

United States  
Department of  
Agriculture

Forest Service

Intermountain  
Region



Revised  
July  
2003

# Payette

## National Forest



## Land and Resource Management Plan

## Photos by David Ede

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# Payette National Forest Land and Resource Management Plan (Forest Plan) Revised - 2003

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# **Chapter I**

## **Introduction**

## **Changes to Chapter I between Draft and Final Plans**

Tables I-1 through I-4 have been updated to incorporate the latest information available for population demographics and payments.

Table I-5 has been changed to reflect the MPC allocations in Alternative 1B, the No Action Alternative, and Alternative 7 in the FEIS, the selected alternative for Forest Plan Revision.

# CHAPTER I

## Introduction

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## PURPOSE OF THE FOREST PLAN

The Payette National Forest Land and Resource Management Plan (hereafter referred to as “the Forest Plan” or “the Plan”) guides natural resource management activities on lands administered by the Payette National Forest. It describes management goals and objectives, resource protection methods, desired resource conditions, and the availability and suitability of lands for resource management. The purpose of the Plan is to provide management direction to ensure sustainable ecosystems and resilient watersheds that are capable of providing a sustainable flow of beneficial goods and services to the public. The Plan is the implementing guide for fulfilling the Forest Service mission of “Caring for the land and serving people.”

The Forest Plan embodies the provisions of the Forest and Rangeland Renewable Resources Planning Act (RPA), as amended by the National Forest Management Act (NFMA) and its implementing regulations. The management prescriptions in the Plan are designed to realize goals for achieving desired conditions; however, future projects planned to implement those prescriptions will be largely dependent on annual budgets.

### Forest Plan Revision

The original Forest Plan for the Payette National Forest was released in 1988. The NFMA requires that forest plans are updated or revised every 10 to 15 years. To meet this requirement, the Payette National Forest teamed up with the Boise and Sawtooth National Forests to revise their Forest Plans together. The three-Forest or Ecogroup approach to Forest Plan revision:

- Applied an ecosystem management framework to management direction across the Forest. Through this framework, the Responsible Official, in consultation with the Forest Plan Revision Interdisciplinary Team, identified and prioritized areas at risk, and developed direction to maintain or restore sustainable and resilient ecosystems.
- Aimed for compatibility. Complete consistency across the three Forests is neither practical nor necessarily desirable. The Responsible Official, in consultation with the Interdisciplinary Revision Team, tried to achieve compatible outcomes relative to key Forest Plan direction. Consistency was emphasized for important issues or effects that transcend administrative boundaries.
- Collaborated with landowners across administrative boundaries to provide for compatible management direction. Collaboration included tribal, federal, state, county, and private entities that own or manage land within the Ecogroup zone of influence.
- Maintained an adaptive strategy using available information. As new information became available, the Responsible Official had the Revision Team incorporate it into the process as appropriate. This adaptive management strategy will continue after revision.



This revised Forest Plan defines the programmatic management strategy for the Payette National Forest for the next 10 to 15 years. However, the revised Forest Plan does not in itself implement any specific actions or projects. Rather the revised plan, through its land allocation prescriptions and management direction, sets the stage for:

- The actions needed to be taken, or not, to move toward desired conditions and goals;
- The management strategies that should be used to help frame when, where, and why action or inaction is needed to help move toward achievement of desired conditions during this planning period;
- The type of activities that are allowed or not allowed to best address management strategies and related Management Prescription Category (MPC) emphasis and direction;
- The intensity, duration, and limitations on management actions needed to manage risks and threats to resources and the social and economic environment, while maintaining or moving toward achievement of desired conditions.

The revised Forest Plan replace the 1988 Plan, which was amended by Pacfish and Infish and associated Biological Opinions (BOs) for chinook salmon, steelhead, and bull trout (US Dept of Commerce NMFS 1995, US Dept of Commerce NMFS 1998, USDI FWS 1998).

## **Ecosystem Management**

In 1992 the Forest Service adopted ecosystem management (EM) as an operating philosophy (Overbay 1992). Ecosystem-based management has been described as “scientifically based land and resource management that integrates ecological capabilities with social values and economic relations to produce, restore, or sustain ecosystem integrity and desired conditions, uses, products, values, and services over the long term” (ICBEMP 1997a). An EM approach shifts management emphasis from a traditional, single resource or species focus to a focus on ecosystems and landscapes. Ecosystem management also strongly considers the interactions between humans and ecosystems. Some of the important concepts used in EM are described in the *Preliminary Analysis of the Management Situation Summary* (USDA Forest Service 1997) for the Southwest Idaho Ecogroup, and in the Introduction to Chapter 3 of the Final Environmental Impact Statement (USDA Forest Service 2003) that accompanies this Plan.

### **The EM Framework**

For Forest Plan revision, the Payette National Forest has adopted an EM conceptual framework. This framework borrows from and builds on: 1) the current Forest Plan (USDA Forest Service 1988), 2) the Forest Service Region 4 *Desk Guide, Bridge to Revision* (USDA Forest Service 1993), and 3) *A Framework for Ecosystem Management in the Interior Columbia Basin* (ICBEMP 1996a). The intent of the framework is to integrate ecosystem elements with human needs to strengthen the essential link between economic prosperity, social continuity, and ecosystem processes and functions. Use of the EM framework will help ensure ecosystem sustainability and resilience over time and space.

Ecosystem management recognizes that people are part of ecosystems and that collaborative stewardship may be able to address the complexity and controversy inherent in public land management. Furthermore, the EM framework will use adaptive management to improve our knowledge about environmental effects or the results of management actions, and incorporate this knowledge into future decisions and actions.

### **EM Components**

The four basic components of EM are physical, biological, social, and economic, as well as all the diversity and connections contained therein. These components can be further broken down into elements. Examples of these elements include:

- Physical Diversity – the elements that comprise the basic building blocks of ecosystems, including geology, landforms, climate, air, water, soil, and hydrologic and soil processes.
- Biological Diversity – the elements that comprise life forms that live within ecosystems, including bacteria, fungi, plants, and animals.
- Social Diversity – the elements that describe how humans interact with ecosystems and how that interaction influences societies and cultures. These elements include human demographics, social organizations, attitudes, beliefs, values, and lifestyles.
- Economic Diversity – the elements that describe how humans generate goods and services from ecosystems and how those products influence economics. These elements include zone of influence, employment status, and economic opportunity and dependency.

These components represent the range of resources considered under the EM framework in this document, and most resources represent some combination of these components. For example, the timber resource manages tree vegetation (a biological element) to provide goods and jobs (economic elements) to support local community values and lifestyles (social elements). The tree vegetation, in turn, depends on productive soils, oxygen, and water (physical elements) to grow. Indeed, most social and economic resources related to Forest management are heavily dependent on the biophysical resources for long-term sustainability. Put another way, sustainable goods and services are the product of resilient and properly functioning ecosystems. Thus, EM focuses on maintaining or restoring the biophysical components of ecosystems in order to sustain economic opportunities and support social and cultural values.

## **RELATIONSHIP OF THE FOREST PLAN TO OTHER DOCUMENTS**

### **RPA and The Intermountain Regional Desk Guide**

The Payette Forest Plan was developed and revised within the framework of national and regional Forest Service direction. The Forest and Rangeland Renewable Resources Planning Act (RPA) and its implementing Program set direction and output levels for National Forest System

lands. Goods and services are distributed based upon detailed, site-specific information concerning the capability and suitability of National Forest System lands being assigned various management activities and prescriptions at the Forest level. The Plan provides information for the RPA assessment and program updates.

Much of the Forest Plan revision was based on direction found in the *Intermountain Regional Desk Guide – Bridge to Revision* (USDA Forest Service 1993). Thus, Regional planning is a two-way street that conveys direction from the National to the Forest level, and transmits information from the Forest to the National level. While this planning Desk Guide ensures that a consistent approach to National Forest planning is followed throughout the Region, it also allows the individual Forests considerable latitude in formulation of their Plans.

### **Forest Plan Environmental Impact Statement (EIS)**

During the Forest Plan revision effort, management alternatives were developed, analyzed, and compared, from which the Regional Forester selected an alternative for implementation. This Forest Plan represents the selected alternative, Alternative 7. The planning process and analysis procedures used in developing the selected alternative and Plan are described or referenced in the FEIS and supporting project record.

### **Subsequent Multi-scale Analyses, Project Assessment and Planning**

Management activities on National Forest System lands within the administrative boundary of the Payette National Forest will be planned and implemented in a manner that furthers the achievement of the goals and objectives described in this Forest Plan. Forest Plan direction serves as an umbrella for environmental analysis and project planning and implementation. Subsequent mid-, fine-scale analyses and project planning and implementation will be tiered to this Plan and its companion FEIS, as provided for in 40 CFR 1502.20.

### **Plans for Special Areas**

The Forest Plan directs land management activities for the Payette National Forest. There are, however, four existing plans that were mandated by separate Congressional actions that cover lands within the proclaimed boundaries of the Forest. These plans, listed below, are referenced so that the reader will know which documents provide analysis and direction for those unique portions of the Forest.

- Frank Church—River of No Return Wilderness Management Plan (USDA Forest Service 1986)
- Salmon Wild and Scenic River Management Plan (USDA Forest Service 1982)
- Hells Canyon-Seven Devils Scenic Area Management Plan (USDA Forest Service 1961)
- Hells Canyon National Recreation Area Comprehensive Management Plan (USDA Forest Service 1996)

In addition, there are three areas within the proclaimed boundaries of the Forest that are administered by adjacent National Forests. Analysis and management direction for these areas can be found within the Forest Plan prepared by each of those Forests. These areas are:

- The Big Hill and Elk Bar areas in the Middle Fork of the Salmon River Canyon. The Salmon-Challis National Forest administers this land, and direction for the area is in the Frank Church - River of No Return Wilderness Management Plan.
- The No Business Saddle and Poison Creek areas on the west side of Cascade Reservoir. The Boise National Forest administers this land, and direction for the area is in the Boise National Forest Plan.
- The Hells Canyon National Recreation Area (NRA) and Hells Canyon Wilderness Area on the east side of the Snake River. The Wallowa-Whitman National Forest administers these areas. Direction for the NRA is in the Comprehensive Management Plan for Hells Canyon National Recreation Area, and direction for the Wilderness is in the Hells Canyon Wilderness Management Plan.
- The Salmon River Wild and Scenic River corridor along the south side of the river extending up approximately 0.25 mile, and extending west to east from Carey Creek to Canyon Creek. Direction for the corridor is in the management plan for Salmon River Wild and Scenic River. The Nez Perce National Forest administers this area.

## **Existing Forest Plan, Permits, Contracts, and Other Uses**

This revised Forest Plan replaces the 1988 Forest Plan. All permits, contracts, and instruments for use or occupancy of the Forest must conform to the revised Plan's direction. However, because some existing permits and leases are already committed, they will remain in effect until they can be adjusted to accommodate direction in the revised Forest Plan. The Record of Decision for the revised Forest Plan provides the Responsible Official's direction concerning transition of the permits, contracts, and other uses to reflect direction of the revised Plan.

## **ORGANIZATION AND STRUCTURE OF THE FOREST PLAN**

The Forest Plan, as administered by the Forest Supervisor, provides direction for managing the Payette National Forest. The Plan contains the goals, objectives, standards, and guidelines needed to achieve the desired conditions for Forest resources. The Forest Plan is organized into the chapters and appendices described below. Subsections for the chapters and appendices are listed in the Table of Contents.

### **Chapter I – Introduction**

Discusses the general purpose of the Forest Plan, the relationship of the Plan to other documents, and the Plan organization. Includes an integrated description of the Forest.

**Chapter II – Analysis of the Management Situation Summary**

Describes the Need For Change in management direction for selected resources, the current condition of those resources, and how the Plan addresses the need to improve those conditions.

**Chapter III – Forest Management Direction**

Presents management direction for the Forest as a whole, and for specific Management Areas. The first section provides Forest-wide desired conditions, goals, objectives, standards, and guidelines. The second section describes the resources of each Management Area, and provides more area-specific direction for the management of those resources.

**Chapter IV – Implementation of the Forest Plan**

Includes direction for implementing the Forest Plan, presents a plan for monitoring and evaluating the effects of management practices, and describes how the Plan will be amended or revised in the future.

**Appendices**

Appendix A – Vegetation (Desired conditions, mapping, classification)  
Appendix B – Soil, Water, Riparian, and Aquatic Resources (Matrix, RCAs, LSP areas, ACS)  
Appendix C – Botanical Resources (TEPCS plants, trends, rare communities, cultural plants)  
Appendix D – Wild and Scenic Rivers (Results of revised eligibility study)  
Appendix E – Wildlife and Fish (TEPCS/MIS lists, habitat changes, lynx, elk vulnerability)  
Appendix F – Recreation (ROS definitions and implementation relationships)  
Appendix G – Land Capability Groups (Susceptibility to erosion)  
Appendix H – Legal and Admin. Framework for Forest Planning and Resource Management  
Appendix J – Utility Corridors

**Glossary**

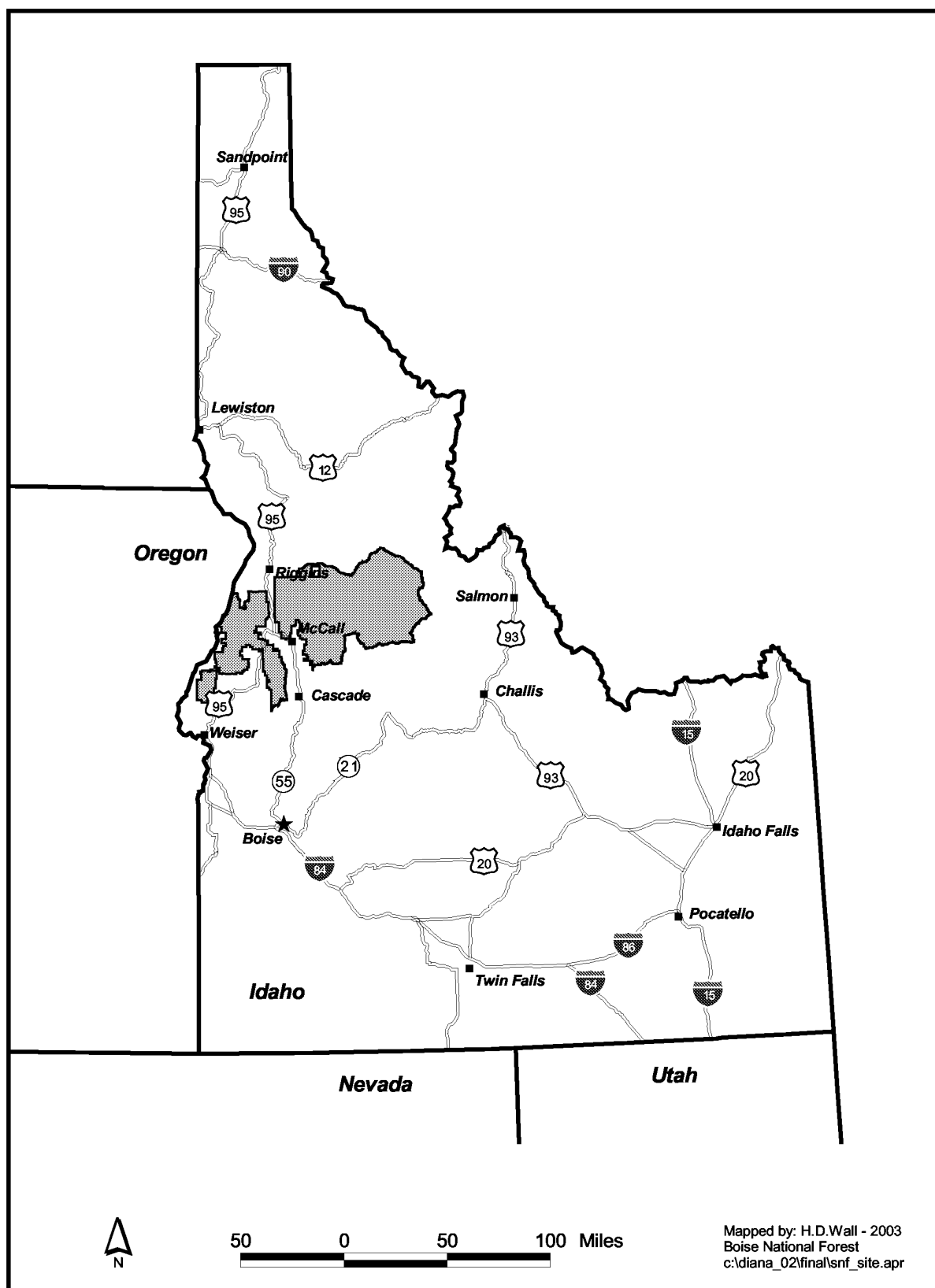
Includes definitions of key terms, and commonly used acronyms.

**LOCATION AND DESCRIPTION OF THE FOREST**

The Payette National Forest is located in west central Idaho (see Figure I-1), in Adams, Idaho, Valley, and Washington Counties. The Forest is bordered on the south by the Boise National Forest, on the east by the Salmon-Challis National Forest, on the north by the Nez Perce National Forest, and on the west by the Wallowa-Whitman National Forest in Oregon. The Supervisor's Office is located in McCall, Idaho, approximately 100 miles north of Boise. The Forest is comprised of five ranger districts—Council, Weiser, New Meadows, McCall, and Krassel—with district headquarters in Council, Weiser, New Meadows, and McCall.

The Forest is an administrative unit of the Intermountain Region (Region 4) of the Forest Service, U.S. Department of Agriculture. The Regional Forester's office is in Ogden, Utah.

Figure I-1. Location Map – Payette National Forest



## Physical and Biological Setting

The Forest administers about 2.3 million acres of federal lands, including an estimated 768,000 acres in the Frank Church-River of No Return Wilderness. A general description of the biophysical setting for the Forest appears below.

### Climate

Climate patterns are typically moist and cold in the winter and early spring, and warm to hot and dry during the summer and early fall. The winter climate is influenced by mountain ranges that block most arctic air from entering the area. The deep Snake River and Salmon River valleys, however, can funnel dry arctic air into the basin where it often stagnates. In the late spring and summer, moisture from the Gulf of Mexico may move north and combine with warm temperatures and steep topography to increase high-intensity, short-duration thunderstorms. Late spring events generally have more precipitation, with 24-hour accumulations often greater than one inch. Dry lightning is more common during summer and fall.

Winter temperatures average between 29 and 9 degrees Fahrenheit. Snowfall ranges from about 55 to 70 inches, with greater amounts at higher elevations. Despite cold winter temperatures, occasional marine intrusions enter the area, with rainfall occurring mainly at elevations below 5,000 feet. This situation increases the risk for rain-on-snow events that can trigger floods and landslides. Increased exposure to the maritime air masses creates moister vegetation regimes as one moves progressively north within the Forest. Maximum summer daytime temperatures can reach over 100 degrees Fahrenheit at lower elevations, with higher elevations in the 80s to 90s. Growing seasons vary greatly, from less than 30 days in the high alpine areas to more than 150 days in the low valleys.

### Topography and Geology

Elevations vary greatly across the Forest from 1,600 feet in the Snake River Canyon to over 9,500 feet in the Salmon River Mountains. This wide range of elevations encompasses a great diversity of geologic characteristics. At least five major landforms have resulted from past geomorphic processes:

- 1) High-elevation distinctive mountains and valleys formed from alpine glaciation,
- 2) More subtle high-elevation topography formed by freezing and thawing processes,
- 3) Lands with sharply defined drainage patterns formed by stream-cutting action,
- 4) Depositional lands formed from eroded materials from higher lands, and
- 5) Lands formed by volcanic flows.

The western part of the Forest is underlain mainly by Columbia River basalts, and much of the eastern part is underlain by granitic rocks of the Idaho batholith. The southeastern portion of the Forest is underlain by volcanic rocks of the Challis group. The Idaho batholith area is characterized by steep slopes of coarse-textured soils that readily take in and transmit water. Unless these soils are disturbed, surface runoff is rare except during high-intensity storms or rain-on-snow events. Major mountain systems include the Lick Creek, Salmon River, and Seven Devils ranges.

**Water**

Watersheds on the Forest provide a continuous supply of water to the Snake and Salmon River basins. The annual water yield from the Forest has been recently estimated at nearly 4,000,000 acre-feet. This water resource has many beneficial uses, including aquatic habitat, recreation, irrigation, hydropower, and domestic water supply. The Forest has an estimated 7,700 miles of perennial and intermittent streams, and 4,600 acres of lakes and reservoirs, and contains important portions of the Snake, Salmon, Payette, and Weiser River systems.

**Vegetation**

The wide range of landforms, elevation, and climate across the Forest has produced a wide variety of vegetative conditions. An estimated 83 percent of the Forest is considered forested, or capable of supporting trees on at least 50 percent of the area. Common tree species include ponderosa pine, Douglas-fir, grand fir, western larch, aspen, lodgepole pine, subalpine fir, Engelmann spruce, and whitebark pine. About 16 percent of the Forest is considered non-forested, or dominated by grass, forbs, shrub, or brush species. Much of the non-forested vegetation is found at low elevation, on dry southern aspects, or in high-elevation alpine settings.

For the purposes of effects analysis and management considerations, the Forest has been broken out into forested, woodland, shrubland, grassland, and riparian vegetation groups. These groups are listed and described in Appendix A.

**Terrestrial and Aquatic Species**

The Forest provides habitat for close to 300 terrestrial species of mammals, birds, reptiles, and amphibians. Elk and deer are the most common large animals, although moose, mountain goat, bighorn sheep, black bear, and cougar are also present. Gray wolves have been recently re-introduced and populations are currently expanding. Habitat also exists for other wide-ranging carnivores such as wolverine, lynx, and fisher. Bird species include bald eagle, mountain quail, great gray owl, northern goshawk, and many migratory land birds.

An estimated 43 species of fish are found in Forest streams and lakes, including nearly 20 species that have been introduced or moved to areas where they are not native. Native species include chinook salmon, steelhead trout, and bull trout, which are currently listed as threatened under the Endangered Species Act. Other native species of special concern include redband rainbow trout and westslope cutthroat trout.

**Social and Economic Setting**

A general description of the social and economic setting for the Forest appears below. Social and economic analyses are conducted by the Forest Service to determine what effects the agency has on local communities and the people using natural resources. The human dimension component is an important part of ecosystem management. Impacts on communities were considered in resource decisions made in the Forest Plan revision process. Social and economic impacts were determined for each alternative analyzed.



Just as the Forest Service can directly or indirectly *affect* social and economic conditions, the agency is also *affected by* changes in attitudes, values, and public desires at both local and national scales. Conflicting opinions over the uses of public lands have increased the complexity of national forest management, and the number and types of laws governing natural resources. In many cases these changes have narrowed the decision space available to local managers.

In the Forest Plan revision process, counties and communities were a focal area of analysis for social and economic purposes, although international, national, regional, and state perspectives were also assessed. This approach differs from that taken in the original Forest Plan analysis, which examined effects on counties and communities, with particular emphasis on counties.

### **Counties and Communities**

The socio-economic overview area for the Payette National Forest includes six counties and seven communities within and near the Forest. The six counties are Ada, Adams, Canyon, Idaho, Valley and Washington. These counties were selected because they include National Forest System land, and/or have major social and/or economic ties to the Forest. The seven communities are Riggins, McCall-Donnelly, Cascade, Council, New Meadows, Weiser, and the greater Boise metropolitan area, commonly referred to as the “Treasure Valley,” which includes Boise, Nampa, Caldwell, Meridian, Kuna, Eagle and other incorporated communities in Ada and Canyon counties.

### **Population Trends**

Table I-1 shows population trends of counties within the socio-economic overview area. This table shows Ada County as the fastest growing of the six counties. Other rapidly growing areas in the same time period were Canyon and Valley Counties.

Table I-2 shows that nearly all the seven communities selected for in-depth analysis grew at least slightly during the 1980-2000 period. For some of these communities, the growth was substantial.

The populations of the areas have generally been growing rapidly and are predicted to continue this growth pattern through the next planning period. Rural areas, on the other hand, have been fairly static, and populations are predicted to remain so or increase at a slower rate.

**Table I-1. Historic<sup>1</sup> and Projected<sup>2</sup> County Populations**

| County     | 1985    | 1990    | 1995      | 2000      | 2010      | 2020      | 1990-2000 Change | 2000-2010 Projected Change |
|------------|---------|---------|-----------|-----------|-----------|-----------|------------------|----------------------------|
| Ada        | 189,811 | 207,505 | 252,251   | 300,904   | 358,495   | 416,167   | 45%              | 19%                        |
| Adams      | 3,372   | 3,265   | 3,850     | 3,476     | 3,973     | 4,449     | 6%               | 14%                        |
| Canyon     | 87,815  | 90,639  | 109,123   | 131,441   | 155,288   | 178,676   | 45%              | 18%                        |
| Idaho      | 14,386  | 13,818  | 14,860    | 15,511    | 17,082    | 18,777    | 12%              | 10%                        |
| Valley     | 6,525   | 6,150   | 7,848     | 7,651     | 9,621     | 11,426    | 24%              | 26%                        |
| Washington | 8,662   | 8,595   | 9,606     | 9,977     | 11,280    | 12,504    | 16%              | 13%                        |
| Idaho      | 977,617 | 996,553 | 1,149,284 | 1,293,953 | 1,506,581 | 1,717,847 | 23%              | 16%                        |

<sup>1</sup>"Historic" population figures (1985, 1990, 1995, 2000) are from the U.S. Department of Commerce, Regional Information System (Robison 1997, Robison and Gneiting 2002).

<sup>2</sup>"Projected" population figures (2010, 2020) represent the median of projections compiled by Idaho Power and by ICBEMP (Robison 1997, Robison and Gneiting 2002).

**Table I-2. Community Populations: 1980-2000**

| Community                    | County     | 1980    | 1990    | 2000    | 90-00 Change |
|------------------------------|------------|---------|---------|---------|--------------|
| Treasure Valley <sup>1</sup> | Ada/Canyon | 167,033 | 199,710 | 333,601 | 67%          |
| Council                      | Adams      | 917     | 831     | 816     | -2%          |
| New Meadows                  |            | 576     | 534     | 533     | < -1%        |
| Riggins                      | Idaho      | N/A     | 443     | 410     | -7%          |
| Cascade                      | Valley     | 945     | 877     | 997     | 14%          |
| McCall-Donnelly              |            | 2,327   | 2140    | 2,222   | 2%           |
| Weiser                       | Washington | N/A     | 4,571   | 5,343   | 17%          |

<sup>1</sup>For the purposes of this discussion, the "Treasure Valley" includes the incorporated communities in Ada County (Boise, Eagle, Garden City, Kuna, Meridian and Star) and Canyon County (Caldwell, Greenleaf, Melba, Middleton, Nampa, Notus, Parma, Wilder).

## **Economic Trends**

The following are important economic trends within the Forest.

**Payments to Counties** - Counties that contain federal lands receive payments from the federal government as described below.

*The Secure Rural Schools and Community Self-Determination Act of 2000* – The Secure Rural Schools and Community Self-Determination Act of 2000 (Public Law 106-393) was signed into law on October 30, 2000. This law was enacted "to restore stability and predictability to the annual payments made to States and counties containing National Forest System lands and public domain lands managed by the Bureau of Land Management for use by the counties for the benefit of public school, roads and other purposes" for fiscal year (FY) 2001 through 2006 (October 1 – September 30).

Before Public Law 106-393 was enacted, the Forest Service returned 25 percent of the revenues from the sale of forest products and permitted operations to counties which contain National Forest System land, through the “25 Percent Fund Law of 1908.” The amount that a county received from each National Forest’s 25 percent fund was proportional to the percent of the Forest located in that county. State regulations stipulated that 70 percent of the funds were to be used for public roads, with 30 percent used to fund public schools. Under Public Law 106-393, counties will have the option of continuing to receive payments under the 25 Percent Fund Act, or electing to receive their share of the average of the three highest 25 percent payments made to the State during the period of FY 1986 through FY 1989 (“the full payment amount”).

Table I-3 shows the 25 percent fund payments from the Payette National Forest to counties over the last several years, as compared to each county’s share of the full payment amount. The table indicates that the level of 25 percent fund decreased in the last several years, as linked to the decrease in National Forest timber sales on the Forest, and that for most counties, their share of the full payment amount would be substantially greater than that received in the past few years.

**Table I-3. 25 Percent Fund Payments to Counties from Payette National Forest**

| County        | Payment From: | FY 1985 \$       | FY 1990 \$       | FY 1995 \$       | FY 2000 \$     | FY 95-00 Change | County Share Full Payment |
|---------------|---------------|------------------|------------------|------------------|----------------|-----------------|---------------------------|
| Ada           | Payette NF    | 0                | 0                | 0                | 0              | 0%              | 0                         |
| Adams         | Payette NF    | 216,195          | 502,006          | 554,642          | 121,844        | -78%            | 737,600                   |
| Canyon        | Payette NF    | 0                | 0                | 0                | 0              | 0%              | 0                         |
| Idaho         | Payette NF    | 346,680          | 789,950          | 872,946          | 192,976        | -78%            | 4,863,900                 |
| Valley        | Payette NF    | 383,530          | 869,126          | 959,624          | 213,548        | -78%            | 2,970,000                 |
| Washington    | Payette NF    | 55,354           | 121,406          | 134,230          | 29,457         | -78%            | 179,000                   |
| <b>Totals</b> |               | <b>1,001,759</b> | <b>2,282,488</b> | <b>2,521,442</b> | <b>557,825</b> |                 | <b>8,750,500</b>          |

Data reflects only 25 percent fund payments from the Payette National Forest; some counties may also receive 25 percent fund payments from other national forests. Fiscal year (FY) extends from October 1 of one year to September 30 of the next calendar year.

*Payments in Lieu of Taxes* – Counties also receive payments from the federal government based on the Payments in Lieu of Taxes (PILT) Act of 1976. The PILT is a federal revenue-sharing program designed to compensate local governments for the presence of tax-exempt federal lands within their jurisdiction. These payments are **not** linked to revenues generated by the sale of national forest products or permitted activities. The Act authorizes payments under one of two alternatives, based on the acres of qualifying federally managed acres (“entitlement acres”) within the county, subject to a payment ceiling based on county population. The amount paid to the county is the higher of two alternative calculations. However, PILT payments are appropriated each year by Congress, and actual payments may be less than those calculated.

Table I-4 shows recent PILT payments for counties within the overview area. Since 1980, decreases in PILT payments have been substantial. In Adams, Idaho, Valley, and Washington Counties, these decreases were compounded by similar decreases in 25 percent fund payments.

Table I-4. Payments in Lieu of Taxes

| County        | Entitlement Acres in 1995 | FY 1980 \$       | FY 1995 \$       | FY 2000 \$       | FY 95-00 Change |
|---------------|---------------------------|------------------|------------------|------------------|-----------------|
| Ada           | 199,368                   | 223,707          | 155,748          | 155,073          | < 1%            |
| Adams         | 545,749                   | 105,450          | 55,039           | 75,572           | 37%             |
| Canyon        | 20,528 (BLM)              | Not available    | 16,005           | 16,152           | < 1%            |
| Idaho         | 4,516,122                 | 837,070          | 452,987          | 476,658          | 5%              |
| Valley        | 2,045,758                 | 392,813          | 206,315          | 215,892          | 5%              |
| Washington    | 326,358                   | 351,490          | 191,511          | 231,016          | 21%             |
| <b>Totals</b> | <b>6,888,238</b>          | <b>1,581,373</b> | <b>1,077,605</b> | <b>1,170,603</b> | <b>9%</b>       |

## Native American Indian Tribes

No Native American Indian reservations are located within the Forest or the Forest's socio-economic overview area. However, the ancestors of the modern day Nez Perce, Shoshone-Bannock, and Shoshone-Paiute Tribes were present in this area long before the establishment of the Payette National Forest. Many of the treaties and executive orders signed by the United States government in the mid-1800s reserved homelands for the Tribes. Additionally, the treaties with the Nez Perce and Shoshone-Bannock reserved certain rights outside of established reservations, including fishing, hunting, gathering, and grazing rights. In addition, the Yakima, Umatilla, and Warm Springs Tribes have reserved certain rights to anadromous fish produced from the Forest.

The following excerpts from the treaties with the Nez Perce and the Shoshone-Bannock, and the Executive Order with the Shoshone-Paiute, provide examples of the rights that the tribes have, and where they can exercise these rights on the Payette National Forest.

**Nez Perce Treaty of 1855:** Article IV in this treaty states:

*“The exclusive right of taking fish in all the streams where running through or bordering said reservation is further secured to said Indians; as also the right of taking fish at all usual and accustomed places in common with citizen's of the territory; and of erecting temporary buildings for curing, together with privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed lands.”*

**Shoshone-Bannock Tribes Fort Bridger Treaty of 1868:** Article 4 of the Treaty with the Eastern Band Shoshone and Bannock states:

*“...but they shall have the right to hunt on the unoccupied lands of the United States so long as game may be found thereon, and so long as peace subsists among the whites and Indians on the borders of the hunting districts.”*

**Shoshone-Paiute Tribes Executive Order of 1877:** This Order set aside the Duck Valley Reservation for several Western Shoshone bands who traditionally lived along the Owyhee River of southeastern Oregon, in southwestern Idaho, and along the Humboldt River of northeastern

Nevada. Later they were joined by Paiute from the lower Weiser country of Idaho and independent Northern Paiutes from Fort McDermitt, Camp Harney, and Quinn River areas and from the Owyhee region of southwestern Idaho, who settled on the reservation to take up farming and ranching. The aboriginal Northern Paiute territory includes portions of southwestern Idaho, eastern Oregon, and northwestern Nevada. Management of these historically occupied areas are still of interest to the Shoshone-Paiute tribes today.

The Nez Perce, Shoshone-Bannock, and Shoshone-Paiute interest in the Payette National Forest goes beyond that of spiritual and cultural, to the unique legal relationship that the United States government has with American Indian tribal governments. Federally recognized tribes are sovereign nations who work with the federal government and its agencies through the process of government-to-government consultation. The federal trust relationship with each tribe was recognized by, and has been addressed through, the Constitution of the United States, treaties, executive orders, statutes, and court decisions. In general, these mandates protect and enhance the ability of the tribes to exercise treaty rights and cultural practices off-reservation. The federal trust doctrine requires federal agencies to manage the lands under their stewardship with full consideration of tribal rights and interests, particularly reserved rights.

## **Historical and Cultural Setting**

The Payette National Forest, and the ecosystems it encompasses, are as much a product of cultural history as of natural history. Contemporary land use patterns have important historical antecedents that provide the context for national forest management. Past uses of the ecosystem may encourage, condition, or preclude certain management practices for the present or future.

The following historical sketch outlines significant periods in the development of the Payette National Forest's landscapes. The overview is by no means inclusive, but rather presented to convey general themes and patterns of the relationships between humans and their environments.

### **The First Inhabitants**

Native Americans were the first inhabitants to live in and use the natural resources of central Idaho. Spear points recovered from archaeological sites in the area document the presence of Paleo-Indian peoples in the area as early as 12,000 years ago.

The Payette National Forest is within the traditional subsistence range of the Shoshone, Northern Paiute, and Nez Perce Tribes. Historically, their lifeways were seasonal and cyclical. They spent the winter in warmer climates along the deep river valleys, and summer and early fall in the mountains, where it was cooler. At different elevations, they harvested different plants, fish, and game. Within the Forest area, camas and salmon were critical food sources for the tribes.

For hundreds, if not thousands of years, Native Americans played an active role in Idaho's environments. Fire was the most powerful tool at their disposal. American Indians deliberately burned forests and meadows for a number of reasons, including forage regeneration and campsite and trail clearing. Fur traders and Oregon Trail emigrants traveling through southern Idaho

frequently observed Indian-set fires in the mountains north of the Snake River Plain. In Long Valley, settlers watched Indians departing fishing camps set fires to clear the forest of underbrush and keep traditional campsites open. These fires were set in late summer and early fall as the Indians left the valley for winter camps in lower elevations.

Over time, ecosystems were conditioned to the effects of fires set by Native Americans. The practice focused on habitats that supported specific food plants. Deliberate burning enhanced camas and berry crops. Seasonal burning fertilized the soil, discouraged the invasion of undesirable species, and prevented forest encroachment into camas meadows. Hand tilling camas meadows aerated the soil, creating conditions later receptive to Euro-American crops. Fires ignited to keep transportation corridors open spread into the surrounding forest, contributing to the open, park-like stands shown in early photographs of Idaho's forests.

In the 1870s, stockmen, followed by settlers, converted camas meadows in the Weiser and Payette River drainages into pasture and agricultural fields. Camas crop destruction was a leading cause of the Bannock War and Sheepstealer Campaign of 1878-1879, in which settlers and government troops skirmished with Paiute and Shoshone trying to pursue traditional lifeways on lands increasingly occupied by miners and homesteaders.

By 1900, most Nez Perce, Shoshone, and Paiute lived on reservations far removed from the mountains of central Idaho. They continued, however, to exercise off-reservation treaty rights such as fishing, hunting, and gathering on what was to become the national forest. According to eyewitness accounts, Indians also continued to set fires when leaving the mountains. White settlers and Forest Service regulations for fire suppression eventually discouraged the practice.

### **New Arrivals and the Fur Trade**

Euro-American exploration, settlement, and industry profoundly changed central Idaho's landscape. Capitalism and a free market economy introduced social, economic, and environmental changes inextricably associated with the region's abundance of natural resources.

Shortly after Lewis and Clark's Corps of Discovery explored the Pacific Northwest in 1805-1806 for the United States, Euro-Americans moved into the region. At the time, Idaho was part of Oregon Country, the ownership of which was disputed between Great Britain and the United States. Until the Oregon Treaty of 1846, when Britain relinquished its claim, Oregon Country was jointly occupied by the two countries.

The first Euro-Americans to arrive in central Idaho were fur trappers and traders working for British companies in Montreal. The fur trade opened Oregon Country to commerce. It was the first large-scale, corporate enterprise in the region, and the first to market Idaho's resources in a global economy. The demand for beaver pelts was enormous—the hat-making industry alone required an estimated one hundred thousand pelts to supply European markets. The British quickly gained control of central Idaho. The Hudson Bay Company sent its "Snake Brigades" to trap out the Snake River and its tributaries. In 1818, a party of fur trappers for the company named the Payette River in honor of their comrade, the French-Canadian, Francois Payette. He explored the Payette and its tributaries.

Though short-lived and on the decline by the 1840s, the fur trade had enormous environmental and social consequences. Hudson's Bay Company purposefully overtrapped beaver, creating "fur deserts" to discourage American competition and settlement. Beaver occupy a special niche in forest environments, and their removal from certain watersheds initiated a host of complex, interconnected changes related to stream morphology, species composition, and disturbance events such as flooding and increased sediment loads.

The fur trade also changed relationships between Indians and Euro-Americans. Native American economies were drawn into new trading relations that transformed the way Indians perceived natural resources. Some tribes increased their hunting of ungulate species or began trapping beaver and other furbearers as commodities exchangeable for European trade goods. As a result, many became dependent on European trade goods, preferring them to traditional cultural goods.

### **Mining**

In 1848, Congress made Oregon Country a United States territory. From 1848 until 1863, what is now Idaho was included at different times in Oregon and Washington territories. Mining was the impetus behind the establishment of Idaho Territory in 1863.

Migrants and miners on their way to Oregon and California between 1840 and 1860 were unimpressed with the Snake River Plain. Southern Idaho was portrayed as a desert—hot, barren, and inhospitable to settlers and livestock. Although Goodale's Cutoff took thousands of travelers north into cooler, forested environments, the majority of Oregon Trail emigrants were unwilling to stop short of the Willamette Valley. Miners intent on California's gold fields largely ignored, for the moment, evidence of Idaho's mineral wealth.

In 1860, gold was discovered in northern Idaho, on a tributary of the Clearwater River. Miners, many of them depression-ridden settlers from Oregon, set out prospecting, and steadily moved south into central Idaho. In 1861, gold was discovered in Warren, northeast of McCall. This mining camp, like others in the West, was remarkable for its ethnic diversity. Miners came from all over the country, as well as from various European countries and provinces of China.

Mining created new demands on central Idaho's natural resources. The industry required an enormous amount of timber to build and fuel mines. The effect that mining had on timberlands is clearly visible in historic photographs that show mining camps surrounded by cutover slopes. Mining, especially of placer deposits, also depended on vast amounts of controllable water. The industry built the first impoundments and diversions in the state. Mining reconfigured the physical and biological landscape—it moved vast amounts of earth, diverted the course of entire streams and rivers, and altered the composition, structure, and function of forested environments.

Mining has continued to support Idaho's development throughout the twentieth century. The boom-bust cycle of mining prolonged the existence of mountain communities that otherwise might have become ghost towns. Agribusiness, however, has been Idaho's chief source of income since statehood. Today, mining's historical legacy contributes to the visitor's experience and provides educational and interpretive opportunities for the public.

**Settlement**

The demand of mining camps for agricultural products eventually encouraged settlement on the Snake River Plain and in forest valleys suitable for cultivation. Whereas settlement was initially a response to mining, goods and services from forest communities also supported regional urban development. In 1890, Idaho Territory became the nation's forty-third state.

Public land laws prior to the establishment of national forests promoted settlement in the West. The Homestead Act of 1862 and the Timber and Stone Act of 1878 were important in moving public land into private ownership. When national forests were later established, they often incorporated a mosaic of land ownerships with existing land use patterns.

Settlement imposed a new set of values on the use, allocation, and conservation of natural resources. Agriculture downstream from the Forest needed extensive irrigation development. Reclamation reached deep into central Idaho for the water necessary to support settlement and industry. In many cases, these water conservation measures ensured future water supplies, provided inexpensive electricity, and offered a variety of recreational opportunities. Dams, nevertheless, have also had environmental consequences, the most controversial of which are effects to anadromous fish.

Euro-American perceptions about fire, namely that it destroyed life and property, evolved into government policies and programs for fire suppression. Predators, such as grizzly bears and wolves, were also considered dangerous and eliminated from central Idaho. Conversely, Euro-American settlement intentionally and unintentionally introduced or encouraged the spread of non-native plants and animals into native ecosystems.

**Livestock Grazing**

The livestock industry followed the 1860s mining boom into Idaho, moving mainly from west to east by way of California and Oregon. Stockmen quickly divided into opposing camps. Prior to 1884, when the Oregon Short Line was built across southern Idaho, stockmen from other western states drove cattle across the territory on their way to stockyards in Cheyenne and Winnemucca. Mountain valleys north of the arid Snake River Plain became popular and highly coveted summer pastures. The range was unregulated, and overgrazing occurred, causing resentment among resident Idaho stockmen. Although the livestock industry had a reputation for opposing forest reserves, in Idaho, stockmen often petitioned for establishment and enlargement of reserves to protect and regulate the range.

Prior to regulation, improved grazing practices, and progress in veterinary science, livestock had more impacts on the Forest. Overgrazing contributed to changes in the distribution and occurrence of native plant communities, erosion, and the amount of forage available to wildlife populations. Livestock also can transmit disease to native species, and this transmission played a role in the decline of certain species such as bighorn sheep.



The livestock industry made significant contributions to the development of Idaho's economy, and continues to support the state's rural communities. In the context of National Forest management, grazing was at one time widely believed to help the agency with fire suppression. Stockmen promoted the industry as a beneficial use of national forests, because cattle and sheep consumed much of the understory vegetation needed for the ignition and spread of fire.

### **Logging**

In 1900, Idaho's economy received a much needed boost from a new industry—commercial logging. Prior to that time, sawmills and timber harvesting existed to meet the needs of mining and local settlement. Although independent contractors logged in the mountains of central Idaho, most of the small operators were eventually bought out by new companies with strong ties to Weyerhaeuser, a lumber giant from Illinois. Companies like Boise Payette Lumber purchased vast tracts of state and private lands, built large and sophisticated mills, and established company towns within national forest boundaries.

Early loggers tended to prefer clearcutting. Lumber companies commonly liquidated the timber, then leased cutover land to stockmen who needed range. Cutover land was rarely rehabilitated. In 1924, Congress passed the Clarke-McNary Act to promote cooperation and incentives between federal, state, and private forestry for the improvement of private timberlands. Clarke-McNary programs focused on fire and tax relief, although there was a strong emphasis on convincing lumbermen to adopt better cutting practices. Over time, cutting practices did change in response to technological innovations, evolutions in silvicultural methods and theory, federal laws and regulations, and prevailing public opinion about what constitutes responsible timber harvesting.

The timber industry has been responsible for much of central Idaho's transportation network. When driving logs downriver through steep, rugged canyons proved unprofitable and highly dangerous, the timber industry persuaded Union Pacific to build subsidiary railroads into the Weiser and Payette river drainages to haul timber out. The new railroads also carried passengers and freight, stimulating additional settlement. Although the Great Depression marked the end of the railroad logging era in Idaho, trains continue to transport forest products to urban markets. In the late 1920s, Idaho lumber companies became famous for using a "modern" invention—the short bed log truck.

### **Forest Service Administration**

The Forest Reserve Act of 1891 empowered the President of the United States to set aside forest reserves from the public domain. For decades, there had been growing public sentiment to protect what was left of American forests. In 1897, Congress passed the Organic Act, which clarified the purposes for which forest reserves could be established. The act stipulated that reserves could only be set aside to protect and improve the forest, secure favorable conditions of waterflows, and to provide a continuous supply of timber for the citizens of the United States. In 1905, the Forest Service was established to administer forest reserves.

The Payette National Forest was created from portions of the original Payette and Weiser Forest Reserves. In 1905, President Roosevelt established the reserves to protect the timber and watershed values of central Idaho from unregulated grazing and logging. But forest reserves were unpopular in the West. In 1907, western congressmen endorsed a law prohibiting the enlargement of forest reserves in Idaho except by act of Congress.

The most immediate impact of the new agency was regulation of occupancy and use of forest reserves. Settlement on national forest lands was prohibited until the Forest Homestead Act of 1906 allowed entry to those lands deemed suitable for agriculture. Mining was also regulated.

The Forest Service also implemented grazing permits and allotments. Dividing the range between resident and non-resident stockmen, and between cattlemen and sheepmen, was a controversial process. Overgrazing was brought under control, though it escalated again during World War I, when Chicago packers, attempting to boost meat production, loaned money to western stockmen to increase their herds. The result was a rush on national forests for pasture.

The Forest Service also developed policies for timber protection. Foresters worked closely with local communities and industry to implement fire prevention regulations and procedures. In 1908, the Payette National Forest Supervisor, Guy B. Mains, and Boise Payette Lumber Company's land agent, Harry Shellworth, formed the Southern Idaho Timber Protection Association. Known as SITPA, the alliance became a model for cooperative forestry, influencing the Weeks Law of 1911 and the Clarke-McNary Act of 1924.

The Forest Service established a network of fire lookouts through central Idaho, many of them built by the Civilian Conservation Corp (CCC) during the Depression. These structures, some of which are still in use, are historic properties eligible for inclusion in the National Register of Historic Places. They contribute to our understanding of Forest Service administrative history and CCC contributions to the conservation of the nation's natural resources in the 1930s.

The Forest Service sold timber from agency land, but only under certain conditions. National forest policy, prior to World War II, focused on supplementing, only when necessary, timber supplies from private land. The Forest Service also sold timber to meet local requirements, giving preference, when possible, to small, independent contractors. Disease and insect infestations were also occasions for a timber sale. After the war, however, private timberlands could not supply the nation's demand for lumber, and the Forest Service began selling more timber. That, combined with truck logging and technological advances in logging equipment, promoted road building and harvesting in steeper environments.

### **Recreation**

One of the most obvious changes that occurred in the twentieth century was the rise of recreation on public lands. A boom in outdoor recreation during the 1950s, related to post World War II increases in disposable income and leisure time, created an interest in natural environments and their aesthetic qualities.

Modern recreation, however, does have historical antecedents. Early national forest maps distributed to the public advertised scenic and recreational opportunities. In the 1930s, the Forest Service responded to the rise in recreation created in large part by the automobile. The agency began to approve special use permits for recreational residences and resorts, and employed the CCC to build public campgrounds.

The rise of recreation on national forests after World War II marks a departure point for federal agency management of public lands. Natural resources, though they retain their importance as commodities important to American society, are also prized for their non-market values. As a result, the Forest Service serves increasingly diverse segments of American society. Today, the Payette Forest manages the land as much for its wilderness and scenic integrity, recreational opportunities, biological diversity, and water and air quality, as it does for traditional uses.

## MANAGEMENT DIRECTION

The 1988 Payette National Forest Plan emphasized the production of goods and services tied to the accomplishment of multiple-use objectives, including the production of wood fiber, maintaining or enhancing visual quality, providing recreation opportunities, and protecting and improving fish and wildlife habitat. The revised Plan strives to achieve desired outcomes for restoration or maintenance of vegetation and watershed conditions, including terrestrial, riparian, and aquatic habitats. Goods and services tied to accomplishment of multiple-use objectives will be the product of management actions designed to meet these desired outcomes.

Land management on the Forest is driven by the goals and objectives listed in Chapter III of the Plan. The Responsible Official, in consultation with the Revision Team, reviewed the goals and objectives in the 1988 Plan and found many to be still appropriate, and many that needed to be changed or strengthened. Similarly, some Plan standards and guidelines were also modified or deleted during revision.

Table I-5, on the following page, summarizes the changes in management prescription allocations made in the Plan. The Payette National Forest 1988 Forest Plan allocations, as amended by Pacfish and Infish and the 1998 Biological Opinions (i.e., Alternative 1B in the supporting FEIS), have been cross-walked to similar allocations values used in the revised plan to allow this comparison. Chapter III of the revised Forest Plan describes these allocations and their purpose in greater detail.

**Table I-5. Comparison of Cross-walked 1988 Forest Plan Management Prescriptions and Revised Forest Plan Management Prescriptions, In Acres and Percent of Forest**

| <b>1988 Plan Cross-walked Management Prescriptions</b>                                               | <b>Acres</b>     | <b>%</b>   | <b>Revised Plan Management Prescriptions</b>                                                         | <b>Acres</b>     | <b>%</b>   |
|------------------------------------------------------------------------------------------------------|------------------|------------|------------------------------------------------------------------------------------------------------|------------------|------------|
| 1.1 - Designated Wilderness                                                                          | 768,000          | 33         | 1.1 - Designated Wilderness                                                                          | 768,000          | 33         |
| 1.2 – Recommended Wilderness                                                                         | 215,000          | 9          | 1.2 – Recommended Wilderness                                                                         | 215,000          | 9          |
| 2.1 – Wild and Scenic Rivers                                                                         | 4,000            | <1         | 2.1 – Wild and Scenic Rivers                                                                         | 4,000            | <1         |
| 2.2 – Research Natural Areas                                                                         | 14,000           | 1          | 2.2 – Research Natural Areas                                                                         | 14,000           | 1          |
| 3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial, and Hydrologic Resources          | 0                | 0          | 3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial, and Hydrologic Resources          | 401,000          | 17         |
| 3.2 – Active Restoration and Maintenance of Aquatic, Terrestrial, and Hydrologic Resources           | 0                | 0          | 3.2 – Active Restoration and Maintenance of Aquatic, Terrestrial, and Hydrologic Resources           | 198,000          | 9          |
| 4.1a – Undeveloped Recreation: Maintain Inventoried Roadless Areas                                   | 1,000            | <1         | 4.1a – Undeveloped Recreation: Maintain Inventoried Roadless Areas                                   | 57,000           | 3          |
| 4.1b – Undeveloped Recreation: Maintain Undeveloped Character with Allowance for Salvage Harvest     | 533,000          | 23         | 4.1b – Undeveloped Recreation: Maintain Undeveloped Character with Allowance for Salvage Harvest     | 0                | 0          |
| 4.1c – Undeveloped Recreation: Maintain Unroaded Character with Allowance for Restoration Activities | 50,000           | 2          | 4.1c – Undeveloped Recreation: Maintain Unroaded Character with Allowance for Restoration Activities | 135,000          | 6          |
| 4.2 – Roaded Recreation Emphasis                                                                     | 45,000           | 2          | 4.2 – Roaded Recreation Emphasis                                                                     | 18,000           | 1          |
| 5.1 – Restoration and Maintenance Emphasis within Forested Landscapes                                | 173,000          | 8          | 5.1 – Restoration and Maintenance Emphasis within Forested Landscapes                                | 193,000          | 8          |
| 5.2 – Commodity Production Emphasis within Forested Landscapes                                       | 456,000          | 20         | 5.2 – Commodity Production Emphasis within Forested Landscapes                                       | 247,000          | 11         |
| 6.1 – Restoration and Maintenance Emphasis within Shrubland and Grassland Landscapes                 | 8,000            | <1         | 6.1 – Restoration and Maintenance Emphasis within Shrubland and Grassland Landscapes                 | 50,000           | 2          |
| 6.2 – Commodity Production Emphasis within Grassland and Shrubland Landscapes                        | 0                | 0          | 6.2 – Commodity Production Emphasis within Grassland and Shrubland Landscapes                        | 0                | 0          |
| 8.0 – Concentrated Development                                                                       | 33,000           | 1          | 8.0 – Concentrated Development                                                                       | 0                | 0          |
| <b>Totals</b>                                                                                        | <b>2,300,000</b> | <b>100</b> | <b>Totals</b>                                                                                        | <b>2,300,000</b> | <b>100</b> |

# **Chapter II**

## **Analysis of the Management Situation Summary**

## **Changes to Chapter II between Draft and Final Plans**

In the Need for Change Topics section, the Changes Under the Preferred Alternative subsections in the DEIS have changed to Changes Under the Revised Plans. These subsections have been updated to reflect any new output or direction changes associated with the selected alternative from the FEIS, which is different from the preferred alternative in the DEIS.

In the Other Changes or Developments Since the Pre-AMS section, a number of items have been added, deleted, moved, or updated to reflect additional changes that have occurred since the Draft Plan. For example, the Natural Resource Agenda discussion in the Draft Plan has been replaced with a discussion of the National Fire Plan, Cohesive and Comprehensive Strategies, and Healthy Forests Initiative in the Final Plan.

# **CHAPTER II**

## **Analysis of the Management Situation Summary**

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## INTRODUCTION

This chapter summarizes the Analysis of the Management Situation (AMS). The AMS is a collection of documents and project record information about the Forest that has been compiled over the past 15-20 years. The Payette National Forest completed an AMS in the 1980s as part of the Forest planning process. The original AMS collected and analyzed data designed to display Forest management conditions, needs, products, and services. In the 1990s, the original AMS was used as baseline information to validate whether management direction in the Forest Plan released in 1988 was effective in addressing the needs that were identified in the 1980s.

As part of Forest Plan revision for the Southwest Idaho Ecogroup, the Payette, Boise, and Sawtooth Forests produced a Preliminary AMS (USDA Forest Service 1997). Although this document summarized current physical, biological, social, and economic conditions of the Ecogroup, the focus was not on presenting benchmark information about the Forests, but rather determining any need to change or establish new management direction, following direction in the Region 4 Desk Guide – Bridge to Revision (USDA Forest Service 1993) and National Forest Management Act (NFMA) regulations {36 CFR 219.12 (e)(5)}. Sources for identifying Need For Change included Forest Monitoring Reports, past Forest Plan amendments, changes in national and regional management direction, and internal and external comments on parts of the forest plans that were not working well. The revision emphasized correcting the original plans, realizing that some of the original management direction was still working well and could be carried forward.

The Preliminary AMS also introduced the ecosystem management framework for revising the Forest Plan, and provided the basis for formulating a Proposed Programmatic Action and management alternatives. Thus, the Preliminary AMS was the beginning of the public scoping process for revision, based on the premise that the type and depth of information presented in the Preliminary AMS would more effectively involve the public early in the revision process than would a more traditional but limited scoping letter. The Ecogroup wanted the public to use the information in this document, along with the Proposed Programmatic Action, to provide detailed comments for alternative development.

Chapter II of this Forest Plan represents a revised AMS summary that is based on the Need For Change topics in the 1997 Preliminary AMS, but also incorporates public comments, changes, and new information since the release of the Preliminary AMS. As such, this AMS is organized into the following sections:

- **Introduction** – Describes the purpose of the AMS and the organization of this chapter.
- **Determining Need For Change** – Describes how the Forest determined the Need For Change topics that generated and set the boundaries for Forest Plan revision.
- **Need For Change Topics** – Describes the major complex Need For Change topics and how the selected alternative for the revised Forest Plan and Final EIS addresses this Need For Change.

- **Strengthening Current Management Direction** – Describes Need for Change items that were addressed by simply changing or adding new management direction in the Plan.
- **Other Changes or Developments Since the Preliminary AMS** – Describes how the selected alternative for the revised Forest Plan and Final EIS addresses other changes or proposed changes in direction that have occurred since the release of the Preliminary AMS.
- **Continuous Assessment and Planning** – Describes the Forest’s strategy for addressing changes that may occur following forest plan revision.

### **Payette Settlement Agreement**

On April 27, 1994, the Wilderness Society, Idaho Conservation League, Sierra Club, and Idaho Sportsmen's Coalition filed a lawsuit against the Payette National Forest, challenging the Forest Plan’s proposed management of timber, roadless areas, fish and wildlife, and other items. As a result of negotiations with the plaintiffs, a settlement agreement was signed on December 21, 1995. It required that the Forest Service complete a revised Forest Plan for the Payette National Forest by December 31, 2000. Due to unforeseeable delays, the Payette Forest requested an extension of this date to June 2003, and the plaintiffs and judge granted this request.

### **Idaho Sporting Congress Suit**

In 1995, the Idaho Sporting Congress (ISC) filed a complaint against the Boise and Payette Forests for failing to supplement their Forest Plan EISs to reflect changes caused by large wildfires in 1994. The Idaho District Court upheld the Forest Service on all grounds in its September 25, 1996 decision. The plaintiff (ISC) appealed this decision to the 9th Circuit Court of Appeals. In August 1997, a three-judge panel of the Circuit Court upheld the original decision. Part of the Circuit Court’s rationale for deciding in favor of the Forest Service was the fact that the Boise and Payette Forests were already addressing changes needed to the Forest Plans--including changed conditions created by the 1994 fires--through their Forest Plan revision process.

## **DETERMINING NEED FOR CHANGE**

### **How Needs for Change Were Identified**

In 1997, the Responsible Official documented the need to establish or change Forest Plan management direction (Need For Change) in the *Preliminary Analysis of the Management Situation Summary* (USDA Forest Service 1997). The Responsible Official used four primary sources for determining Need For Change items:

- 1) Results of the three Forest Plan monitoring reports.
- 2) Comparison of the latest regulatory requirements and Agency Policy, Manual and Handbook direction with existing Forest Plan direction.

- 3) New information, such as the *Integrated Scientific Assessment for Ecosystem Management in the Interior Columbia Basin and Portion of the Klamath and Great Basins* (Quigley et al. 1997), the *Federal Wildland Fire Management Policy and Program Review* (USDA Forest Service 1996) *Conservation of Columbia Basin Fish: Final Basinwide Salmon Recovery* (US Dept. of Commerce, NMFS 2000), and the *10-year Comprehensive Strategy, A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment* (USDA Forest Service et al. 2002).
- 4) Comments from Forest employees who have been implementing the Forest Plans.

Upon review of the existing documentation, summarized below, the Responsible Official identified multiple, significant, Need for Change issues.

### **Forest Plan Monitoring Reports**

National forests monitor and evaluate land management activities to determine how well objectives have been met and how well standards and guidelines have been applied. The Forest-wide Monitoring and Evaluation Report (USDA Forest Service 1996) was completed and made available to the public in 1996. The report described changed conditions since the Forest Plan was released and recommended changes where appropriate. These conditions included:

- Since 1989, wildfire has affected nearly 13 percent of the land base on the Payette. Since the 1996 report was published, another 19 percent of the Forest has burned, for a total of nearly 32 percent of the Forest affected by wildfire since 1989. A substantial portion of this area has burned so intensely that large-sized timber stands have shifted to the grass/forb/shrub/seedling size class.
- Since the release of the 1988 Forest Plan, wildfire has affected nearly 32 percent of the land base on the Payette. A substantial portion of this area has burned so intensely that large-sized timber stands have shifted to the grass/forb/shrub/seedling size class.
- Substantial increases in non-native plants and tree mortality from insects have occurred in localized areas.
- Impacts to water quality from human-caused sediment and other pollutants (e.g. nutrients, temperature) have increased in some areas, and the State of Idaho has listed a number of stream segments on the Payette Forest as 303(d) water quality limited water bodies.
- Species listed under the ESA have changed. Some species have been added to the list (chinook salmon, steelhead, bull trout, Canada lynx, northern Idaho ground squirrel); some species are now proposed for listing, or are considered candidates for federal listing. Other species have been de-listed (peregrine falcon), or are proposed for de-listing (bald eagle). In addition, new plant species are proposed for the Region 4 Sensitive Species List.

### **Regulatory Requirements and Agency Policy, Manual, and Handbook Direction**

The latest regulatory requirements and Agency policy, and Forest Service Manuals and Handbook direction were reviewed for all relevant resources to determine whether the Forest

Plan follows or addresses the most current direction. New national policies—Roads Policy, Roadless Rule, National Fire Plan, Healthy Forests Initiative, etc.—have also been considered during the revision process. Examples of important changes in regulatory requirements or agency policy, manual and handbook direction include:

- Federal Wildland Fire Management Policy and Program Review (USDA Forest Service 1996) and the 10-year Comprehensive Strategy, A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment (USDA Forest Service et al. 2002).
- Amended Forest Plan direction (Pacfish/Infish and 1995 and 1998 Biological Opinions) and consultation for species recently listed under the ESA has required resource mitigation well beyond original Forest Plan estimates for protection. This, in turn, has affected estimated levels of services (e.g., recreation opportunities) and products (e.g., timber harvest and livestock grazing opportunities).

### **New Information**

Since the Forest Plan was released, new information has come to light that might influence Forest management policies or procedures. Some of this new information is related to changed conditions like those mentioned above. Other sources include broad-scale research assessments—like the Interior Columbia Basin Ecosystem Management Project Scientific Assessment, or the Canada Lynx Conservation Assessment—or changes in regional management direction, such as Interim Strategies of Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (Pacfish) and the Inland Native Fish Strategy (Infish) that are designed to protect habitat of anadromous and native fish. These new information sources were reviewed to identify what components need to be incorporated into new or changed Forest Plan management direction.

### **Internal Comments**

Comments were solicited from Forest Service employees who have helped implement the Forest Plan during the last planning period. These comments were reviewed to determine what implementation problems have occurred, how they might relate to specific Forest Plan direction, and what changes could be made to help solve or reduce those problems in the future.

For example, a key component of risk management is to allow administrative flexibility at the local level to the extent compatible with addressing mid- and broad-scale risks to resources. Probably the most significant internal comment received concerning current plan implementation was that direction resulting from Pacfish and Infish and associated 1995 and 1998 Biological Opinion amendments removed local manager flexibility needed to balance and address the different spatial and temporal resource, social, and economic risks. Decisions that attempt to address all risks across a large geographic area, with a “one-size-fits-all” approach, typically result in fewer management options at the site level and increase the probability that a decision may not be appropriate for a particular site.

The plan amendments noted above established standards and guidelines at levels above the local site, typically for an entire river basin, using averages or blanket prescriptions across a wide array of conditions. The result was that, for some sites, the standards were too high, and for others, too low. This incompatibility often affected desired outcomes, and in some cases prevented desired outcomes from being achieved. The direction also required additional process and analysis (e.g., watershed analysis) at the same level and intensity based on an action type or location. The common level and intensity for analysis required was not always needed to inform decisions and thus resulted in unnecessary delays and expense in implementation of actions.

## **Forest Plan Decisions**

The results of the reviews cited above revealed that portions of the existing Forest Plan direction were still appropriate, while other direction needed adjustment in light of changed resource conditions, new or changed regulatory requirements or Agency policy and direction, and new information. The Responsible Official, in consultation with the Revision Team specialists, compared the initial list of Need For Change topics against the six decisions made in forest plans to identify which topics were planning-related versus project-level issues. The six types of decisions made in forest plans are listed below.

- 1) Establishment of Forest-wide multiple-use goals and objectives, including a description of the desired future condition of the Forest (36 CFR 219.11[b]).
- 2) Establishment of Forest-wide standards and guidelines to fulfill the requirements of 16 USC 1604 (NFMA) applying to future activities (36 CFR 219.13 to 219.27).
- 3) Establishment of management areas and direction applying to future activities in those management areas (36 CFR 219.11[C]).
- 4) Designation of lands not suitable for timber production (16 USC 1604[k] and 36 CFR 219.14) and the allowable sale quantity (ASQ) determination for timber that may be sold from the suited timber base during each decade (36 CFR 219.16(a)).
- 5) Establishment of monitoring and evaluation requirements that will provide a basis for a periodic determination of the effects of management practices (36 CFR 219.11[d]).
- 6) Recommendation to Congress of areas for wilderness classification where 36 CFR 219.17(a) applies.

## **Management Direction that Needs to be Changed or Established**

Upon review of existing documentation, the Responsible Official made a determination to change or develop new management direction in the following Forest Plan revision topics. These topics are described in detail later in this chapter.

- Topic 1 - Biological Diversity
- Topic 2 - Fire and Smoke Management
- Topic 3 - Habitat Fragmentation and Disruption
- Topic 4 - Non-native Plants
- Topic 5 - Rangelands/Grazing Resources
- Topic 6 - Hydrologic, Riparian, and Aquatic Resources
- Topic 7 - Timberland Suitability
- Topic 8 - Management Emphasis Areas

These changes were presented to the public in the 1997 Preliminary AMS, and they have been modified somewhat since then based on external and internal comments and new information. The most recent changes are described below.

## NEED FOR CHANGE TOPICS

This section describes the issues or areas where the Responsible Official identified a Need For Change in Forest Plan management direction. The topic descriptions are divided into five parts:

- **Background** - Briefly describes the resource or issue, and current management direction sources.
- **Current Condition** - Summarizes the current condition of the resource or issue, focusing on areas where current management direction is not being met or does not exist.
- **No Action** - This section presents the effects of continuing current management direction (No Action) associated with the Need For Change topics.
- **Need to Establish or Change Management Direction** - Targets the specific area where management direction needs to change or to be developed to address changed conditions.
- **Changes Under the Revised Forest Plan** – Summarizes changes in management direction, monitoring, area adjustments, etc. in the revised Plans that address Need For Change.

### Topic 1 - Biological Diversity

#### **Background**

Biological diversity is the variety and abundance of life and its processes. It includes all living organisms, the genetic differences among them, and the communities and ecosystems in which they occur. Biological diversity also refers to the compositions, structures, and functions of species and habitats and their interactions. The interactions of biological and physical components operate at multiple scales, from micro-sites to regional landscapes. The goal of conserving biological diversity is to support sustainable development by protecting and using biophysical resources in ways that do not diminish the world's variety of genes and species, or do not destroy important habitats or ecosystems.

The variety of habitats and species on federal and adjacent lands puts land management agencies in a key role for managing and protecting biological diversity. This is especially true for rare and unique ecosystems, and species that are highly valued or are considered to be on the brink of extinction (Salwasser 1989). Consequently, current management direction (CFR 219.26 and 219.27, FSM 2070, and the Forest Plans) for biological diversity concentrates on numbers of species and diversity of habitats.

In general, prior to human-caused disturbances, major changes in native biodiversity were a result of shifts in climate or geology. However, human influences have substantially affected ecological processes and biodiversity, and will likely continue to do so.

### **Current Condition**

Although the 1988 Forest Plan addresses many of the key indicators of biological diversity, these indicators are largely described and analyzed as separate functional entities. There is little information on how these indicators interact with one another and with natural processes, particularly at the Forest-wide scale.

The 1988 Forest Plan does not adequately address all biological diversity elements (coarse filter, fine filter, Historical Range of Variability [HRV]) defined within the Ecogroup's Ecosystem Management Framework. The 1988 Plan tends to focus on a species-by-species approach (fine filter) rather than looking at the interactions of whole ecosystems (coarse filter). This revised Forest Plan takes a multi-scale and temporal framework approach that addresses and analyzes fine- and mid-scale indicators (TES species, MIS, rare and unique species and habitats), broad scale indicators (vegetation communities and watersheds), and natural processes (fire, erosion, and hydrology) within an integrated ecosystem management framework.

To maintain or restore functioning and sustainable ecosystems and the multiple values they hold for humans, the following questions must first be addressed:

- What is out there? (composition, structure, diversity, relative abundance)
- Where is it? (distribution, patterns, connectivity)
- Where did it come from? (processes and disturbances, geoclimatic capability, HRV)

The following discussion of biological diversity components begins with a description of landscape-level vegetation patterns and processes, and then moves to the structure and dynamics of key ecosystem components and species.

**Composition/Structure/Function** - Maintenance of compositional, structural, and functional diversity is essential for sustaining ecological processes, such as regulation of hydrologic cycles, carbon and nutrient cycling, and fire regimes. Current conditions and trends indicate that some plant communities on the Forest have substantially changed from what they were historically (ICBEMP 1997a). Current management direction lacks adequate definitions and direction for desired vegetation components that provide for landscape diversity. An understanding of the vegetation component patterns on the landscape and how they are connected is critical for species habitat management.

**Disturbance Processes** - Disturbance processes—such as fires, droughts, landslides, floods, insects, and pathogens—are common in nature, and these agents of change and their interactions heavily influence the character of ecosystems. Disturbance processes can be desirable in many cases. Current management direction does not consider or recognize the frequency, size, intensity, and severity of disturbance processes in determining vegetative conditions and how management practices have altered them. For example, with the exclusion of fire, stand and shrub densities are often much greater than they were historically. In addition, species composition has changed and increased the susceptibility of some plant communities to large-scale infestations of insects, pathogens, and uncharacteristic wildfires. Desired conditions for stand components for all forest cover types and structural stages need to be designed to meet management goals and objectives that also take into account expected disturbance regimes.

Several large wildfires have occurred since the 1988 Forest Plan was approved. These fires have altered ecological components, patterns and processes across thousands of Forest acres.

**Soils Functions and Processes** - The physical, chemical, and biological properties of soils regulate biological productivity, hydrologic response, site stability, and ecosystem resiliency. The sustainability of soil-hydrologic function and processes is currently at risk in localized areas where redistribution of nutrients has resulted from changes in ground cover (combination of organic material plus plants), composition, pattern, removal of the larger size component of wood, and uncharacteristic fire.

**Snags, Down Logs, and Coarse Woody Debris** – Snags, down logs, and coarse woody debris are critical elements of ecosystems that maintain soil productivity, provide terrestrial and aquatic habitat, and contribute to other critical ecological processes. Management direction needs to consider the effects of management activities on these ecosystem elements to ensure a sustainable diversity of size and decay classes across the landscape.

**Threatened and Endangered Species** - Federally listed Threatened and Endangered wildlife species on the Forest include the gray wolf, bald eagle, northern Idaho ground squirrel, and Canada lynx. The peregrine falcon has only recently been de-listed. Listed fish species include sockeye salmon, chinook salmon, steelhead trout, and bull trout. Potential habitat may exist for listed plant species such as Macfarlane's four-o'clock and Ute ladies'-tresses, and Spalding's catchfly is a candidate for listing. Management direction in the 1988 Forest Plan for these species is generally to follow recovery plans developed by the appropriate regulatory agencies, with the ultimate objective of de-listing the species once stable viable populations are established and maintained.

**Sensitive Species** - Species are designated "Sensitive" by the Regional Forester because their populations or habitats are limited (narrowly endemic) or trending downward, or because little information is available on their population or habitat trends. The primary purpose of the sensitive species program is to conserve or improve habitat conditions for these species to prevent them from becoming federally listed. Currently, a number of species are designated



Sensitive and have some probability of occurring on the Forest. More species are proposed for listing. Current management direction is to follow conservation assessments and plans developed at the Regional or Forest level. However, because the Forest Plan was developed before the sensitive species program began, there is little direction regarding sensitive species.

*Management Indicator Species (MIS)* - The NFMA regulations direct national forests to identify MIS whose populations and habitat conditions indicate potential impacts from human activities, including Forest management. By monitoring and assessing habitat conditions of indicator species, managers can estimate effects on other species with similar habitat needs. MIS in the 1988 Forest Plan were selected because their habitat requirements encompass a diverse range of conditions. However, monitoring and management experience with MIS since the Plan was developed have indicated that some species may not be the best indicators for the habitats they are intended to represent. For instance, adult chinook salmon may not be the best indicator for on-Forest habitat because their populations are affected by many off-Forest activities and conditions. Groups of species that use similar habitats may also be more useful as management indicators than individual species.

### **No Action**

Implementation of the 1988 Forest Plan over the next ten years would result in a continued focus on a species-by-species approach, using short time frames rather than dealing with issues at larger spatial and temporal scales.

Ecosystem health would continue to change. Some forest species—such as Douglas-fir and whitebark pine—would become more susceptible to insect and pathogen infestations. Old, single-story structured ponderosa pine would continue to decrease. Sagebrush and grassland community types would likely continue to decline due to exotic plants and animals and other factors. Riparian area health would likely improve slowly over time under Pacfish/Infish direction.

Snags, down logs, and coarse woody debris guidelines in the 1988 Plan would continue to be inadequate for maintaining functional and structural diversity. Current direction would have an unknown effect on maintaining long-term soil productivity and plant, wildlife, and fish habitat diversity.

Under 1988 Forest Plan direction, habitat fragmentation would likely continue and connectivity across the landscape would decline.

Because the 1988 Forest Plan has little or no direction for Sensitive species, there is a possibility that Sensitive wildlife, fish, and plant species would decline and/or become listed under the ESA.

Efforts to lower risks to plantations from disturbance would continue at a low, but relatively ineffective rate.

Under 1988 Forest Plan direction, the Forest would continue to focus on old growth, without considering the amount, distribution, and importance of all structural stages on a Forest-wide scale in Forest management.

**Need to Establish or Change Management Direction**

There is a need to develop vegetation management direction that provides for short and long-term biological, physical, economic and social sustainability. The 1988 Forest Plan lacks adequate direction for potentially needed restoration, management, and maintenance of plant communities, including vegetative structure, species composition, distribution, and patterns, and how they are influenced by soil and disturbance processes in relation to historical and current conditions. Land management practices alter the landscape dynamics, generating a greater need to integrate management direction for all resources including a concern for providing sufficient habitat to maintain viable species populations within the context of overall multiple use objectives.

Specific needs for change are:

- To provide management direction for the maintenance and restoration of habitats for species of concern (Threatened, Endangered, Proposed, Candidate, Sensitive, MIS, at risk, rare and unique species).
- To develop management direction that minimizes habitat fragmentation and maintains or restores landscape linkages and habitat edge.
- To develop snag, down log, and coarse woody debris guidelines that help maintain ecosystem structure and function.
- To provide management direction that addresses important soil processes—such as erosion rates, mass stability, infiltration, and nutrient cycling—as they relate to desired conditions and the management of other resources.
- To develop management direction that describes desired structural stages, composition, and density for each vegetation group or type.
- To develop management practices and standards and guidelines that address appropriate stocking levels, stand structure, and species composition that incorporates the extent and frequency of all types of disturbances.

**Changes Under the Revised Forest Plan**

Changes to habitat conditions in terms of composition/structure/function were analyzed for the Interior Columbia River Basin (Wisdom et al. 2000). Changes to habitat within the planning unit were evaluated in a similar manner and compared to the Basin-wide findings. Based on this evaluation, habitats with the greatest change have been identified, and implications for species that use them were analyzed. Management direction including goals, objectives, standards and guidelines for habitats most changed should result in improved conditions for maintaining and restoring biological diversity under the revised Plan. Additionally, new MIS better reflect those habitats that are of a concern, basin-wide and locally.

The development of desired conditions for vegetation components, which evolved based on consideration of the Historical Range of Variability (HRV) for vegetative types and their associated disturbance processes, is the most significant change in management direction related to vegetation management. The lack of adequate definitions and direction for desired vegetation components in the 1988 Forest Plan made it difficult to maintain the compositional, structural, and functional diversity across the landscape, and to sustain ecological processes and manage species habitat.

As many of the vegetation components are identified as being outside of historical ranges or properly functioning condition, the revised Forest Plan provides management direction to maintain or restore plant community attributes (species composition, size class, canopy closure, snags and coarse woody debris) through the goals, objectives, standards and guidelines. Maintaining or restoring vegetation components to desired conditions, and the ecological processes that supported those vegetation components, will support efforts to achieve overall biological diversity necessary to sustain individual species of concern and minimize the risks of uncharacteristic disturbances, while providing economic, social, and cultural opportunities for Forest users

## **Topic 2 - Fire and Smoke Management**

### **Background**

The 1897 Organic Act states that forests shall be protected against destruction by fire. Subsequent laws describing land management practices often used the phrase “protect from” to describe fire management. Early Forest Service policy interpreted protection as suppression, and for several decades fire management focused on suppression efforts. In the 1970s, emphasis began to shift from full suppression to responses that more appropriately reflected values that were at risk. In addition, information regarding the role and function of fire in ecosystems began to increase. However, wildfires in the past 15 years (particularly the 1994 and 2000 fire seasons) prompted the Departments of Interior and Agriculture to review fire policy and programs. This review resulted in an update of the Forest Service Manual, which includes direction that Forest Plans will be evaluated to ensure fire management considerations are incorporated. This direction includes the use of fire to achieve management objectives and consider the impacts of fire exclusion.

The Federal Clean Air Act is a legal mandate to protect human health and welfare from air pollution. National Ambient Air Quality Standards are defined in the Act as levels of pollutant above which detrimental effects on human health and welfare may result. Particulate matter emissions are produced from Forest Service activities such as prescribed fire, mining, and road construction and use. Another provision of the Clean Air Act that affects Forest Service activities is the Prevention of Significant Deterioration provisions. The premise behind these provisions is to prevent areas that currently have very clean air from becoming polluted. The 1977 amendments to the Clean Air Act established Class I areas that were to have specific Air Quality Related Values, including visibility identified for these areas. Three such Class I areas—the Sawtooth, Hells Canyon, and the Selway-Bitterroot Wilderness Areas—were recognized in the Forest’s area of influence.

**Current Condition**

Wildland fire occurrence throughout the Forest is currently high. From 1989 to 1998, an average of 187 fires occurred annually, 93 percent of them from lightning. Although average wildfire occurrence per year has not changed since the 1988 Plan was completed, compared to the 20-year period before its release, the average number of acres burned per year has risen dramatically. Since 1989, nearly 32 percent of the Forest land base has been burned from wildfire. Quigley and Arbelbide found that acres burned within the Columbia River Basin during the 1980s exceeded those of the 1950s. They related the change to increased fuel loadings, both in amount and extent, from previous conditions (Quigley and Arbelbide 1997a, b, c, d).

Historically, fuel loadings were lower in many areas of the Forest, and areas with high loadings were smaller and more isolated. Currently, fuel loadings have increased, and areas with moderate to high fuels are larger and more contiguous. In addition, resources available to fight fire are sometimes limited, particularly when multiple fires are burning within the Forest and across the country. These factors, in combination with certain weather conditions, can lead to large fires. However, Quigley and Arbelbide noted that, even though acres burned by wildfire have been increasing over the past few decades, the amount of area burned is still below historical levels (Quigley and Arbelbide 1997a, b, c, d).

Data used to prepare the UCRB Draft EIS (ICBEMP 1997a) indicated that, in some cases, fire regimes within the Forest have changed from historical conditions. Currently the amount of area that would likely have stand-replacing fires has increased from 63 percent to 72 percent, while the amount of area that historically had ground fires has decreased from 38 percent to less than 27 percent. The ICBEMP Integrated Scientific Assessment (ICBEMP 1996b) related these changes to the disruption of historical disturbance processes, combined with altered vegetative structure and composition.

Historically, wildfires throughout the Forest ranged from ground fires to stand-replacing fires, depending on the vegetative community. Currently, some wildfires create more homogeneous landscapes than those that typically occurred within historical fire regimes. An example is the 1994 Chicken Fire, which was primarily stand replacing in vegetative communities that historically experienced ground fires. Because of the nature of this uncharacteristic fire, species composition, vegetative structure, and associated habitats have been simplified in some areas. Investments have also been lost including many conifer plantations burned by wildfires over the past 10 years.

In other cases, however, some recent wildfires may have been more similar to historical fires. For example, the 1994 Corral Fire burned through vegetative types that historically burned infrequently. The effects across the landscape from this kind of fire varied, depending on weather, fuel loadings, and the vegetative community type. In some places, the same fire might have been a ground fire, and in other places stand replacing. These kinds of fires create a diversity of vegetative communities and a variety of landscape mosaics.

Fire suppression costs have risen dramatically since the 1970s. Nationally, suppression costs have increased an average of \$17.4 million per year since 1977. Suppression costs within the Ecogroup are following this trend. For instance, from 1986 through 1996, costs on the Payette Forest have averaged over \$14 million a year.

The 1988 Forest Plan generally does not address the role of fire as an ecosystem process or tool for maintaining or restoring ecosystem health, particularly in vegetative communities that historically burned more frequently. In the past few years, prescribed burning as a management tool has received national attention, emphasis, and funding. The ability to accomplish national fire management objectives, priorities for ecosystem management, and achievement of desired fuel loadings, may be limited by missing, vague, or conflicting 1988 Forest Plan direction.

In addition, updated Forest Service Manual direction requires Fire Management Plans for all areas subject to wildland fire. These plans are dependent on Forest Plan direction. In order to develop the needed Fire Management Plans, the Forest Plans must provide clear and integrated desired conditions, goals, and objectives for fire management.

Population growth within and around Forest boundaries has led to increases in wildland/urban interface. Much of this growth has taken place at lower elevations within or adjacent to dry forest or rangelands. In some of these areas, the risk of uncharacteristic wildfire is high. Often, small communities, isolated subdivisions, or owners of concentrated recreation facilities do not have the resources to address fire risk (protection or prevention) or to assist in the control of wildfires. The growth of the wildland/urban interface increases the risk of wildfire spreading from private to federal lands, and vice versa.

Wildfires can alter watershed conditions and increase the risk of floods and landslides. In the wildland/urban interface, threats to life, property, and municipal watersheds from such events are much greater than in non-interface areas. The social and economic costs of mitigating these risks can be high.

Vegetation treatments that can reduce wildfire risks in wildland/urban interface areas may conflict with existing Forest Plan direction for various resources. In addition, planning and implementing treatments in or adjacent to wildland/urban interface areas depends on collaboration between the Forest Service, private landholders, local, county, and state governments, and other federal land management agencies. All parties must understand the risks associated with wildland/urban interface and their role in reducing those risks. Because of the complexity of the issues, goals and objectives for wildland/urban interface should be addressed during forest planning to clearly articulate management priorities, rather than on a project-by-project basis.

The 1988 Forest Plan provides flexibility in incorporating changes in the federal, state and local air quality requirements, as directed in the Clean Air Act. The 1988 Plan gives strong direction that meets or exceeds these requirements. However, there have been several subsequent changes and additions to these requirements that have not been incorporated into the 1988 Forest Plan.

The 1988 Plan does not consider the potential air quality conflicts associated with increasing fire use to restore fires as an ecosystem process. Increases in smoke emissions from fire use and the potential environmental consequences, were not analyzed for the 1988 Forest Plan. In addition, the trade-offs between smoke produced from fire use and wildfire were not evaluated.

**No Action**

Suppression actions would continue to be the primary focus of fire management to protect life, property, and resources. Preventative activities to reduce the risks and costs of fire could vary, even though national emphasis on these types of treatments has been increasing. Within Region 4 and the Forest, acres treated with prescribed fire have increased since the Plan was developed, and this increase is expected to continue. However, the ability to achieve the objectives of risk and cost reduction could be limited because fire management goals and objectives currently conflict with the goals and objectives for some other resources. These conflicts could reduce opportunities to treat areas at an appropriate scale.

Under the 1988 Plan, information about the role of fire as an ecosystem process and opportunities to restore that process to ecosystems would be limited. Prescribed fire would continue to be planned and implemented on a project-by-project basis rather than at a programmatic level, which would be more effective and efficient. The 1988 Plan may have to be amended to reflect new manual direction that resulted from recent changes in national fire management policy and related program reviews conducted by the Departments of Interior and Agriculture.

Under the right weather conditions, large uncharacteristic fires would continue to burn in areas without fuel treatments and where vegetation has not been altered to a structure and composition that is more resistant to fires spread and intensity. Where uncharacteristic fires occur, vegetative communities would become more homogeneous. Burned Area Emergency Response (BAER) activities such as grass seeding would further increase vegetative homogeneity (see Non-native Plants). Landscape mosaics of structural stages would be simplified, particularly if uncharacteristic fires occur adjacent to or within areas burned in the last 10 years. This trend may reduce biological and wildlife habitat diversity, long-term soil productivity, and nutrient cycling.

Suppression costs would continue to increase, particularly on lands within or next to the wildland/urban interface. Additional costs may be incurred to reduce post-wildfire threats to life and property from floods, debris flows, and landslides. Investments such as plantations, bridges, and campgrounds may be at risk.

The approach for conducting air quality analysis on the effects of prescribed fire may not be consistent or appropriate, as the 1988 Forest Plan does not adequately provide direction. Without specific and consistent direction, the Forest may not adequately protect Air Quality Related Values, including visibility, as required by the Clean Air Act, for the Class I wilderness areas: Sawtooth, Hells Canyon, and Selway-Bitterroot. This would increase the risk of potential legal action against the Forests from state and federal regulatory agencies.

**Need to Establish or Change Management Direction**

There is a need to integrate fire management goals and objectives into Forest-wide desired conditions. In addition, there is a need to develop resource-specific fire-related goals and objectives. The 1988 Forest Plan does not adequately address fire starts, especially fires that escape initial attack and, under certain circumstances, cross multiple management areas and become landscape-scale in size. The 1988 Plan does not provide adequate goals and objectives for evaluating and comparing appropriate suppression response alternatives to factors such as social-political implications, economics, environmental considerations, public and firefighter safety, and values at risk. The use of fire as a management tool was described for some resources; however, fire over large areas (landscapes) was not considered, and the potential impacts on timber, wildlife, watershed, and other resources were not analyzed or are in conflict with each another.

There is a need to address National Fire Plan communities and wildland/urban interface in the Forest Plan. Interface was not considered when the 1988 Forest Plan was developed. Since the Plan was released, increasing wildfires in wildland/urban interface areas--both on the Forest and nationally--have made the interface issue a significant social and economic concern.

There is a need to incorporate consistent air quality and smoke management direction, desired conditions, and monitoring plans into the Forest Plan based on new air quality requirements at federal, state and local levels, including new Forest Service direction.

There is also a need for the Forest Plan to address the recent emphasis on increased prescribed fire to improve ecosystem health and reduce the risk of large uncharacteristic fire, and the impacts that emphasis may have on air quality.

**Changes Under the Revised Forest Plan**

Under the revised Forest Plan, fire use is considered and integrated into Forest-wide desired conditions and goals where appropriate.

Management area goals consider the juxtaposition of adjacent areas and, where possible, are consistent in order to reduce conflicts when wildland fires cross management area boundaries.

Management area characterizations and goals highlight management area priorities in order to assist in the selection of appropriate suppression alternatives. In addition, the allowable range of Appropriate Management Responses (including wildland fire use) is identified for each management area, and considers the effects on resources and social-economic factors.

Fire's role as an ecosystem process is integrated into desired conditions and goals at the Forest-wide and management area level. Potential impacts from fire use have been evaluated. Fire use is limited in areas where it could have undesirable effects on resources.

National Fire Plan communities and wildland-urban interface areas are identified by management area, and objectives have been developed to prioritize fuels reduction treatments in these areas.

## Topic 3 - Habitat Fragmentation and Disruption

### **Background**

Fragmentation is the separation or isolation of similar types of habitat, either by natural events or human activities. Fragmentation is essentially the opposite of connectivity. Connectivity is the arrangement of habitats that allows organisms and ecological processes to move across the landscape. In landscapes with high connectivity, patches of similar habitats are either close together or linked by corridors of appropriate vegetation, stream channels, and waterways.

Habitat connectivity is a fundamental concept in considering species viability and sustaining biodiversity. Connectivity is needed to ensure genetic interaction and species recruitment following random catastrophic events. Some habitats are naturally patchy in distribution, as opposed to once contiguous habitat blocks that have become fragmented due to management actions. Many of the forested habitats on the west side of the Payette National Forest are naturally patchy in distribution, so fragmentation may not be a major concern.

The NFMA regulations direct that “fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species.” The NFMA further defines a viable population as “one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed (36 CFR 219.19).” Historically, fire, insects, and disease were the disturbance processes that modified habitat connectivity and caused disruption to species and habitats. Currently, management practices and facilities—including roads, trails, utility corridors, and vegetation management—may be causing habitat fragmentation.

Some species of wildlife and fish are sensitive to human activities in close proximity during the breeding, nesting, and wintering portions of their life cycles. Human activities, whether intentional or unintentional, can increase stress to these species and may reduce their reproductive success. Mitigation measures that restrict human activities in close proximity to the species during these life cycle periods can reduce stress at these critical times [36 CFR 219.19(a)4, and 36 CFR 219.21(d)(g)].

### **Current Condition**

The ICBEMP Integrated Scientific Assessment (ICBEMP 1996b, Wisdom et al. 2000) identified roads as a major impact on many physical and biological processes. Road access can increase human-related conflicts with wildlife and aquatic species by fragmenting habitats and increasing disruption. Increasing human access was also identified as a major impact on large predators, big-game populations, and many fish populations (Quigley and Arbelbide 1997c, Wisdom et al. 2000). Impacts include increased disruption, displacement, vulnerability to mortality, and barriers to migration.

One of the mitigation measures often used for Threatened and Endangered species is restricting access during breeding and rearing stages. In addition, access management is currently being used on the Forest to help achieve harvest goals related to elk and other species.



The 1988 Plan does not address road-related effects from a multi-resource approach. Direction in the 1988 Plan is focused on harvestable species of big game. However, road closures not only affect hunting pressures and big game populations, but recreation opportunities, watershed restoration, fish habitat, livestock grazing management, fire suppression, soil productivity, minerals access, and other activities. Monitoring strategies in the 1988 Plan often measure effectiveness for one issue or concern, but not for others.

Increases in habitat fragmentation within and between blocks of habitat have isolated some plant, wildlife, and fish populations, reducing their ability to move across the landscape. For some species, habitat fragmentation has reduced genetic interchange and increased population isolation.

Connectivity is important in aquatic and terrestrial ecosystems. Disruptions affect the connectivity of riparian areas and the linkages between aquatic and forested ecosystems. Where road crossings and concentrated human activity exist in aquatic ecosystems, a level of connectivity is lost compared to what existed historically. Aquatic systems can be affected by migration barriers that include dams, culverts, changes in stream channel, water quality, and de-watering.

### **No Action**

Under 1988 Plan direction, road construction levels and usages are likely to be affected by Pacfish, Infish, Biological Opinions, and new roads-related regulations. Any effects to habitat fragmentation would be addressed at the project level, if fragmentation were an issue. Disruption would also be assessed for site-specific projects where there are wildlife or aquatic habitat issues. State and federal agencies (Idaho Dept. of Fish and Game, U.S. Fish and Wildlife Service, National Marine Fisheries Service) would likely be involved in developing alternatives or mitigation when there are specific concerns about terrestrial or aquatic populations.

### **Need to Establish or Change Management Direction**

There is a need to develop integrated and consistent Forest Plan direction to provide fish, plant, and wildlife habitat connectivity. The 1988 Forest Plan has inadequate and ineffective direction concerning habitat fragmentation from roads, trails, timber harvest, fire, culverts, utility corridors, and other sources.

There is also a need to manage disruption in order to reduce species avoidance behavior, displacement, and mortality, and impacts to cover, nutrient cycling, hydrologic function, sex/age ratios in harvestable species, and species viability. These impacts have biological, physical, economic, and social implications.

There is a need to apply management strategies that improve habitat connectivity and decrease the adverse affects of roads, trails, dispersed use, and access.

**Changes Under the Revised Forest Plan**

Habitats that have changed from historic times were evaluated against conditions within the Forest. The evaluation found that some habitats/species have become isolated due to fragmentation within the Forest, mostly because of past Forest Service activities. Management direction is provided to reduce the extent of fragmentation for habitats within Forest Service jurisdiction.

Fragmentation has also occurred where Forest Service activities have been a minor contributor, but major problems have occurred for the habitat over a large area. Some activities on other ownerships have caused problems for some habitat/species. The remaining isolated Forest habitats are important to the persistence of species still using them. Management direction is provided to maintain, or if possible improve, these remaining habitats, although historical conditions likely can never be achieved.

Species have been identified to which disruption is a concern during important life stages. Direction is given to eliminate or reduce known disruptions to some species.

**Topic 4 - Non-native Plants****Background**

Non-native plants are species that do not have their origin in a local geographic area. They have not evolved with the local environment, including native plants, animals and disturbances. Non-native plants include exotics and noxious weeds. Exotic plants are species that have been introduced to an area, usually from a different continent. Some non-native plants have been intentionally introduced for restoration purposes such as road stabilization, range improvements, and Burned Area Emergency Response (BAER). Noxious weeds are plant species that can have detrimental effects on agriculture, commerce, and public health, and they are designated by state law. They spread aggressively and are difficult to manage. These species are generally not native to the United States.

Some exotic and noxious weed species thrive so well in areas that they tend to out-compete native species. Their success is due to the lack of natural control agents in their new environment, as well as prolific seed production, physiological advantages, and a propensity to establish in early to mid-successional vegetation communities. These plants can spread quickly and affect the amount and distribution of native plant species, as well as the animals that have evolved to rely on the native plants. This can result in a substantial change in the overall biological diversity of the affected area.

Non-native plant introduction, both intentional and unintentional, is a national, regional, and Forest concern. The NFMA addresses this concern, as do the Forest Service Manual and the Forest Plan. However, none of these documents provides a specific, aggressive strategy for identifying and controlling non-native plants, or restoring ecosystems to native plant populations and distributions.

Forest Service direction is to “control the establishment, spread, or invasion of non-indigenous plant species in otherwise healthy native vegetative ecosystems” (FSM 2080.1). Also, direction requires that Integrated Weed Management (IWM) determine the factors that are favoring the establishment and spread of noxious weeds, and then design prescriptions that reduce the risks, in accordance with the 1988 Farm Bill amendment of the 1974 Noxious Weed Act. The first priority of IWM is to prevent the introduction of new populations.

**Current Condition**

The ICBEMP Draft EIS (ICBEMP 1997a) and the ICBEMP Integrated Scientific Assessment (ICBEMP 1996b) have identified that non-native plant species are spreading rapidly throughout the Upper Columbia River Basin, which includes the Payette National Forest.

The Payette National Forest - Eight-Year Monitoring Report (USDA Forest Service 1996) also describes a growing concern with the spread and effects of non-native plants. Specifically, the expansion of non-native plants within the Forest is out-pacing containment and control efforts. There are many new infestations along highways and road systems--both on National Forest System lands and on adjacent jurisdictions--that pose significant risk of further expansion.

Non-native plants are being introduced unintentionally (for example, seeds from vehicle tires, or livestock, bird, and big-game droppings), and intentionally (restoration and rehabilitation seeding). Roads provide the primary corridors of access for non-native plants to establish new populations.

The 1988 Forest Plan does not address non-native plants from a multi-functional approach (for example, recreation, timber, and special uses). Also, 1988 direction addresses the treatment of noxious weed infestations rather than prevention, containment, and control. While an IWM approach is incorporated in national Forest Service direction, it is not addressed in the Forest Plan.

The 1988 Forest Plan does not include management direction or desired condition for designing or implementing BAER treatment strategies for evaluating the trade-offs between short-term needs of post-fire rehabilitation and long-term compatibility with ecosystem management. Due to the emergency nature and critical time requirements to plan and implement BAER activities, sufficient consideration may not be given to the long-term desired conditions for ecosystems. This may lead to improper BAER treatment strategies, rehabilitation measures, and inaccurate estimates for funding requests.

Seeded non-native plants have an impact on the establishment and growth of native vegetation in fire rehabilitation areas. Certain species have been purposely introduced to provide forage and cover in arid regions where vegetation has been removed. As a result, sites with monocultures or a few selected species have developed. In general, there is little likelihood that these introduced species will encroach into undisturbed areas. However, these conditions have affected fire regimes and wildlife habitat.

Fire regimes have been altered in some ecosystems due to exotic species. For instance, cheatgrass has taken over many dry shrubland types, increasing soil erosion and fire frequency. Such changes can have long-term impacts on ecosystem processes, composition, and structure.

**No Action**

The current spread of non-native plants would be expected to continue. Spotted knapweed, yellow starthistle, rush skeletonweed, and leafy spurge would become much more prevalent on the landscape, with impacts on agriculture, wildlife habitat, recreation, and community interests. These species would spread in areas where roads access the Forest and vegetative communities are susceptible to invasion.

Management direction would continue to emphasize containing and controlling new or established populations. The effectiveness would be minimal due to limited economic ability to treat the invaded areas. Cheatgrass and other exotics would increase, particularly in the sagebrush and dry forest communities where large uncharacteristic wildfires occur. In lower to mid-elevation areas where watershed and fire rehabilitation have occurred, homogeneous stands of non-native grasses would continue to dominate the landscape. BAER activities would continue to be based on the immediate short-term risks and would not be balanced with potential effects on long-term ecosystem conditions and needs.

**Need to Establish or Change Management Direction**

There is a need to modify current management direction to adequately address non-native plants and their effects on ecosystem structure, composition, and function. Non-native plants have greatly increased from historical conditions, and they have contributed to changes in fire regimes.

There is a need to establish a containment/control strategy that recognizes the difficulty and expense of controlling large and firmly established populations of non-native plants. This strategy needs to consider jurisdictional boundaries and all functional resource areas.

There is a need to incorporate non-native plant management direction and desired conditions for implementing post-fire BAER activities and non-structural range improvement projects. There is also a need to review seeding and revegetation practices associated with erosion control, fire rehabilitation, non-structural range improvement, and watershed restoration to ensure compatibility with the desired conditions and management priorities.

**Changes Under the Revised Forest Plan**

The revised Forest Plan establishes Forest-wide standards and guidelines that assist in preventing the establishment of new infestations and the transport of weed seed to other locations. This direction is primarily associated with roads, fire suppression, and other Forest activities. The revised Forest Plan also provides restoration direction to reduce the potential for exotic invasion of disturbed sites. It also identifies areas of high susceptibility to invasion and provides precautionary measures when planning and implementing site-specific management activities. Finally, the alternative provides IWM goals and objectives at the management area level for species and sites of concern.

## Topic 5 - Rangeland/Grazing Resources

### **Background**

The NFMA regulations require that Forest Plans determine potential capability and suitability for producing grazing animal forage and providing habitat for MIS (36 CFR 219.20). Range capability is defined as lands that have the potential to be grazed, given the physical constraints of grazing (distance from water, slope, access, etc.). Capability criteria (constraints) are used to determine a Forest's estimated acreage capable of producing forage. Identifying rangeland capability is not a decision to graze and is only determined at the Forest Plan level.

Suitability can only be addressed once capability is determined. Suitability identifies areas within the capable land base where grazing is appropriate within the context of land management considerations such as economics, environmental consequences, rangeland conditions, and other uses or values of the area. Typically, suitability decisions are made at the forest plan level, but can be done at the project or allotment level. Suitability issues are usually broad in scope and extend across a larger landscape than a single allotment. The Forest Plan revision EIS analysis should also clearly identify areas where grazing is not appropriate. The Forest Plan revision process will be used to evaluate different grazing suitability alternatives and will review range management prescriptions as directed in 36 CFR 219.20.

### **Current Condition**

The extent to which the demand for livestock forage is being met has not been determined. However, actual average livestock use levels (measured in Animal Unit Months or AUMs per year) are 19 percent lower than originally anticipated in the Forest Plan. Some probable contributing factors to this downward trend are:

- Protection of Threatened and Endangered species habitat,
- Increased livestock operator costs due to mitigation measures needed to protect habitat,
- Limited agency funding to implement capital improvements,
- Voluntary and involuntary reductions for resource protection, and
- Permit waivers back to the government that are not re-issued due to resource concerns.

**Capability and Suitability** - Current rangeland capability determinations do not make a clear distinction between cattle and sheep use.

Allotment stocking and capacity determinations have been revised regularly. There is a concern that some sites within existing allotments are not meeting resource objectives related to soil productivity, erosion, hydrologic function, vegetation, and aquatic and terrestrial habitat.

The 1988 Plan direction does not meet requirements outlined in Forest Service national direction, specifically regarding the determination of rangeland capability and suitability. The capability and suitability assessments in the original Forest Plan Final EIS need to be updated to include direction and research findings that have occurred since the release of the Plan. Updates to the capability and suitability assessments need to include the following considerations:

- Wildlife - There is inconsistent or insufficient management direction for some wildlife wintering areas that are also used by livestock. The combined use by livestock and wildlife may exceed desired use levels on vegetation [36 CFR 219.20(b)].

Bighorn sheep populations have declined on the Forest. Although bighorn sheep are not listed under the ESA, the U.S. Fish and Wildlife Service is concerned about their population status and threats to their local viability (Quigley and Arbelbide 1997c). One threat may be the potential for disease transmission from livestock. The 1988 Forest Plan lacks management direction that addresses this threat [36 CFR 219.20(b)].

- Recreation - Within the past 10 to 15 years, recreation use has increased above the 1988 Forest Plan projections. Reports of conflicts between livestock and recreationists have also increased. No direction or monitoring process exists in the 1988 Plan to address this increased use.
- Range Management Direction - New information regarding the proper functioning condition of rangelands susceptible to drought, and the identification of areas susceptible to soil erosion and recovery, needs to be obtained to determine allotment stocking, grazing capacities, and grazing management strategies. See Topic 6—Hydrologic, Riparian, and Aquatic Resources—for additional information on range management and its relationship to riparian resources.

### **No Action**

Site-specific development of grazing capacity determinations and capability would continue to occur on an allotment-by-allotment basis. Where existing suitable rangelands are in unsatisfactory condition, recovery would be slow or may not occur due to the limited economic resources to implement recovery strategies.

Management during drought conditions would be dealt with through the administration of utilization standards on an allotment-by-allotment basis. Range deterioration is possible where grazing management is inflexible, where stocking remains high, where long grazing durations and high intensities occur, and where compliance with grazing standards is difficult to administer due to limited economic resources.

Conflicts between livestock and competing uses, such as recreation and wildlife, would continue in some locations. Resolution would occur at a slow rate due to lack of direction and limited funding, time, and personnel.

### **Need to Establish or Change Management Direction**

There is a need to establish grazing capacity determination guidelines for the Forest that adequately reflect site conditions and give direction for assessing allotments on a site-specific basis. The guidelines need to distinguish between sheep and cattle use.

Management direction is needed to reduce or eliminate potential conflicts between livestock and wildlife that use common areas. These conflicts include the risk of disease transmission between domestic sheep and bighorn sheep, and the risk of reduced forage availability in wildlife wintering areas.

User conflicts between recreationists and livestock in localized areas need to be validated so that a determination can be made whether management area direction needs to be changed.

There is a need to consider rangeland suitability that addresses such issues as bighorn sheep disease transmission, noxious weeds, recreation conflicts, and the economics of re-instating management on vacant allotments.

### **Changes Under the Revised Forest Plan**

The revised Forest Plan establishes Forest-wide standards and guidelines for rangeland resources that assist in: 1) restoring and maintaining riparian and upland vegetation, 2) achieving watershed condition indicators, 3) providing for the physiological needs of plants, and 4) protecting Threatened and Endangered species.

Suitable rangeland decisions and direction under the revised Forest Plan prevent grazing in developed recreation sites, administrative sites, and Research Natural Areas (RNA); reduces the risk of disease transmission to bighorn sheep; and closes vacant allotments that contribute low management values and have other resource considerations.

The revised Forest Plan also provides direction at the management area level for specific concerns, such as areas with high susceptibility to surface erosion, habitats for terrestrial and aquatic species at risk, vegetation cover types functioning at risk, key watershed areas for improving livestock grazing management, and other important resource values that need to be considered when conducting site-specific planning.

## **Topic 6 – Hydrologic, Riparian, and Aquatic Resources**

### **Background**

Aquatic ecosystems include watersheds, water bodies, riparian areas, and wetlands, as well as the fish, wildlife, plant, amphibian, and invertebrate species they contain. Riparian refers to areas with distinctive soil and vegetation between a stream or other body of water and an adjacent upland. Riparian areas include wetlands and the portions of floodplains and valley bottoms that support riparian vegetation (ICBEMP 1997a).

The Forest manages significant aquatic habitat for anadromous and resident fish populations, including chinook salmon, steelhead trout, redband trout, westslope cutthroat trout, and bull trout. The Forest has over 7,600 miles of perennial and intermittent streams, and 4,600 acres of lakes and reservoirs, that support an estimated 43 native and non-native fish species. Important fish habitat is found in major portions of the Salmon, Payette, and Weiser drainages. These areas are also important to bald eagles and other species dependent on fish as a food source, as well as some rare plant species.

**Current Condition**

In 1992 and 1997, Snake River chinook salmon and steelhead trout, respectively, were listed as Threatened under the ESA. In 1998, bull trout were also listed as Threatened. The bald eagle, a Threatened species, is dependent on riparian and aquatic habitats. Any proposed federal action that may adversely affect these species or their habitats must be consulted with the USDI Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) prior to implementation of the action. Programmatic planning, such as Forest Plan revision, must follow the same requirements.

In 1995, the Forest Plan was amended by management direction in the *Interim Strategies of Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California*, or Pacfish (USDA Forest Service and USDI BLM 1995), the *Inland Native Fish Strategy*, or Infish (USDA Forest Service 1995) and the Biological Opinions (BOs) for chinook salmon, steelhead, and bull trout (US Dept of Commerce NMFS 1995, US Dept of Commerce NMFS 1998, USDI FWS 1998). These strategies include the identification of interim Riparian Management Objectives (RMOs), standards and guidelines, and watershed analysis requirements. These interim strategies are in effect until long-term management direction is developed through geographically specific environmental analyses or Forest Plan revisions.

The effectiveness of the Pacfish/Infish standards and guidelines has not been determined for the Forest. Project-level analyses since 1995 have revealed that, in some areas, existing Forest Plan direction exceeds or is more restrictive than Pacfish/Infish direction. In other areas, Pacfish/Infish and the chinook salmon, steelhead, and bull trout BO RMOs are not appropriate for the watersheds being analyzed. For example, RMOs cannot be met because certain habitat features (large woody debris, pool frequency) are not available naturally in the amounts the RMOs specify. In addition, Pacfish/Infish RMOs do not address all riparian-related parameters, including sedimentation, water chemistry, vegetation composition, and natural disturbance processes.

Pacfish/Infish and the BOs amended the Forest Plan to address soil, water, riparian, and aquatic (SWRA) issues. However, 1990 Forest Plan direction for other resources now sometimes conflicts with this direction. For instance, protective measures and objectives for range, recreation, and mining are not always intensive or extensive enough to sufficiently protect or restore riparian values. During the Forest Plan revision process, this direction needs to be rewritten to be consistent.

Some inland native fish species (such as bull trout and cutthroat trout) are declining. The decline of these fish is primarily due to habitat degradation and fragmentation, blockage of migration corridors, poor water quality, past fisheries management practices, fishing, and introduction of exotic fish species.

Although impacts to fisheries from livestock grazing, water diversions, timber harvesting, mining, and recreation continue on the Forest, substantial progress has been made to protect fish habitat. Future Forest land management will continue to play an important role in the recovery of declining fish populations. Emphasis will be on restoring depleted habitat and maintaining



and protecting populations that are currently considered stable. Also, non-consumptive instream uses of water flows (including fish habitat and channel maintenance) will need to be considered in light of other water rights claims and conflicting appropriation.

The 1988 Forest Plan does not adequately or consistently define SWRA Desired Conditions. Existing parameters for defining appropriate SWRA conditions are inconsistent and do not adequately reflect the condition of SWRA resources. The Plan also does not include management direction to emphasize management activities to assist in the de-listing of 303(d) water quality limited water bodies.

The 1988 Forest Plan lacks adequate and consistent direction for protection of sensitive intermittent stream and landslide-prone areas. Identification and direction for these areas could result in a substantial change in the long-term supply of goods and services from other resources, as these areas could comprise as much as 25 percent of the land base within the Forest.

Since 1990, the Regional Forester has designated several riparian and aquatic species as Sensitive. Because the sensitive species program was being developed when the Forest Plan was finalized, the Plan contains little or no management direction concerning these species.

In 1998, the Idaho Department of Environmental Quality submitted a list of water quality limited water bodies that were not meeting their designated beneficial uses under Section 303(d) of the Clean Water Act. In early 2000, the Environmental Protection Agency (EPA) approved this list. This list affects several dozen subwatersheds within the Forest. A priority list has been compiled to develop a Total Maximum Daily Load limit for pollutants in these water bodies that may establish new standards and guidelines, criteria for water quality parameters, and watershed restoration measures. In addition, there have been changes and additions to the State water quality rules and regulations based on supporting beneficial uses that need to be incorporated into the Plan.

In December of 2000, the Conservation of Columbia Basin Fish: The Final Basin-wide Salmon Recovery Strategy (US Dept of Commerce, NMFS 2000) was released. This strategy, also called the “All H Paper”, was developed by NMFS in consultation with eight federal agencies (Corps of Engineers, Bonneville Power Administration, Bureau of Indian Affairs, Bureau of Land Management, Bureau of Reclamation, Environmental Protection Agency, Fish and Wildlife Service, and the Forest Service). The All H Paper focuses on four elements for salmon recovery—hydropower, fish hatcheries, harvest, and habitat. Habitat is the key element addressed by forest plan revision. For habitat on federal land, the salmon recovery strategy strongly emphasizes the following management objectives:

- 1) Protect existing high quality habitat.
- 2) Restore degraded habitats on a priority basis and connect them to other functioning habitats.
- 3) Prevent further degradation of tributary and estuary habitat and water quality.

Currently, two of the Management Indicator Species (MIS) for the Forest are anadromous species; fish that spend part of their life in the ocean and part in freshwater streams or lakes. Because anadromous fish are influenced primarily by off-Forest activities, adult fish population numbers are not good indicators of effects from Forest management activities. Better indicators may be habitat conditions or seasonal levels of selected life stages.

The three Forest Monitoring Reports for the Ecogroup were not consistent in their analysis methods and indicators for water quality and aquatics. These inconsistencies led to the development of the *Monitoring and Evaluation Strategy - Southwest Idaho Ecogroup Version 1.2* (USDA Forest Service 1997), which has yet to be incorporated into Forest Plan revision.

### **No Action**

Under 1988 Forest Plan direction, SWRA management would continue to be inconsistent across the Ecogroup Forests. Forest Plan amendments resulting from Pacfish, Infish and associated Biological Opinions would continue to be implemented. The “major weakness” of the short-term Aquatic Conservation Strategy (ACS) currently being implemented would continue. As stated in the 1998 Biological Opinion for listed salmon and steelhead in the Upper Columbia and Snake River Basins, page 57:

*“In spite of additional recommendations, a major weakness in PACFISH has been, and still is, the lack of a comprehensive aquatic conservation strategy for listed anadromous fish. PACFISH was intended to maintain or improve the environmental baseline while a long-term strategy is being developed. Given the degraded baseline conditions were part of the rationale for listing salmon and steelhead, maintenance of baseline conditions cannot suffice as a long-term strategy. Indefinite extension of PACFISH, delays the recovery of salmon and steelhead, and increases the risk that key population segments will be irretrievably lost. PACFISH maintains a fragmented network of habitats and degraded habitat conditions, where they presently exist, because it lacks a comprehensive restoration and management strategy for watersheds with anadromous fish.”*

The 1988 Forest Plan direction, as amended, does not adequately emphasize habitat restoration, population viability, or biodiversity. The 1988 Plan direction does not address habitat connectivity, a major need identified in the ICBEMP project for native fish recovery. Because direction is inconsistent and insufficient at present, this direction might not have the desired beneficial effects on declining fish populations.

The 1988 Plan desired conditions and monitoring strategies would not provide accurate monitoring data or analyses. Forest Plan direction would not emphasize an accelerated rate of recovery to assist in de-listing of water quality limited water bodies. Attaining full support of beneficial uses for these streams may be delayed.

**Need to Establish or Change Management Direction**

There is a need to develop a long-term ACS that includes a comprehensive restoration and management strategy for watersheds that includes protective and conservation direction, as well as restoration essential to the recovery of listed native inland and anadromous fish. In addition, the long-term ACS needs to include restoration and management strategies needed to restore water quality limited water bodies and their related beneficial uses.

The long-term ACS needs to provide consistent and appropriate SWRA restoration or conservation strategies across the planning area. Existing SWRA management direction is inconsistent among the Forest Plans, is often vague or too general, and does not fully incorporate new SWRA management emphasis on protection and restoration. In addition, there is a need to provide direction for the management of intermittent streams and landslide-prone areas that are not adequately addressed in the existing Forest Plans.

The long-term ACS needs to include appropriate Riparian Management Objectives (RMOs) and desired conditions that reflect the inherent diversity and capability of the Forest's SWRA resources. Interim RMOs identified in Pacfish and Infish are not applicable for all streams within the Forest; neither are the more restrictive water temperature RMOs for bull trout added to the State Water Quality Standards, and the proposed RMOs for steelhead trout identified in the 1998 programmatic biological assessment. Some streams, for example, are inherently incapable of meeting these RMOs. Other critical RMOs--such as riparian vegetation, soils and soil processes, sediment, and water quality--are not included in Pacfish and Infish. These missing RMOs need to be developed for the Forest Plan. The RMOs must be designed to fully support the designated beneficial uses for water bodies, as identified by State Water Quality Standards.

There is a need to establish fish MIS or management indicators that more accurately reflect the effects of Forest management activities.

There is a need to establish a consistent monitoring strategy by incorporating *Monitoring and Evaluation Strategy - Southwest Idaho Ecogroup Version 1.2* into the Forest Plan.

**Changes Under the Revised Forest Plan**

The revised Forest Plan provides a long-term comprehensive ACS that includes the following eight components (see Appendix B):

1. Goals to Maintain and Restore SWRA Resources
2. Watershed Condition Indicators for SWRA Resources
3. Delineation of Riparian Conservation Areas (RCAs)
4. Objectives, Standards, and Guidelines for Management of SWRA Resources, including RCAs
5. Determination of Priority Subwatersheds within Subbasins
6. Multi-Scale Analyses of Subbasins and Subwatersheds
7. Determination of the Appropriate Type of Subwatershed Restoration and Prioritization
8. Monitoring and Adaptive Management Provisions

Bull trout were selected as the aquatic MIS for the Forest, except the North Fork Payette River drainage, in the revised Forest Plan. Reasons for selecting bull trout as an MIS, other than in the North Fork Payette are as follows:

- Bull Trout have a low tolerance to habitat and watershed disturbances.
- Bull trout are present throughout most of the Ecogroup area.
- Bull trout represent a wide range of aquatic habitat needs for other aquatic species.
- Local populations of bull trout generally do not extend beyond the Ecogroup area.
- Bull trout have not been stocked.
- There is a fair amount of information on bull trout collected within the Ecogroup.

The *Monitoring and Evaluation Strategy - Southwest Idaho Ecogroup Version 1.2* has been incorporated into the revised Forest Plan; therefore, monitoring of watershed and aquatic systems across the Ecogroup will be more consistent.

## **Topic 7 - Timberland Suitability**

### **Background**

The National Forest Management Act (NFMA) requires that lands that are suited for timber production be identified. Suited lands include forested lands outside of withdrawn areas such as designated wilderness areas, lands where reforestation can be assured, and lands where timber management activities can take place without causing irreversible resource damage to soil productivity or watershed conditions. Lands identified as not suited for timber production are required to be reassessed at least once every 10 years to determine if they should be reclassified.

A complete reassessment of suited lands has been completed to account for changes in land status that may have occurred, such as land exchanges and acquisitions, Pacfish/Infish and BO direction, and other Forest Plan amendments. The reassessment has benefited from the availability of analytical tools--including Landsat Imagery and Geographic Information Systems (GIS) data--that were not available during the development of the 1988 Forest Plan.

The suitability assessment includes the identification of tentatively suited timberlands (capable and available forest lands that are physically suited for timber management) and suited timberlands (the tentatively suited lands considered appropriate for timber management). The suited timberlands are then evaluated to determine the range of timber harvest levels for the revision alternatives. Timber harvest levels are expressed as Allowable Sale Quantity (ASQ) and Long Term Sustained Yield Capacity (LTSYC). The ASQ represents the average annual maximum volume that a Forest may sell during each decade. The LTSYC represents the maximum level of sustainable timber production that suited lands are capable of producing.

### **Current Condition**

Changes in ownership and policies since the 1988 Forest Plan was released have created a need to reassess the suitability of timberlands for timber production. Land exchanges are undertaken for numerous reasons, including improved land management efficiency or increased protection

of habitat and resources. These exchanges are accomplished on an equal value basis, and may result in a net increase or decrease in timberland area. Lands acquired as a result of land exchanges need to be assessed to determine their timberland suitability status.

The Forest Plan has been amended by interim direction developed through the Pacfish and Infish environmental assessments and BOs. This direction is designed to protect and restore habitat for anadromous and inland fish species. This direction reclassified lands located within Riparian Habitat Conservation Areas (RHCAs), including landslide-prone areas, as being not suited for timber production. These lands thus are not included when determining the ASQ. These areas have been reclassified as not appropriate for timber production under the FEIS no action alternative, Alternative 1B.

Timber harvest may occur in RHCAs where appropriate as a tool designed to achieve desired vegetation characteristics, if management does not retard attainment of RMOs and avoids adverse effects to Threatened or Endangered fish. The 1988 Forest Plan was reconciled to reflect the change in suited land area and the resultant change in ASQ and LTSYC through development of Alternative 1B, the no action alternative in the FEIS supporting Forest Plan revision.

The revised Forest Plan replaces the 1988 Forest Plan direction, including the interim direction in Pacfish and Infish and associated Biological Opinions (BOs) for chinook salmon, steelhead, and bull trout (US Dept of Commerce NMFS 1995, US Dept of Commerce NMFS 1998, USDI FWS 1998) that amended the 1988 Forest Plan. This will, as currently proposed, modify the standards for determining the width of RHCAs, rename RHCAs to Riparian Conservation Areas (RCAs), and extend the direction for reclassifying suited lands within RCAs for all watersheds, not just those watersheds with current or potential listed fish populations. .

### **No Action**

Suited timberland acres show a slight increase, however volume outcomes for the FEIS No Action Alternative (Alternative 1B) show a decrease from the 1988 Forest Plan because of the following:

- Pacfish/Infish and BO amendments to the Plan have identified RHCAs, including landslide-prone areas, and applied more stringent standards for timber harvest to these areas. This change has generally reduced the availability of timber from RHCAs.
- Budget levels for timber management not associated with salvage opportunities are anticipated to remain static or show a slight decrease.
- Large-scale salvage efforts associated with catastrophic fire and insect epidemics have been completed. Although additional salvage opportunities could result from future mortality, the amount and timing in the next planning period is unpredictable.

Table II-1 displays compares suited timberland acres, ASQ, and Total Sale Program Quantity (TSPQ) of the 1988 Forest Plan with the No Action Alternative for the revised Forest Plan.

**Table II-1. Comparison of Suited Acres, ASQ, and TSPQ from 1988 Forest Plan to 2003 FEIS No Action Alternative (1B)**

| Year - Alternative                    | Suited Timber Land (Acres) | Allowable Sale Quantity (MMBF) | Total Sale Program Quantity (MMBF) |
|---------------------------------------|----------------------------|--------------------------------|------------------------------------|
| 1988 Forest Plan Selected Alternative | 431,700                    | 80.9                           | 105.0                              |
| 2003 FEIS No Action Alternative (1B)  | 438,100                    | 60.0                           | 61.9                               |

**Need to Establish or Change Management Direction**

There is a need to reassess National Forest System lands to determine which lands are suited for timber management, as required by the NFMA. Specifically, there is a need to assess changes in the suited land base. These changes include reclassification of some lands previously identified as not suited, and changes in National Forest System lands resulting from land exchanges or acquisitions. The reassessment of suited lands is needed to determine changes in the LTSYC and the ASQ

**Changes Under the Revised Forest Plan**

Suited timberlands for the revised Forest Plan are identified through the allocation of management prescriptions. Tentatively suited forest land within areas allocated to management prescriptions that include timber production objectives are classified as suited, or in other words, are appropriate for timber production. Table II-2 displays differences in suited timberland acreage, ASQ, TSPQ, and LTSYC between the 1988 Forest Plan, as amended (Alternative 1B in the FEIS for revision) and the revised Forest Plan (Alternative 7 in the FEIS for revision).

**Table II-2. Comparison of Suited Acres, ASQ, TSPQ, and LTSYC for FEIS Alternative 1B vs. Alternative 7**

| Plan - Alternative                                       | Suited Timber Land (Acres) | Allowable Sale Quantity (MMBF) | Total Sale Program Quantity (MMBF) | Long-Term Sustained Yield Capacity (MCCF) |
|----------------------------------------------------------|----------------------------|--------------------------------|------------------------------------|-------------------------------------------|
| 1988 Plan, as amended <sup>1</sup> (FEIS Alternative 1B) | 438,100                    | 60.0                           | 61.9                               | 140.6                                     |
| 2003 Revised Forest Plan (FEIS Alternative 7)            | 330,000                    | 32.5                           | 40.3                               | 83.6                                      |

<sup>1</sup>1988 Forest Plan direction, including the interim direction in Pacfish and Infish and associated Biological Opinions (BOs) for chinook salmon, steelhead, and bull trout (US Dept of Commerce NMFS 1995, US Dept of Commerce NMFS 1998, USDI FWS 1998) that amended the 1988 Forest Plan.

## Topic 8 - Management Emphasis Areas

The Payette National Forest includes many outstanding natural areas with various combinations of biophysical resources and social interests. When these areas receive formal protection from Congress or the Forest Service, they are given an appropriate management emphasis in the Forest Plan. This direction is designed to protect the qualities that earned these areas their designation. Management emphasis areas with a Need For Change include Wild and Scenic Rivers, Inventoried Roadless Areas, and Management Areas.

### Wild and Scenic Rivers

#### **Background**

The Wild and Scenic Rivers Act (Public Law 90-542, 1968) establishes objectives, goals, and procedures for Wild, Scenic, and Recreational River designation.

Agency policy related to the Wild and Scenic Rivers Act in land management planning requires that rivers identified as potential Wild and Scenic Rivers (WSRs) be evaluated as to their eligibility, and documented in the Forest Plan. An eligible river or river segment must be free flowing and possess at least one feature that is judged to be outstandingly remarkable. Additionally, it is recommended, but not required, to complete the WSR suitability studies during the Forest Plan revision process. To be found suitable, the benefits of designating the river should outweigh the disadvantages. If a recommendation is deferred on rivers identified as eligible where the Forest Service has primary responsibility, the Forest Plan must also provide interim management direction for protection of the outstanding features.

As part of a 1989 settlement agreement between American Rivers, Inc. and the Payette National Forest, the Forest agreed to conduct suitability studies for the five streams that have been determined eligible for inclusion in the National Wild and Scenic River System during scheduled updates of the Forest Plan (Appeal 2529). These five streams are: Big Creek, French Creek, Monumental Creek, Secesh River, and South Fork Salmon River.

#### **Current Condition**

The Payette National Forest completed an eligibility study as part of the Forest Planning process in 1988. As a result of that process, five rivers were identified as being eligible for inclusion into the Wild and Scenic River System. See Appendix D for names and locations of eligible segments.

Suitability studies have not been conducted on the five eligible rivers listed in the Forest Plan. However, through a separate suitability study, four river segments on the Payette National Forest were recommended to Congress as suitable for WSR designation. Congress subsequently designated these four river segments as part of the National WSR System. These segments are all on the Payette National Forest and include portions of the Salmon River, Middle Fork Salmon River, Snake River, and Rapid River.

**No Action**

Management direction for the designated Wild and Scenic Rivers would not change. These areas would continue to be affected primarily by natural processes and human recreation.

Management activities would not affect the Outstandingly Remarkable Values of eligible or suitable river segments or their free-flowing status

**Need to Establish or Change Management Direction**

The Forest needs to re-evaluate previous eligibility studies based on the need to improve upon earlier inventories and apply a consistent inventory and assessment approach across the Ecogroup. Specifically, the process for determining Outstandingly Remarkable Values needs to be refined and expanded. These changes need to incorporate new information and changed conditions since the last eligibility studies were completed, such as new species listings and large uncharacteristic events. Any rivers found eligible during the re-evaluation process will be subject to the suitability study prioritization shown below.

The Forest has completed suitability studies for priority 1 rivers in the Forest Plan revision process, and priorities 2 and 3 will be addressed after the revision effort. The priority streams are:

**Priority 1.** Commitments made in a settlement agreement between American Rivers, Inc. and the Payette National Forest. These commitments cover Big Creek, French Creek, Monumental Creek, and the Secesh River on the Payette National Forest, and the South Fork Salmon River on the Boise and Payette National Forests

**Priority 2.** Rivers that are shared with other National Forests.

**Priority 3.** All other eligible rivers.

In addition, regardless of priority, any rivers found eligible during the re-evaluation process will undergo suitability studies if site-specific projects may affect the Outstandingly Remarkable Values (ORVs) or classification.

**Changes Under the Revised Forest Plan**

The Forest Plan revision process focused on changed condition—such as a new ESA listing or changed condition of the river area—and new information such as adding botanical and ecological to Outstandingly Remarkable Values. This resulted in portions or all of 2 rivers found eligible for inclusion in the national system. The eligible river segments and their classifications can be found in Appendix D of the Forest Plan. Management direction for interim management of these segments can be found in the Wild and Scenic Rivers section of Chapter III of this Forest Plan, and in the Management Areas in which the river segments appear.

Suitability studies were completed as part of the Payette National Forest Plan revision in 2000, and updated in 2001. The Secesh and South Fork Salmon Rivers were found to be suitable for inclusion in the national system. See Appendix D to the Forest Plan, and Appendix J to the EIS, for more information on the Wild and Scenic River eligibility and suitability processes.



## Inventoried Roadless Areas

### **Background**

Inventoried Roadless Areas, also known as roadless areas, refer to areas that do not have constructed and maintained roads, and are substantially undeveloped. The Forest has many roadless areas, which have varying degrees of wilderness characteristics. Wilderness is specifically defined in the Wilderness Act of 1964 (Public Law 88-577); one requirement is a roadless, undeveloped condition.

The NFMA regulations direct that, “Unless otherwise provided by law, roadless areas within the National Forest System shall be evaluated and considered for recommendation as potential wilderness areas during the forest planning process.” The Forest Service does not have the authority to designate wilderness areas, but rather evaluates and considers roadless areas for recommendation as potential wilderness areas. Formal designation of wilderness areas occurs through Congressional action, and two wilderness areas have been established within the Forest boundaries.

### **Current Condition**

The Payette National Forest currently has about 900 thousand acres in Inventoried Roadless Areas. The 1988 Forest Plan assigned management prescriptions to each roadless area. These prescriptions range from recommended wilderness, where activities are consistent with preserving wilderness attributes, to general forest management, where activities may include road construction, timber harvest, range improvement, recreation development, and habitat improvement projects. Depending on the size and intensity of these projects, land may be considered developed and subsequently removed from a roadless area, resulting in a change in roadless area size and boundaries.

The 1988 Forest Plan recommended over 212,000 acres of roadless areas for Wilderness designation (see Table II-3). These areas were assigned management area prescriptions to help preserve wilderness characteristics until Congress decides whether to officially designate them as Wilderness. Wilderness evaluation was documented in Appendix C of the 1988 Forest Plan EIS.

**Table II-3. Roadless Areas Recommended for Wilderness – 1988 Forest Plan**

| <b>Recommended Wilderness Area</b> | <b>Acres</b> |
|------------------------------------|--------------|
| Needles (contiguous with Boise NF) | 95,816       |
| Secesh                             | 116,189      |
| Total                              | 212,005      |

### **No Action**

Roadless areas would continue under current management prescriptions. Effects to these areas would vary considerably, depending on those prescriptions. Areas with prescriptions for recommended wilderness or semi-primitive recreation emphasis would likely retain their current wilderness characteristics and roadless boundaries. However, areas with a general forest

management prescription would likely receive new or additional development that would reduce wilderness characteristics and the overall size of roadless area that would likely be considered for wilderness designation in the future.

### **Need to Establish or Change Management Direction**

Roadless areas need to be re-evaluated for wilderness capability, availability, and need. After the evaluation of roadless areas is completed, the need to establish or change management direction for recommended wilderness will be identified. No programmatic changes were identified from monitoring and evaluation.

### **Changes Under the Revised Forest Plan**

The Forest has re-inventoried its roadless areas since the release of the Preliminary Analysis of the Management Situation Summary. During the re-inventory process, changes were made to the roadless area boundaries based on project-level decisions. Any areas within the roadless areas that had been developed by projects were removed from the inventory. The Forest was also examined, using Geographic Information System (GIS) technology, to identify roadless areas that may have been missed in past inventories. Changes in the roadless areas are shown on the maps in Appendix C of the Forest Plan EIS.

A subsequent evaluation of the re-inventoried roadless areas was also completed and the results are documented in Appendix C of the Forest Plan EIS. This evaluation reviewed the roadless areas for their potential as Wilderness using capability, availability, and need criteria.

Based on the roadless area evaluation, the revised Forest Plan carried forward Wilderness recommendations from the original Forest Plan. However, minor acreage changes occurred due to changes in technology used to measure the areas and minor boundary adjustments. Revised acres for recommended Wilderness are shown in Table II-4. Changes in management direction for recommended Wilderness are in Chapter III in the Wilderness section. Management emphasis disposition for all roadless areas is found in Appendix C of the Forest Plan EIS. In addition, a roadless characteristic analysis was completed for the Final EIS, the results of which can be found in Appendix H to the EIS.

**Table II-4. Roadless Areas Recommended for Wilderness in the Revised Forest Plan**

| <b>Recommended Wilderness Area</b> | <b>Acres</b> |
|------------------------------------|--------------|
| Needles (contiguous with Boise NF) | 91,900       |
| Secesh                             | 115,400      |
| Total                              | 207,300      |

## **Management Area Boundaries**

### **Background**

A management area is an identifiable unit of land that has specific land management emphasis and prescriptions. A management prescription is a composite of multiple-use direction applicable to all or part of the management area. The prescription generally includes goals, objectives, standards and guidelines, and probable management practices.

### **Current Condition**

Management area boundaries on the Payette National Forest were developed based on a combination of geographic and political features, social issues, and land capability. Prescriptions for the Payette management areas were written to apply over the entire management areas. When implementing prescriptions, the Ranger Districts have to validate where the prescriptions do or do not apply on the landscape.

### **No Action**

Management area boundaries would not change.

### **Need to Establish or Change Management Direction**

There is a need to define management area boundaries where feasible along watershed boundaries in order to more effectively manage and track cumulative effects to resources within those definable areas.

### **Changes Under the Revised Forest Plan**

New management area boundaries have been established and are described in the Management Area Description and Direction section in Chapter III.

## **STRENGTHENING CURRENT MANAGEMENT DIRECTION**

This section describes changes that are needed to clarify 1988 management direction or to create direction that supports and is consistent with Forest Service or other national direction that has been changed or created since the release of the Forest Plan. These changes are different from the major Need For Change topics above in that they could be made without detailed analysis or alternative development in the Draft or Final EIS. However, they represent important Need For Change in specific Forest Plan direction that is being tracked through the revision process.

## **Ecosystem Management**

### **Need to Establish or Change Management Direction**

In 1992 the Forest Service adopted ecosystem management as an operating philosophy (Overbay 1992). Ecosystem management has been described as “scientifically based land and resource management that integrates ecological capabilities with social values and economic relations to produce, restore, or sustain ecosystem integrity and desired conditions, uses, products, values, and services over the long term” (ICBEMP 1997a). An ecosystem management approach shifts management emphasis from traditional, single resource or species focus to a focus on ecosystems

and landscapes. Ecosystem management also strongly considers the interactions between humans and ecosystems. A framework built around these principles and elements needs to be incorporated into the revised Forest Plan.

### **Changes Under the Revised Forest Plan**

For Forest Plan revision, the Payette National Forest has adopted an EM conceptual framework. This framework borrows from and builds on: 1) already existing Forest Plan (USDA Forest Service 1988), 2) The Forest Service Region 4 *Desk Guide - Bridge to Revision* (USDA Forest Service 1993), and 3) *A Framework for Ecosystem Management in the Interior Columbia Basin* (ICBEMP 1996a). The intent of the framework is to integrate ecosystem elements with human needs to strengthen the essential link between economic prosperity, social continuity, and ecosystem processes and functions. The use of the EM framework will help ensure ecosystem sustainability and resilience over time and space.

## **Treaty Rights and the Federal Trust Responsibilities**

### **Need to Establish or Change Management Direction**

In 1855, the federal government signed treaties with Indian Nations that inhabited or used what is now the Payette National Forest. These Indian Nations included the Nez Perce, Shoshone-Bannock, and Shoshone-Paiute. These intergovernmental treaties reserved rights for traditional uses such as hunting, fishing, and gathering forest products on unoccupied public lands. Treaties are laws that pre-date the establishment of National Forest System lands; thus, rights reserved by treaties take precedence over many federal laws. The 1988 Forest Plan does not contain specific language concerning treaty rights and the federal government's obligation to protect those rights. As a result, Forest managers and decision makers lack sufficient direction to coordinate resource management activities with treaty rights. The revised Forest Plan needs to include this language to meet the federal government's trust responsibilities, to foster a better understanding of tribal concerns and to develop shared goals in land management.

### **Changes Under the Revised Forest Plan**

New Forest-wide management direction is located in the Treaty Rights and Interests section in Chapter III of this Forest Plan. This direction addresses the protection of treaty rights and the need for the Forest to consult local tribes regarding management activities that would affect those rights.

## **Heritage Program**

### **Need to Establish or Change Management Direction**

The 1988 Forest Plan needs to be revised to incorporate new management direction into the Heritage Program's goals, objectives, and guidelines.

Specific direction that has been enacted since the Plan was released include:

- 1992 amendments to the National Historic Preservation Act that include 1) the development of educational and interpretive programs for public outreach and involvement (Section 110), 2) increased protection for historic properties on federal lands or lands where federal jurisdiction exists (Sections 106 and 301), and 3) consultation with appropriate American Indian tribes for the management of traditional, religious and cultural properties (Section 101).
- The Native American Graves Protection and Repatriation Act of 1990 and its 1995 regulations that require that the Forest Service consult with Indian tribes when American Indian human remains and certain cultural objects are identified in the Agency's archaeological collections or are discovered during the course of federal actions.
- 1996 Executive Order #13007 that requires federal agencies to protect and make accessible Indian sacred sites on public lands for Indian religious practitioners. This includes consultation with Indian tribes for the identification of sacred sites, and for federal actions or policies that may restrict access to, or use of, a ceremonial site, or may adversely affect the physical integrity of the site.

The revised Forest Plan should also acknowledge the Agency's 1992 change from a "Cultural Resources Program" focus on compliance, to a "Heritage Program" that emphasizes a balance between protection of historic properties and public outreach for the enjoyment of American history.

### **Changes Under the Revised Forest Plan**

New Forest-wide management direction has been added to the Heritage Program section of Chapter III. This direction addresses compliance with cultural resource protection and consultation as well as the expansion of the Heritage Program to emphasize more interpretation, education, and outreach activities.

## **Forest Land Acquisition Priorities**

### **Need to Establish or Change Management Direction**

The 1988 Forest Plan emphasizes consolidating ownership patterns when exchanging or acquiring land in order to increase efficiency in land management. In the past few years, national and local emphasis in land exchange or acquisition has shifted to other priorities, including the protection of habitat for Threatened or Endangered species. The revised Forest Plan needs to reflect this shift in emphasis to clarify our current policy.

### **Changes Under the Revised Forest Plan**

New Forest-wide management direction is located in the Lands and Special Uses section in Chapter III. Guidelines have been established that prioritize land acquisitions based on criteria such as protection of Threatened and Endangered species habitat, cultural resources and historical properties, public access, and sensitive environmental areas, as well as land management efficiency.

## Special Uses

### **Need to Establish or Change Management Direction**

Direction in the 1988 Forest Plan for some Special Uses merely refers to the Forest Service Manual or Handbooks. However, the direction in the Manual or Handbooks either does not exist or refers back to the Forest Plan. This ambiguous direction has resulted in some Special Use decisions that are based on subjective interpretations rather than objective information or criteria. The Forest Plan needs to provide objective information and criteria for making decisions on some Special Use permits.

The 1988 Forest Plan is inconsistent in its treatment of current and historic communication and electronic sites. These sites need to be recognized in the Plan as “designated” sites, except as provided for in FSH 2709.11. The Forest Plan also needs to address emerging needs for communication, transportation, and utility corridors. These corridors need to be recognized as acceptable locations for future linear communication uses such as cellular phones.

### **Changes Under the Revised Forest Plan**

New Forest-wide management direction has been added to the Lands and Special Uses section in Chapter III to consistently address special uses, including communication and electronic sites.

## Scenic Byway Designations

### **Need to Establish or Change Management Direction**

After the 1988 Forest Plan was completed, State Scenic Travel Routes became National Forest Scenic Byways, with minor differences in management goals and prescriptions. The Chief of the Forest Service designates National Forest Scenic Byways for their exceptional scenic, historic, cultural, recreational, and natural resources. Scenic Byways in Idaho are designated with concurrence from the State. The Payette National Forest has the Payette River Scenic Byway, which also crosses onto the Boise National Forest, and the Hells Canyon Scenic Byway. The 1988 Payette Forest Plan has no recognition of, or management direction for, National Forest Scenic Byways. Management direction needs to be established for Scenic Byways in the revised Forest Plan.

### **Changes Under the Revised Forest Plan**

Forest-wide management direction has been added to the Recreation Resources section of Chapter III. Additional information has been added to the Management Areas where the byways occur. The established Visual Quality Objectives also reflect Scenic Byway status.

## Caves

### **Need to Establish or Change Management Direction**

The Federal Cave Resources Protection Act of 1988 establishes procedures for identifying, protecting, and managing cave resources on federal lands. The Act requires federal agencies to determine which cave resources are significant and warrant protection. Ten significant caves

have been identified on the Payette Forest since the Forest Plan was developed. Other caves may be identified in the future. There is a need to establish management guidelines in the Plans that will protect cave resources consistent with the Federal Cave Resources Protection Act and 36 CFR 290.

**Changes Under the Revised Forest Plan**

Forest-wide management direction has been added to the Recreation section in Chapter III.

**Winter Recreation Areas****Need to Establish or Change Management Direction**

Recreation managers are observing a rising level of winter recreation conflicts in a number of areas within the Forest. In most cases, these conflicts are terrain use conflicts between snow-mobilers and skiers and are occurring in developed and backcountry ski areas. However, most of these conflicts will only be fully resolved by site-specific access determinations. In that this Forest Plan revision process analyzes and adjusts management direction at the programmatic level, full resolution of these conflicts is beyond the scope of this revision process. However, programmatic management direction related to winter recreation management is being reviewed and adjusted as part of the Forest Plan revision process. Site-specific winter access management will be addressed in separate travel management planning processes, which will follow this revision.

**Changes Under the Revised Forest Plan**

Forest-wide direction has been added to the Recreation Resources section in Chapter III to provide a foundation for subsequent analysis and access management determinations. In some cases, specific management direction has been included for the appropriate management areas as well.

**South Fork Salmon River****Need to Establish or Change Management Direction**

The South Fork Salmon River drainage was identified in the 1988 Forest Plan as an area of special concern, primarily because of its important habitat for anadromous fish. Natural and human-caused damage has imperiled this resource, requiring the need to establish standards, guidelines, goals, and objectives specific to this area. After the Forest Plan was completed, the river was identified as not meeting the beneficial uses of salmonid spawning and coldwater biota, based on requirements of the Clean Water Act. A Total Maximum Daily Load (TMDL) for sediment delivery was developed for portions of the river in 1992. The TMDL includes additional management direction, sediment reduction projects, instream sediment criteria, and monitoring requirements. In 1996, additional streams within the South Fork drainage were also identified as not meeting beneficial uses. A priority list has been created for the analysis of these streams to determine if a TMDL is required in the year 2000. If it is required, it will likely result in the establishment of new standards and guidelines, criteria for water quality parameters, and watershed restoration measures. These changes will need to be reflected in the revised Forest Plan.

**Changes Under the Revised Forest Plan**

Although the South Fork Salmon River drainage remains an area of special concern on the Forest, management areas containing portions of the drainage have not been separated out in the revised Plan as they were in the 1988 Plan. The reasons for this change are:

- Many of the short-term goals and objectives for the drainage stated in the 1988 Plan have since been achieved,
- Management areas containing portions of the South Fork drainage have been reconfigured based on watershed boundaries to reflect ecosystem management,
- Management direction for the new management areas has incorporated the intent of protection measures from Pacfish/Infish and the associated 1995 and 1998 Biological Opinions for chinook salmon, steelhead trout, and bull trout,
- Management direction associated with the development of the long-term ACS for SWRA resources has been strengthened across the entire Forest, including the South Fork drainage, and
- Management emphasis for the South Fork, as depicted by the Management Prescription Categories for the revised Forest Plan, focuses on conservation and restoration of aquatic, terrestrial, and watershed resources.

See Forest-wide Management Direction and Management Area Description and Direction in Chapter III for more detailed information.

**Predator Control****Need to Establish or Change Management Direction**

Some livestock are lost to predators each year on National Forest System lands. The Forest, in cooperation with state and federal wildlife agencies, was previously responsible for determining control measures on Forest System lands. The 1988 Forest Plan gives some guidance on these control measures. Since the Plan was released, however, the responsibility for predator control activities and related NEPA compliance has shifted to the jurisdiction of Wildlife Services, formerly called the Animal Damage Control agency. There is a need in the revised Forest Plan to clarify the Forest Service's role regarding predator control activities on Forest System lands.

**Changes Under the Revised Forest Plan**

An objective has been added to the Wildlife Resources section in the Forest-wide Management Direction of Chapter III that alerts the Forest to "Coordinate animal damage management with the Animal and Plant Health Inspection Service (APHIS), in compliance with USDA Wildlife Services' most current direction for southern Idaho."



## **Management Area Direction**

### **Need to Establish or Change Management Direction**

Management area goals and objectives and standards and guidelines need to be reviewed and updated to provide consistent, implementable direction designed to achieve Forest-wide desired conditions. Improvements should include the correction of conflicting direction, such as mutually exclusive goals and objectives that can be found in the 1988 Forest Plan. Standards and guidelines should also be revised to incorporate new information that helps to achieve goals, objectives, and desired conditions.

### **Changes Under the Revised Forest Plan**

New management area direction has been added to the management areas in Chapter III. Improvements were made to correct conflicting direction and to incorporate new information to help the Forest achieve its goals, objectives, and desired conditions.

## **OTHER CHANGES OR DEVELOPMENTS SINCE THE PRELIMINARY ANALYSIS OF THE MANAGEMENT SITUATION**

### **Interior Columbia Basin Ecosystem Management Project**

#### **Need to Establish or Change Management Direction**

The Payette National Forest is within the area of land covered by the Interior Columbia Basin Ecosystem Management Project (ICBEMP). The Project, which was initiated as a joint effort between the Bureau of Land Management and the Forest Service in January 1994, addressed landscape health issues facing the Interior Columbia Basin. These issues included threats from wildfire and non-native plants, and protection and restoration of fish and wildlife habitat.

The ICBEMP issued an Integrated Scientific Assessment in 1996 that described the current condition of the Interior Columbia Basin. The information base of this package provides context at a broad, multiple-state scale and was used by the Revision Team, in addition to more localized information, to identify current habitat conditions and trends (ICBEMP 1996b). The Upper Columbia River Basin (UCRB) Draft EIS was issued for comment in June 1997 (ICBEMP 1997a), a Supplemental Draft EIS was released for comment in March of 2000 (ICBEMP 2000a), and the Final EIS was released in December 15, 2000 (ICBEMP 2000d). Based on comments received on the FEIS—including concerns that the direction was too broad in scale to make decisions at the local level, and did not consider the USFS Roadless Area Conservation Rule (USDA Forest Service 2000) and National Fire Plan (USDA Forest Service 2000)—no Record of Decision for the Project was released.

On February 19, 2003, the Project was completed with the signing of a Memorandum of Understanding (MOU) between the Forest Service, Bureau of Land Management, National Marine Fisheries Service, US Fish and Wildlife Service, Environmental Protection Agency, and

the Forest Service's Forest and Range Experiment Stations, to cooperatively implement the "*A Strategy For Applying The Knowledge Gained By The Interior Columbia Basin Ecosystem Management Project To The Revision Of Forest And Resource Management Plans And Project Implementation*" (USDA Forest Service et al. 2003).

The purpose of this MOU is to cooperatively implement the "*The Interior Columbia Basin Strategy*" to guide the amendment and revision of forest (FS) and resource management (BLM) plans and project implementation on public lands administered by the Forest Service and Bureau of Land Management throughout the Interior Columbia Basin. This strategy incorporates the scientific assessment information in, "*An Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins*" (Quigley and Arbelbide 1997), the analyses supporting or developed as part of the ICBEMP, the "*Integrated Scientific Assessment for Ecosystem Management*" (Quigley et al. 1996) developed by the Interior Columbia Basin Ecosystem Management Project (ICBEMP) as guidance for implementation, and all reports generated by the ICBEMP project.

### **Changes Under the Revised Forest Plan**

Key science findings and basin-wide issues developed in the ICBEMP Final Environmental Impact Statement (FEIS) were considered and used in the development of the revised forest plan. These key findings relate to:

- Landscape Dynamics
- Terrestrial Species Habitat
- Aquatic and Riparian Habitat
- Social-Economics
- Tribal Governments
- Coordination with other management efforts
- Adaptive Management

The revised Forest Plan tiers from this information, forming a link between the broad-scale ICBEMP assessment and project-specific assessments and proposed actions.

## **2001 Road Management Final Rule and Administrative Policy**

### **Need to Establish or Change Management Direction**

The final rule and administrative policy is referred to as the "Road Management Policy". The Road Management Policy was published in the Federal Register on January 12, 2001. It applies to existing and future roads on National Forest System lands. It emphasizes local, science-based decisions designed to maintain a road system that is safe, responsive to public needs, environmentally sound, and affordable to manage. It also established official definitions regarding road management terms.

The policy requires responsible officials to conduct a science-based roads analysis to help make better decisions on all new construction, reconstruction, and decommissioning activities made after July 12, 2001. Currently, the August 1999 process entitled “Roads Analysis: Informing Decision About Managing the National Forest Transportation System” (USDA Forest Service 1999) is the only approved analysis process.

FSM 7712.15 requires that “units that have begun revision or amendment of their forest plans but will not adopt the final revision or final amendment by July 12, 2001, must complete a roads analysis prior to adoption of the final plan or amendment”. The Forest completed a Forest-scale Roads Analysis as part of the revision effort (refer to the SWIE Roads Analysis contained in the project record). The information generated was used by the responsible official to make informed programmatic decisions needed to ensure that the road system on a forest planning unit was safe, responsive to public needs, environmentally sound, and affordable to manage.

### **Changes Under the Revised Forest Plan**

Transportation system management will be consistent with direction provided by the Roads Management Policy. The following objectives and standard were incorporated into Forest-wide direction, Facilities and Roads section, in Chapter III.

*Objective* - Analyze road system needs and associated resource effects in accordance with the established agency policy direction for roads analysis.

*Objective* - Coordinate transportation systems, management, and decommissioning with other federal, state and county agencies, tribal governments, permittees, contractors, cost-share cooperators, and the public to develop a shared transportation system serving the needs of all parties to the extent possible.

*Objective* - Identify roads and facilities that are not needed for land and resource management, and evaluate for disposal or decommissioning.

*Standard* - In support of road management decisions, use an interdisciplinary science-based roads analysis process such as Roads Analysis: Informing Decisions About Managing the National Forest Transportation System (USDA Forest Service 1999).

## **Lynx Listing**

### **Need to Establish or Change Management Direction**

On March 21, 2000, the USDI Fish and Wildlife Service (USFWS) listed the Canada lynx in the contiguous United States as Threatened under the Endangered Species Act. The lynx is found predominantly on federal lands, especially in the West. The USFWS concluded that one threat to lynx in the contiguous United States is the lack of guidance to conserve the species in current Federal land management plans. The Forest Service has signed a Lynx Conservation Agreement that would affect the forest plans of Forests within lynx habitat.

**Changes Under the Revised Forest Plan**

Conservation measures in the Agreement have been incorporated into Forest-wide management direction in Chapter III. The TEPC Species section has the following direction specifically related to lynx: Objectives 12, 13, 14, 28, 29, 30, 31, 32, 33; and Standards 14, 15, 16, 34.

In addition, vegetation desired conditions for size class, density, snag, and coarse woody debris components should help protect or improve lynx foraging and denning habitats Forest-wide (see Appendix A).

**Northern Idaho Ground Squirrel Listing****Need to Establish or Change Management Direction**

On April 5, 2000, the USFWS listed the northern Idaho ground squirrel as Threatened under the ESA. This animal is found only in Idaho, on and adjacent to a small portion of the Payette National Forest, primarily in Adams County. The current Payette LRMP does not have any specific management direction for this species.

**Changes Under the Revised Forest Plan**

Special management direction has been developed to protect this species and expand existing and potential habitat on the Payette National Forest. See Chapter III, Forest-wide Management Direction, TEPC Species, Objective 15; and direction in the following Management Areas:

**Management Area 2** – Goal 0243, Objective 0244, Standard 0251, Standard 0263, Standard 0271, Guideline 0272, Standard 0277, Standard 0278, Standard 0279, Objective 0282.

**Management Area 3** – Goal 0332, Objective 0333, Standard 0340, Objective 0343, Objective 0344, Objective 0345, Standard 0361, Standard 0375, Guideline 0376, Standard 0380, Standard 0381, Standard 0382, Objective 0385.

**Management Area 5** – Goal 0527, Objective 0528, Standard 0530, Standard 0537, Standard 0541, Standard 0545, Standard 0546, Standard 0547, Objective 0549.

**2001 Roadless Area Conservation Rule****Need to Establish or Change Management Direction**

In October 1999, President Clinton announced a roadless area initiative, which led to the release of the Forest Service Roadless Area Conservation Draft EIS (USDA Forest Service 2000). The Forest Service Roadless Area Conservation Final EIS (USDA Forest Service 2000) was published in November 2000, and the Record of Decision on the Roadless Rule came out on January 12, 2001. However, before the Forest Service could implement the rule, the United States District Court for the District of Idaho issued a preliminary injunction of the rule nationwide.

On May 4, 2001 Agriculture Secretary Ann M. Veneman announced her decision to move forward with an open and fair process to address reasonable concerns raised about the rule so implementation, following resolution of the injunction, would occur in a responsible, common

sense manner. The Forest Service then conducted an Advanced Notice of Proposed Rulemaking to solicit public comments on the Roadless Rule to help the Forest Service determine the next appropriate steps regarding roadless area protection and management. Over 700,000 responses were received. The respondents provided information on a much wider range of concerns and issues than just the rule.

The agency's goal is to provide a long-term protection and management policy for inventoried roadless areas using a responsible and balanced approach that fairly addresses concerns raised by affected local communities, tribes, and states. Recently the Forest Service agreed to participate in a public dialogue sponsored by the Forest Roads Working Group, which is composed of representatives from several non-government organizations. The group is interested in forging agreement and developing workable solutions related to roadless area management.

In the meantime, the Chief of the Forest Service has issued interim directives concerning management within roadless areas until long-term protections are in place or legal actions are concluded. The direction issued by Chief Bosworth on June 7, 2001 reserves to himself final approval of proposed road building and timber harvest in roadless areas, with limited exceptions (Bosworth 2001). To date, Chief Bosworth has not approved any projects in roadless areas on the Payette National Forest. The Forest Service is committed to protecting and managing roadless areas as an important component of the National Forest System.

The current Forest Plan has management prescriptions for some roadless areas that would maintain their roadless character, but other areas are available for road building, timber harvest, and other development.

### **Changes Under the Revised Forest Plan**

The revised Forest Plan has applied management prescription categories (MPCs) and associated standards to IRAs that would limit the types and amounts of development that could occur.

Under MPC 1.2, for IRAs that are Recommended Wilderness, management actions must be designed and implemented in a manner that maintains wilderness values, as defined in the Wilderness Act. Mechanical vegetation treatments, including salvage harvest, are prohibited. Road construction or reconstruction may only occur where needed to provide access related to reserved or outstanding rights, or to respond to statute or treaty.

Under MPC 4.1a, management actions must be designed and implemented in a manner that does not adversely compromise the area's roadless and undeveloped character in the temporary, short term, and long term. Road construction or reconstruction may only occur where needed to provide access related to reserved or outstanding rights, or to respond to statute or treaty.

Under MPC 4.1c, management actions must be designed and implemented in a manner that would be consistent with the Management Area ROS objectives in the temporary, short term, and long term. Within IRAs, road construction or reconstruction may only occur where needed to provide access related to reserved or outstanding rights, or to respond to statute or treaty.

Under MPC 3.1, management actions may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years). Mechanical vegetative treatments may only occur where: (a) the responsible official determines that wildland fire use or prescribed fire would result in unreasonable risk to public safety and structures, investments, or undesirable resource affects; and (b) they maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or (c) they maintain or restore habitat for native and desired non-native wildlife and plant species. Road construction or reconstruction may only occur where needed to: (a) provide access related to reserved or outstanding rights, or (b) respond to statute or treaty, or (c) address immediate response situations where, if the action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.

Under MPC 3.2, management actions may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary or short-term time periods, and must be designed to avoid resource degradation in the long term (greater than 15 years). Mechanical vegetative treatments may only occur where: (a) they maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or (b) they maintain or restore habitat for native and desired non-native wildlife and plant species, or (c) reduce risk of impacts from wildland fire to human life, structures, and investments. Road construction or reconstruction may only occur where needed to: (a) provide access related to reserved or outstanding rights, or (b) respond to statute or treaty, (c) support aquatic, terrestrial, and watershed restoration activities, or (d) address immediate response situations where, if the action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.

There were no suited timberland MPCs (4.2, 5.1, 5.2, 6.1, 6.2) allocated to IRAs under the revised Forest Plan, and no scheduled commercial timber harvests or new road construction are planned for these roadless areas.

## **National Fire Plan, Cohesive and Comprehensive Strategies, Healthy Forests Initiative**

### **Need to Establish or Change Management Direction**

*National Fire Plan* (USDA Forest Service 2000) - The Departments of Agriculture (Forest Service) and Interior (NPS, USFWS, BLM) developed the National Fire Plan in 2000 in response to a Presidential request on how best to respond to the severe fire season of that year. The plan is a long-term, multi-faceted strategy designed to manage the impacts of wildland fire to communities and ecosystems, and to reduce wildfire risk. It focuses on improving fire preparedness, restoring and rehabilitating burned areas, reducing hazardous fuels, assisting communities, and identifying research needs.

*Protecting People and sustaining Resources in Fire-Adapted Ecosystems - Cohesive Strategy* (USDA Forest Service 2000) – The Forest Service developed this strategy in 2000 to address the need to reduce the identified fuel build-up in the West. The strategy establishes a framework to restore and maintain conditions in fire-adapted ecosystems where lower-intensity ground fires

were a powerful force in shaping the make-up and structure of vegetative communities. The strategy identified Condition Class categories for these ecosystems, and prioritized areas for hazardous fuel treatments called for in the National Fire Plan. These priority areas include:

- Wildland-Urban interface
- Municipal supply watersheds
- Threatened and endangered species habitat
- Maintenance of low risk Condition Class 1 areas

*10-Year Comprehensive Strategy Implementation Plan, A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment* (USDA Forest Service et al. 2002) – Developed in 2001 in collaboration with governors and a broad range of stakeholders, this is a 10-year strategy to comprehensively manage wildfire, hazardous fuels, and ecosystem restoration on federal, state, tribal, and private lands. The strategy was designed to extend the concepts of the National Fire Plan and Cohesive Strategy into a broader and more collaborative effort. In 2002, an Implementation Plan for the 10-year Comprehensive Strategy was released. The plan identifies 22 specific tasks to achieve the four goals of the 10-year strategy; and specific performance measures for achievement. The plan emphasizes a collaborative, community-based approach to address wildfire-related issues, and translates the conceptual framework of the 10-year Comprehensive Strategy into specific actions.

*Healthy Forests - An Initiative for Wildfire Prevention and Stronger Communities* (Bush 2002) – Released in 2002, this Presidential initiative is designed to facilitate projects that reduce wildfire hazard and risk by making decisions in a more timely and efficient manner. In facilitating fuels reduction projects, the initiative would speed implementation of projects, improving implementation of the National Fire Plan and the 10-Year Comprehensive Strategy. It emphasizes using collaborative processes in identifying projects and priorities. The administrative proposal would:

- Seek to increase the use of Categorical Exclusions for fuel reduction projects,
- Seek to streamline the appeals process within the existing appeals framework, and
- Seek to streamline the Environmental Assessment documentation process.

The current Forest Plan does not have any specific information or direction to address the national policy changes in wildfire and fuels hazard reduction described above.

### **Changes Under the Revised Forest Plan**

The revised Forest Plan addresses the wildfire hazard plans, strategies, and initiative described above by:

- Analyzing potential effects from wildfire and hazardous fuel conditions in the Vegetation Hazard and Fire Management sections of Chapter 3 in the FEIS,
- Revising Forest-wide Fire Management direction in Chapter III of the Forest Plan to incorporate national fire and fuel management objectives; specifically FMGO04, FMGO06, FMOB01, FMOB02, FMOB04, FMOB05, FMOB06, and FMOB07.

- Identifying National Fire Plan communities and wildland-urban interface areas within each appropriate Management Area in Chapter III of the Forest Plan, and
- Developing specific Management Area direction to prioritize treatment, suppression, prevention, and coordination efforts within and around National Fire Plan communities and wildland-urban interface areas.

## Planning Regulations and Committee of Scientists Report

The Forest Service issued a proposed planning rule in October 1999 that would change the Forest Service regulations for implementing the National Forest Management Act (NFMA). This proposed change was based upon decades of experience implementing the existing regulations as well as the March 15, 1999 Committee of Scientists Report. The report, *Sustaining the People's Land – Recommendations for Stewardship of the National Forests and Grasslands into the Next Century* (Committee of Scientists 1999), highlighted needed changes in four areas:

- Sustainability
- Collaboration (public involvement, partnerships)
- Role of Scientists
- Living Documents

The proposed rule change is in the process of being finalized. When the rule is final, it could result in changes in the planning process used to revise future Forest Plans. The type and extent of changes will not be known until changes in the planning regulations are made final. However, forest plan revision efforts already initiated, including this one, are not be required to follow the new planning regulations.

## CONTINUOUS ASSESSMENT AND PLANNING

The first round of planning in the 1980s required that each Forest build a plan from scratch. This effort became an all-consuming task for the Forest Service and required a big budget, many employees, and lots of time. As the time came to revise these initial plans, budgets and employees were made available to meet the revision demands.

It is important to remember that the Forest is proposing changes to a Plan that has already been developed and implemented. Therefore, there have been years to determine what direction is working and what changes need to be made. In revising the Forest Plan, the Forest focused on those areas that must be reviewed in accordance with federal regulations, and on critical issues identified through new information, monitoring, and public concerns.

The regulations direct the revision process; “The Forest Supervisor shall determine the major public issues, management concerns, and resource use and development opportunities to be



addressed in the planning process” [36 CFR 219.12(b)]. Throughout the revision process, only those portions of the Plan that were identified as needing change were addressed. Budget considerations were also used to validate that alternatives developed were appropriate for detailed consideration.

In June 1990, the Forest Service, in coordination with The Conservation Foundation and Department of Forestry and Natural Resources at Purdue University, published recommendations on how to improve the planning process. After reviewing the Land Management Planning Critique, Region 4 of the Forest Service adopted a more adaptive planning process, called Continuous Assessment and Planning. There are three primary goals of this process:

- Work more collaboratively with customers and interested publics to achieve shared land management expectations;
- Use the revision effort to create an adaptive Forest Plan that will meet current management needs but is readily amended with new information, and;
- Effectively and efficiently utilize information and analysis across scales to improve land management.

Through this process, issues that were better addressed at a later time or at a different scale were deferred. This has allowed the Forest to focus on the most compelling needs for change in Plan direction, or in some cases, make changes where needed prior to the year 2000.

The Forest has already forged a strong beginning for the Continuous Assessment and Planning process by adopting ecosystem management, responding to monitoring results and public concerns, changing management areas and direction, making the Forest Plan more flexible, and incorporating new and valuable information from a many different sources. The Forest has already forged a strong beginning for the Continuous Assessment and Planning process by adopting ecosystem management, responding to monitoring results and public concerns, changing management areas and direction, making the Forest Plan more flexible, and incorporating new and valuable information from a wide variety of sources. This Continuous Assessment and Planning process will continue to be used throughout the next planning period to:

- Fine-tune Forest Plan direction and effectiveness with amendments as needed to address new information or changed conditions, or adapt direction to better address site-specific situations,
- Evaluate Forest-wide effectiveness and validation monitoring, reporting results, and make any necessary changes to plans, and
- Address broad-scale issues that were not covered in detail during Forest Plan revision, such as travel management planning.

# **Chapter III**

## **Management Direction**

## **Changes to Chapter III between Draft and Final Plans**

The Introduction section has been expanded to provide information on multi-scale assessments, continuous assessment and planning, additional aspects of management direction, and desired conditions common to all resources.

A TEPC Species section has been added to the Forest-wide Direction to address concerns with threatened, endangered, proposed, and candidate species in one place. This section was suggested during consultation and was strongly supported by the regulatory agencies.

Forest-wide and Management Area direction have undergone numerous changes in response to concerns expressed in public comments, consultation, and internal reviews on the Draft Plans. Direction has also been reformatted into tables for better organization. Each piece of direction now has a unique identification number that can be referenced in future planning, implementation, monitoring, amendments, or appeals.

The Management Area Description and Direction section has been expanded to provide more information on the content and organization of the management area descriptions and direction. Management Prescription Categories (MPC) are described, along with their associated standards and guidelines, which have been added in the Final Plan.

In the Management Area Descriptions, area maps have been improved, MPC tables have been moved next to the maps, resource sections have been reorganized somewhat to better follow the Forest-wide direction organization, priority treatment areas have been added to the SWRA Resources, Non-native Plants, and Fire Management descriptions, National Fire Plan communities and interface subwatersheds have been added to the Fire Management descriptions, and ROS inventories have been added to the Recreation Resources descriptions. A Scenic Environment description has been added, indicating visually sensitive routes and areas for each management area.

MPC standards and guidelines have been added where applicable to the Management Direction sections of the management areas.

# **CHAPTER III**

## **Management Direction**

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## INTRODUCTION

Chapter III describes management direction for the Forest that will guide Forest personnel to achieve desired outcomes and conditions for both land stewardship and public service. This direction is presented in two sections: (1) Forest-wide Management Direction, which begins below, and (2) Management Area Description and Direction, immediately following. These two sections are closely interrelated and need to be considered together in order to understand the full scope and intent of Forest management direction.

The Forest-wide Management Direction section provides general direction for all Forest resources and the foundation for more specific direction at the Management Area level. For more efficient and effective management, the Forest has been divided into smaller units called Management Areas organized around a combination of watershed and administrative boundaries. The Management Area Description and Direction section describes these areas in detail, highlights resource areas of importance or concern, and prescribes specific management direction to address these concerns. The Management Area direction is designed to tier to the Forest-wide direction, and to help achieve Forest-wide goals and desired conditions.

### Multi-Scale Analysis

Direction contained in this plan was developed from analyses completed at multiple scales. This approach was necessary in order to better understand context and the inter-relationship of forest plan direction on resource, social and economic factors that span multiple scales. Direction (i.e., goals, objectives, standards, and guidelines) in this plan was developed considering the context of the ICBEMP Science, available Northwest Power Planning Council (NWPPC) subbasin assessments and plans, species recovery plans and conservation strategies, 303(d) watershed plans, and other broad<sup>1</sup>-, mid<sup>2</sup>-, and in some cases fine<sup>3</sup>-scale information that was available.

A guide to Mid Scale Ecosystem Inquiry (August 1999), and other information sources, will be used by project planning interdisciplinary teams to help link the broad-, mid-, and fine-scale information utilized in development of this plan direction to site/project-scale<sup>4</sup> design efforts, including establishment of work priorities. The official responsible for project planning and implementation associated with this plan will determine when and what additional fine and site-scale analyses are needed to ensure project implementation decisions are sufficiently linked to the broad-, mid- and fine-scale information utilized in development of this plan.

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<sup>1</sup> **Broad-scale:** A regional land area that may include all or parts of several states. An example of a broad-scale assessment is the Interior Columbia Basin Ecosystem Management Project.

<sup>2</sup> **Mid-scale:** An area varying in size from a U.S. Geological Survey 4th-field hydrologic unit (HU) to groups of 4th-field HUs, approximately 500,000 to 5,000,000 acres; however, a particular mid-scale analysis may not follow hydrologic boundaries when other boundaries are more appropriate to address mid-scale issues. Subbasin Review and Land Management Planning unit analyses occur at this scale.

<sup>3</sup> **Fine-scale:** A landscape area varying in size from a 6th-field HU to a combination of 5th-field HUs, approximately 10,000 to 100,000 acres; however, a particular fine-scale analysis may not follow hydrologic boundaries when other boundaries are more appropriate to address fine-scale issues. Ecosystem Analysis at the Watershed Scale (EAWS) and Lynx analysis units (LAU) occur at this scale.

<sup>4</sup> **Site-scale:** A project area or site, typically associated with project-level NEPA analysis. Any scale less than a broad, mid or fine scale.

## Continuous Assessment and Planning (CAP)

A proactive approach to ecosystem management within an adaptive strategy is needed in order to effectively move toward, and maintain, higher ecological integrity and social and economic resiliency. To respond to this, the intent of future management is to use a continuing process of planning, implementing, monitoring, evaluating, and incorporating new knowledge into forest planning management strategies, for adjustment purposes, where:

- A planned direction is adapted to a site-specific situation, which is different than what was assumed during planning.
- An event changes the characteristics of the environment.
- New information accumulates over time through monitoring that indicates planned objectives are not being met, and/or research indicates a need for change.

Monitoring and evaluation are an integral part of adaptive management and are key to achieving the short- and long-term goals and desired conditions described in this plan. The need for amending or revising direction in this plan will be based on (1) ongoing broad- and mid-scale monitoring programs (e.g., Interagency Implementation Team (IIT) Biological Opinion efforts, ongoing efforts of the NWPPC, State water quality efforts and other broad-scale monitoring programs), and (2) specific planning unit monitoring and evaluation efforts identified in Chapter IV of this document, independent of basin-wide efforts, to address unique local needs. Local monitoring efforts described in Chapter IV of this plan avoid duplication with basin-wide efforts, but are compatible to those efforts whenever possible.

## FOREST-WIDE MANAGEMENT DIRECTION

### Definitions

This section describes management direction that applies generally to National Forest System lands across the entire Forest. There are basically five types of direction described for the Forest resource programs in the pages that follow: desired conditions, goals, objectives, standards, and guidelines. Each of these types is defined in detail, below.

**Desired Conditions** are descriptions of how Forest resources should look and function to provide diverse and sustainable habitats, settings, goods, and services. Taken together, the desired conditions should present an integrated vision of a properly functioning Forest that supports a broad range of biodiversity and social and economic opportunity.

**Goals** are concise statements that help describe desired conditions, or how to achieve those conditions. Goals are typically designed to maintain conditions if they are currently within their desired range, or restore conditions to their desired range if they are currently outside that range. Goals are normally expressed in broad, general terms that are timeless, in that there are no specific dates by which the goals are to be achieved. Goal statements form the basis from which objectives are developed.

**Objectives** are concise time-specific statements of actions or results designed to help achieve goals. Objectives form the basis for project-level actions or proposals to help achieve Forest goals. Like goals, objectives are typically designed to maintain conditions if they are currently within their desired range, or restore conditions to their desired range if they are currently outside that range. The timeframe for accomplishing objectives, unless otherwise stated, is generally considered to be the planning period, or the next 10 to 15 years. More specific dates are not typically used because accomplishment can be delayed by funding, litigation, environmental changes, and other influences beyond the Forest's control.

**Standards** are binding limitations placed on management actions. Standards are typically action restrictions designed to prevent degradation of resource conditions, or exceeding a threshold of unacceptable effects, so that conditions can be maintained or restored over time. However, exceptions are made in some cases to allow temporary or short-term degrading effects in order to achieve long-term goals (e.g., SWST04). Standards must be within the authority and ability of the Forest Service to enforce. A project or action that varies from a relevant standard may not be authorized unless the Forest Plan is amended to modify, remove, or waive its application.

**Guidelines** represent a preferred or advisable course of action generally expected to be carried out. Guidelines often indicate measures that should be taken to help maintain or restore resource conditions, or prevent resource degradation. Deviation from compliance does not require a Forest Plan amendment (as with a standard), but rationale for deviation must be documented in the project decision document.

See Glossary for definitions of “maintain”, “restore”, and “degrade”.

## **Timeframes**

As noted above, management objectives in this Plan are generally designed to be achieved within the planning period (the next 10 to 15 years), unless otherwise stated. Similarly, standards and guidelines are expected to apply for the planning period, although there may be deviations, as explained in the definitions above. In addition, the Continuous Assessment and Planning process, under which this Plan was developed, will allow the Plan to adapt through time. If, for instance, monitoring shows that a certain standard is not working, or that a new guideline is needed, these changes can be made during the planning period with Forest Plan amendments.

Desired conditions and goals are more timeless in nature. For certain resources, the desired conditions may already exist, in which case both the short-term and long-term goal may be to maintain those conditions over time. In other cases, there may be short-term impediments to achieving desired conditions, but the long-term goal is to move resources toward those conditions. One example would be a desired condition of having more large ponderosa pine trees and snags in specific vegetation types. The Forest can retain existing large trees over the short-term planning period, but to achieve the desired condition of more trees may take much longer due to the extended time needed for trees to grow to a large size.



In some management direction that follows, there are references to temporary, short-term, or long-term effects. These time periods were also used in the Forest Plan Revision EIS, and were consistently defined for modeling purposes so that effects could be analyzed on an equal basis across alternatives. The definitions used in the EIS were:

- Temporary = 0 to 3 years
- Short term = greater than 3 years to 15 years
- Long term = greater than 15 years.

This Forest Plan uses these temporal definitions as starting points but recognizes that they vary depending on species, life cycles, mobility, ecological processes, and other influences. For example, a relatively long-lived, mobile species like a bear may be able to avoid or adapt to the temporary effects of prescribed fire or recreation disturbance, whereas a short-lived, stationary plant species may not survive the same effects. Because the plant may only have one brief reproductive period and cannot move to avoid fire or trampling, those disturbance effects have a more long-term impact relative to the plant species than they would to the bear. These different temporal relationships need to be determined and analyzed at the project level where site-specific circumstances can be taken into account.

Similarly, the Plan recognizes that all effects are not the same just because they may occur within the same temporary, short-term, or long-term time period. The duration or repetition of an effect within that time period can vary greatly, as can the intensity, location, or type of effect. Again, Forest personnel should have the flexibility to determine these differences during project-scale analysis.

### **Limited Authority – Guidelines vs. Standards**

As a federal land management agency, the Forest Service has limited authority to influence certain activities or uses—such as mining and hydropower development—on its administered lands. However, the agency does have authority to require reasonable terms, conditions, or measures to minimize or mitigate the effects of some of these activities or uses. In the Forest-wide management direction, these activities or uses are typically addressed by guidelines rather than standards, to reflect the Forest’s limited authority. In such cases, the Forest remains committed to minimizing or mitigating effects from these activities, where they cannot be avoided or eliminated.

### **TEPC Species**

Although all Threatened, Endangered, Proposed, or Candidate species on the Forest may not be individually addressed in the Forest Plan management direction, the Forest is obligated to provide sufficient habitat to contribute to their survival and recovery. This obligation is spelled out in more detail in the Endangered Species Act, Magnuson-Stevens Act, Forest Service Manual and Handbook direction, and various recovery plans, conservation strategies and agreements, and MOUs. In addition, Section 7 consultation will occur at the project level for all proposed actions that may affect these species or their habitats. The Forest Plan does not authorize or implement specific actions and cannot predict potential effects. The actions and effects would occur at the project level and will be addressed in consultation at that level.

## Pacfish/Infish and Biological Opinions

The revised Land and Resource Land Management Plan (LRMP) direction replaces Pacfish/Infish standards, guidelines, and terms and conditions specified in the 1995 BO for chinook salmon and the 1998 BOs for steelhead and bull trout. Analysis in the Forest Plan Biological Assessment provides the linkage between Pacfish/Infish and the 1995/1998 BOs, and the LRMP direction that follows.

## Organization

The Forest-wide desired condition, goals, objectives, standards, and guidelines are organized by resource program area. These resource areas, in turn, are organized by ecological groupings, beginning with biophysical resources, and then moving to socio-economic resources. Although management direction is presented by individual resource area for efficient reference and retrieval, this direction has been integrated across resource areas.

## Laws, Regulations, and Policies

Besides the management direction described in this chapter, numerous federal and state laws, regulations, and policies govern the use and management of resources on National Forest administered lands. Some of the more important ones are described in *Appendix H, Legal and Administrative Framework for Forest Planning and Resource Management*. The Forest has no legal obligation to repeat these laws, regulations, and policies in its Forest Plan; however, direction in the Plan has been designed to guide Forest resource management in such a way that the laws, regulations, and policies should be met. Wherever the laws, regulations, or policies have more stringent requirements than Forest Plan direction, the Forest must and will comply with those requirements.

Existing administrative policy, procedure, and guidance to Forest Service employees issued through the Forest Service Directive System are not typically duplicated in this plan. These directives (i.e., Forest Service Manual and related Forest Service Handbooks) that provide further guidance to a resource area are referenced at the beginning of each resource section.

The Forest Service Manual and Handbook System codifies the agency's policy, practice, and procedure affecting more than one unit and the delegations of continuing authority and assignment of continuing responsibilities; serves as the primary administrative basis for the internal management and control of all programs; and is the primary source of administrative direction to Forest Service employees.

- **Forest Service Manual (FSM).** The component of the agency Directive System that contains legal authorities, management objectives, policies, responsibilities, instructions, and guidance needed on a continuing basis by Forest Service line officers and primary staff in more than one unit to plan and execute assigned programs and activities (FSM 1111).

- **Forest Service Handbooks (FSH).** The component of the agency Directive System that provides detailed procedures, instructions, and guidance needed on a continuing basis by employees in more than one unit on how to proceed with a specialized aspect of a program or activity. Handbooks either implement direction as required by the Manual or incorporate external directives (FSM 1110.3, 1112).
- **Interim Directive.** An internal directive issuance that modifies previous manual or handbook direction or establishes new direction for a period of up to 18 months. FSM 1113.3 describes the criteria related to issuance and policy on the duration of interim directives, including reissuance.

When an FSM, FSH, or related interim directive is issued, its force and effect do not depend upon the component of the Directive System to which the directive is issued; rather, it is the use of the helping verbs "must," "shall," "ought," "should," or "may," or the use of the imperative mood (where "you" is understood) that determines the force and effect of the direction. These words have the same force and effect whether they are used in a manual, handbook or interim directive. FSM 1110.8 provides guidance on the degree of compliance and restriction imposed by helping verbs and imperative mood.

While directives may refer to procedures or requirements imposed on those outside the agency, Forest Service employees do not use internal directives to assign responsibility to or mandate requirements on employees of local, state, or other federal agencies or on the public. Instead, Forest Service officials use correspondence, agreements, contracts, authorizations, regulations, or other appropriate instruments where necessary to impose requirements on other agencies or on persons not employed by the Forest Service.

## Desired Conditions Common To All Resources

The desired condition for the Forest is to care for the land and serve people through the maintenance and restoration of productive and sustainable ecosystems. The Forest features a broad array of landscapes and opportunities, from wilderness areas where natural conditions predominate, to concentrated development areas where conditions have been highly altered to meet a specific resource concern.

Ecosystems on the Forest:

- Have ecological and watershed integrity, meaning they have a viable combination of all the diverse elements and processes needed to sustain the systems and to perform desired functions,
- Are dynamic in nature and resilient and resistant to natural and man-caused disturbances,
- Have a range of vegetative composition and structure that provide habitat for desired plant, wildlife, and aquatic species, and

- Are managed in an environment of public and interagency trust, and cultural and socio-economic sustainability.
- Are managed to promote meaningful relationships with American Indian Tribes to understand and incorporate tribal cultural resources, needs, interests, and expectations.

Ecosystems have the following physical, biological, social, and economic components and conditions:

- Soils retain all or most of their natural productivity and are in a condition that promotes vegetative growth, hydrologic function, long-term nutrient cycling, and erosional stability. Streams and lakes provide clean water, appropriate temperatures, and a variety of connected habitats to support native and desired non-native aquatic species. Air quality is occasionally affected by smoke from fire use and wildfire.
- Forest, grassland, shrubland, and riparian plant communities are within a desired range of variability for composition, structure, patterns, and processes. Vegetation forms a diverse network of habitats and connective corridors for wildlife, and provides desired levels of snags, coarse woody material, and soil organic matter. Terrestrial and aquatic habitats support species diversity, with emphasis on maintaining or restoring threatened, endangered and sensitive species, rare and unique plant communities, and species of cultural, commercial, and recreational significance. Riparian areas connect upland and aquatic habitats, and promote stable and diverse stream channel conditions. Existing noxious weed populations are not expanding, and new invader species are not becoming established.
- Disturbance processes--such as fire, insects, disease, floods, and landslides--contribute to functioning ecosystems. Fire plays its natural role where appropriate and desirable, but is suppressed where necessary to protect life and resources. Fire is used to manage vegetation where appropriate to enhance ecosystem resiliency and lower hazardous fuel levels.
- Recreational settings range from primitive to developed, offering a wide spectrum of opportunities and uses. Facilities--such as roads, trails, campgrounds, and administrative sites--are constructed, reconstructed, or eliminated as needed to provide a balance of safe, effective, and environmentally responsible management activities. Visitors enjoy a variety of special attractions, including National Recreation Areas, Wilderness Areas, Wild and Scenic Rivers, Scenic Byways, historic landmarks, and winter recreation areas. People have the opportunity to explore and learn about their cultural heritage. Significant cultural sites are preserved and accessible through working tribal and public partnerships.
- Sustainable ecosystems provide a variety of sustainable products and services for current and future generations alike. Timber, range, recreation, minerals, and special use programs offer opportunities for economic development, and contribute to local community needs, while maintaining ecological integrity.

## Threatened, Endangered, Proposed, and Candidate Species

*Forest Service Manual and Handbook direction for Threatened, Endangered, Proposed, and Candidate species is in: FSM 2600 – Wildlife, Fish, and Sensitive Plant Habitat Management; and in FSH 2609.13 – Wildlife and Fisheries Program Management Handbook. See also FSM and FSH direction for other appropriate resources in this section.*

### DESIRED CONDITION

Habitats for Threatened and Endangered Species are managed consistent with established and approved Recovery Plans. Management actions either contribute to, or do not prevent recovery or de-listing of these species. Habitats for Proposed and Candidate species are managed to help preclude listing as Threatened or Endangered under the Endangered Species Act (ESA). Degrading effects from Forest programs are at levels that do not threaten the persistence of Threatened, Endangered, Proposed, or Candidate species populations.

| Management Direction for Threatened, Endangered, Proposed, and Candidate Species |                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                                             | Number                                                                                                                                                                                       | Direction Description                                                                                                                                                                                                                                                             |
| Goals                                                                            | TEGO01                                                                                                                                                                                       | Provide habitat capable of contributing to the survival and recovery of species listed under the ESA (see Appendix E for current list of species).                                                                                                                                |
|                                                                                  | TEGO02                                                                                                                                                                                       | Provide habitat that will help keep Proposed or Candidate species from becoming listed (see Appendix E for current list of species).                                                                                                                                              |
|                                                                                  | TEGO03                                                                                                                                                                                       | Balance the need for restorative actions to address the long-term threats to listed and proposed species with the short-term need to protect listed and proposed species and their habitats.                                                                                      |
|                                                                                  | TEGO04                                                                                                                                                                                       | Design and implement management actions to provide for ecological conditions, population viability, reproductive needs, and habitat components Threatened, Endangered, Proposed, and Candidate (TEPC) species.                                                                    |
|                                                                                  | TEGO05                                                                                                                                                                                       | Provide for well-distributed habitat capable of maintaining self-sustaining, complex interacting groups of TEPC species.                                                                                                                                                          |
|                                                                                  | TEGO06                                                                                                                                                                                       | Provide habitat capable of maintaining stable or increasing trends in abundance of TEPC species in all recovery units.                                                                                                                                                            |
|                                                                                  | <i>See also Goals for Soil, Water, Riparian and Aquatic (SWRA) Resources (09, 10, 11, 12, 13, 14, 15); Vegetation (04); Botanical Resources (04, 05, 06); and Recreation Resources (04).</i> |                                                                                                                                                                                                                                                                                   |
| Objectives                                                                       | TEOB01                                                                                                                                                                                       | Continue to map and update locations of species occurrence and habitat for TEPC species during fine- or site/project-scale analyses. Incorporate information into a coordinated GIS database and coordinate with the Idaho Conservation Data Center.                              |
|                                                                                  | TEOB02                                                                                                                                                                                       | Cooperate with USFWS and NMFS to develop an Information and Education program for special use authorizations within TEPC habitat.                                                                                                                                                 |
|                                                                                  | TEOB03                                                                                                                                                                                       | Identify and reduce road-related effects on TEPC species and their habitats using the Watershed and Aquatic Recovery Strategy and other appropriate methodologies.                                                                                                                |
|                                                                                  | TEOB04                                                                                                                                                                                       | Follow emergency consultation procedures after an emergency event as defined in 50 CFR 402.05.                                                                                                                                                                                    |
|                                                                                  | TEOB05                                                                                                                                                                                       | Coordinate with research efforts for TEPC species to determine basic life history requirements and potential effects from management activities. Coordinate efforts and information with the Idaho Conservation Data Center, universities, Forest Service Research Stations, etc. |

| Management Direction for Threatened, Endangered, Proposed, and Candidate Species |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                                             | Number                                              | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                     |
| Objectives                                                                       | TEOB06                                              | Develop an agreed upon process with NMFS and USFWS for project-level consultation that addresses multi-scale analyses and tracking environmental baselines.                                                                                                                                                                                                                                                               |
|                                                                                  | TEOB07                                              | During fine-scale analyses, identify practices or facilities that are adversely affecting TEPC species or their habitats, and prioritize opportunities to mitigate, through avoidance or minimization, adverse effects to TEPC species.                                                                                                                                                                                   |
|                                                                                  | <b>Soil, Water, Riparian, and Aquatic Resources</b> |                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                  | TEOB08                                              | Maintain and update the Watershed and Aquatic Recovery Strategy for restoration of TEPC aquatic species habitat. Update the plan biennially by using the Watershed and Aquatic Recovery Strategy prioritization process, or other appropriate methodologies.                                                                                                                                                              |
|                                                                                  | TEOB09                                              | As funding allows, implement restoration activities in accordance with the current Watershed and Aquatic Recovery Strategy or Forest Service-approved portions of recovery plans to: <ul style="list-style-type: none"> <li>a) Restore listed fish species distribution,</li> <li>b) Restore desired habitat conditions,</li> <li>c) Conserve genetic diversity, and</li> <li>d) Provide for genetic exchange.</li> </ul> |
|                                                                                  | TEOB10                                              | Over the planning period, initiate habitat restoration for at least two subpopulations of anadromous fish and two populations of resident fish in each subbasin where these species occur. Use the current Watershed and Aquatic Recovery Strategy (i.e., WARS), or Forest Service approved portions of recovery plans, to assist in determining watershed priorities for habitat restoration within a subbasin.          |
|                                                                                  | <b>Wildlife Resources</b>                           |                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                  | TEOB11                                              | Update appropriate NRIS database modules for TEPC species and their habitats on a biennially basis to incorporate latest field data.                                                                                                                                                                                                                                                                                      |
|                                                                                  | TEOB12                                              | During project-level planning, field review lynx analysis units (LAUs) that overlay project areas to determine the suitability for denning, foraging, security and connectivity of habitat within the project area.                                                                                                                                                                                                       |
|                                                                                  | TEOB13                                              | Design and implement vegetation management actions in lynx habitat within LAUs to maintain or restore conditions for lynx foraging and denning habitat.                                                                                                                                                                                                                                                                   |
|                                                                                  | TEOB14                                              | During mid- or project-scale analysis, identify and prioritize opportunities for restoration of habitat linkage zones to promote genetic integrity and species distribution (See Figure E-1 in Appendix E).                                                                                                                                                                                                               |
|                                                                                  | TEOB15                                              | Maintain or restore vegetative conditions that contribute to the recovery of northern Idaho ground squirrel habitat. See additional management area direction for northern Idaho ground squirrels in Management Areas 2, 3, and 5.                                                                                                                                                                                        |
|                                                                                  | TEOB16                                              | Maintain or restore forest structural conditions for nesting and roosting areas near water bodies used by bald eagles.                                                                                                                                                                                                                                                                                                    |
|                                                                                  | TEOB17                                              | Seek funding and initiate preparation of a site-specific Bald Eagle Nest Site Management Plan within 5 years after occupation of a nesting territory has been determined.                                                                                                                                                                                                                                                 |
|                                                                                  | TEOB18                                              | Work with the U.S. Fish and Wildlife Service, Nez Perce Tribe and, when appropriate, the State to meet the experimental/non-essential population rules if wolf breeding pair populations' drop below six pairs in the Central Idaho Recovery Area (from the approved FEIS for Gray Wolf Re-introduction; USDI U.S. Fish and Wildlife Service, 1994).                                                                      |
|                                                                                  | <b>Vegetation</b>                                   |                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                  | TEOB19                                              | During fine-scale analyses in areas where TEPC species occur, identify opportunities to maintain desired habitat conditions or restore degraded habitat for TEPC species.                                                                                                                                                                                                                                                 |
|                                                                                  | TEOB20                                              | Design vegetative activities to maintain or restore denning habitat on landscape settings with the highest probability of escaping stand replacing wildfire events.                                                                                                                                                                                                                                                       |
|                                                                                  | <b>Botanical Resources</b>                          |                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Management Direction for Threatened, Endangered, Proposed, and Candidate Species |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                                             | Number                        | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Objectives                                                                       | TEOB21                        | Coordinate with research efforts for TEPC plant species to determine habitat dynamics, seral conditions, pollination ecology, phenology, distribution, and susceptibility to adverse affects. Coordinate efforts and information with the Idaho Conservation Data Center, universities, Forest Service Research Stations, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                                  | TEOB22                        | Develop Integrated Weed Management plans to maintain or restore habitats for TEPC plants and other native species of concern where they are threatened by noxious weeds or non-native invasive plants.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                  | <b>Fire Management</b>        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                  | TEOB23                        | Develop operational resources (maps, keys, desk guides, etc.) within 1 year of signing the ROD, to coordinate TEPC species concerns and practical mitigations, and include those resource tools in the Fire Management Plan. Consult with NMFS and USFWS on operational resources on an annual basis. As part of this process consider the following relative to initial attack: <ul style="list-style-type: none"> <li>a) How these resource tools will be provided to initial attack personnel.</li> <li>b) Locations or identification of occupied TEPC plant habitat, TEPC fish-bearing streams, surface water with direct delivery to TEPC fish bearing streams and associated RCAs.</li> <li>c) Criteria and potential mitigation concerning decisions to place incident bases, camps, helibases, helispots, and other centers for incident activities within occupied TEPC plant habitat or RCAs.</li> <li>d) Criteria and potential mitigation concerning decisions to use draft hoses in TEPC fish-bearing streams that do not have appropriate screening.</li> <li>e) Criteria and potential mitigation concerning decisions to use chemical retardant, foam or other additives in RCAs where surface waters have direct delivery to TEPC fish-bearing streams.</li> <li>f) Criteria and potential mitigation concerning decisions to use heavy equipment in RCAs.</li> </ul> |
|                                                                                  | <b>Rangeland Resources</b>    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                  | TEOB24                        | Manage livestock grazing to be compatible with the maintenance or restoration of desired lynx habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                  | <b>Lands and Special Uses</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                  | TEOB25                        | Use land acquisition, exchange, and conservation easements, where appropriate, to meet riparian and aquatic goals and objectives, and to facilitate restoration of TEPC species habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                  | TEOB26                        | Where the authority to issue special-use authorizations and agreements was not retained (i.e., FERC, mineral leases), work with permit holders to negotiate changes to meet TEPC species desired habitat conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                  | <b>Recreation Resources</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                  | TEOB27                        | During fine-scale analyses in areas where dispersed and developed recreation practices or facilities are identified as a potential concern or problem contributing to adverse affects to TEPC species or degradation of their habitats, evaluate and document where the problems are and prioritize opportunities to mitigate, through avoidance or minimization, adverse effects to TEPC species.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                  | TEOB28                        | During travel planning, identify areas of concentrated snow compaction activities (designated trails, snow play areas) in lynx habitat within LAUs, and minimize snow compaction in those areas to reduce potential conflicts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                                  | TEOB29                        | Allow for expansion of winter recreation facilities that maintain opportunities for lynx movement and dispersal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                  | TEOB30                        | Manage recreational activities to maintain lynx habitat and connectivity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Management Direction for Threatened, Endangered, Proposed, and Candidate Species |                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| Type                                                                             | Number                                                                                                                                                                                                                                                                                                  | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Objectives                                                                       | TEOB31                                                                                                                                                                                                                                                                                                  | Concentrate activities within existing developed areas rather than developing new areas in lynx habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                  | TEOB32                                                                                                                                                                                                                                                                                                  | Ensure the development or expansion of developed recreational sites or ski areas, and adjacent lands provide for landscape connectivity and lynx habitat needs.                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                  | <i>See also Objectives for SWRA Resources (11, 12, 13, 14, 15, 16, 18); Wildlife Resources (07, 08, 09); Botanical Resources (03, 04, 08, 11, 12, 13, 14); Non-native Plants (06, 08); Mineral and Geology Resources (08); Facilities and Roads (10, 11, 12); and Tribal Rights and Interests (03).</i> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Standards                                                                        | TEST01                                                                                                                                                                                                                                                                                                  | The Forest shall consult with the NMFS and Fish and Wildlife Service as needed, and appropriate, to comply with consultation requirements under the Endangered Species Act and Magnuson-Stevens Act.                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                  | TEST02                                                                                                                                                                                                                                                                                                  | For Forest-wide, watershed, or project-level Biological Opinions (BOs) and Biological Assessments (BAs) with letters of concurrence, requirements shall continue to apply until their expiration date unless these documents are specifically updated during further review with related regulatory agencies. Exception to this standard: The 1995 and 1998 Chinook and Steelhead Biological Opinions and 1998 Bull Trout Biological Opinion are replaced by the Biological Opinion for this Forest Plan revision (refer to page 4 of this Chapter). |
|                                                                                  | TEST03                                                                                                                                                                                                                                                                                                  | Design and implement projects to meet the terms of Forest Service approved portions of recovery plans. If a recovery plan does not yet exist, use the best information available (for example, BAs, BOs, letters of concurrence, Forest Service-approved portions of Conservation Strategies) until a recovery plan is written and approved.                                                                                                                                                                                                         |
|                                                                                  | TEST04                                                                                                                                                                                                                                                                                                  | Management actions that have adverse effects on Proposed or Candidate species or their habitats, shall not be allowed if the effects of those actions would contribute to listing of the species as Threatened or Endangered under the ESA.                                                                                                                                                                                                                                                                                                          |
|                                                                                  | TEST05                                                                                                                                                                                                                                                                                                  | For management actions that include application of insecticides, herbicides, fungicides, or rodenticides, mitigation shall avoid or minimize adverse effects on TEPC species or their habitats.                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                  | TEST06                                                                                                                                                                                                                                                                                                  | Management actions shall be designed to avoid or minimize adverse effects to listed species and their habitats. For listed fish species, use Appendix B for determining compliance with this standard.                                                                                                                                                                                                                                                                                                                                               |
|                                                                                  | <b>Soil, Water, Riparian, and Aquatic Resources</b>                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                  | TEST07                                                                                                                                                                                                                                                                                                  | In TEPC fish-bearing waters, do not authorize new surface diversions unless they provide upstream and downstream fish passage and, if needed, include either fish screens that meet NMFS and/or USFWS criteria or other means to prevent fish entrapment or entrainment.                                                                                                                                                                                                                                                                             |
|                                                                                  | <b>Botanical Resources</b>                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                  | TEST08                                                                                                                                                                                                                                                                                                  | Avoid management actions within occupied TEPC plant species habitat that would adversely affect the long-term persistence of those species                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                  | TEST09                                                                                                                                                                                                                                                                                                  | In revegetation and seeding projects in occupied TEPC plant habitat, a Forest botanist shall be consulted to ensure appropriate species are used.                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                  | TEST10                                                                                                                                                                                                                                                                                                  | Management actions that may contribute to establishment or spread of non-native invasive weed species within occupied TEPC plant habitat shall include measures to avoid weed establishment and spread.                                                                                                                                                                                                                                                                                                                                              |
|                                                                                  | TEST11                                                                                                                                                                                                                                                                                                  | New facilities for storage of fuels and other toxicants shall be located outside of occupied TEPC plant habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                                  | <b>Wildlife Resources</b>                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                  | TEST12                                                                                                                                                                                                                                                                                                  | Mitigate, through avoidance or minimization, management actions within known nest or denning sites of TEPC species if those actions would disrupt reproductive success during the nesting or denning period. During project planning, determine sites, periods, and appropriate mitigation measures to avoid or minimize effects.                                                                                                                                                                                                                    |



| Management Direction for Threatened, Endangered, Proposed, and Candidate Species |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| Type                                                                             | Number                 | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Standards                                                                        | TEST13                 | Mitigate, through avoidance or minimization, management actions within known winter roosting sites of TEPC species if those actions would adversely affect the survival of wintering or roosting populations. During project planning, determine sites, periods, and appropriate mitigation measures to avoid or minimize effects.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                  | TEST14                 | <p>Vegetative management activities within lynx foraging habitat in LAUs shall not degrade, nor retard attainment of desired habitat for the lynx and its prey except:</p> <ul style="list-style-type: none"> <li>a) Within 200 feet of Forest Service administrative sites, dwellings, and/or associated outbuildings as needed to reduce risk of loss from wildfire.</li> <li>b) Research studies and genetic tests (i.e., performance tests, long-term field tests and realized gain trials) necessary to evaluate genetically improved reforestation stock.</li> <li>c) Within the wildland urban interface in order to develop or maintain fuel profiles that are necessary to reduce the risk of wildfire.</li> <li>d) Where outweighed by demonstrable short- or long-term benefits to lynx and its prey habitat conditions.</li> </ul> <p>This standard does not apply to activities that are not vegetation management proposals that may affect vegetation, such as removal of vegetation for ski runs, mineral extraction, etc.</p> |
|                                                                                  | TEST15                 | Unless a broad-scale assessment has been completed that substantiates different historical levels of unsuitable habitat, limit disturbance within each LAU as follows: If more than 30 percent of lynx habitat within a LAU is currently in unsuitable condition, no additional habitat may be changed to unsuitable habitat as a result of vegetative management projects. Fire use, or fire hazard reduction and associated vegetation management activities within the wildland urban interface watersheds, that develop or maintain fuel profiles needed to reduce the risk of wildfire threats to the wildland urban interface areas, are NOT bound by this standard.                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                                  | TEST16                 | Lynx LAU boundaries will not be adjusted except through consultation with US Fish and Wildlife Service.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                  | <b>Fire Management</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                  | TEST17                 | <p>Once a Wildland Fire Situation Analysis (WFSA) is approved, heavy equipment shall not be used to construct fire lines within occupied TEPC plant habitat unless:</p> <ul style="list-style-type: none"> <li>a) The line officer or designee determines that imminent safety to human life or protection of structures is an issue; OR</li> <li>b) The incident resource advisor determines and documents an escaped fire would cause more degradation to occupied TEPC plant habitat than would result from the disturbance of heavy equipment.</li> </ul> <p>In no case will the decision to use heavy equipment in occupied TEPC plant habitat be delayed when the line officer or designee determines safety or loss of human life or protection of structures is at imminent risk.</p>                                                                                                                                                                                                                                                  |
|                                                                                  | TEST18                 | Once a WFSA is approved, incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities shall be located outside of occupied TEPC plant habitat unless the only suitable location for such activities is determined and documented by the line officer or designee to be within occupied TEPC plant habitat. In no case will the decision to place these activities inside occupied TEPC plant habitat be delayed when the line officer or designee determines safety or loss of human life or structures is at imminent risk.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Management Direction for Threatened, Endangered, Proposed, and Candidate Species |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| Type                                                                             | Number                     | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Standards                                                                        | TEST19                     | <p>Once a WFSA is approved, hoses used to draft water from TEPC fish-bearing streams for suppression activities shall be screened with the most appropriate mesh size (generally 3/32), or as determined through coordination with NMFS and/or USFWS, unless:</p> <ul style="list-style-type: none"> <li>a) The line officer or designee determines that imminent safety to human life or protection of structures is an issue; OR</li> <li>b) The incident resource advisor determines and documents an escaped fire would cause more degradation to TEPC fish and their habitat than risk to individuals within TEPC fish-bearing streams affected by the use of unscreened, or inappropriately screened, draft hoses.</li> </ul> <p>In no case will the decision to use draft hoses without screening in TEPC fish-bearing streams be delayed when the line officer or designee determines safety or loss of human life or protection of structures is at imminent risk</p>                         |
|                                                                                  | TEST20                     | <p>Once a WFSA is approved, avoid delivery of chemical retardant, foam, or additives to all surface waters with direct drainage to TEPC fish bearing streams or occupied aquatic TEPC plant habitat unless:</p> <ul style="list-style-type: none"> <li>a) The line officer or designee determines that imminent safety to human life or protection of structures is an issue; OR</li> <li>b) The incident resource advisor determines and documents an escaped fire would cause more degradation to TEPC fish and their habitat, or occupied aquatic TEPC plant habitat, than would be caused by chemical, foam or additive delivery to waters containing these TEPC fish or plants.</li> </ul> <p>In no case will the decision to avoid delivery of chemical retardant, foam or additives to TEPC fish bearing waters or occupied TEPC aquatic plant habitat be delayed when the line officer or designee determines safety or loss of human life or protection of structures is at imminent risk</p> |
|                                                                                  | TEST21                     | <p>Water dipping points and criteria for determining dipping points, shall be identified in the operation resources for TEPC fish-bearing streams and occupied TEPC aquatic plant habitat. In situations where dipping points have not been approved in advance, the operational resources criteria for dipping points shall be used until the line officer or designee can approve sites following a review and recommendation by a resource advisor, unless the line officer or designee determines that imminent safety to human life or protection of structures is an issue.</p>                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                  | <b>Rangeland Resources</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                  | TEST22                     | Livestock trailing, bedding, watering, and other handling efforts shall be mitigated, through avoidance, to address adverse effects to occupied TEPC plant habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                  | TEST23                     | New water developments, corrals, and other handling or loading facilities shall not be located within occupied habitat of TEPC plant species unless it can be demonstrated these facilities shall not adversely affect occupied TEPC plant habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                  | TEST24                     | Livestock salting and/or bed grounds shall be located outside occupied TEPC plant habitat so that plants shall not be adversely affected by associated trampling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                  | TEST25                     | Mitigate, through avoidance, the adverse effects of livestock access or activities that may result in trampling of redds or disturbance of spawning or reproductive staging of ESA listed fish species.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                  | TEST26                     | Mitigate, through avoidance, effects to occupied TEPC plant habitat through grazing system design and implementation, and livestock handling adjustments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                  | <b>Mineral Resources</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                  | TEST27                     | Do not approve new development of saleable or leasable mineral operations in occupied TEPC plant habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                  | TEST28                     | Avoid adverse effects from locatable mineral operations to TEPC plant species and occupied habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Management Direction for Threatened, Endangered, Proposed, and Candidate Species |                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| Type                                                                             | Number                                                                                                                                                       | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Standards                                                                        | TEST29                                                                                                                                                       | Avoid or minimize adverse effects from locatable mineral operations to TEPC animal species or their habitats.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                  | TEST30                                                                                                                                                       | In new and existing quarry projects, keep equipment and activities out of occupied TEPC plant habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                  | <b>Lands and Special Uses</b>                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                  | TEST31                                                                                                                                                       | Adverse effects from new facilities to occupied TEPC plant habitat shall be avoided.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                  | <b>Facilities and Roads</b>                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                  | TEST32                                                                                                                                                       | When taking water from TEPC fish-bearing streams for road and facility construction and maintenance activities, intake hoses shall be screened with the most appropriate mesh size (generally 3/32 of an inch), or as determined through coordination with NMFS and/or USFWS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                  | <b>Recreation Resources</b>                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                  | TEST33                                                                                                                                                       | Where it is documented that float-boating activities may have an adverse effect on TEPC species, consult with USFWS and/or NMFS to determine what action is appropriate and necessary to minimize or avoid those effects.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                                  | TEST34                                                                                                                                                       | Allow no net increase in groomed or designated over-the-snow routes or play areas, outside of baseline areas of consistent snow compaction, by LAU or in combination with immediately adjacent LAUs unless the Biological Assessment demonstrates the grooming or designation serves to consolidate use and improve lynx habitat. This does not apply within permitted ski area boundaries, to winter logging, and access to private inholdings. Also, permits, authorizations or agreements could expand into baseline routes and baseline areas of existing snow compaction, and grooming could expand to routes of existing snow compaction and routes that have been designated but not groomed in the past and still comply with this standard. |
|                                                                                  | <i>See also Standards for Wildlife Resource (02, 03, 04); Fire Management (01, 02, 03); Non-native Plants (01-12); and Tribal Rights and Interests (01).</i> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Guidelines                                                                       | TEGU01                                                                                                                                                       | Discretionary actions should avoid take of listed species, and actions where the Forest's discretion is limited should minimize adverse effects that could lead to a take.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                  | TEGU02                                                                                                                                                       | For proposed actions that may affect potential habitat of TEPC species, identify potential habitat and determine species presence within or near the project area. Document the rationale for not identifying potential habitat and determining species presence for TEPC species in the project record.                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                  | TEGU03                                                                                                                                                       | Management actions in occupied Proposed or Candidate species habitat should be modified or relocated if the effects of the actions would contribute to a trend toward ESA listing for these species.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                  | TEGU04                                                                                                                                                       | The Forest should cooperate with USFWS and NMFS, as appropriate, by providing information, data, and assistance for the development of recovery plans for species listed under the ESA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                  | TEGU05                                                                                                                                                       | The Forest should cooperate with USFWS and NMFS, as appropriate, by providing information, data, and assistance for the evaluation of species that are petitioned, or proposed, or candidates to be listed under the ESA, and for evaluation of proposed critical habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                  | TEGU06                                                                                                                                                       | Coordinate with Forest resource specialists to consider TEPC habitat needs when designing and implementing management activities that may affect TEPC species and their habitats.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                  | <b>Botanical Resources</b>                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                  | TEGU07                                                                                                                                                       | During site/project-scale analysis and review, a Forest botanist should review insecticide or herbicide spray plans and prescribed burning plans to determine whether effects to TEPC plant species and their pollinators should be mitigated, through avoidance or minimization.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Fire Management</b>                                                           |                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| Management Direction for Threatened, Endangered, Proposed, and Candidate Species                                                                                                                               |                               |                                                                                                                                                                                                                                                                                                                                                |
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| Type                                                                                                                                                                                                           | Number                        | Direction Description                                                                                                                                                                                                                                                                                                                          |
| Guidelines                                                                                                                                                                                                     | TEGU08                        | Fire Resource advisors should be trained in techniques to mitigate, through avoidance or minimization, adverse effects to TEPC species.                                                                                                                                                                                                        |
|                                                                                                                                                                                                                | <b>Rangeland Resources</b>    |                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                | TEGU09                        | Driveways and trailing routes should be located to avoid occupied TEPC plant habitat.                                                                                                                                                                                                                                                          |
|                                                                                                                                                                                                                | <b>Lands and Special Uses</b> |                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                | TEGU10                        | Land exchanges that would result in a net loss of quality or quantity of habitat for TEPC species should not be considered unless benefits of the exchange outweigh the benefits to those species in the long term.                                                                                                                            |
|                                                                                                                                                                                                                | TEGU11                        | The Federal Energy Regulatory Commission should be notified that hydroelectric proposals in watersheds with TEPC fish species, and/or occupied TEPC plant habitat are inconsistent with Forest Plan management objectives when adverse effects can not be effectively avoided for plant species or avoided or minimized for TEPC fish species. |
|                                                                                                                                                                                                                | TEGU12                        | Where the authority to do so was retained, proposed or existing special use authorizations should be issued, re-issued, or amended upon expiration, only if adverse effects of the authorizations on TEPC species can be minimized.                                                                                                            |
|                                                                                                                                                                                                                | <b>Facilities and Roads</b>   |                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                | TEGU13                        | To protect TEPC plant species and their occupied habitat, water supply points, service areas, and other needs for road and facility construction projects should be specified in project planning and used in project implementation.                                                                                                          |
|                                                                                                                                                                                                                | TEGU14                        | For watersheds with listed aquatic species, essential fish habitat, or designated critical habitat, transportation system design criteria for fish passage should be coordinated with NMFS or USFWS, as appropriate.                                                                                                                           |
| <i>See also Guidelines for Botanical Resources (01, 02, 03, 04); Non-native Plants (01, 03, 05); Fire Management (03, 05); Lands and Special Uses (01, 09, 12, 13, 18); and Facilities and Roads (09, 11).</i> |                               |                                                                                                                                                                                                                                                                                                                                                |

## Air Quality and Smoke Management

*Forest Service Manual and Handbook management direction for air quality, smoke management and Fire Management Plans is in FSM 2500 - Watershed and Air Management, and FSM 5100 - Fire Management, and FSH 5109.19. – Fire Management Analysis and Planning Handbook.*

### DESIRED CONDITION

People visiting the National Forest have the opportunity to experience clean air and spectacular vistas in a natural setting, while recognizing that those vistas may be affected periodically by smoke from management actions or wildfires. Smoke emissions from wildland fires do not exceed the estimated historical frequency and distribution for the various vegetation types across the Forest. Ambient air quality and visibility across the Forest are within federal and state standards

| Management Direction for Air Quality and Smoke Management |        |                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                      | Number | Direction Description                                                                                                                                                                                                                                                                                                       |
| Goals                                                     | ASGO01 | Meet federal and state ambient air quality and visibility standards and other applicable air quality direction.                                                                                                                                                                                                             |
|                                                           | ASGO02 | Manage smoke, while achieving land management objectives, to provide for desirable air quality and visibility.                                                                                                                                                                                                              |
| Objectives                                                | ASOB01 | Comply with federal, state, and local requirements relating to the Clean Air Act. This includes, but is not limited to, participating in the respective state's Smoke Management Programs, and following State Implementation Plans.                                                                                        |
|                                                           | ASOB02 | Within five years or within the timeframe required by the respective (i.e., Idaho and Utah) State Implementation Plans, develop emissions data and trend information for fire use to be stored in a centralized database. Use data to document meeting Regional Haze requirements established by the State.                 |
|                                                           | ASOB03 | Use a variety of management tools, including prescribed fire and Wildland Fire Use (for Resource Benefits), to help manage vegetation to reduce potential smoke impacts from uncharacteristic wildfire.                                                                                                                     |
|                                                           | ASOB04 | Provide educational and interpretive exhibits, displays, and programs to increase public awareness and understanding of smoke emissions from fire use and wildfire, the tradeoffs between the two, and the benefits of fuel reduction and smoke management techniques.                                                      |
|                                                           | ASOB05 | When developing and implementing fire use projects, inform the public about potential smoke impacts to health and safety.                                                                                                                                                                                                   |
| Standards                                                 | ASST01 | Prescribed fire operations shall be conducted consistent with the state's smoke management program.                                                                                                                                                                                                                         |
|                                                           | ASST02 | Adhere to the operations and procedures of the Montana/Idaho Airshed Group and the Utah Interagency Smoke Management Program to limit potential unacceptable smoke impacts. Further restrict burning activities if local conditions indicate potential unacceptable smoke impacts to ambient air quality and/or visibility. |
|                                                           | ASST03 | Apply control measures as directed by the appropriate DEQ during air pollution episodes (e.g., no new ignitions during declared episodes).                                                                                                                                                                                  |

| Management Direction for Air Quality and Smoke Management |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| Type                                                      | Number | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Guidelines                                                | ASGU01 | In addition to identifying applicable regulations, plans, and policies important to project design of prescribed fire activities, air quality and visibility impact evaluations should also consider other sources of emissions; identify sensitive areas; include descriptions of planned measures to reduce smoke impacts as appropriate; identify the potential risk for smoke intrusions into sensitive areas; and describe ambient air monitoring plans, when appropriate.                                                                                                                          |
|                                                           | ASGU02 | Consider and evaluate the impacts of smoke on sensitive areas (e.g., Class I, non-attainment or maintenance areas, population centers, etc.) within an appropriate area of consideration. A 100-kilometer (approximately 62 miles) distance surrounding the project area should be the initial area of consideration. Air quality modeling should be used to support evaluations when possible. Particulate matter is currently the primary pollutant of concern for air quality evaluations related to Forest management activities for compliance with National Ambient Air Quality Standards (NAAQS). |
|                                                           | ASGU03 | Fire Management Plans should outline a process to consider smoke impacts resulting from Wildland Fire Use and suppression activities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                           | ASGU04 | Annually and/or seasonally communicate with the public regarding planned amounts of prescribed burning and potential smoke impacts. Especially near population centers, communication should be aimed at minimizing concerns about health and safety related to smoke.                                                                                                                                                                                                                                                                                                                                   |

## Soil, Water, Riparian, and Aquatic Resources

*Forest Service Manual and Handbook management direction for riparian, soil, water and aquatic resources is in Forest Service Manuals 2500 - Watershed and Air Management, 2600 - Wildlife, Fish, and Sensitive Plant Habitat Management, and 3500 - Cooperative Watershed Management; and in Forest Service Handbooks: 2500, 2509.13 - Burned-Area Emergency Rehabilitation Handbook, 2509.18 - Soil Management Handbook, and 2509.22 - Soil and Water Conservation Handbook.*

### DESIRED CONDITION

Soil protective cover, soil organic matter, and coarse woody material are at levels that maintain or restore soil productivity and soil-hydrologic functions where conditions are at risk or degraded. Soils also have adequate physical, biological, and chemical properties to support desired vegetation growth. Riparian and aquatic ecosystems have appropriate types and amounts of vegetation. There is sufficient large woody debris appropriate for land and stream channel forms to maintain water quality, filter sediment, aid floodplain development, improves floodwater retention and groundwater recharge, and contributes to diverse habitat components. Management actions result in no long-term degradation of soil, water, riparian, and aquatic resources conditions. Instream flows are sufficient to support healthy riparian and aquatic habitats, the stability and effective function of stream channels, and the ability to route flood discharges, and provide for downstream uses. Wetlands and floodplains are maintained where they are properly functioning, and restored where degraded. Improving watershed conditions contribute to the de-listing of water quality limited water bodies to meet Clean Water Act requirements. Public waters are restored where water quality does not support beneficial uses and otherwise are maintained or improved.

Distribution of native and desired non-native fish and other aquatic species is maintained or is expanding into previously occupied habitat, with inter-connectivity between and within meta-populations. The amount, distribution, and characteristics of life-stage habitats are present to maintain or reach viable populations of native and desired non-native species. Habitat conditions prevent further listing of species under the Act or adding species to the Region 4 Sensitive Species list. Efforts are in place to prevent new introductions of undesirable non-native fish species and to reduce degrading effects from past introductions. Habitat provides fish populations for recreational, cultural, and commercial significance. Human activities do not prevent populations from maintaining distribution and abundance during critical life stages. Restoration activities have resulted in maintaining necessary water temperatures, reducing pollutants such as sediment, and removing human-caused barriers to fish passage to restore population and habitat connectivity where genetic contamination to native fish species from exotic species is not an issue.

| Management Direction for Soil, Water, Riparian, and Aquatic Resources                                                                                          |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                                                                                                                           | Number                                          | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Goals                                                                                                                                                          | <b>Soil Processes and Productivity</b>          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                | SWGO01                                          | Maintain soil productivity and ecological processes where functioning properly, and restore where currently degraded. Maintain the physical, chemical, and biological properties of soils to support desired vegetation conditions and soil-hydrologic functions and processes within watersheds.                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                | <b>Hydrology and Watershed Processes</b>        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                | SWGO02                                          | Provide for stream channel integrity, channel processes, and the sediment regime under which the riparian and aquatic ecosystems evolved.                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                | SWGO03                                          | Maintain surface and ground water in streams, lakes, wetlands, and meadows to support healthy riparian and aquatic habitats; the stability and effective function of stream channels; and downstream uses.                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                | SWGO04                                          | Restore and maintain flow regimes sufficient to create and sustain soil-hydrologic and water quality conditions, and riparian, aquatic and wetland habitats, and to achieve patterns of sediment, and nutrient and large woody debris routing within their inherent range of capability.                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                | <b>Water Quality</b>                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                | SWGO05                                          | Design and implement watershed management programs and plans that will restore water quality and watershed function to support beneficial uses.                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                | SWGO06                                          | Meet or surpass State water quality standards by planning and designing land management activities that protect water quality.                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                                | SWGO07                                          | Provide water quality for stable and productive riparian and aquatic ecosystems while fully supporting appropriate beneficial uses.                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                | SWGO08                                          | Manage water quality to meet requirements under the Clean Water Act and Safe Drinking Water Act, with special emphasis on de-listing water quality limited water bodies under Section 303(d) and supporting state development and implementation of TMDLs.                                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                | SWGO09                                          | Promote integration of planning, analysis, implementation, and monitoring efforts that support the ESA, Magnuson-Stevens Act, and Clean Water Act requirements.                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                | <b>Aquatic and Riparian Habitat and Species</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                | SWGO10                                          | Provide riparian and aquatic habitat capable of supporting viable populations of native and desired non-native aquatic species.                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                | SWGO11                                          | Manage human-caused disturbances to avoid or reduce degrading effects to aquatic populations, particularly during critical life stages.                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                | SWGO12                                          | Provide habitat that will help keep aquatic Region 4 sensitive species from becoming listed (see Appendix E for current list of species).                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                | SWGO13                                          | Provide habitat capable of supporting viable populations of aquatic Management Indicator Species (see Appendix E for current list of species).                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                                | SWGO14                                          | Diversity and productivity of native and desired non-native plant communities in riparian conservation areas: <ul style="list-style-type: none"> <li>a) Provide amounts and distribution of large woody debris consistent with desired forest vegetation conditions described in Appendix A;</li> <li>b) Provide adequate summer and winter thermal regulation within the aquatic and riparian zones; and</li> <li>c) Achieve rates of surface erosion, bank erosion, and chemical migration characteristic of those under which the communities developed.</li> </ul> |
|                                                                                                                                                                | SWGO15                                          | Provide habitat to support populations of well-distributed native and desired non-native plant, vertebrate, and invertebrate populations that contribute to the viability of riparian-dependent communities.                                                                                                                                                                                                                                                                                                                                                           |
| See also Goals for TEPC Species (01, 02, 03, 04, 05, 06); Vegetation (04); Rangeland Resources (03, 05); Recreation Resources (04); and Heritage Program (03). |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |



| Management Direction for Soil, Water, Riparian, and Aquatic Resources |                                                 |                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                                  | Number                                          | Direction Description                                                                                                                                                                                                                                                                                                                                                                  |
| Objectives                                                            | <b>Soil Processes and Productivity</b>          |                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                       | SWOB01                                          | Continue to maintain and update the landslide prone database to assist in identifying landslides and predicting landslide-prone areas.                                                                                                                                                                                                                                                 |
|                                                                       | SWOB02                                          | During fine-scale analysis, identify opportunities using fuels management activities to reduce the risk of post-wildfire watershed runoff in subwatersheds with potential threats to life and property.                                                                                                                                                                                |
|                                                                       | SWOB03                                          | During fine-scale analysis, identify opportunities to restore degraded soil productivity and processes.                                                                                                                                                                                                                                                                                |
|                                                                       | <b>Hydrology and Watershed Processes</b>        |                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                       | SWOB04                                          | In cooperation with affected state, tribal, and local governments, holders of water rights, and other interested parties, quantify and seek to obtain federal water rights under the appropriate state and federal laws and Forest Service policy for consumptive and instream water uses needed to carry out National Forest multiple use objectives on National Forest System lands. |
|                                                                       | <b>Water Quality</b>                            |                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                       | SWOB05                                          | Cooperate with the State, Tribes, other agencies and organizations to develop and implement Total Maximum Daily Loads (TMDLs) and their implementation plans for 303d impaired water bodies influenced by National Forest System management.                                                                                                                                           |
|                                                                       | SWOB06                                          | Work with State, Tribes, other agencies and organizations to prioritize restoration needs and to bring 303d impaired water bodies into compliance with State water quality standards in a reasonable timeframe.                                                                                                                                                                        |
|                                                                       | SWOB07                                          | Work within the State's timelines to assist the State in the identification of 303d impaired water bodies, development of TMDLs, and development of TMDL Implementation Plans.                                                                                                                                                                                                         |
|                                                                       | SWOB08                                          | Work with the State of Idaho to validate whether their listings of 303d water bodies are correct or whether the water bodies have been restored adequately so that they can be considered for de-listing.                                                                                                                                                                              |
|                                                                       | SWOB09                                          | Using watershed condition indicators (refer to Appendix B), update the environmental baseline biennially when new information is available through sources such as subbasin assessments, mid- or project-scale analysis, inventories, or Forest-wide monitoring. Use this information to update the Watershed and Aquatic Recovery Strategy.                                           |
|                                                                       | SWOB10                                          | Coordinate with municipalities to ensure that management actions are consistent with water quality requirements within municipal watersheds.                                                                                                                                                                                                                                           |
|                                                                       | <b>Aquatic and Riparian Habitat and Species</b> |                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                       | SWOB11                                          | Coordinate with state and local agencies and tribal governments annually to limit or reduce degrading effects from stocking programs on native and desired non-native fish and aquatic species.                                                                                                                                                                                        |
|                                                                       | SWOB12                                          | Design and implement management actions so they do not fragment habitat for native and desired non-native fish species. Restore connectivity in currently fragmented habitat where the risk of genetic contamination, predation, or competition from exotic fish species is not a concern.                                                                                             |
|                                                                       | SWOB13                                          | During fine and site/project-scale analysis, identify and prioritize opportunities for restoration of habitat linkage to promote genetic integrity and species distribution.                                                                                                                                                                                                           |
|                                                                       | SWOB14                                          | Prioritize improvements to existing culverts, bridges, and stream crossings identified for fish passage and associated bedload and debris problems, based on the Watershed Aquatic Recovery Strategy (WARS) Map, fine-scale analyses and/or project-level priorities.                                                                                                                  |
|                                                                       | SWOB15                                          | Maintain and update species occurrence and habitat maps for Forest species (e.g., MIS and Region 4 Sensitive species) during fine and site/project-scale analyses.                                                                                                                                                                                                                     |
| <b>SWRA Restoration</b>                                               |                                                 |                                                                                                                                                                                                                                                                                                                                                                                        |

| Management Direction for Soil, Water, Riparian, and Aquatic Resources |                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                                  | Number                                                                                                                                                                                                                                                                                                                                    | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Objectives                                                            | SWOB16                                                                                                                                                                                                                                                                                                                                    | During fine-scale analysis, identify opportunities to restore degraded upland and aquatic habitat conditions in order to support productive and diverse populations of native and desired non-native aquatic species to meet social needs and tribal interests. Opportunities should focus on restoring passage for fish and other aquatic species, and restoring desired ranges of water temperature, large woody debris, streambank stability, sediment levels, water chemistry, and pool size and numbers. Refer to the Watershed Condition Indicators in Appendix B.                                                                                                                                                                                                                                                                                                                           |
|                                                                       | SWOB17                                                                                                                                                                                                                                                                                                                                    | Biennially, maintain and update the Watershed and Aquatic Recovery Strategy (WARS) using the Watershed and Aquatic Recovery Strategy prioritization process, or other appropriate methodologies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                       | SWOB18                                                                                                                                                                                                                                                                                                                                    | Reduce road-related effects on soil productivity, water quality, and aquatic/riparian species and their habitats. Refer to the Watershed and Aquatic Recovery Strategy (WARS) for mid-scale prioritization indicators to assist in fine and site/project scale restoration prioritization planning.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                       | SWOB19                                                                                                                                                                                                                                                                                                                                    | Identify and capitalize on funding opportunities to assist in the restoration of aquatic habitat and watershed conditions important to the recovery of listed fish species and de-listing of 303(d) impaired water bodies. Examples of potential funding sources include the State Clean Water Act 319 funds, Federal Columbia River Power System Re-licensing funds, and funds from the Northwest Power Planning Council, public and private partnerships.                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                       | SWOB20                                                                                                                                                                                                                                                                                                                                    | As requested by the lead agency, coordinate data exchange and provide review/input into subbasin planning efforts undertaken by the State Office of Species Conservation, the Northwest Power Planning Council (NWPPC), Tribes, and local watershed advisory groups.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                       | <i>See also Objectives for Rangeland Resources (03); Mineral and Geology Resources (08, 09); Lands and Special Uses (12); Facilities and Roads (04, 10, 11, 12); Recreation Resources (01, 10); Heritage Program (18); Tribal Rights and Interests (03); and Wilderness, Recommended Wilderness, and Inventoried Roadless Areas (02).</i> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Standards                                                             | <b>General</b>                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                       | SWST01                                                                                                                                                                                                                                                                                                                                    | Management actions shall be designed in a manner that maintains or restores water quality to fully support beneficial uses and native and desired non-native fish species and their habitat, except as allowed under SWRA Standard #4 below. Use the MATRIX located in Appendix B to assist in determining compliance with this standard.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                       | <b>Soil Processes and Productivity</b>                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                       | SWST02                                                                                                                                                                                                                                                                                                                                    | <p>Management activities that may affect soil detrimental disturbance (DD) shall meet the following requirements:</p> <ul style="list-style-type: none"> <li>a) In an activity area where existing conditions of DD are below 15 percent of the area, management activities shall leave the area in a condition of 15 percent or less detrimental disturbance following completion of the activities.</li> <li>b) In an activity area where existing conditions of DD exceed 15 percent of the area, management activities shall include mitigation and restoration so that DD levels are moved back toward 15 percent or less following completion of the activities.</li> </ul> <p>To estimate soil DD, it is essential that the glossary definitions for <i>activity area</i>, <i>detrimental soil disturbance</i> and <i>total soil resource commitment</i> (TSRC) are clearly understood.</p> |
|                                                                       | SWST03                                                                                                                                                                                                                                                                                                                                    | <p>Management activities that may affect TSRC shall meet the following requirements:</p> <ul style="list-style-type: none"> <li>a) In an activity area where existing conditions of TSRC are below 5 percent of the area, management activities shall leave the area in a condition of 5 percent or less TSRC following completion of the activities.</li> <li>b) In an activity area where existing conditions of TSRC exceed 5 percent of the area, management activities shall include mitigation and restoration so that TSRC levels are moved back toward 5 percent or less following completion of the activities.</li> </ul> <p>To estimate TSRC, it is essential that the glossary definitions for <i>activity area</i>, <i>detrimental soil disturbance</i> and <i>total soil resource commitment</i> are clearly understood.</p>                                                         |

| Management Direction for Soil, Water, Riparian, and Aquatic Resources |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| Type                                                                  | Number                                          | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Standards                                                             | <b>Hydrology and Watershed Processes</b>        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                       | SWST04                                          | <p>Management actions will neither degrade nor retard attainment of properly functioning soil, water, riparian, and aquatic desired conditions, except:</p> <ul style="list-style-type: none"> <li>a) Where outweighed by demonstrable short- or long-term benefits to watershed resource conditions; or</li> <li>b) Where the Forest Service has limited authority (e.g., access roads, hydropower, etc.). In these cases, the Forest Service shall work with permittee(s) to minimize the degradation of watershed resource conditions.</li> </ul> <p>Use the MATRIX located in Appendix B to assist in determining compliance with this standard.</p>                                                                                                                                                                                                                            |
|                                                                       | SWST05                                          | Management actions within RCAs that are associated with valid existing rights—such as mining, water diversions, and hydro-power—shall be coordinated with licensees, permittees, or claimants in an effort to maintain or restore beneficial uses and desired habitat conditions for native and desired non-native fish.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                       | SWST06                                          | In cooperation with affected state, tribal, and local governments, holders of water rights, and other interested parties, determine instream flows needed for protection of water-related resources when assessing permit or license actions such as mining claim development, hydropower development, snowmaking, or water transmission facilities. When determining the sufficient quality, quantity, and timing of flows, use the following four factors: (a) maintenance and restoration of habitat for fish, wildlife, and riparian plant communities; (b) maintenance of channel stability and capacity for passing floods; (c) maintenance of recreational opportunities such as fishing, swimming, boating, and aesthetic enjoyment; and (d) maintenance of water quality and natural temperature regimes. Make sufficient flows a condition of permit or license issuance. |
|                                                                       | <b>Water Quality</b>                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                       | SWST07                                          | Within legal authorities, ensure that new proposed management activities within watersheds containing 303(d) listed water bodies improve or maintain overall progress toward beneficial use attainment for pollutants that led to the listing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                       | SWST07                                          | Within legal authorities, ensure that new proposed management activities within watersheds containing 303(d) listed water bodies improve or maintain overall progress toward beneficial use attainment for pollutants that led to the listing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                       | <b>Aquatic and Riparian Habitat and Species</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                       | SWST08                                          | Fish passage shall be provided at all proposed and reconstructed stream crossings of existing and potential fish-bearing streams unless protection of pure-strain native fish enclaves from competition, genetic contamination, or predation by exotic fishes is determined to be an overriding management concern.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                       | SWST09                                          | In fish-bearing waters, do not authorize new surface diversions unless they provide upstream and downstream fish passage and, if needed, include either fish screens or other means to prevent fish entrapment/entrainment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                       | SWST10                                          | Trees or snags that are felled within RCAs must be left unless determined not to be necessary for achieving soil, water, riparian, and aquatic desired conditions. Felled trees or snags left in RCAs shall be left intact unless resource protection (e.g., the risk of insect infestation is unacceptable) or public safety requires bucking them into smaller pieces.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                       | SWST11                                          | Do not authorize storage of fuels and other toxicants or refueling within RCAs unless there are no other alternatives. Storage of fuels and other toxicants or refueling sites within RCAs shall be approved by the responsible official and have an approved spill containment plan commensurate with the amount of fuel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Management Direction for Soil, Water, Riparian, and Aquatic Resources |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| Type                                                                  | Number                                   | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Standards                                                             | SWST12                                   | Site-specific analysis or field verification of broad-scale landslide-prone models shall be conducted in representative areas that are identified as landslide prone during site/project-scale analysis involving proposed management actions that may alter soil-hydrologic processes. Based on the analysis findings, design management actions to avoid the potential for triggering landslides. Refer to the <i>Implementation Guide for Management on Landslide and Landslide Prone Areas</i> , located in Appendix B to help determine compliance with this standard.                                                                                                                     |
|                                                                       |                                          | See also Standards for Vegetation (01); Fire Management (01, 02, 03); Timberland Resources (04, 05, 07, 08); Rangeland Resources (01, 02, 03, 04); Mineral and Geology Resources (01, 03, 04, 08, 09); Lands and Special Uses (07, 11, 12, 13, 14); Facilities and Roads (01, 02, 04, 05); Recreation Resources (02, 05); and Tribal Rights and Interests (03).                                                                                                                                                                                                                                                                                                                                 |
| Guidelines                                                            | <b>General</b>                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                       | SWG01                                    | Federal, state, county, tribal, and regulatory agency priorities should be considered early in the process of subbasin review, fine- and site/project-scale analyses, and restoration priorities to help ensure priorities compliment each other where possible, or at least minimize conflicts.                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                       | SWG02                                    | When doing fine-scale assessments, the MATRIX in Appendix B should be used to assist in establishing reference and current conditions. Based on a comparison of current and desired conditions, identify management opportunities for watershed and aquatic restoration.                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                       | <b>Soil Processes and Productivity</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                       | SWG03                                    | Where proposed management actions may alter soil-hydrologic processes, representative sample of landslides and landslide-prone areas should be field-verified to identify and interpret controlling and contributing factors of slope stability. Integrate the resulting information with supporting data to provide a final stability assessment and identification of appropriate land management actions in landslide and landslide-prone areas. Refer to the <i>Implementation Guide for Management on Landslide and Landslide Prone Areas</i> , located in Appendix B.                                                                                                                     |
|                                                                       | SWG04                                    | General Field Verification Procedures for Landslide and Landslide-Prone Areas: Six major groups of known characteristics should be investigated to supply information adequate to characterize unstable conditions. These are:<br>a) Landform<br>b) Overburden<br>c) Geological Processes on the Hillslope<br>d) Bedrock Lithology and Structure<br>e) Hydrology<br>f) Vegetation.<br>Refer to the <i>Implementation Guide for Management on Landslide and Landslide Prone Areas</i> , located in Appendix B.                                                                                                                                                                                   |
|                                                                       | SWG05                                    | After completion of ground-disturbing activities in a watershed, the minimum ground cover should be sufficient to prevent erosion from exceeding the range of soil erosion rates that are characteristic of the local soil type, landform, climate, and vegetation of the area, or the soil-loss tolerance.                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                       | <b>Hydrology and Watershed Processes</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                       | SWG06                                    | When assessing projects where there is a need to determine appropriate water management strategies to maintain instream flows, cooperate with affected State, Tribal, and local governments, holders of water rights, and other interested parties. These flows should incorporate: (a) summer and winter base flows to maintain or restore habitat for resident and anadromous fish species and riparian vegetation, (b) a peak flow component to maintain fish habitat, channel capacity, and riparian vegetation, and (c) a gradual rising and falling hydrograph limb during spring runoff to protect bank stability, fish habitat, and trigger fish behavioral patterns such as migration. |

| Management Direction for Soil, Water, Riparian, and Aquatic Resources |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                      |
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| Type                                                                  | Number                                                                                                                                                                                                                                                                                         | Direction Description                                                                                                                                                                                                                                                                                                                                                |
| Guidelines                                                            | <b>Water Quality</b>                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                       | SWG07                                                                                                                                                                                                                                                                                          | Projects in watersheds with 303(d) listed water bodies should be supported by the appropriate scale and level of analysis sufficient to permit an understanding of the implications of the project within the larger watershed context.                                                                                                                              |
|                                                                       | SWG08                                                                                                                                                                                                                                                                                          | Proposed actions analyzed under NEPA should adhere to the State Nonpoint Source Management Plan to best achieve consistency with both Sections 313 and 319 of the Federal Water Pollution Control Act.                                                                                                                                                               |
|                                                                       | SWG09                                                                                                                                                                                                                                                                                          | Project proposals that may affect water quality should answer the 11 questions outlined in the Idaho Nonpoint Source Management Plan (or as updated) to achieve federal consistency with the Clean Water Act as implemented by the State.                                                                                                                            |
|                                                                       | <b>Aquatic and Riparian Habitat and Species</b>                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                       | SWG10                                                                                                                                                                                                                                                                                          | Stocking of non-native fish species in high-mountain and other Forest lakes and streams should be discouraged if stocking imperils the inherent composition, structure, or function of the lake or stream ecosystems. Coordinate management of these ecosystems with Idaho Department of Fish and Game and tribal governments.                                       |
|                                                                       | SWG11                                                                                                                                                                                                                                                                                          | Transport hazardous materials on the Forest in accordance with 49 CFR 171 in order to reduce the risk of spills of toxic materials and fuels during transport through RCAs.                                                                                                                                                                                          |
|                                                                       | SWG12                                                                                                                                                                                                                                                                                          | During site/project-scale analyses, habitat should be determined for sensitive aquatic species within or near the project area. Surveys to determine presence should be conducted for those species with suitable habitat. Document the rationale for not conducting surveys for other species in the project record.                                                |
|                                                                       | SWG13                                                                                                                                                                                                                                                                                          | In intermittent and perennial non-fish bearing waters, new surface diversions should not be authorized unless they provide passage and habitat for native and desired non-native aquatic species other than fish. Flows that are adequate to pass fish would also be sufficient to pass other aquatic species in intermittent and perennial non-fish bearing waters. |
|                                                                       | See also <i>Guidelines for Fire Management</i> (02, 03, 05, 06); <i>Rangeland Resources</i> (01, 02, 04, 05, 06, 07); <i>Mineral and Geology Resources</i> (06, 07, 09, 10, 11); <i>Lands and Special Uses</i> (01, 09, 12, 13, 18); and <i>Facilities and Roads</i> (01, 05, 06, 07, 09, 11). |                                                                                                                                                                                                                                                                                                                                                                      |

## Wildlife Resources

*Forest Service Manual and Handbook management direction for wildlife resources is in FSM 2600 - Wildlife, Fish, and Sensitive Plant Habitat Management, and in FSH 2609.13 - Wildlife and Fisheries Program Management Handbook.*

### DESIRED CONDITION

The amount, distribution, and characteristics of vegetation are present at levels necessary to maintain viable populations of native and desired non-native wildlife species. For Region 4 Sensitive Species and Forest Management Indicator Species, management actions maintain habitat conditions that are properly functioning, or restore those conditions that are degraded. Habitat conditions generally contribute to the survival, recovery, and de-listing of species under the Endangered Species Act, and prevent further listing of species under the Act or adding species to the Region 4 Sensitive Species List. Human activities do not prevent populations from maintaining desired distribution and abundance during critical life stages. Habitat conditions support populations of species of ecological, socio-economic, tribal, cultural, and recreational significance.

| Management Direction for Wildlife Resources |                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                      |
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| Type                                        | Number                                                                                                                                                                                                                                   | Direction Description                                                                                                                                                                                                                |
| Goals                                       | <b>General</b>                                                                                                                                                                                                                           |                                                                                                                                                                                                                                      |
|                                             | WIGO01                                                                                                                                                                                                                                   | Provide habitat capable of supporting viable populations of native and desired non-native wildlife species.                                                                                                                          |
|                                             | WIGO02                                                                                                                                                                                                                                   | Reduce human-caused disturbances that cause undesirable effects to wildlife populations during critical life stages.                                                                                                                 |
|                                             | WIGO03                                                                                                                                                                                                                                   | Provide habitat for wildlife species on National Forest System lands capable of contributing to sustainable populations for socio-economic and tribal needs.                                                                         |
|                                             | <b>Region 4 Sensitive and Management Indicator Species</b>                                                                                                                                                                               |                                                                                                                                                                                                                                      |
|                                             | WIGO04                                                                                                                                                                                                                                   | Provide habitat that will help keep Region 4 Sensitive wildlife species from becoming listed (see Appendix E for current lists of species).                                                                                          |
|                                             | WIGO05                                                                                                                                                                                                                                   | Provide habitat capable of supporting the viability of wildlife Management Indicator Species (see Appendix E for current list of species).                                                                                           |
|                                             | WIGO06                                                                                                                                                                                                                                   | Provide well-distributed habitat and connective corridors important to sustaining MIS and other wildlife species.                                                                                                                    |
|                                             | <i>See also Goals for TEPC Species (01, 02, 03, 04, 05, 06); Vegetation (01, 02, 04, 05, 06, 07); Non-native Plants (04); Timberland Resources (05); Fire Management (03); Recreation Resources (04, 06); and Heritage Program (03).</i> |                                                                                                                                                                                                                                      |
|                                             | <b>General</b>                                                                                                                                                                                                                           |                                                                                                                                                                                                                                      |
| Objectives                                  | WIOB01                                                                                                                                                                                                                                   | During fine-scale analyses, identify and prioritize opportunities for restoration of habitat linkage to promote genetic integrity and wildlife species distribution (see Appendix E).                                                |
|                                             | WIOB02                                                                                                                                                                                                                                   | During site/project-scale analyses, identify non-vegetated wintering and denning wildlife habitats (caves, talus slopes, etc.) when it is determined that the proposed activity may measurably reduce the quality of those habitats. |

| Management Direction for Wildlife Resources                |                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                       | Number                                                                                                                                                                                                                                        | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Objectives                                                 | WIOB03                                                                                                                                                                                                                                        | Prioritize wildlife habitats to be restored at a mid- or Forest-scale, using information from sources such as species habitat models, and fine-scale analyses. Initiate restoration activities on priority wildlife habitats to move current conditions toward desired conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                            | WIOB04                                                                                                                                                                                                                                        | Coordinate animal damage management with the Animal and Plant Health Inspection Service (APHIS), in compliance with USDA Wildlife Services' most current direction for southern Idaho.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                            | WIOB05                                                                                                                                                                                                                                        | Identify existing and potential areas where wildlife mortality from vehicles may be a concern. Work with the state and county road agencies to reduce the potential for vehicle-caused mortality.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                            | WIOB06                                                                                                                                                                                                                                        | Enhance public awareness of wildlife habitat management and species conservation through educational and interpretive programs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                            | WIOB07                                                                                                                                                                                                                                        | Maintain or restore each PVG in each watershed (5 <sup>th</sup> field hydrologic unit) to provide at least 20 percent of the forest vegetation in the large tree size class (medium tree size class in PVG 10).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                            | <b>Region 4 Sensitive and Management Indicator Species</b>                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                            | WIOB08                                                                                                                                                                                                                                        | Continue to map locations of species occurrence and habitat for MIS and Region 4 Sensitive species during fine- and site/project scale analyses. Incorporate information into a coordinated GIS database, including FAUNA, and coordinate with the Idaho Conservation Data Center.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                            | WIOB09                                                                                                                                                                                                                                        | During fine-scale analyses, identify and prioritize opportunities for restoring degraded MIS and Sensitive species habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                            | WIOB10                                                                                                                                                                                                                                        | Update appropriate NRIS database modules for sensitive species' occurrence and habitat on a biennial basis to incorporate latest field data.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                            | <b>Big Game</b>                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                            | WIOB11                                                                                                                                                                                                                                        | Work with Idaho Department of Fish and Game to address their species plan objectives when Forest Service management activities may affect those objectives.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                            | WIOB12                                                                                                                                                                                                                                        | Implement temporary, seasonal, or permanent area and transportation route closures through special orders to address big game vulnerability and public access needs. Coordinate closures with appropriate state agencies, other federal agencies, and tribal governments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                            | <i>See also Objectives for TEPC Species (11, 12, 13,14, 17, 18); SWRA Resources (13); Vegetation (01, 06, 07); Rangeland Resources (03); Facilities and Roads (04, 12); Recreation Resources (19, 22, 24, 25); and Heritage Program (18).</i> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Standards                                                  | <b>General</b>                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                            | WIST01                                                                                                                                                                                                                                        | <p>Maintain at least 20 percent of the acres within each forested PVG found in a watershed (5<sup>th</sup> field HU) in large tree size class (medium tree size class for PVG 10, persistent lodgepole pine). Where analysis of available datasets indicates that the large tree size class (medium tree size class in PVG 10) for a potential vegetation group in a watershed (5<sup>th</sup> field HU), is less than 20 percent of the total PVG acres, management actions shall not decrease the current area occupied by the large tree size class, except when:</p> <ol style="list-style-type: none"> <li>Fine or site/project scale analysis indicates the quality or quantity of large tree size class for a PVG within the 5<sup>th</sup> field HU would not contribute to habitat distribution or connective corridors for TEPCS and MIS species in short or long-term, <i>and</i></li> <li>Management actions that cause a reduction in the area occupied by the large tree size class would not degrade or retard attainment of desired vegetation conditions in the short or long-term as described in Appendix A, including snags and coarse woody debris.</li> </ol> |
| <b>Region 4 Sensitive and Management Indicator Species</b> |                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Management Direction for Wildlife Resources |                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                        | Number                                                                                                                                                                                                                                        | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                            |
| Standards                                   | WIST02                                                                                                                                                                                                                                        | Design and implement projects within occupied habitats of Sensitive species to help prevent them from becoming listed. Use Forest Service-approved portions of Conservation Strategies and Agreements, as appropriate, in the management of Sensitive species habitat to keep management actions from contributing to a trend toward listing for these species.                                                                  |
|                                             | WIST03                                                                                                                                                                                                                                        | Mitigate management actions within known nesting or denning sites of MIS or Sensitive species if those actions would disrupt the reproductive success of those sites during the nesting or denning period. Sites, periods, and mitigation measures shall be determined during project planning.                                                                                                                                  |
|                                             | WIST04                                                                                                                                                                                                                                        | Mitigate management actions within known winter roosting sites or hibernacula (bats) of Sensitive species if those actions would measurably reduce the survival of wintering or roosting populations. Sites, periods, and mitigation measures will be determined during project planning.                                                                                                                                        |
|                                             | WIST05                                                                                                                                                                                                                                        | In goshawk territories with known active nest stands, identify alternate and replacement nest stands during project-level planning when it is determined that the proposed activity is likely to degrade nest stand habitat.                                                                                                                                                                                                     |
|                                             | <b>Big Game</b>                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                             | WIST06                                                                                                                                                                                                                                        | Mitigate human-caused disturbances within winter/spring ranges if disturbances cause displacement of wildlife while they are occupying those ranges.                                                                                                                                                                                                                                                                             |
|                                             | WIST07                                                                                                                                                                                                                                        | Big game requirements for space and forage have priority in the management of winter range used in common by livestock and big game.                                                                                                                                                                                                                                                                                             |
|                                             | <i>See also Standards for TEPC Species (12, 13, 14, 15, 16); SWRA Resources (01, 04, 06); Vegetation (01); Timberland Resources (02, 03, 8); Rangeland Resources (01); Recreation Resources (05); and Mineral and Geology Resources (01).</i> |                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Guidelines                                  | <b>General</b>                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                             | WIGU01                                                                                                                                                                                                                                        | Vegetation management should consider the following habitat conditions or features: <ul style="list-style-type: none"> <li>a) The amount, quality, and distribution of habitats,</li> <li>b) Fragmentation within habitats,</li> <li>c) Juxtaposition and connectivity to other habitats,</li> <li>d) The influence of road-related degradation, and</li> <li>e) Ecosystem processes that develop and modify habitat.</li> </ul> |
|                                             | WIGU02                                                                                                                                                                                                                                        | Inventories of bat hibernacula or maternity colonies should be typically limited to no more than once a year, to reduce disturbance. Follow approved methods for inventory or monitoring techniques.                                                                                                                                                                                                                             |
|                                             | WIGU03                                                                                                                                                                                                                                        | Bat passage gates that restrict human access should be evaluated and installed if needed in abandoned mines that are used by bats and are scheduled for closure.                                                                                                                                                                                                                                                                 |
|                                             | WIGU04                                                                                                                                                                                                                                        | During highway reconstruction or construction, wildlife crossing needs should be evaluated for consideration.                                                                                                                                                                                                                                                                                                                    |
|                                             | <b>Region 4 Sensitive and Management Indicator Species</b>                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                             | WIGU05                                                                                                                                                                                                                                        | During site/project-scale analysis, habitat should be determined for MIS or Sensitive wildlife species within or near the project area. Surveys to determine presence should be conducted for those species with suitable habitat. Document the rationale for not conducting surveys for MIS or Sensitive species in the project record.                                                                                         |
|                                             | WIGU06                                                                                                                                                                                                                                        | Management actions in occupied Sensitive species habitat should be modified or relocated if the effects of the actions would contribute to a trend toward ESA listing for these species.                                                                                                                                                                                                                                         |
|                                             | WIGU07                                                                                                                                                                                                                                        | Use appropriate research to help define active, alternate, and replacement nest stands for goshawks, and configuration of post-fledging areas.                                                                                                                                                                                                                                                                                   |
|                                             | <b>Big Game</b>                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                  |



| Management Direction for Wildlife Resources                                                                                                                                                                  |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                                                                                                                                                                         | Number | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Guidelines                                                                                                                                                                                                   | WIGU08 | Big game vulnerability to road related mortality should be evaluated during mid-, fine- or site/project-level travel management planning to help assess effects of potential travel management decisions on state population objectives.                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                              | WIGU09 | Even-aged regeneration cuts should be considered to provide big-game hiding cover when the vegetation conditions in the unit meet the definition of hiding cover in the Glossary.                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                                                              | WIGU10 | Fencing needs for big-game passage should be determined through a field review during AMP updates. Fences on elk and deer winter/spring ranges and antelope ranges that prohibit passage should be relocated or modified to permit passage.                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                              | WIGU11 | Management actions should neither degrade or retard attainment of winter range desired conditions except where outweighed by demonstrable short- or long-term benefits to winter range or where the Forest Service has limited authority.                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                                                              | WIGU12 | Calving and fawning areas should be protected from project-related disturbance during big game calving or fawning. Calving/fawning areas and periods should be determined during site/project-level planning.                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                              | WIGU13 | To address big game vulnerability to mortality, components of habitat security should be identified and managed during project planning and implementation. Management requirements or mitigation measures needed to maintain these components should be determined during site/project-level planning. Consider components such as big game wallows and licks, public access, wildlife travel routes, created openings, meadows, forested stringers, and winter/spring ranges.                                                                                                                                                             |
|                                                                                                                                                                                                              | WIGU14 | To address big game stress and exposure during critical wintering periods, thermal cover components on winter/spring ranges should be identified and managed during project planning and implementation. Management requirements or mitigation measures needed to maintain these components should be determined during site/project-level planning. As a general guideline, at least 15 percent thermal cover should be retained on big game winter ranges where this cover presently exists. Cover should be maintained in at least 30-acre patch sizes where available. Thermal and hiding cover may or may not occur on the same acres. |
| <i>See also Guidelines for Vegetation (01, 02, 03, 04, 05, 06); Rangeland Resources (02, 05, 09); Lands and Special Uses (01, 09, 13, 14); Facilities and Roads (04, 09); and Recreation Resources (09).</i> |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## Vegetation

*Forest Service Handbook management direction for vegetation is in FSH 2409.17 - Silvicultural Practices Handbook. Forest Service Manual and Handbook management direction for snags and coarse woody debris is in FSM 5150 – Fuels, FSM 2550 - Soil Management, and FSH 2509.18 - Soil Management Handbook. Direction for Threatened, Endangered, and Sensitive Plants is in FSM 2670 - Threatened, Endangered, and Sensitive Plants and Animals.*

### DESIRED CONDITION

#### Forested Vegetation

Forested vegetation reflects a combination of successional development, disturbance regimes, and management activities. Forested lands exhibit variable patterns of size classes, densities, structural stages, and species composition. Seral tree species such as ponderosa pine, Douglas-fir, aspen, and whitebark pine have increasing species composition in areas where fire and mechanical vegetation treatments are the primary tools. Where vegetation development is dominated by plant succession, climax species composition is increasing, canopy cover densities are moderate to high, and late successional structure develops. Snags and coarse woody debris are present in sufficient quantities to provide for habitat diversity and long-term soil productivity.

#### Grassland and Shrubland Vegetation

Grasslands and shrublands exhibit variable patterns of multiple-aged shrubs, grasses, and forbs. Shrublands are found in mosaics of canopy closures across the landscape, reflecting a combination of successional development, disturbance regimes and management activities. Some mid- to high-elevation grasslands are primarily meadow complexes that are dominated by sedges, rushes, grasses, and forbs.

#### Riparian Vegetation

Riparian vegetation is dominated by a variety of species, age classes, and structures including coniferous and deciduous trees, willows, alders, sedges and hydric grasses, depending on stream substrate, gradient, elevation, soil-hydrologic, and disturbance processes. Riparian areas have their own disturbance processes that influence vegetation dynamics, with an almost continual readjustment in successional stages in many areas. Riparian vegetation is also influenced by processes in the uplands, as well as by those upstream in the watershed.

Table A-1 in Appendix A lists the Potential Vegetation Groups (PVGs) for the Ecogroup. Appendix A contains more detail on these groups.

Tables A-2 through A-9 in Appendix A represent default ranges that can be used to determine desired numbers of vegetative attributes following management activities. Sizes, numbers, and amounts may be adjusted based on new scientific information from the literature and/or studies on current and historical conditions.

| Management Direction for Vegetation |                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                | Number                                                                                                                                                                                                                                                                                                                                                                                           | Direction Description                                                                                                                                                                                                                                                                                                                                                |
| Goals                               | VEGO01                                                                                                                                                                                                                                                                                                                                                                                           | Maintain or restore desired plant community components, including species composition, size classes, canopy closures, structure, snags, and coarse woody debris as described in Appendix A.                                                                                                                                                                          |
|                                     | VEGO02                                                                                                                                                                                                                                                                                                                                                                                           | Maintain or restore vegetative conditions as described in Appendix A to provide for ecological processes, including disturbance regimes, soil-hydrological processes, nutrient cycles, and biotic interactions.                                                                                                                                                      |
|                                     | VEGO03                                                                                                                                                                                                                                                                                                                                                                                           | Maintain or restore vegetation conditions as described in Appendix A to reduce frequency, extent, severity, and intensity of uncharacteristic or undesirable disturbances such as fire, insects, and pathogens.                                                                                                                                                      |
|                                     | VEGO04                                                                                                                                                                                                                                                                                                                                                                                           | Maintain or restore distribution and abundance of habitats that contribute to viable populations of existing native and desirable non-native plant, fish, and wildlife species.                                                                                                                                                                                      |
|                                     | VEGO05                                                                                                                                                                                                                                                                                                                                                                                           | Maintain or restore a representation of native plant communities throughout the Forest.                                                                                                                                                                                                                                                                              |
|                                     | VEGO06                                                                                                                                                                                                                                                                                                                                                                                           | Facilitate regeneration of desirable plant species, particularly those that are currently identified as declining.                                                                                                                                                                                                                                                   |
|                                     | VEGO07                                                                                                                                                                                                                                                                                                                                                                                           | Maintain or restore elements of vegetative spatial pattern, such as amount, proportion, size, inter-patch distance, variation in patch size, and landscape connectivity important to the achievement of vegetation or other resource goals and objectives in the Forest Plan.                                                                                        |
|                                     | See also Goals for TEPC Species (01, 02, 03, 04, 05, 06); SWRA Resources (14); Wildlife Resources (02, 03, 04, 05, 06); Botanical Resources (01, 02, 03, 04, 05, 06); Non-native Plants (04); Fire Management (02, 03, 04, 05); Timberland Resources (01, 02, 03, 04); Rangeland Resources (02, 04); Scenic Environment (01); and Heritage Program (03).                                         |                                                                                                                                                                                                                                                                                                                                                                      |
| Objectives                          | VEOB01                                                                                                                                                                                                                                                                                                                                                                                           | During fine-scale analysis, identify and prioritize areas for regeneration of: <ul style="list-style-type: none"> <li>a) Aspen in both climax stands and as a seral component of coniferous stands</li> <li>b) Native herbaceous understory in shrub communities</li> <li>c) Woody riparian species</li> <li>d) Western larch</li> <li>e) Whitebark pine.</li> </ul> |
|                                     | VEOB02                                                                                                                                                                                                                                                                                                                                                                                           | When available, use monitoring data to support site/project-scale analysis and to design management actions to achieve vegetation goals and desired conditions over the long term.                                                                                                                                                                                   |
|                                     | VEOB03                                                                                                                                                                                                                                                                                                                                                                                           | Utilize emerging technologies and science, and implement an adaptive management process to provide for increasing the effectiveness of vegetation monitoring.                                                                                                                                                                                                        |
|                                     | VEOB04                                                                                                                                                                                                                                                                                                                                                                                           | Enhance public awareness about vegetation diversity through interpretive and education programs that address species, communities, ecosystems and their processes.                                                                                                                                                                                                   |
|                                     | VEOB05                                                                                                                                                                                                                                                                                                                                                                                           | Promote partnerships and cooperation with state and federal agencies, tribal governments, and with other interested groups through coordination, cost sharing, and cross-training for assistance with vegetation inventory, classification, monitoring, and other activities as needed.                                                                              |
|                                     | VEOB06                                                                                                                                                                                                                                                                                                                                                                                           | Determine high-priority areas for vegetation management actions that restore or maintain vegetation desired attributes.                                                                                                                                                                                                                                              |
|                                     | VEOB07                                                                                                                                                                                                                                                                                                                                                                                           | Maintain current mid and fine-scale inventories of vegetation conditions developed during the forest plan revision process to aid in developing vegetation treatment priorities or needs.                                                                                                                                                                            |
|                                     | See also Objectives for TEPC Species (13, 14, 15, 16, 19, 20); SWRA Resources (02, 12, 13); Wildlife Resources (03, 07); Botanical Resources (02, 03, 05, 06, 10, 13, 14); Fire Management (02, 04, 05); Timberland Resources (01); Rangeland Resources (02, 03); Facilities and Roads (12); Recreation Resources (02, 15, 22); Heritage Program (18); and Tribal Rights and Interests (02, 03). |                                                                                                                                                                                                                                                                                                                                                                      |
| Standards                           | VEST01                                                                                                                                                                                                                                                                                                                                                                                           | The activity area shall be used to assess snag and coarse wood conditions for vegetative management actions.                                                                                                                                                                                                                                                         |
|                                     | VEST02                                                                                                                                                                                                                                                                                                                                                                                           | Vegetation management actions associated with developed recreation shall be designed to meet recreation objectives, not vegetative desired conditions described in Appendix A.                                                                                                                                                                                       |

| Management Direction for Vegetation |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                | Number | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Standards</b>                    |        | See also Standards for TEPC Species (04, 05, 06, 13, 14, 15); SWRA Resources (01, 02, 03, 04, 07, 10, 12); Wildlife Resources (01, 02, 03, 04, 05, 06); Botanical Resources (01, 03, 04, 05); Non-native Plants (03, 04, 06, 10); Timberland Resources (01, 02, 04); Rangeland Resources (01); Mineral and Geology Resources (01, 03); Lands and Special Uses (03, 04); Facilities and Roads (04); Scenic Environment (01); Heritage Program (01); and Tribal Rights and Interests (01, 02, 04).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Guidelines</b>                   | VEGU01 | During site/project-scale analysis, tradeoffs in the achievement of one or more of the vegetative components described in Appendix A may need to be considered. Current conditions of the vegetation may necessitate the need to move one component away from the desired condition in order to move another one toward the desired condition. In these situations, decisions should be based not only on which vegetative component is important to emphasize at any point in time to meet resource objectives, but also how to effectively move all components toward their desired condition over the long term.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                     | VEGU02 | Prior to developing vegetative management project proposals whose purpose is to maintain or restore live vegetative components described in Appendix A, a vegetative assessment at the watershed scale (5 <sup>th</sup> field HU) using available forest level datasets (e. g., LANDSAT) should be completed to describe current vegetative conditions and identify opportunities for treatment. A scale other than watershed may be used where it is determined that a different reference area is more appropriate for identifying opportunities for a specific type of treatment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                     | VEGU03 | When coarse woody debris (CWD) in the larger size classes (>15" diameter) is not available for retention in an activity area, smaller size classes (< 6" diameter) may or may not be utilized to meet desired tonnage levels described in Appendix A. Decisions on the amount of CWD in smaller classes that are retained, whether the larger size classes are available or not, should be based on the level of fire hazard risk that can be reasonably assumed in light of management objectives. Risk as it relates to both the activity area and adjacent areas should be considered.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                     | VEGU04 | Broad spectrum herbicides, such as 2, 4-D, should not be used for large-scale sagebrush management if it would result in the loss of non-target forb species.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                     | VEGU05 | Where wildfire has burned within an allotment, burned areas should be evaluated to determine if rest from livestock grazing is necessary for recovery of desired vegetation conditions and related biophysical resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                     | VEGU06 | When sagebrush cover types are determined to need rest from livestock grazing following a wildfire, areas should be rested for a minimum of two growing seasons. Evaluate whether additional rest is needed after two growing seasons. Base this determination on the following factors: <ul style="list-style-type: none"> <li>a) The ecological status of the sagebrush community prior to the wildfire,</li> <li>b) How long the sagebrush community had a density or canopy closure greater than 15 percent prior to the wildfire,</li> <li>c) The severity and intensity of the fire,</li> <li>d) The amount, diversity, and recovery of forbs, grasses and palatable shrubs that are present after 2 years of rest in relation to desired conditions.</li> </ul> In areas other than sagebrush cover types, an appropriate rest period should be determined. Base this determination on the following factors: soil conditions, the amount, diversity and recovery of forbs, grasses, and palatable shrubs in relation to the desired condition that are present after the 2 years of rest. |
|                                     |        | See also Guidelines for SWRA Resources (03, 04, 05, 07, 08, 09, 12); Wildlife Resources (01, 05, 06, 09, 11, 12, 13, 14); Botanical Resources (01, 02, 03, 04, 05); Non-native Plants (03,05); Fire Management (05); Rangeland Resources (05); Mineral and Geology Resources (06, 07); Lands and Special Uses (01, 13); Facilities and Roads (09); Recreation Resources (23, 26); and Scenic Environment (02).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## Botanical Resources

*Forest Service Manual and Handbook management direction for Threatened, Endangered, and Sensitive plants is in FSM 2670 - Wildlife, Fish, and Sensitive Plant and Habitat Management, and FSH 2609.25 - Threatened and Endangered Plants Program Handbook. Direction on Special Designation Areas, such as Botanical Special Interest Areas, is in FSM 2370.*

### DESIRED CONDITION

The amount, distribution, and characteristics of life-stage habitats are present to maintain or reach viable populations of native species. Habitat conditions generally contribute to survival and recovery, and prevent listing on the Region 4 Sensitive Species List. Populations of non-native plants are reduced or eradicated in occupied and potential rare plant habitat. Desired habitat conditions are maintained or degraded habitats restored to promote pollinator success and survival. Human activities are at levels that maintain desired conditions and dynamics during key life stages of rare plants. The public understands the importance of maintaining rare and culturally important plant species.

| Management Direction for Botanical Resources |                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                         | Number                                                                                                                                                                           | Direction Description                                                                                                                                                                                                                                                                                                                                                                                           |
| Goals                                        | BTGO01                                                                                                                                                                           | Provide habitat capable of: <ul style="list-style-type: none"> <li>a) Supporting viable populations of native plant species within the Forest, and</li> <li>b) Supporting plant biodiversity to meet social needs, biological diversity, and ecological and functional integrity.</li> </ul>                                                                                                                    |
|                                              | BTGO02                                                                                                                                                                           | Emphasize conservation and recovery of Region 4 Sensitive species, Forest “Watch” plants, and other species at risk where quantity and quality of habitat needed to support viability is a concern (see Appendix C).                                                                                                                                                                                            |
|                                              | BTGO03                                                                                                                                                                           | Maintain or restore globally rare plants identified as the Natural Heritage Program G1, G2, and G3 and/or S1 and S2 species, and provide for their continued compositional and functional integrity for those species for which we have habitat (see Appendix C).                                                                                                                                               |
|                                              | BTGO04                                                                                                                                                                           | Maintain habitats for native plants that provide nectar, floral diversity, and pollen throughout the season during which pollinator species are active, with emphasis on rare plant species.                                                                                                                                                                                                                    |
|                                              | BTGO05                                                                                                                                                                           | Maintain or restore unique habitats (e.g., unique assemblages of rare plant species, tall forb communities, etc.) throughout the Forest.                                                                                                                                                                                                                                                                        |
|                                              | BTGO06                                                                                                                                                                           | Manage plant community habitats (e.g., riparian, wetland, and upland forest, shrub, and grassland habitats) to provide for: <ul style="list-style-type: none"> <li>a) The desired amount, quality, and distribution of habitats,</li> <li>b) Reduced fragmentation within habitats,</li> <li>c) Juxtaposition and connectivity to other habitats,</li> <li>d) Ecosystem processes that shape habitat</li> </ul> |
|                                              | See also Goals for TEPC Species (01, 02, 03, 04, 05, 06); Vegetation (04, 05, 06, 07); Non-native Plants (01, 02, 04, 05); Recreation Resources (04); and Heritage Program (03). |                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Objectives                                   | BTOB01                                                                                                                                                                           | Continue to map locations of suitable occupied habitat for Region 4 Sensitive plant species, Forest Watch plants, and globally rare plant communities. Incorporate information into a GIS database and coordinate with the Idaho Conservation Data Center.                                                                                                                                                      |

| Management Direction for Botanical Resources |                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                         | Number                                                                                                                                                                                                                                                                                                   | Direction Description                                                                                                                                                                                                                                                                                                       |
| Objectives                                   | BTOB02                                                                                                                                                                                                                                                                                                   | During fine-scale analyses in areas containing sensitive species habitat, identify and prioritize opportunities for restoring degraded Sensitive species habitat.                                                                                                                                                           |
|                                              | BTOB03                                                                                                                                                                                                                                                                                                   | Continue to identify potential Botanical Special Interest Areas and recommend them for establishment. Botanical Special Interest Areas may include areas of unique habitat features, rare plant communities, or areas of high-quality cryptogammic soil crusts with lichens, bryophytes, and fungi.                         |
|                                              | BTOB04                                                                                                                                                                                                                                                                                                   | Maintain annually a list of Forest Watch plants that identify species of concern (see Appendix C for list of species).                                                                                                                                                                                                      |
|                                              | BTOB05                                                                                                                                                                                                                                                                                                   | Provide for the gathering of plants for Native American Indian traditional or cultural uses, as stipulated in statutes, treaties, and agreements with the U.S. Government (see Appendix C for list of species).                                                                                                             |
|                                              | BTOB06                                                                                                                                                                                                                                                                                                   | Identify and prioritize habitat types that support economically (i.e., herbal, medicinal) and culturally important plant species to provide for gathering of plants associated with Native American Indian traditional or cultural uses (see Appendix C).                                                                   |
|                                              | BTOB07                                                                                                                                                                                                                                                                                                   | Encourage participation from Forest employees, the public, and other agencies in a collaborative Celebrating Wildflowers program to promote the importance of conservation and management of native plants and plant habitats.                                                                                              |
|                                              | BTOB08                                                                                                                                                                                                                                                                                                   | During fine- and site/project-scale analyses, identify and map areas of non-native plant invasions within rare plant habitat.                                                                                                                                                                                               |
|                                              | BTOB09                                                                                                                                                                                                                                                                                                   | Coordinate with research efforts for Sensitive plant species to determine habitat dynamics, seral conditions, pollination ecology, phenology, distribution, and susceptibility to impacts. Coordinate efforts and information with the Idaho Conservation Data Center, universities, Forest Service Research Stations, etc. |
|                                              | BTOB10                                                                                                                                                                                                                                                                                                   | Identify areas of high potential for cryptogamic crust restoration and/or maintenance.                                                                                                                                                                                                                                      |
|                                              | BTOB11                                                                                                                                                                                                                                                                                                   | Enhance public awareness of the fundamental importance of plants to society through educational programs about native plants, plant conservation, biological diversity, ecological processes, and noxious weeds.                                                                                                            |
|                                              | BTOB12                                                                                                                                                                                                                                                                                                   | As a means of proactive management, seek funding for, prioritize preparation of, and prepare Conservation Agreements and Strategies to maintain or restore habitats of Sensitive plant species                                                                                                                              |
|                                              | BTOB13                                                                                                                                                                                                                                                                                                   | Cooperate with researchers, ecologists, geneticists and other interested parties to develop seed zones or breeding zones for native plants.                                                                                                                                                                                 |
|                                              | BTOB14                                                                                                                                                                                                                                                                                                   | Collect seeds of native plants to be used in rehabilitation and restoration activities. Collect seed in accordance with seed zones or breeding zones. Develop long-term storage facilities for collected seeds such as the seed bank at the Lucky Peak Nursery.                                                             |
|                                              | <i>See also Objectives for TEPC Species (21, 22); Vegetation (02, 03, 04, 06); Non-native Plants (06, 07, 08); Rangeland Resources (03); Minerals and Geology (08); Lands and Special Uses (12); Facilities and Roads (04, 12); Heritage Program (18); and Tribal Rights and Interests (02, 03, 04).</i> |                                                                                                                                                                                                                                                                                                                             |
| Standards                                    | BTST01                                                                                                                                                                                                                                                                                                   | Management actions that occur within occupied sensitive plant species habitat must incorporate measures to ensure habitat is maintained where it is within desired conditions, or restored where degraded.                                                                                                                  |
|                                              | BTST02                                                                                                                                                                                                                                                                                                   | Do not allow collection of sensitive plants except for research or scientific purposes, under the direction of the Forest or Regional Botanist.                                                                                                                                                                             |
|                                              | BTST03                                                                                                                                                                                                                                                                                                   | Design and implement projects to meet the Forest Service approved portions of Conservation Strategies and Agreements for Sensitive species.                                                                                                                                                                                 |
|                                              | BTST04                                                                                                                                                                                                                                                                                                   | For projects or activities that include application of insecticides, herbicides, fungicides, or rodenticides, degrading effects on sensitive plant species will be mitigated.                                                                                                                                               |
|                                              | BTST05                                                                                                                                                                                                                                                                                                   | In revegetation and seeding projects in occupied sensitive plant habitat, a Forest botanist shall be consulted to ensure appropriate species are used.                                                                                                                                                                      |

| Management Direction for Botanical Resources |        |                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                         | Number | Direction Description                                                                                                                                                                                                                                                                                                                                               |
|                                              |        | <i>See also Standards for TEPC Species (08, 09, 10, 11); SWRA Resources (01, 11); Non-native Plants (01-12); Timberland Resources (08); Rangeland Resources (03, 04); Mineral and Geology Resources (01, 08); and Tribal Rights and Interests (01, 04).</i>                                                                                                         |
| Guidelines                                   | BTGU01 | For site/project-scale analysis, suitable habitat should be determined for Sensitive species within or near the project area. Conduct surveys for those species with suitable habitat to determine presence. Document the rationale for not conducting surveys for other species in the project record.                                                             |
|                                              | BTGU02 | During site/project-scale analysis and review, a Forest botanist should review insecticide or herbicide spray plans and prescribed burning plans to determine whether degrading effects to Sensitive and Forest Watch plants and their pollinators should be mitigated.                                                                                             |
|                                              | BTGU03 | When available and not cost-prohibitive, seeds and plants used for seedings and plantings in revegetation projects should originate from genetically local sources of native species. When project objectives justify the use of non-native plant materials, documentation explaining why non-natives are preferred should be part of the project planning process. |
|                                              | BTGU04 | In cases where plant collection permits are issued, digging or physically removing whole plants should be discouraged in favor of collecting seeds or cuttings.                                                                                                                                                                                                     |
|                                              | BTGU05 | Coordinate with Forest botanists to consider sensitive species habitat needs when designing and implementing management activities that may affect these species or their habitats.                                                                                                                                                                                 |
|                                              |        | <i>See also Guidelines for TEPC Species (07); SWRA Resources (05); Vegetation (01, 04, 05, 06); Non-native Plants (01, 02, 03, 05); Fire Management (05); Rangeland Resources (05); Mineral and Geology Resources (07); Lands and Special Uses (01, 13); Facilities and Roads (09, 11); Recreation Resources (07); and Tribal Rights and Interests (02).</i>        |

## Non-Native Plants

*Forest Service Manual and Handbook management direction for non-native plants is in FSM 2080 - Noxious Weed Management, FSM 2100 - Environment Management, FSH 2109.14 - Pesticide Use Management and Coordination Handbook, FSH 2509.13 - Burned Area Emergency Rehabilitation Handbook, and FSH 2509.22 - Soil and Water Conservation Practices Handbook. Direction can also be found in WO Amendment 2000-95-5, Zero Code 2080; and WO Amendment 2100-94-6, Chapter 2080 - Pesticide Use Management and Coordination.*

### DESIRED CONDITION

Noxious weed infestations are primarily restricted to locations along roads, trails, river corridors, and airstrips. Existing noxious weed populations are not expanding in size. Weed species cover or densities are variable across the Forest. New noxious weed outbreaks may occur temporarily or continue to exist as a small non expanding population in areas of high susceptibility. Noxious weed populations in low susceptibility areas are small and scattered with low to moderate densities. New invader species to the forest are not becoming established. Native plants are dominant on disturbed or recently restored sites. Some areas of historic rehabilitation or vegetative manipulation are still dominated by non-native grasses or forbs.

| Management Direction for Non-native Plants |                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                       | Number                                                                                        | Direction Description                                                                                                                                                                                                                                                                                                                                                                             |
| Goals                                      | NPGO01                                                                                        | Manage noxious weeds with an Integrated Weed Management approach using prevention, education, eradication, containment, and control treatment strategies in a coordinated effort that includes potentially affected resources, users, funding sources, and activities.                                                                                                                            |
|                                            | NPGO02                                                                                        | Prevent new infestations of undesirable non-native plants or noxious weed species, with emphasis on areas of high susceptibility where those species have a strong probability for establishment and spread.                                                                                                                                                                                      |
|                                            | NPGO03                                                                                        | Promote and participate in establishment of Coordinated Weed Management Areas. Support the State of Idaho Weed Management Strategy.                                                                                                                                                                                                                                                               |
|                                            | NPGO04                                                                                        | Reestablish vegetation that is compatible with desired long-term vegetative conditions, Forest-wide management direction, and management area priorities.                                                                                                                                                                                                                                         |
|                                            | NPGO05                                                                                        | Work to reduce the risk of establishing new noxious weed populations by minimizing weed seed transport and reducing favorable establishment conditions on disturbed sites.                                                                                                                                                                                                                        |
|                                            | <i>See also Goals for TEPC Species (03, 04, 05, 06) and Botanical Resources (01, 04, 06).</i> |                                                                                                                                                                                                                                                                                                                                                                                                   |
| Objectives                                 | NPOB01                                                                                        | Maintain, and use current field data to update, the Forest-wide database and map library of current status of noxious weed infestations, treatment activities, and locations of newly established infestations.                                                                                                                                                                                   |
|                                            | NPOB02                                                                                        | Designate Coordinated Weed Management Areas on Payette National Forest System lands.                                                                                                                                                                                                                                                                                                              |
|                                            | NPOB03                                                                                        | Develop strategic noxious weed management plans for Coordinated Weed Management Areas. Cooperate on a regular basis with federal agencies, tribal governments, the State of Idaho, county weed organizations, state and local highway departments, and private individuals in establishing Coordinated Weed Management Area strategic priorities, and locating and treating noxious weed species. |
|                                            | NPOB04                                                                                        | Coordinate with the Idaho Department of Transportation and county officials to assist and promote cooperative efforts to reduce introduction and spread of noxious weeds.                                                                                                                                                                                                                         |



| Management Direction for Non-native Plants |                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                       | Number                                                                                     | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Objectives                                 | NPOB05                                                                                     | Cooperatively work with holders of special use authorizations to identify and manage noxious weed infestations within areas of use to prevent further expansion or reduce existing densities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                            | NPOB06                                                                                     | Emphasize prevention of noxious weed establishment through education and cooperation with recreation user groups such as all-terrain vehicle (ATV), motorcycle, and stock user groups.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                            | NPOB07                                                                                     | Use Burned Area Emergency Rehabilitation or other appropriate procedures to reduce the risk of noxious weed expansion in wildland fire areas, especially those identified in the Forest-wide database and map library as being highly susceptible to invasion.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                            | NPOB08                                                                                     | Develop a Forest Noxious Weed Management Plan in coordination with county, state, and federal agencies, including USFWS and/or NMFS, within 3 years of signing the ROD for Forest Plan revision.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                            | <i>See also Objectives 21 for TEPC Species and 08, 13, and 14 for Botanical Resources.</i> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Standards                                  | NPST01                                                                                     | Only certified noxious weed-free hay, straw, or feed is allowed on National Forest System lands.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                            | NPST02                                                                                     | All seed used on National Forest System lands will be certified to be free of seeds from noxious weeds listed on the current <i>All States Noxious Weeds List</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                            | NPST03                                                                                     | To prevent invasion/expansion of noxious weeds, the following provisions will be included in all special use authorizations, timber sale contracts, service contracts, or operating plans where land-disturbing activities are associated with the authorized land use (additional direction may be found in timber sale and service contract provisions and in Forest Service handbooks): <ul style="list-style-type: none"> <li>a) Revegetate areas, as designated by the Forest Service, where the soil has been exposed by ground-disturbing activity. Implement other measures, as designated by the Forest Service, to supplement the influence of re-vegetation in preventing the invasion or expansion of noxious weeds. Potential areas would include: construction and development sites, underground utility corridors, skid trails, landings, firebreaks, slides, slumps, temporary roads, cut and fill slopes, and traveledways of specified roads.</li> <li>b) Earth-disturbing equipment used on National Forest System lands--such as cats, graders, and front-loaders--shall be cleaned to remove all visible plant parts, dirt, and material that may carry noxious weed seeds. Cleaning shall occur prior to entry onto the project area and again upon leaving the project area, if the project area has noxious weed infestations. This also applies to fire suppression earth-disturbing equipment contracted after a WFSa/WFIP has been completed.</li> </ul> |
|                                            | NPST04                                                                                     | Contractors, with the exception of fire suppression prior to completion of WFSa/WFIP, shall be required to clean earth-disturbing, construction, and road maintenance equipment, of all sizes, to remove all plant parts, dirt, and material that may carry noxious weed seeds, prior to entry onto the Forest, or movement from one Forest project area to another.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                            | NPST05                                                                                     | During WFSa/WFIP development, identify noxious weed control and mitigation measures. Ensure their implementation through direction in the Letter of Delegation and the Incident Overhead Team briefing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                            | NPST06                                                                                     | Materials such as hay, straw, or mulch that are used for rehabilitation and reclamation activities shall be free of noxious weed seed, and shall comply with the 1995 weed-free forage special order against use of non-certified hay, straw, or mulch. Materials that are not covered under a weed seed free certification, and that have the potential to contain noxious weed seed, shall be inspected and determined to be free of weed seed before purchase and use.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                            | NPST07                                                                                     | Source sites for gravel and borrow materials shall be inspected for noxious weeds before materials are processed, used, or transported from the source site into the project area or onto the National Forest.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Management Direction for Non-native Plants                                                                                                                            |                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                                                                                                                                  | Number                                                                                                              | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Standards                                                                                                                                                             | NPST08                                                                                                              | Gravel or borrow material source sites with noxious weed species present shall not be used, unless effective treatment or other mitigation measures are implemented.                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                                       | NPST09                                                                                                              | The Forest shall comply with the intent and direction established in the above provisions or clauses in a manner similar to that required of contractors or permittees.                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                       | NPST10                                                                                                              | Projects that may contribute to the spread or establishment of noxious weeds shall include measures to reduce the potential for spread and establishment of noxious weed infestations.                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                       | NPST11                                                                                                              | Integrated Weed Management shall be used to maintain or restore habitats for sensitive plants and other native species of concern where they are threatened by noxious weeds or non-native invasive plants.                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                       | NPST12                                                                                                              | Implement the Forest Noxious Weed Management Plan upon completion.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                       | <i>See also Standards for TEPC Species (09, 10); SWRA Resources (01, 07, 12); and Botanical Resources (04, 05).</i> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Guidelines                                                                                                                                                            | NPGU01                                                                                                              | Noxious weeds and undesirable non-native plants should be eradicated. Where it is not practical to eradicate existing infestations, infestations should be managed to prevent seed production and spread.                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                       | NPGU02                                                                                                              | Clean borrow and gravel sources on Forest should be maintained as noxious weed free through an inspection and treatment program. Off-Forest inspections and treatments should be coordinated with county weed agents.                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                       | NPGU03                                                                                                              | Identify areas with extensive noxious weed infestations where precautionary actions are necessary when planning and implementing management activities. In areas of extensive weed infestations, designated wash sites should be established as part of project planning. Wash sites should be located: (1) where they are easily accessible and useable, (2) on gravelly or well-drained soils, (3) where wash water runoff will not carry seeds away from site, (4) where wash water runoff will not directly enter streams, and (5) where they may be used repeatedly for several projects or activities within the area. |
|                                                                                                                                                                       | NPGU04                                                                                                              | Where feasible and practical, weed-free locations should be selected for incident camps, staging, cargo loading, drop points, helibases, and parking areas.                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                       | NPGU05                                                                                                              | Noxious weed management should determine the presence, location, and amount of noxious weed infestations. Management strategies should also identify: <ul style="list-style-type: none"> <li>a) Methods and frequency for treating infestations,</li> <li>b) Treatment procedures and restrictions,</li> <li>c) Reporting requirements, and</li> <li>d) Follow-up or monitoring requirements.</li> </ul>                                                                                                                                                                                                                     |
|                                                                                                                                                                       | NPGU06                                                                                                              | The Forest-wide database and map library of noxious weed infestations and susceptibility should be used in the development of site-specific Integrated Weed Management approaches and strategies used in Coordinated Weed Management Areas.                                                                                                                                                                                                                                                                                                                                                                                  |
| <i>See also Guidelines for TEPC Species (07); Wildlife Resources (05, 06); Botanical Resources (02, 03); Fire Management (01, 05); and Facilities and Roads (02).</i> |                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Fire Management

*Forest Service Manual and Handbook direction for fire management is in FSM 5100 – Fire Management, and in Forest Service Handbooks: 5109.14 - Individual Fire Report Handbook, 5109.17 - Fire and Aviation Management Qualifications Handbook, 5109.18 - Wildfire Prevention Handbook, 5109.19 - Fire Management Analysis and Planning Handbook, 5109.31 - Wildfire Cause Determination Handbook, 5109.32a - Fireline Handbook, and 5109.34 - Interagency Fire Business Management Handbook.*

### DESIRED CONDITION

Fire—both prescribed and wildland—is used as a tool to achieve and maintain vegetative conditions and desired fuel levels. Fire plays a natural role where appropriate and desirable, but is actively suppressed where necessary to protect life, investments, and valuable resources. Fire operates within historical fire regimes appropriate to the vegetation type and management objectives. The selected suppression strategy is successful.

| Management Direction for Fire Management |                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                     | Number                                                                                                                                                                                                                                                            | Direction Description                                                                                                                                                                                                                                                                                                                                                        |
| Goals                                    | FMGO01                                                                                                                                                                                                                                                            | Firefighter and public safety is the priority in all fire management activities.                                                                                                                                                                                                                                                                                             |
|                                          | FMGO02                                                                                                                                                                                                                                                            | Allow fire to play its natural role where appropriate and desirable to reduce the risk of uncharacteristic and undesirable wildland fires.                                                                                                                                                                                                                                   |
|                                          | FMGO03                                                                                                                                                                                                                                                            | Use fire alone or with other management activities to restore or maintain desirable plant community attributes including fuel levels, as well as ecological processes (see Vegetation Goals).                                                                                                                                                                                |
|                                          | FMGO04                                                                                                                                                                                                                                                            | Use fire alone or with other management activities to treat natural and activity fuels to a level that reduces the risk of uncharacteristic or undesirable wildland fires.                                                                                                                                                                                                   |
|                                          | FMGO05                                                                                                                                                                                                                                                            | Provide for protection of life, investments, and valuable resources through appropriate vegetation, fuel, and wildland fire management.                                                                                                                                                                                                                                      |
|                                          | FMGO06                                                                                                                                                                                                                                                            | Encourage and participate in partnerships with citizens or community-centered approaches to manage fire risks and hazards in wildland/urban interface areas.                                                                                                                                                                                                                 |
|                                          | <i>See also Goals for TEPC Species (03); Air and Smoke Management (01, 02); Wildlife Resources (02); Vegetation (01, 02, 03, 04, 05, 06, 07); Non-native Plants (05); Timberland Resources (02, 03); Rangeland Resources (02, 03); and Heritage Program (03).</i> |                                                                                                                                                                                                                                                                                                                                                                              |
| Objectives                               | FMOB01                                                                                                                                                                                                                                                            | Reduce fire fighter and public injuries and loss of life, and damage to communities from severe, unplanned and unwanted wildland fires by prioritizing fire fighter, public, and community safety above other concerns in fire management activities.                                                                                                                        |
|                                          | FMOB02                                                                                                                                                                                                                                                            | During project planning, identify appropriate areas where prescribed fire could be used to meet management objectives. These areas may include intermingled landownership, and areas of concentrated investments, structures, or other resource concerns.                                                                                                                    |
|                                          | FMOB03                                                                                                                                                                                                                                                            | Following identification of areas where wildland fire use is appropriate within management areas, aggregate common areas between management areas to fully describe the extent of wildland fire use implementation areas to be included in the Fire Management Plan. Develop the necessary implementation information for the areas and include in the Fire Management Plan. |

| Management Direction for Fire Management |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                     | Number | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Objectives                               | FMOB04 | Schedule and complete at least 100,000 acres of fuels management through prescribed fire and mechanical treatments in the next decade to achieve desired vegetation attributes and fuel reduction goals. Focus on wildland/urban interface and areas in Fire Regimes 1, 2, and 3 (non-lethal, mixed1, mixed2) in Condition Classes 2 and 3 (moderate to extreme hazard rating).                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                          | FMOB05 | Continue to identify high fire hazard areas in wildland/urban interface areas. Develop and prioritize vegetation treatment plans in coordination with local and tribal governments, agencies, and landowners to reduce the risk from wildland fire.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                          | FMOB06 | Enhance public awareness of the fundamental importance of fire through educational programs about the role of fire in the ecosystem.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                          | FMOB07 | Coordinate vegetation management activities and partnership opportunities with local land managers and owners for wildland fire suppression and use, and prescribed fire.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                          |        | <i>See also Objectives for TEPC Species (23); Air and Smoke Management (01, 02, 03, 04, 05); SWRA Resources (12, 13, 17); Wildlife Resources (01, 07, 09); Vegetation (01, 06); Botanical Resources (02, 08); Non-native Plants (07); Facilities and Roads (08); Recreation Resources (03, 07, 19); and Heritage Program (14).</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Standards                                | FMST01 | Once a Wildland Fire Situation Analysis (WFSA) is approved, heavy equipment shall not be used to construct firelines within Riparian Conservation Areas (RCAs) unless: <ol style="list-style-type: none"> <li>The line officer or designee determines that imminent safety to human life or protection of structures is an issue; OR</li> <li>The incident resource advisor determines and documents an escaped fire would cause more degradation to RCAs than would result from the disturbance of heavy equipment.</li> </ol> In no case will the decision to use heavy equipment in RCAs be delayed when the line officer or designee determines safety or loss of human life or protection of structures is at imminent risk.                                                           |
|                                          | FMST02 | Once a WFSA is approved, incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities shall be located outside RCAs unless the only suitable location for such activities is determined and documented by the line officer or designee to be within an RCA. In no case will the decision to place these activities inside an RCA be delayed when the line officer or designee determines safety or loss of human life or structures is at imminent risk.                                                                                                                                                                                                                                                                                           |
|                                          | FMST03 | Once a WFSA is approved, avoid delivery of chemical retardant, foam, or additives to all surface waters within RCAs unless: <ol style="list-style-type: none"> <li>The line officer or designee determines that imminent safety to human life or protection of structures is an issue; OR</li> <li>The incident resource advisor determines and documents an escaped fire would cause more degradation to an RCA, than would be caused by addition of chemical, foam or additive delivery to surface waters in RCAs.</li> </ol> In no case will the decision to avoid delivery of chemical retardant, foam or additives to surface waters within RCAs be delayed when the line officer or designee determines safety or loss of human life or protection of structures is at imminent risk. |
|                                          |        | <i>See also Standards for TEPC Species (03, 04, 06, 08, 10, 17, 18, 19, 20, 21); Air and Smoke (01, 02, 03); SWRA Resources (01, 02, 03, 04, 07, 11); Wildlife Resources (01, 02, 03, 04, 05, 06); Botanical Resources (01, 03, 05); Non-native Plants (03, 04, 05, 06, 10); Lands/Special Uses (03, 04, 05); Recreation Resources (05); Scenic Environment (01, 02); Heritage Program (01); and Wild and Scenic Rivers (01).</i>                                                                                                                                                                                                                                                                                                                                                           |
| Guidelines                               | FMGU01 | An interdisciplinary team or resource advisor should be used to predetermine incident base and helibase locations. These locations should be described in the Fire Management Plans.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Management Direction for Fire Management |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                     | Number                                                                                                                                                                                                                                                                                                                                                                                                                                           | Direction Description                                                                                                                                                                                                                                                                                                  |
| Guidelines                               | FMGU02                                                                                                                                                                                                                                                                                                                                                                                                                                           | When prescribed fire or wildland fire use areas burn more severely than prescribed or anticipated, with the potential for detrimental soil disturbance or loss of soil-hydrologic function, appropriate personnel should complete a field evaluation to determine the need for any rehabilitation measures.            |
|                                          | FMGU03                                                                                                                                                                                                                                                                                                                                                                                                                                           | To minimize mechanical ground disturbance in RCAs, prescribed fire and wildland fire use should be considered viable tools to meet soil, water, riparian, and aquatic desired conditions.                                                                                                                              |
|                                          | FMGU04                                                                                                                                                                                                                                                                                                                                                                                                                                           | Consider a full range of appropriate management responses, from wildland fire use that benefits resources, to full suppression.                                                                                                                                                                                        |
|                                          | FMGU05                                                                                                                                                                                                                                                                                                                                                                                                                                           | Implementation information for wildland fire use described in the Fire Management Plan should include identification of sensitive ecological resources and social values. When it is determined that wildland fire use may degrade sensitive areas, prescriptions for wildland fire use should mitigate these effects. |
|                                          | FMGU06                                                                                                                                                                                                                                                                                                                                                                                                                                           | Direct ignition of prescribed fire in RCAs should not be used unless site/project scale effects analysis demonstrates that it would not degrade or retard attainment of soil, water, riparian, and aquatic desired conditions. Refer to SWRA Standard 4 for exceptions.                                                |
|                                          | See also Guidelines for TEPC Species (02, 07, 08); Air and Smoke Management (01, 02, 03, 04); SWRA Resources (02, 03, 05, 07, 08, 09, 12); Wildlife Resources (01, 05, 06, 11, 12, 13, 14); Vegetation (01, 02, 03); Botanical Resources (01, 02, 03, 05); Non-native Plants (03, 04); Timberland Resources (01); Rangeland Resources (03); Lands and Special Uses (06); Recreation Resources (10, 15, 23, 26); and Scenic Environment (02, 17). |                                                                                                                                                                                                                                                                                                                        |

## Timberland Resources

*Forest Service Manual and Handbook direction for timber management is in the FSM 2400- Timber Management, and in Forest Service Handbooks: 2409.13 - Timber Resource Planning Handbook, 2409.13a - Timber Permanent Plot Handbook, 2409.15 - Timber Sale Administration Handbook, 2409.17 - Silvicultural Practices Handbook, 2509.18 - Soil Management Handbook, 2609.13 - Wildlife and Fisheries Program Management Handbook, and 2509.22 – Soil and Water Conservation Practices Handbook. Sale implementation direction can also be found in Timber Sale Contract Provisions and procurement contracts.*

### DESIRED CONDITION

Desired vegetation conditions for Timberland Resource are described in Appendix A and the desired condition statements for forested vegetation (see Vegetation section). Appendix A contains Forest-wide desired conditions for species composition, tree size, and canopy cover for each potential vegetation group.

Suited timberlands provide sustainable and predictable levels of forest products, both now and continuing in the future. Forest products include, but are not limited to, fuelwood, post and poles, and sawlogs.

| Management Direction for Timberland Resources |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                          | Number | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Goals                                         | TRGO01 | Manage forested vegetation to achieve: <ul style="list-style-type: none"> <li>a) Conditions that are resilient and resistant to uncharacteristic fire, insect, and disease damage, and</li> <li>b) Conditions that contribute to desired vegetative conditions, including, distribution of tree sizes, species composition, and canopy cover.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                               | TRGO02 | Manage suited timberlands to achieve: <ul style="list-style-type: none"> <li>a) Growth rates and yields that are compatible with other resources,</li> <li>b) Annual harvest of expected timber volume,</li> <li>c) Maintenance or improvement, where possible, of genetic diversity within tree species,</li> <li>d) Successful reforestation through the application of appropriate and available silvicultural techniques,</li> <li>e) Vegetative conditions (structure, density, etc.) in plantations and surrounding stands that result in reduced hazard for loss from uncharacteristic disturbance events, and</li> <li>f) Sustained yield, even flow of high-quality forest products, including timber and non-timber forest products.</li> </ul> |
|                                               | TRGO03 | Manage not suited timberlands to achieve: <ul style="list-style-type: none"> <li>a) Forest vegetation conditions that benefit other resource objectives, and</li> <li>b) Utilization of forest products to the extent feasible and compatible with other uses.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                               | TRGO04 | Provide fuelwood, post, pole, Christmas tree, and other non-sawtimber, miscellaneous forest products to help meet public demand, while also contributing to the attainment of timberland and other resource goals and objectives.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Management Direction for Timberland Resources |                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Type                                          | Number                                                                                                                                                                                                                                                                                                                                                                                                                         | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
| Goals                                         | TRGO05                                                                                                                                                                                                                                                                                                                                                                                                                         | Enhance public awareness about the value of retaining snags and coarse woody debris, the need to protect riparian areas, and the importance of preventing accelerated soil erosion through methods such as information included with personal use permits (fuelwood, Christmas trees, etc.) and interpretive displays.                                                                                                                                         |  |
|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                | See also Goals for TEPC Species (04, 05); Vegetation (01, 02, 03, 07); Fire Management (04); Rangeland Resources (02); Scenic Environment (01); and Heritage Program (03).                                                                                                                                                                                                                                                                                     |  |
| Objectives                                    | TROB01                                                                                                                                                                                                                                                                                                                                                                                                                         | Provide timber harvest, and related reforestation and timber stand improvement activities, to contribute toward the attainment of desired vegetation conditions. Annually, during the next 10 to 15 years:<br>a) Harvest timber, other than by salvage, on an average of approximately 5,500 acres,<br>b) Reforest an average of approximately 1,500 acres, and<br>c) Complete timber stand improvement activities on an average of approximately 3,000 acres. |  |
|                                               | TROB02                                                                                                                                                                                                                                                                                                                                                                                                                         | Make available an estimated 325 million board feet of timber for the decade, which will contribute to Allowable Sale Quantity (ASQ).                                                                                                                                                                                                                                                                                                                           |  |
|                                               | TROB03                                                                                                                                                                                                                                                                                                                                                                                                                         | Utilize wood products (e.g., fuelwood, posts, poles, house logs, etc.) generated from vegetation treatment activities, on both suited and not suited timberlands, to produce approximately 80 million board feet of volume for the decade. This volume, when combined with ASQ, is the Total Sale Program Quantity (TSPQ). The TSPQ for the first decade is estimated to be 405 million board feet.                                                            |  |
|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                | See also Objectives for TEPC Species (13, 14, 15, 16, 19); SWRA Resources (12, 13); Wildlife Resources (07); Vegetation (01, 02); Rangeland Resources (02); Facilities and Roads (06); Recreation Resources (02, 20); Heritage Program (14); Tribal Rights and Interests (02, 03); and Social/Economics (01).                                                                                                                                                  |  |
| Standards                                     | Vegetation Management Practices                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|                                               | TRST01                                                                                                                                                                                                                                                                                                                                                                                                                         | Minimum stocking requirements for plantation certification for each potential vegetation group are described in the table below. A certified silviculturist may prescribe different minimum stocking requirements, which are more appropriate for site-specific conditions and stand management objectives; otherwise, the minimum stocking standards outlined in this table must be used.                                                                     |  |
|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
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|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| TRST02                                        | Openings created by even-aged timber harvest shall be separated by stands not defined as an opening. The size of stands between created openings may vary to address site-specific resource concerns, but the minimum stand size may never be less than 5 acres. Where openings that exceed 40 acres are proposed to meet management objectives, a 60-day public notice and review by the Regional Forester shall be required. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |

| Management Direction for Timberland Resources                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                                                                                                                                                                                                                                                                    | Number                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Standards                                                                                                                                                                                                                                                                                               | TRST03                                                                                                                                                                                                                                                                                                                                                                                                                                                      | An opening created by timber harvesting will, as a minimum, no longer be considered an opening when a new forest stand is established in that opening. Regenerated areas, whether planted or developed through natural regeneration, are established when they are certified.                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                         | TRST04                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Lands within Riparian Conservation Areas (RCAs), determined after field review, will be identified as not suited for timber production. Wood products harvested within RCAs will not contribute to the Allowable Sale Quantity (ASQ).                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                         | TRST05                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Field-verified high-risk landslide-prone sites are identified as not suited for timber production. Wood products harvested from high-risk landslide-prone sites will not contribute to the ASQ.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                         | <b>Harvest of Miscellaneous Forest Products</b>                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                         | TRST06                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Off-road vehicle travel for purposes of fuelwood harvest, Christmas trees, and other miscellaneous forest products must comply with Travel Map restrictions unless specifically exempted by permit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                         | TRST07                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No fuelwood harvest is allowed within 300 feet of perennial streams and 150 feet of intermittent streams unless management actions are designed in a manner that will not degrade riparian and related aquatic resources. Fuelwood harvest allowed within 300 feet of perennial streams and 150 feet of intermittent streams will be described in the annual fuelwood map and instructions.                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                                                                                                                                                         | <b>Salvage Harvesting</b>                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                         | TRST08                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Salvage harvest in RCAs is allowed only where the wood products salvaged will not degrade or retard attainment of riparian, aquatic, hydrological, botanical, and terrestrial wildlife habitat desired conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                         | <i>See also Standards for TEPC Species (04, 06, 14, 15); SWRA Resources (01, 02, 03, 04, 07, 10, 12); Wildlife Resources (01, 02, 03, 04, 05, 06); Vegetation (01); Botanical Resources (01); Non-native Plants (03, 04, 06, 10); Rangeland Resources (08); Mineral and Geology Resources (01); Scenic Environment (01, 02); Lands and Special Uses (03, 04); Heritage Program (01); Tribal Rights and Interests (01); and Wild and Scenic Rivers (01).</i> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Guidelines                                                                                                                                                                                                                                                                                              | <b>Conifer Plantation Protection</b>                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                         | TRGU01                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Provide long-term protection of conifer plantations by any one, or a combination of the following, or similar, actions within and adjacent to plantations: <ul style="list-style-type: none"> <li>a) Release and weeding to control competing vegetation,</li> <li>b) Thinning to control stand density,</li> <li>c) Brush disposal to reduce fuel loading,</li> <li>d) Prescribed fire (underburning) to reduce fuel loading, fuel ladders, and understory vegetation,</li> <li>e) Animal damage control.</li> </ul> These and other activities should be integrated with other resource management objectives to provide protection against undesirable effects of fire, insects, and disease. |
|                                                                                                                                                                                                                                                                                                         | <b>Harvest of Miscellaneous Forest Products</b>                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                         | TRGU02                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Designated areas for harvesting miscellaneous forest products should be used where needed to achieve resource objectives or to reduce conflicts with other resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <i>See also Guidelines for SWRA Resources (03, 04, 05, 07, 08, 09, 12); Wildlife Resources (01, 05, 06, 09, 12, 13, 14); Vegetation (01, 02, 03); Botanical Resources (01, 02); Non-native Plants (03, 05); Recreation Resources (05, 06, 09, 23, 26); and Scenic Environment (02, 03, 04, 05, 06).</i> |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |



## Rangeland Resources

*Forest Service Manual and Handbook management direction for rangeland resources is in FSM 2200 - Range Management, WO Amendment 2200-90-1, Chapters 10-50; Intermountain Interim Directive FSH 2209.3-99-9 - Grazing Permit Administration Handbook, Chapter 90 - Rangeland Management Decision Making; and FSH 2209.21 - Rangeland Ecosystem Analysis and Management Handbook, R4 Amendment 2209.21-93-1, Chapters 10-40.*

### DESIRED CONDITION

A sustainable level of forage, consistent with other resource management direction, is available for use through the Forest Service grazing permit system. Rangeland forage quality is maintained or improved in areas where vegetation management projects and range management actions occur. Riparian areas continue to be a focal point for providing vegetative diversity, landscape capability, soil productivity, wildlife habitat, proper stream channel function and water quality important to sustaining beneficial uses. Riparian areas are functioning properly and/or have improving trends in vegetative composition, age class structure and vigor. Upland range vegetation is contributing to proper hydrologic function. The composition and densities of shrubs, grasses and forbs are variable and dynamic across the landscape.

| Management Direction for Rangeland Resources |                                                                                         |                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                         | Number                                                                                  | Direction Description                                                                                                                                                                                                                                                                                                                                         |
| Goals                                        | RAGO01                                                                                  | Provide for livestock forage within existing open allotments, in a manner that is consistent with other resource management direction and uses.                                                                                                                                                                                                               |
|                                              | RAGO02                                                                                  | Manage rangelands using controlled livestock grazing, range structural and non-structural improvements, vegetative and ground rehabilitation, fire, and timber management in various combinations to meet desired conditions.                                                                                                                                 |
|                                              | RAGO03                                                                                  | Manage upland vegetation on suitable rangelands to maintain or restore hydrologic function and soil productivity of watersheds containing allotments.                                                                                                                                                                                                         |
|                                              | RAGO04                                                                                  | Manage herbaceous and shrub vegetation on suitable rangelands to meet resource objectives in an efficient manner.                                                                                                                                                                                                                                             |
|                                              | RAGO05                                                                                  | Manage livestock grazing within riparian areas to accommodate the maintenance or restoration of aquatic and riparian processes and functions.                                                                                                                                                                                                                 |
|                                              | RAGO06                                                                                  | Coordinate livestock grazing to address conflicts with other resource uses in a manner that is consistent with Forest Plan management direction.                                                                                                                                                                                                              |
|                                              | See also Goal 03 for Heritage Program and Goals 01, 04, and 06 for Botanical Resources. |                                                                                                                                                                                                                                                                                                                                                               |
| Objectives                                   | RAOB01                                                                                  | Coordinate the design, update, and/or revision of Allotment Management Plans with adjacent landowners to maximize opportunities and minimize potential conflicts in management.                                                                                                                                                                               |
|                                              | RAOB02                                                                                  | Coordinate livestock grazing with timber harvest and forest regeneration activities to capitalize on management opportunities, while minimizing activity conflicts to help meet Forest Plan Vegetation and Rangeland Resource goals.                                                                                                                          |
|                                              | RAOB03                                                                                  | During fine-scale analyses where rangeland facilities are identified as a potential concern or problem contributing to degrading resource conditions within the analysis area, identify rangeland facilities that are degrading resource conditions and prioritize opportunities to mitigate their effects or to initiate restoration of resource conditions. |

| Management Direction for Rangeland Resources |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                         | Number | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Objectives</b>                            |        | <i>See also Objectives for TEPC Species (07, 20, 24); SWRA Resources (03); Wildlife Resources (04); Botanical Resources (02, 09, 10); Non-native Plants (05); Heritage Program (14); Tribal Rights and Interests (02, 03); and Social/Economics (01).</i>                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Standards</b>                             | RAST01 | Maximum forage utilization of representative areas within each pasture shall not exceed the values shown at the end of growing season. Variation in utilization standards in order to achieve specific vegetative management objectives shall occur with a site-specific or project-level decision according to direction in FSM 1922.5.<br>a) <u>Riparian Areas</u> : Maximum 45 percent use or retain a minimum 4-inch stubble height of hydric greenline species, whichever occurs first.<br>b) <u>Upland Vegetative Cover Types</u> : Early season or season long pastures – 40 percent use. Vegetative slow growth, after seed seed ripe conditions, or late season pastures – 50 percent use. |
|                                              | RAST02 | Livestock trailing, bedding, watering, and other handling efforts shall be limited to those areas and times that maintain or allow for restoration of beneficial uses and native and desired non-native fish habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                              | RAST03 | New water developments, corrals, and other handling or loading facilities shall not be located within RCAs, unless it can be demonstrated that these facilities maintain or allow for restoration of beneficial uses and native and desired non-native fish habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                              | RAST04 | Livestock salting will be prohibited in RCAs. Sheep will be salted only at bed grounds. Salt will be placed in containers and moved with the sheep.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                              | RAST05 | Only one night/one time use of bed grounds is allowed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                              | RAST06 | Only open or loose sheep herding will be practiced, except where site-specific vegetation management (e.g., noxious weed control or reforestation) is needed and has been prescribed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                              | RAST07 | Only annual once-over sheep grazing will be allowed, with the exception of designated sheep driveways, travel routes, or where specifically authorized.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                              | RAST08 | Bedding of sheep and salting of livestock in plantations will be prohibited until plantation trees have grown to a size that reduces their susceptibility to damage from livestock.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                              | RAST09 | New, reconstructed, or replaced livestock water developments must provide access and escape to and from water for all types of wildlife.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                              |        | <i>See also Standards for TEPC Species (04, 06, 08, 10, 22, 23, 24, 25, 26); SWRA Resources (01, 02, 03, 04, 07, 12); Wildlife Resources (02, 03, 07); Botanical Resources (01, 03); Mineral and Geology Resources (01); Heritage Program (01); Scenic Environment (01); Tribal Rights and Interests (01); and Wild and Scenic Rivers (01).</i>                                                                                                                                                                                                                                                                                                                                                     |

| Management Direction for Rangeland Resources |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                         | Number | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Guidelines                                   | RAGU01 | <p>The following situations should be examined when determining grazing capacities for individual or groups of allotments during project-level decisions. These guidelines are based on the assumption that typical management practices are occurring or will occur (for example, a deferred rotation grazing system):</p> <ul style="list-style-type: none"> <li>a) Generally, areas where native, desirable introduced, or introduced palatable species site productivity is less than 200 pounds per acre should not be included in the allotment grazing base.</li> <li>b) <u>Landtype Associations within Capability Groups 1-5 and 10</u>. In areas where annual precipitation is 15 inches or more, the preferred course of action is to remove sites from the grazing base that have vegetation, litter, rock, and moss cover (ground cover) less than 60 percent. In areas where annual precipitation is less than 15 inches, the preferred course of action is to remove sites that have ground cover less than 40 percent.</li> <li>c) <u>Landtype Associations in Capability Group 6-9 (landtypes with a moderately high or high susceptibility to erosion)</u>. Generally, sites with soil depths less than 10 to 12 inches, and/or sites with slopes between 25-50 percent that have vegetation and litter cover less than 60 percent, and/or sites where slopes are less than 25 percent that have vegetation and litter cover less than or equal to 40 percent, should not be included in the allotment grazing base.</li> </ul> |
|                                              | RAGU02 | <p>In cattle allotments where riparian area restoration is an objective, grazing systems should be designed to incorporate the following parameters where appropriate:</p> <ul style="list-style-type: none"> <li>a) Provide residual vegetative cover (at least 6 inches of hydric vegetation) either through regrowth or rest treatments for at least 75 percent of the years in a rotation cycle.</li> <li>b) Reduce the duration of riparian area grazing periods where needed. Grazing period reduction may be especially needed in the fall where riparian deciduous woody species are an important riparian vegetation component.</li> <li>c) Design grazing periods to take advantage of favorable seasonal livestock dispersal behavior (examples: spring use of uplands, due to wet riparian conditions, late fall upland use, due to cold temperatures, poor dispersal during "hot" season).</li> <li>d) Incorporate sufficient growing season rest to provide good vigor, physiological needs, and regeneration of all riparian plants.</li> <li>e) Where deciduous trees and shrubs are important in the composition, modify the frequency of grazing periods, reduce the grazing duration, or reduce grazing intensity to levels that provide for recovery/maintenance of healthy diverse trees and shrubs.</li> </ul>                                                                                                                                                                                                              |
|                                              | RAGU03 | After completing vegetation treatments, livestock grazing practices (for example, salting locations, rest, temporary closure of stock water, herding, season of use, duration, and temporary electric fencing) may be altered as needed to hasten or enhance site recovery or treatment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                              | RAGU04 | New stock driveways and trailing routes should be located outside of RCAs. Where driveways and trailing routes must pass through RCAs, they should be located and managed to minimize the extent and severity of degrading effects to soil, water, riparian, aquatic, and botanical resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                              | RAGU05 | Where rangeland facilities or practices have been identified as potentially contributing to the degradation of water quality, aquatic species or occupied sensitive or watch plant habitat, facilities and practices causing degradation should be considered for relocation, closure, or changes in management strategy, alteration, or discontinuance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                              | RAGU06 | Livestock use should be discouraged in progeny sites, seed orchards, and plantations that have not been certified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

| Management Direction for Rangeland Resources |                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                   |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                         | Number                                                                                                                                                                                                                                                  | Direction Description                                                                                                                                                                                                                                                             |
| Guidelines                                   | RAGU07                                                                                                                                                                                                                                                  | To improve the cost-effectiveness of livestock pasture and improvement management, consider combining allotments or portions of allotments to increase the number of pastures available in a rotation, rather than dividing existing pastures with new fences into smaller units. |
|                                              | RAGU08                                                                                                                                                                                                                                                  | Sheep should be routed to avoid slopes with loose soil conditions, active gullies, and snowbank areas that have low productivity, soil puddling, and compaction conditions.                                                                                                       |
|                                              | RAGU09                                                                                                                                                                                                                                                  | Season-long grazing practices should be discontinued where they preclude restoration of upland or riparian vegetation communities.                                                                                                                                                |
|                                              | RAGU10                                                                                                                                                                                                                                                  | Where recreation prescriptions are applied, adjustments to grazing management practices should be evaluated to resolve conflicts in areas of concentrated recreation use.                                                                                                         |
|                                              | See also Guidelines for TEPC Species (09); SWRA Resources (03, 05, 07, 08, 09, 12); Wildlife Resources (05, 06, 10, 11, 12, 13, 14); Vegetation (05, 06); Fire Management (05); Recreation Resources (09, 18, 23, 26); and Research Natural Areas (01). |                                                                                                                                                                                                                                                                                   |

## Mineral and Geology Resources

Forest Service Manual direction for mineral management is in FSM 2800 - Minerals and Geology, WO Amendment 2800-96-1, Zero Code; FSM 2810 - Mining Claims, WO Amendment 2800-90-1; FSM 2820 - Mineral Leases, Permits and Licenses, WO Amendment 2800-94-1; FSM 2830 - Mineral Reservations and Outstanding Mineral Rights, WO Amendment 2800-90-1; FSM 2840 - Reclamation, WO Amendment 2800-90-1; FSM 2860 - Forest Service Authorized Prospecting and Mineral Collecting, WO Amendment 2800-92-1. Direction can also be found in 36 CFR 228, Subpart A through E. When evaluating the completeness of reclamation plans, the Manual of Best Management Practices for the Mining Industry in Idaho, 1993, published by the Idaho Department of Lands, should be used as a reference for mitigating potential degrading effects to water quality.

### DESIRED CONDITION

Exploration, development, and production of mineral and energy resources are conducted in an environmentally sound manner. Mineral resource inventories and evaluations are completed. Although some areas (designated Wilderness and Wild Rivers, campgrounds, administrative sites, etc.) are withdrawn from mineral exploration and development, most areas of the Forest remain open to mineral activities. Demand for locatable minerals depends upon world markets and fluctuates. Operating plans include appropriate mitigation measures, and contain bonding requirements commensurate with the costs of anticipated site reclamation. Where practicable, sites are returned to a condition consistent with management emphasis and objectives.

| Management Direction for Mineral and Geology Resources |                                                                           |                                                                                                                                                                                                                                                       |
|--------------------------------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                   | Number                                                                    | Direction Description                                                                                                                                                                                                                                 |
| Goals                                                  | MIGO01                                                                    | Facilitate orderly and environmentally sound exploration, development, and production of mineral and energy resources.                                                                                                                                |
|                                                        | MIGO02                                                                    | Require appropriate mitigation and reclamation of environmental disturbance for all mineral exploration and development proposals. Reduce environmental effects from past mineral-related activity. Restore disturbed land to a productive condition. |
|                                                        | MIGO03                                                                    | Eliminate or prevent occupancy that is not reasonably incident to and required for mineral operations.                                                                                                                                                |
|                                                        | MIGO04                                                                    | Integrate mineral and geology project planning and implementation in a manner that is consistent with other resource management direction.                                                                                                            |
|                                                        | MIGO05                                                                    | Interpret local geology and mining activities for public enjoyment and education.                                                                                                                                                                     |
|                                                        | See also Goal 03 in Heritage Program and Goals 03 and 04 in TEPC Species. |                                                                                                                                                                                                                                                       |
| Objectives                                             | MIOB01                                                                    | Continue to inventory known abandoned mines and prepare restoration plans to address biological and physical resource concerns, chemical stability, and human health and safety.                                                                      |
|                                                        | MIOB02                                                                    | Develop and implement within one year standardized inspection, monitoring, and reporting requirements for minerals activities to provide for environmentally sound exploration, development, and production of mineral and energy resources.          |
|                                                        | MIOB03                                                                    | Develop a plan to provide for reasonable access to and occupancy of National Forest System lands for mineral-related activities.                                                                                                                      |
|                                                        | MIOB04                                                                    | Coordinate and cooperate with other federal and state agencies having authority or expertise in mineral-related activities.                                                                                                                           |

| Management Direction for Mineral and Geology Resources |                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                   | Number                                                                                                               | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Objectives                                             | MIOB05                                                                                                               | Identify suitable locations for the interpretation of local geology and mining activities for public enjoyment and education.                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                        | MIOB06                                                                                                               | Identify and provide suitable locations for the development of common variety mineral resources.                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                        | MIOB07                                                                                                               | Administer active mineral operations in accordance with approved plans of operation, current NEPA analysis, and adequate reclamation bonds.                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                        | MIOB08                                                                                                               | During fine-scale analyses in areas where mine facilities are identified as a potential concern or problem contributing to degradation of water quality, aquatic species or occupied sensitive or Watch plant habitat, evaluate and document where the contributing mine facilities are and prioritize opportunities to mitigate effects.                                                                                                                                                                                   |
|                                                        | MIOB09                                                                                                               | During site/project-scale analysis, evaluate mine waste material using accepted sampling methods and analytic techniques to determine its chemical and physical stability characteristics.                                                                                                                                                                                                                                                                                                                                  |
|                                                        | See also Objectives TEPC Species (24); Non-native Plants (05), Recreation Resources (20), and Heritage Program (04). |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Standards                                              | MIST01                                                                                                               | Permits and authorizations for exploration and development of common variety minerals shall include terms and conditions for controlling operating methods in timing to prevent degrading effects to surface resources and uses.                                                                                                                                                                                                                                                                                            |
|                                                        | MIST02                                                                                                               | Common variety mineral activities will not be conducted on land allocations such as National Recreation Trails, Research Natural Areas, and where recreation or capital improvements preclude such activities.                                                                                                                                                                                                                                                                                                              |
|                                                        | MIST03                                                                                                               | Common variety and leaseable mineral sources shall not be located and developed within RCAs. If no alternative exists, common variety and leaseable mineral sources shall be located and developed so that they do not degrade or retard attainment of other Forest Plan desired resource conditions and so that reclamation is feasible.                                                                                                                                                                                   |
|                                                        | MIST04                                                                                                               | Mitigate degrading effects from locatable mining operations situated within RCAs by identifying reasonable locations for access, processing, and disposal facilities outside of RCAs, wherever possible.                                                                                                                                                                                                                                                                                                                    |
|                                                        | MIST05                                                                                                               | A Certified Mineral Examiner (CME) shall review all proposed Plan of Operations in Inventoried Roadless Areas to determine if unnecessary or unreasonable resource damage will occur. If it is determined that the proposed plans are the next logical level of development, the CME shall prepare a formal Surface Use Determination Report to be used in processing and approving the Plan of Operation.                                                                                                                  |
|                                                        | MIST06                                                                                                               | Require reclamation bonds for all proposed mineral activities that will potentially cause significant surface disturbance and require rehabilitation.                                                                                                                                                                                                                                                                                                                                                                       |
|                                                        | MIST07                                                                                                               | Access on and off mining claims shall be authorized where necessary for mineral development. Road construction, reconstruction, and commercial road use on and off mining claims shall be authorized through a Plan of Operations. When mine development proposals include roads, the NEPA process shall be used to analyze and evaluate proposed routes.                                                                                                                                                                   |
|                                                        | MIST08                                                                                                               | Locate new structures, support facilities, and roads outside RCAs. Where no alternative to siting facilities in RCAs exists, locate and construct the facilities in ways that avoid or minimize degrading effects to RCAs and streams, and adverse effects to TEPC species. Where no alternative to road construction in RCAs exists, keep roads to the minimum necessary for the approved mineral activity. Close, obliterate, and revegetate such roads if no longer required for mineral or other management activities. |

| Management Direction for Mineral and Geology Resources |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                   | Number | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Standards                                              | MIST09 | <p>Prohibit solid and sanitary waste facilities in RCAs. If no alternative to locating mine waste (waste rock, spent ore, tailings) facilities in RCAs exists, then:</p> <ol style="list-style-type: none"> <li>Analyze waste material using the best conventional methods and analytic techniques to determine its chemical and physical stability characteristics.</li> <li>Locate and design waste facilities using the best conventional geochemical and geotechnical predictive tools to ensure mass stability and prevent the release of acid or toxic materials. If the best conventional technology is not sufficient to prevent such releases and ensure stability over the long term, and such releases or instability would result in exceedance of established water quality standards or would degrade surface resources, prohibit such facilities in RCAs.</li> <li>Monitor waste and waste facilities to confirm predictions of chemical and physical stability, and make adjustments to operations as needed to avoid degrading effects to beneficial uses and native and desired non-native fish and their habitats.</li> <li>Reclaim and monitor waste facilities to ensure chemical and physical stability and revegetation to avoid degrading effects to beneficial uses and native and desired non-native fish and their habitats.</li> <li>Require reclamation bonds adequate to ensure long-term chemical and physical stability and successful revegetation of mine waste facilities.</li> </ol> |
|                                                        |        | <p><i>See also Standards for TEPC Species (06, 08, 11, 27, 28, 29, 30); SWRA Resources (01, 02, 03, 04, 07, 12); Wildlife Resources (02, 03, 04, 06); Botanical Resources (01); Non-native Plants (03, 04, 06); Scenic Environment (01); Heritage Program (01) and Wild and Scenic Rivers (01).</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Guidelines                                             | MIGU01 | Reclamation and mitigation standards that specifically address recurrent maintenance and end-of-season and interim shutdown should be part of operating plans. Reasonable expiration dates and frequency of inspections should be identified in approved plans.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                        | MIGU02 | Long-term or final reclamation should return the land to a planned use that is consistent with the overall land use objectives of the area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                        | MIGU03 | Where settlement ponds, tailing dams, or impoundments are planned, each should be located, designed, constructed and inspected under the supervision of a professional engineer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                        | MIGU04 | Unless otherwise authorized, all garbage or refuse should be removed from National Forest System lands.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                        | MIGU05 | New Forest Service capital investments should be avoided on lands where the potential for mineral activities occurring is high, or moderately high, within the foreseeable future.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                        | MIGU06 | <p>Mining development roads should be constructed and maintained to ensure adequate drainage that will mitigate degrading effects to soil, water, and other resource values through avoidance or minimization. Mitigation measures and seasonal maintenance practices for mining access and development roads should be part of the operating plan. Direction applicable to Forest Development Roads used for commercial mining uses are found in the Facilities Standards and Guidelines. Roads no longer needed should be restored, revegetated, and:</p> <ol style="list-style-type: none"> <li>Be closed to vehicular traffic;</li> <li>Have bridges and culverts removed; and</li> <li>Have the road surface shaped to as near a natural contour as practical and stabilized.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                        | MIGU07 | On National Forest System lands with Reserved Public Domain Status, issuing a lease, permit, or license is not recommended where operational activities—such as surface-based access, product transportation, and ancillary production facilities—may result in irreversible or irretrievable commitment of surface resources. The denial of consent should be based upon site-specific consideration, using the appropriate evaluation criteria for the management area involved.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Management Direction for Mineral and Geology Resources |                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                   | Number                                                                                                                                                                                                                                | Direction Description                                                                                                                                                                                                                                                                                                                         |
| Guidelines                                             | MIGU08                                                                                                                                                                                                                                | For locatable mineral operations, degrading effects to aquatic resources and water quality should be mitigated.                                                                                                                                                                                                                               |
|                                                        | MIGU09                                                                                                                                                                                                                                | Monitoring plans for operation and closure should be developed to confirm predictions and ability to mitigate negative effects to biological, chemical, or physical resources. Results of inspection and monitoring should be evaluated and applied to modify plans and permits as needed to minimize negative effects to other resources.    |
|                                                        | MIGU10                                                                                                                                                                                                                                | Reclamation bonds should be sufficient to ensure the full costs of reclamation, reasonable Forest Service administrative costs, restoration of productivity, and maintenance of long-term physical, chemical, and biological stability. Approved plans should include requirements for regular (annual or biennial) review of bonds.          |
|                                                        | MIGU11                                                                                                                                                                                                                                | Where mine facilities or practices have been identified as potentially contributing to degradation of water quality, aquatic species or occupied sensitive and watch plant habitat, facilities and practices causing degradation should be considered for relocation, closure, changes in management strategy, alteration, or discontinuance. |
|                                                        | See also Guidelines for TEPC Species (01, 02); SWRA Resources (03, 05, 07, 08, 09, 11, 12); Wildlife Resources (03, 05, 06, 12, 13); Botanical Resources (01); Non-native Plants (03, 05); and Recreation Resources (05, 09, 23, 26). |                                                                                                                                                                                                                                                                                                                                               |



## Lands and Special Uses

*Forest Service Manual and Handbook management direction for the Lands program and non-recreation special uses is in FSM 2700 - Special Uses Management, FSM 5400 - Landownership, FSM 5500 - Landownership Title Management, FSM 7150 - Surveying, and FSM 7700 - Transportation System, and in Forest Service Handbooks: 2709.11 - Special Uses Handbook, 2709.12 - Road Rights-of-Way Grants Handbook, 2709.15 - Hydroelectric Handbook, 5409.13 - Land Acquisition Handbook, 5409.17 - Rights-of-Way Acquisition Handbook, and 5509.11 - Title Claims, Sales, and Grants Handbook. See also the Recreation Resources section in this Chapter for additional direction for recreation special uses.*

### DESIRED CONDITION

Forest management and public needs are met through:

- a) Landownership adjustments,
- b) Property boundary and landline location, and
- c) Issuance of Special Use authorizations.

Adjustments made in land ownership achieve resource management or protection objectives, provide needed access, or allow National Forest System lands to be managed more efficiently. Rights-of-way to access National Forest System lands are acquired to meet planned resource activities. National Forest property boundaries are located on the ground and posted. Pro-active efforts to educate and inform users and adjacent landowners result in reduced levels of unpermitted uses, encroachments, and user conflicts. Conflicts between authorized special uses and other uses and resources are mitigated or eliminated.

| Management Direction for Lands and Special Uses |                                  |                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                            | Number                           | Direction Description                                                                                                                                                                                                                                                                                                                          |
| Goals                                           | <b>Landownership Adjustments</b> |                                                                                                                                                                                                                                                                                                                                                |
|                                                 | LSGO01                           | Identify and seek adjustments to land ownership, National Forest boundaries, and interior exclusions to effectively meet public needs, to protect and enhance important resources, to consolidate National Forest System land, and to improve management efficiency. Land adjustments reflect Forest priorities for acquisition and conveyance |
|                                                 | <b>Rights-of-Way</b>             |                                                                                                                                                                                                                                                                                                                                                |
|                                                 | LSGO02                           | Acquire, grant, and/or exchange for legal access to meet the needs of planned resource management activities and public and administrative access.                                                                                                                                                                                             |
|                                                 | <b>Boundaries</b>                |                                                                                                                                                                                                                                                                                                                                                |
|                                                 | LSGO03                           | Protect the public estate and manage the status of National Forest System lands to support resource goals.                                                                                                                                                                                                                                     |
|                                                 | <b>Special Uses</b>              |                                                                                                                                                                                                                                                                                                                                                |
|                                                 | LSGO04                           | Proposed special uses of National Forest System lands—such as hydroelectric development, communication sites, water developments, and utility corridors—are considered that meet public needs, are consistent with direction for other National Forest resources, and cannot be accommodated off the National Forest.                          |

| Management Direction for Lands and Special Uses |                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                            | Number                                                                                                                                                          | Direction Description                                                                                                                                                                                                                                                                                                                                                                                         |
| Goals                                           | LSGO05                                                                                                                                                          | 5) Special use authorizations are issued for uses that: <ul style="list-style-type: none"> <li>a) Serve the public,</li> <li>b) Promote public health and safety,</li> <li>c) Protect the environment, and/or</li> <li>d) Are legally mandated.</li> </ul>                                                                                                                                                    |
|                                                 | See also Goals for TEPC Species (06); Wildlife Resources (02), Mineral and Geology Resources (03), Heritage Program (03); and Tribal Rights and Interests (02). |                                                                                                                                                                                                                                                                                                                                                                                                               |
| Objectives                                      | <b>Landownership Adjustments</b>                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                 | LSOB01                                                                                                                                                          | Use purchase, donation, conveyance, exchange, rights-of-way acquisition, transfer, interchange, and boundary adjustment to accomplish Forest Plan goals.                                                                                                                                                                                                                                                      |
|                                                 | LSOB02                                                                                                                                                          | Prepare and update, as needed, site-specific plans to guide rights-of-way acquisition, and ownership boundary marking, posting, and management.                                                                                                                                                                                                                                                               |
|                                                 | LSOB03                                                                                                                                                          | Prepare and maintain a landownership adjustment map based on Forest Plan goals and objectives.                                                                                                                                                                                                                                                                                                                |
|                                                 | <b>Rights-of-Way</b>                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                 | LSOB04                                                                                                                                                          | Acquire and grant rights-of-way that meet resource access needs of the Forest Service, public users, and cost-share cooperators.                                                                                                                                                                                                                                                                              |
|                                                 | LSOB05                                                                                                                                                          | Reduce or eliminate the current backlog of reciprocal Rights-of-Way and easement cases.                                                                                                                                                                                                                                                                                                                       |
|                                                 | <b>Boundaries</b>                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                 | LSOB06                                                                                                                                                          | Protect and maintain boundary lines between National Forest System lands and other ownerships that have been surveyed, posted, and marked to keep them visible, to protect the investment, and to deter encroachment.                                                                                                                                                                                         |
|                                                 | LSOB07                                                                                                                                                          | Maintain land status records.                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                 | LSOB08                                                                                                                                                          | Identify and resolve trespass uses, title claims, and encroachment occurring on National Forest System lands, and act to reduce the likelihood of future trespass.                                                                                                                                                                                                                                            |
|                                                 | <b>Special Uses</b>                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                 | LSOB09                                                                                                                                                          | Continue working with utilities and others to identify potential areas for additional designated utility and communication facilities.                                                                                                                                                                                                                                                                        |
|                                                 | LSOB10                                                                                                                                                          | Provide for communication site designations and developments that meet public needs and are consistent with direction for National Forest resources.                                                                                                                                                                                                                                                          |
|                                                 | LSOB11                                                                                                                                                          | Work toward resolution of RS2339 claims for pre-existing ditch lines or other water transmission structures.                                                                                                                                                                                                                                                                                                  |
|                                                 | LSOB12                                                                                                                                                          | During fine-scale analyses in areas where special use authorization facilities are identified as a potential concern or problem contributing to degradation of water quality, aquatic species or occupied sensitive or Watch plant habitat, evaluate and document where the contributing facilities are and prioritize opportunities to mitigate effects.                                                     |
|                                                 | See also Objectives for TEPC Species (25, 26); Non-native Plants (05); Recreation Resources (20); Heritage Program (14); and Tribal Rights and Interests (03).  |                                                                                                                                                                                                                                                                                                                                                                                                               |
| Standards                                       | <b>Landownership Adjustments</b>                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                 | LSST01                                                                                                                                                          | Land adjustments shall be consistent with Forest Plan goals and objectives, and shall consider the goals and objectives for Rights-of-Way.                                                                                                                                                                                                                                                                    |
|                                                 | <b>Rights-of-Way</b>                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                 | LSST02                                                                                                                                                          | Easement acquisition shall conform to right-of-way planning and shall include existing Forest Transportation System roads and trails as well as project-related new construction.<br><br>Coordinate with intermingled and adjacent landowners and local governments in developing roads or road systems that serve the needs of all parties. Obtain rights-of-way utilizing eminent domain only if necessary. |

| Management Direction for Lands and Special Uses |                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                            | Number                                                                                                                                                                                                                                                                                                                                                                               | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Standards                                       | <b>Boundaries</b>                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                 | LSST03                                                                                                                                                                                                                                                                                                                                                                               | Locate and post National Forest System land boundaries before implementing management activities near or adjacent to private land or other lands not under Forest Service management.                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                 | LSST04                                                                                                                                                                                                                                                                                                                                                                               | Locate and post wilderness boundaries before implementing management activities that may conflict with any nearby designated wilderness.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                 | LSST05                                                                                                                                                                                                                                                                                                                                                                               | Include protection measures for marked property boundaries and corners in all authorizations, contracts, agreements, plans of operations, and internal management activities where the potential for disturbing property markers exists. Damage to or loss of marked property boundaries and corners will be repaired by the appropriate party or management function.                                                                                                                                                                                                                                           |
|                                                 | <b>Special Uses</b>                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                 | LSST06                                                                                                                                                                                                                                                                                                                                                                               | Do not accept special-use authorization applications that do not meet special-uses proposal screening and application criteria, as presented in 36CFR 251.54.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                 | LSST07                                                                                                                                                                                                                                                                                                                                                                               | New authorized facilities shall be located outside of RCAs wherever possible. When new facilities must be located in RCAs, they shall be developed such that degrading effects to RCAs are mitigated, through avoidance or minimization                                                                                                                                                                                                                                                                                                                                                                          |
|                                                 | LSST08                                                                                                                                                                                                                                                                                                                                                                               | Require adequate bonds or other security instruments for special-use authorizations if it is determined the use has potential for disturbance that may require rehabilitation or when needed to ensure other performance.                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                 | LSST09                                                                                                                                                                                                                                                                                                                                                                               | Proposals for utility and communication facilities outside designated communication sites or utility and wireless technology corridors shall be considered only after improvement of existing facilities to accommodate expanded use is analyzed and determined to be unreasonable.                                                                                                                                                                                                                                                                                                                              |
|                                                 | LSST10                                                                                                                                                                                                                                                                                                                                                                               | Use authority granted under Section 4(e) of the Federal Power Act, to participate in FERC licensing processes for any project with the potential to affect National Forest System lands.                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                 | LSST11                                                                                                                                                                                                                                                                                                                                                                               | Use conditioning authority granted under Section 4(e) of the Federal Power Act to ensure that hydroelectric facilities that must be located within RCAs are located, operated, and maintained in a manner that mitigates degradation of Forest resources.                                                                                                                                                                                                                                                                                                                                                        |
|                                                 | LSST12                                                                                                                                                                                                                                                                                                                                                                               | Where the authority to do so was retained, and in cooperation with affected state, tribal, and local governments, holders of water rights, and other interested parties, require that water diversion structures: <ul style="list-style-type: none"> <li>a) Be monitored to limit water withdrawals to the amount of the water right and the time period of the water right; and</li> <li>b) Have either fish screens, or other means, to prevent fish entrapment or entrainment.</li> </ul> Where the authority was not retained, negotiate changes to meet other Forest resource objectives wherever possible. |
|                                                 | LSST13                                                                                                                                                                                                                                                                                                                                                                               | Small hydropower facilities that are granted exemptions from licensing by the FERC shall be located, operated and maintained to mitigate degradation of Forest resources.                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                 | LSST14                                                                                                                                                                                                                                                                                                                                                                               | Applications received before December 31, 1996 that request issuance of a permanent easement for a qualifying agricultural water system under Public Law 99-545 (commonly called the "Ditch Bill") shall be processed, subject to the conditions of the law.                                                                                                                                                                                                                                                                                                                                                     |
|                                                 | LSST15                                                                                                                                                                                                                                                                                                                                                                               | Access to privately owned property surrounded by National Forest System lands shall be provided, subject to reasonable terms and conditions, as required by the Alaska National Interest Lands Conservation Act of December 2, 1980.                                                                                                                                                                                                                                                                                                                                                                             |
|                                                 | See also Standards for TEPC Species (06, 07, 11, 31); SWRA Resources (01, 02, 03, 04, 05, 06, 07, 08, 09, 11, 12); Wildlife Resources (02, 03, 04, 05, 06); Botanical Resources (01); Non-native Plants (03, 10); Mineral and Geology Resources (01); Scenic Environment (01); Heritage Program (01); Tribal Rights and Interests (01, 02, 05, 06); and Wild and Scenic Rivers (01). |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

| Management Direction for Lands and Special Uses |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                            | Number                  | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Guidelines                                      | <b>Land Acquisition</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                 | LSGU01                  | <p>Acquisitions of land and interest in lands should be guided by the following criteria:</p> <p><b>Priority 1 Acquisitions:</b> (not listed in any order of priority)</p> <ul style="list-style-type: none"> <li>a) Lands and associated riparian ecosystems on water frontage such as lakes and major streams.</li> <li>b) Critical habitat lands needed for protection of TEPC fish, wildlife, or plants.</li> <li>c) Other environmentally sensitive lands, such as important wetland and riparian areas.</li> <li>d) Lands needed for the protection of significant historical or cultural resources when these resources are threatened or when management may be enhanced by public ownership.</li> <li>e) Lands that enhance recreation opportunities, public access, and protection of aesthetic values.</li> <li>f) Lands needed for protection and management of administrative and Congressionally designated areas.</li> <li>g) Lands needed to reduce expenses of both the Forest Service and the public in administration and utilization. Consolidation of split estates.</li> <li>h) Lands with water rights that can be used to accomplish purposes for which the National Forest was created, or related resource obligations.</li> </ul> <p><b>Priority 2 Acquisitions:</b> (not listed in any order of priority)</p> <ul style="list-style-type: none"> <li>a) Key tracts of an ecosystem that are not urgently needed, but will promote more effective management of the ecosystem and will meet specific needs for vegetative management, watershed management, research, public recreation, or other defined management objectives. Generally, these tracts will support consolidation objectives.</li> <li>b) Buffer lands needed for protection of lands acquired for purposes listed above.</li> <li>c) Lands needed to protect resource values by eliminating or reducing fire risks, soil erosion and occupancy trespass.</li> </ul> <p><b>Priority 3 Acquisitions:</b><br/>All other lands desirable for inclusion in the National Forest System.</p> |
|                                                 | <b>Land Conveyance</b>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                 | LSGU02                  | <p>Federal land conveyances by exchange or other specific authority should be guided by the following criteria: (not listed in any order of priority)</p> <ul style="list-style-type: none"> <li>a) Lands inside or adjacent to communities or intensively developed private land, and chiefly valuable for non-National Forest System purposes. Lands that support community expansion.</li> <li>b) Parcels that will serve a greater public need in state, county, city, or other federal agency ownership.</li> <li>c) Inaccessible parcels isolated from other National Forest System lands. Parcels intermingled with private lands.</li> <li>d) Parcels under long-term special use permits whose use and purpose are not substantially consistent with National Forest purposes and character. Parcels having boundaries, or portions of boundaries, with inefficient configurations (projecting necks or long, narrow strips of land, etc.) Lands that support more logical and efficient management.</li> <li>e) Parcels eligible for disposition under the Small Tracts Act or other statutory authorities.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                 | <b>Rights-of-Way</b>    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                 | LSGU03                  | Necessary rights for county roads, state highways, and major utility improvements should be conveyed when such conveyances are in the long-term interest of management of the National Forest and in the public interest.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Management Direction for Lands and Special Uses |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                            | Number              | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Guidelines                                      | LSGU04              | Where feasible, exchange of easements, co-op agreements, and cost/share supplements should be considered as alternatives to purchase of rights-of-way.                                                                                                                                                                                                                                                                                                                                                                          |
|                                                 | LSGU05              | Existing Forest transportation system roads and trails, as well as project-related new construction, should be included in easement acquisition.                                                                                                                                                                                                                                                                                                                                                                                |
|                                                 | <b>Boundaries</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                 | LSGU06              | Ownership boundary lines should be surveyed, marked, and posted to applicable Forest Service standards according to the following priorities: <ul style="list-style-type: none"> <li>a) Boundary lines adjacent to or near proposed management activities.</li> <li>b) Boundary lines where encroachment activity by adjoining owners is suspected or known to exist.</li> <li>c) Boundary lines at high risk in proximity to potential or planned outside development.</li> </ul>                                              |
|                                                 | <b>Special Uses</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                 | LSGU07              | Formation of user associations in lieu of individual special-use permits and rights-of-way in common use facilities, uses, or areas should be encouraged. Multiple permits to the same organization should be incorporated into one permit if this facilitates permit administration.                                                                                                                                                                                                                                           |
|                                                 | LSGU08              | Priority for modifying existing authorizations should consider the current and potential negative effects on human health and safety and resource values that may be affected.                                                                                                                                                                                                                                                                                                                                                  |
|                                                 | LSGU09              | The Federal Energy Regulatory Commission should be notified that hydroelectric proposals in watersheds with water quality concerns, important fisheries, and/or occupied TEPC plant habitat are inconsistent with Forest Plan management objectives when degrading effects cannot be effectively avoided or mitigated.                                                                                                                                                                                                          |
|                                                 | LSGU10              | Hydroelectric development that meets public needs and is consistent with direction for other National Forest resources should be considered.                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                 | LSGU11              | The FERC should be notified when projects are proposed for locations, such as in designated Wilderness, which would be inconsistent with Forest management direction and/or the National Forest reservation. It should be recommended to the FERC that preliminary permits and licenses be denied for proposals within areas recommended for Wilderness, proposed Research Natural Areas, and eligible and suitable Wild and Scenic River stream segments until appropriate studies and/or legislative processes are completed. |
|                                                 | LSGU12              | During licensing of new and existing facilities, conditions that require flows and habitat conditions that maintain or restore riparian and aquatic resources and channel integrity should be recommended to the Federal Energy Regulatory Commission (FERC). Review and assessment of applications should be coordinated with the FERC and others. The FERC should be notified of projects that are inconsistent with the National Forest reservation.                                                                         |
|                                                 | LSGU13              | During licensing of new and existing hydroelectric facilities, conditions requiring that existing ancillary facilities be located such that degrading effects to other resources are mitigated should be recommended to the FERC. Where effective mitigation cannot be implemented, such facilities should be relocated.                                                                                                                                                                                                        |
|                                                 | LSGU14              | Proposed new and previously unpermitted small hydroelectric projects that have been exempted by FERC should be evaluated on a case-by-case basis. The evaluation should consider beneficial uses, environmental and social consequences, and resolution of conflicts with other resource objectives and activities.                                                                                                                                                                                                             |
|                                                 | LSGU15              | Access to authorized improvements for maintenance needs should be addressed as part of Special Use authorizations. Where appropriate access is not addressed in existing authorizations, the authorizations should be amended to include it.                                                                                                                                                                                                                                                                                    |
|                                                 | LSGU16              | The 1993 Western Regional Utility Corridor Study, or its successors, should be used as a reference document or guide when considering land use decisions that may affect existing and/or proposed major electric power utility corridors.                                                                                                                                                                                                                                                                                       |

| Management Direction for Lands and Special Uses |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                            | Number                                                                                                                                                                                                                                                                                                                                                    | Direction Description                                                                                                                                                                                                                                          |
| Guidelines                                      | LSGU17                                                                                                                                                                                                                                                                                                                                                    | Consider requiring the posting of a bond by authorization holders to cover future project decommissioning costs associated with new structures such as dams and large buildings.                                                                               |
|                                                 | LSGU18                                                                                                                                                                                                                                                                                                                                                    | Where opportunities to mitigate special use authorized facilities and practices causing degradation have been identified, consider mitigating through measures such as relocation, closure, and changes in management strategy, alteration, or discontinuance. |
|                                                 | See also Guidelines for TEPC Species (10, 11, 12); SWRA Resources (03, 05, 06, 07, 08, 09, 12, 13); Wildlife Resources (04, 05, 06, 11, 12, 13); Botanical Resources (01); Fire Management (05); Non-native Plants (03, 05); Mineral and Geology Resources (05, 07); Recreation Resources (05, 06, 09, 15, 23, 26); and Tribal Rights and Interests (01). |                                                                                                                                                                                                                                                                |

## Facilities and Roads

*Forest Service Manual and Handbook management direction for facilities and roads is in Forest Service Manuals: 5460 - Right-of-Way Acquisition, 7100 - Engineering Operations, 7300 - Buildings and Other Structures, 7400 - Public Health and Pollution Control Facilities, 7500 - Water Storage and Transmission, 7600 - Electrical Engineering, and 7700 - Transportation System; and in Forest Service Handbooks: 5409.17 - Rights-of-Way Acquisition Handbook, 7309.11 - Buildings and Related Facilities Handbook, 7409.11 - Sanitary Engineering and Public Health Handbook, 7509.11 - Dams Management Handbook, 7709.55 - Transportation Planning Handbook, 7709.56 - Road Preconstruction Handbook, 7709.56b - Transportation Structures Handbook, 7709.57 - Road Construction Handbook, 7709.58 - Transportation System Maintenance Handbook, and 7709.59 - Transportation System Operations Handbook.*

### DESIRED CONDITION

Needed facilities are developed to the standard adequate for their intended purpose. Reconstruction and remodeling of existing facilities, and construction of new facilities, occur as facilities wear out or need to change. Facilities are safe, efficient, and meet land and resource management objectives.

The road network matches the level of management activities occurring on the Forest and supplies the transportation system needed for recreation, special uses, timber harvest, range management, minerals development, and fire protection. The transportation network is managed, through the use of a variety of tools, to reduce degrading effects to resources. Roads needed for long-term objectives are maintained to provide for user safety and resource protection. Roads not needed for long-term objectives are decommissioned and stabilized.

| Management Direction for Facilities and Roads |                                                                                                                                                |                                                                                                                                                                                                    |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                          | Number                                                                                                                                         | Direction Description                                                                                                                                                                              |
| Goals                                         | FRGO01                                                                                                                                         | Provide and maintain a safe, efficient Forest transportation system that meets resource management and access needs, while mitigating degrading resource effects.                                  |
|                                               | FRGO02                                                                                                                                         | Provide and maintain safe and efficient Forest facilities.                                                                                                                                         |
|                                               | FRGO03                                                                                                                                         | Manage the Forest telecommunication system and related facilities in accordance with the Forest Communication Plan and established national telecommunication standards.                           |
|                                               | <i>See also Goals for Wildlife Resources (02), Botanical Resources (06); Heritage Program (03), and Recreation Resources (01, 02, 04, 05).</i> |                                                                                                                                                                                                    |
| Objectives                                    | FROB01                                                                                                                                         | Analyze road system needs and associated resource effects in accordance with the established agency policy direction for roads analysis.                                                           |
|                                               | FROB02                                                                                                                                         | Cooperate with federal, state, and county agencies, tribal governments, and cost-share partners to achieve consistency in road design, operation, and maintenance needed to attain resource goals. |
|                                               | FROB03                                                                                                                                         | Identify safety hazards on Forest classified roads, establish improvement priorities, correct or mitigate the hazard.                                                                              |
|                                               | FROB04                                                                                                                                         | During fine-scale analyses, identify opportunities to reduce road-related degrading effects to help achieve other resource objectives.                                                             |

| Management Direction for Facilities and Roads                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                                                                                                                                                                                                                                                   | Number                                                                                                                                                                                                                                                                                                                                                                                   | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Objectives                                                                                                                                                                                                                                                                             | FROB05                                                                                                                                                                                                                                                                                                                                                                                   | Coordinate transportation systems, management, and decommissioning with other federal, state and county agencies, tribal governments, permittees, contractors, cost-share cooperators, and the public to develop a shared transportation system serving the needs of all parties to the extent possible.                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                        | FROB06                                                                                                                                                                                                                                                                                                                                                                                   | Identify roads and facilities that are not needed for land and resource management, and evaluate for disposal or decommissioning.                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                                                                                                                                        | FROB07                                                                                                                                                                                                                                                                                                                                                                                   | Ensure that potable water provided at any public or administrative facility is safe to protect the health and safety of the public and Forest personnel as required by law.                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                        | FROB08                                                                                                                                                                                                                                                                                                                                                                                   | Manage a system of airfields and helispots needed for land and resource management, including appropriate public access needs.                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                                                                                                                                        | FROB09                                                                                                                                                                                                                                                                                                                                                                                   | Develop a Forest Facilities Master Plan depicting facility location, unit standards, existing and proposed buildings, and related improvements.                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                                                                                                                                                                                                                                        | FROB10                                                                                                                                                                                                                                                                                                                                                                                   | Inventory and assess existing classified road crossings in subwatersheds that are occupied or contain critical habitat for TEPC species. Prioritize inventories and assessments in subwatersheds outside designated and recommended wilderness and Inventoried Roadless Areas (IRA); few if any classified road crossings exist in these areas. Assess crossings to determine if they provide for fish passage, 100 year flood flow, and bedload and debris transport. Incorporate the results into the biennial updates of the Watershed and Aquatic Recovery Strategy (WARS) database. |
|                                                                                                                                                                                                                                                                                        | FROB11                                                                                                                                                                                                                                                                                                                                                                                   | In the Forest's annual program of work, prioritize and schedule improvements to existing culverts, bridges, and other stream crossings to accommodate fish passage, 100 year flood flow, and bedload and debris transport. Include accomplishments in the biennial update of the Watershed and Aquatic Recovery Strategy (WARS) database.                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                        | FROB12                                                                                                                                                                                                                                                                                                                                                                                   | During fine-scale analyses in areas where roads and facilities are identified as a potential concern or problem contributing to degradation of water quality, aquatic species or occupied sensitive or Watch plant habitat, evaluate and document where the contributing facilities are and prioritize opportunities to mitigate effects.                                                                                                                                                                                                                                                |
| <i>See also Objectives for TEPC Species (03, 07); SWRA Resources (12, 13, 14, 18); Wildlife Resources (05, 12); Non-native Plants (03, 04); Recreation Resources (01, 05, 07); Heritage Program (14); and Wilderness, Recommended Wilderness, and Inventoried Roadless Areas (03).</i> |                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Standards                                                                                                                                                                                                                                                                              | FRST01                                                                                                                                                                                                                                                                                                                                                                                   | When taking water from fish-bearing streams for road and facility construction and maintenance activities, intake hoses shall be screened with the appropriate mesh size.                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                        | FRST02                                                                                                                                                                                                                                                                                                                                                                                   | To accommodate floods, including associated bedload and debris, new culverts, replacement culverts, and other stream crossings shall be designed to accommodate a 100-year flood recurrence interval unless site-specific analysis using calculated risk tools or another method, determines a more appropriate recurrence interval.                                                                                                                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                        | FRST03                                                                                                                                                                                                                                                                                                                                                                                   | In support of road management decisions, use an interdisciplinary science-based roads analysis process such as Roads Analysis: Informing Decisions About Managing the National Forest Transportation System (USDA FS, 1999 Report FS-643).                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                        | FRST04                                                                                                                                                                                                                                                                                                                                                                                   | Roads shall be constructed to a standard appropriate to their intended use, considering safety and concerns for resource degradation.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                                        | FRST05                                                                                                                                                                                                                                                                                                                                                                                   | Mitigate handling of road waste material (e.g., slough, rocks) to avoid or minimize delivery of waste material to streams that would result in degradation of soil, water, riparian and aquatic resources.                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                        | <i>See also Standards for TEPC Species (06, 11, 32); SWRA Resources (01, 02, 03, 04, 07, 08, 11, 12); Wildlife Resources (02, 03, 04, 05, 06); Botanical Resources (01, 04); Non-native Plants (03, 04, 06, 07, 08, 09, 10); Mineral and Geology Resources (08); Recreation Resources (02, 03, 04); Scenic Environment (01); Heritage Program (01); and Wild and Scenic Rivers (01).</i> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |



| Management Direction for Facilities and Roads                                                                                                                                                                                                                                                                                                                                                                           |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                                                                                                                                                                                                                                                                                                                                                                                    | Number | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Guidelines                                                                                                                                                                                                                                                                                                                                                                                                              | FRGU01 | To protect soil, water, and riparian resources, and their occupied habitat, water supply points, service areas, and other needs for road and facility construction projects should be specified in project planning and used in project implementation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                         | FRGU02 | In areas of existing extensive infestation, mitigation for noxious weed prevention should be incorporated into road layout, design, and project alternative evaluation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                         | FRGU03 | Prior to decommissioning roads, opportunities related to those roads for potential development or use as travel routes for ATVs, mountain bikes, or other alternative forms of transportation, should be considered.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                         | FRGU04 | Roads that are not desired for public access or tribal uses, and that are no longer needed to manage the Forest or to provide access to inholdings should be considered for decommissioning and returning the lands that they occupy to desired resource management.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                         | FRGU05 | Where practical alternatives exist, roads in RCAs that are degrading riparian-dependent resources should be evaluated for obliteration or relocation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                         | FRGU06 | New roads and landings should be located out of RCAs wherever possible. When new roads or landings must be located in RCAs, they should be developed such that degrading effects to RCAs are mitigated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                         | FRGU07 | Annually prioritize roads to receive maintenance, repairs, or improvements to protect the investment, maintain the intended serviceability, and protect other resources. Road maintenance activities should be prioritized using factors such as user safety, resource protection needs, administrative needs, user comfort, the identified traffic service level, and available funding.                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                         | FRGU08 | Classified roads in intermittent use status should be evaluated for physical closure during periods of non-use and closed as appropriate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                         | FRGU09 | Travel management should be used, as needed, to accomplish the following: <ul style="list-style-type: none"> <li>a) Provide for the safety and welfare of the users.</li> <li>b) Protect threatened and endangered species and their habitat.</li> <li>c) Protect Forest resources, such as wildlife, soil, vegetation, and water.</li> <li>d) Provide a diversity of recreational experiences and reduce user conflicts.</li> <li>e) Protect road and trail investments.</li> <li>f) Comply with Forest contracts or permits, cooperative agreements, road purchase agreements, easement deeds, or other formal documents of the Government requiring that road use be controlled.</li> <li>g) Coordinate hunting and fishing opportunities with State agencies.</li> </ul> |
|                                                                                                                                                                                                                                                                                                                                                                                                                         | FRGU10 | When considering closure or decommissioning of roads for which an RS2477 assertion has been made by either a State or a County government, the merits of the assertion should be evaluated prior to taking any actions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                         | FRGU11 | Where opportunities to mitigate facilities and road management practices causing degradation have been identified, consider mitigating through measures such as relocation, closure, and changes in management strategy, alteration, or discontinuance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                         | FRGU12 | Historic qualities should be considered when reviewing proposed modifications to, or decommissioning of, fire lookouts and other administrative use structures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                         | FRGU13 | Architectural designs should follow principles and concepts outlined in the Built Environment Image Guide (BEIG).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| See also Guidelines for TEPC Species (13, 14); SWRA Resources (03, 05, 06, 07, 08, 09, 11, 12); Wildlife Resources (04, 05, 06, 08, 11, 12, 13); Botanical Resources (01, 02, 03); Non-native Plants (02, 03, 05); Mineral and Geology Resources (05, 06); Lands and Special Uses (03, 04, 05); Recreation Resources (05, 09, 10, 11, 13, 19, 20, 21); and Scenic Environment (07, 08, 09, 10, 11, 12, 13, 14, 15, 16). |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Recreation Resources

*Forest Service Manual and Handbook direction for managing recreation resources is in Forest Service Manuals: 2300 - Recreation, Wilderness, and Related Resource Management, 2710 – Special Use Authorizations, and 2720 - Special Uses Administration; and in Forest Service Handbooks 2309.18 - Trails Management Handbook, and 2709.11 - Special Uses Handbook. Direction can also be found in the Region 1 - Region 4 Handbook 2509.22 - Soil and Water Conservation Practices Handbook.*

### DESIRED CONDITION

People visiting the National Forest find opportunities for a wide spectrum of recreation experiences. Various methods are used to manage recreation uses and facilities to mitigate degrading effects from recreation to other resources. Diverse landscapes offer a variety of settings for a wide range of activities, including primitive settings where there are opportunities for solitude, risk, and challenge, to more modified settings where there are opportunities for social interaction, comfort, and less risk.

Recreation facilities are managed to provide safe experiences and opportunities. Recreation programs and facilities meet all applicable local, state, and national standards for health and safety. Opportunities for physically challenged recreationists are maintained or expanded at developed facilities and through management of dispersed activities.

Dispersed recreation sites and uses are located and conducted in an environmentally responsible manner and managed to established standards.

Conflicts between recreationists are reduced or addressed, while a broad array of recreation opportunities are available. Collaboration among users results in decisions that reduce conflicts between recreational needs and environmental needs. Local communities, partners, and volunteers are involved and benefit from their roles in providing recreational opportunities.

A variety of environmentally responsible access is provided for recreation users.

Interpretive exhibits, displays, and programs provide learning opportunities that enhance Forest visitor's experiences. Interpretive and educational efforts increase visitor awareness of the environmental effects of recreation use, and result in reduced degradation to other resources.

Authorized commercial developments and services meet established national standards and broaden the range of recreation opportunities and experiences provided on National Forest System lands.

| Management Direction for Recreation Resources |                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                          | Number                                                                                                                                                                                                                                                              | Direction Description                                                                                                                                                                                                                                                                                                                                   |
| Goals                                         | <b>General Recreation</b>                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                         |
|                                               | REGO01                                                                                                                                                                                                                                                              | Manage, operate, and maintain a year-round recreation program that offers a broad range of developed and dispersed recreation opportunities and experiences in a range of settings as reflected by the Recreation Opportunity Spectrum (see Appendix F for descriptions of ROS classes).                                                                |
|                                               | REGO02                                                                                                                                                                                                                                                              | Plan and manage the recreation program and recreation resources to meet established standards (e.g., Meaningful Measures) to provide for health and cleanliness, safety and security, facility conditions, responsiveness to customers, environmental setting, and permit administration.                                                               |
|                                               | REGO03                                                                                                                                                                                                                                                              | Address current and emerging recreation conflicts, while maintaining recreation opportunities when possible.                                                                                                                                                                                                                                            |
|                                               | REGO04                                                                                                                                                                                                                                                              | Manage recreation uses and facilities to mitigate degrading effects from recreation to other resources.                                                                                                                                                                                                                                                 |
|                                               | <b>Recreation Access</b>                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                         |
|                                               | REGO05                                                                                                                                                                                                                                                              | Manage motorized and non-motorized travel and travel-related facilities to: <ul style="list-style-type: none"> <li>a) Provide for public safety,</li> <li>b) Meet resource objectives and access needs,</li> <li>c) Mitigate road and trail damage, and</li> <li>d) Minimize maintenance costs and user conflicts.</li> </ul>                           |
|                                               | <b>Winter Recreation</b>                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                         |
|                                               | REGO06                                                                                                                                                                                                                                                              | Provide an array of winter recreation experiences, while mitigating conflicts between motorized and non-motorized use and wintering wildlife.                                                                                                                                                                                                           |
|                                               | <b>Recreation Special Uses</b>                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                         |
|                                               | REGO07                                                                                                                                                                                                                                                              | Ensure that recreation operations, under or being considered for special use authorizations, provide opportunities, facilities, and services that respond to a demonstrated public need while mitigating conflicts with other uses and resources, where possible.                                                                                       |
|                                               | <i>See also Goals for SWRA Resources (11); Wildlife Resources (02); Botanical Resources (06); Non-native Plants (01); Rangeland Resources (06); Lands and Special Uses (04, 05); Facilities and Roads (02); Heritage Program (03); and Scenic Environment (01).</i> |                                                                                                                                                                                                                                                                                                                                                         |
| Objectives                                    | <b>General Recreation</b>                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                         |
|                                               | REOB01                                                                                                                                                                                                                                                              | During fine-scale analyses in areas where recreation facilities are identified as a potential concern or problem contributing to degradation of water quality, aquatic species or occupied sensitive or Watch plant habitat, evaluate and document the location of the facilities causing degradation and prioritize opportunities to mitigate effects. |
|                                               | REOB02                                                                                                                                                                                                                                                              | Utilize the Recreation Opportunity Spectrum (ROS) to evaluate and tailor proposed projects and activities in order to maintain desired recreation opportunities and the quality of recreation experiences                                                                                                                                               |
|                                               | REOB03                                                                                                                                                                                                                                                              | Update existing ROS inventories as part of project-level planning and implementation if project activities cause a change in recreation setting conditions significant enough to reclassify the affected area.                                                                                                                                          |
|                                               | REOB04                                                                                                                                                                                                                                                              | Maintain the necessary data to determine the individual and/or cumulative changes in ROS classes relative to the management area ROS strategy.                                                                                                                                                                                                          |
|                                               | REOB05                                                                                                                                                                                                                                                              | Develop cave management plans for all significant caves.                                                                                                                                                                                                                                                                                                |
|                                               | REOB06                                                                                                                                                                                                                                                              | Identify and develop motorized use opportunities in locations appropriate for motorized uses through road to trail conversion, development of new trails, and other methods.                                                                                                                                                                            |
|                                               | REOB07                                                                                                                                                                                                                                                              | Continue efforts to inventory, survey, and map dispersed recreation sites to provide resource data for dispersed site management.                                                                                                                                                                                                                       |

| Management Direction for Recreation Resources |                             |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                          | Number                      | Direction Description                                                                                                                                                                                                                                                                                                                                                                                           |
| Objectives                                    | REOB08                      | Inform the public in a timely manner about management actions affecting their recreation opportunities at appropriate locations, including roads, trails, and at developed sites.                                                                                                                                                                                                                               |
|                                               | REOB09                      | In cooperation with affected state, tribal, and local governments, holders of water rights, and other interested parties, maintain and acquire, under the appropriate state and federal laws and Forest Service policy, water rights for the administration of recreational activities and developments, including special use authorizations.                                                                  |
|                                               | REOB10                      | Use education and interpretation opportunities to foster dispersed camping that is at least 100 feet from trails, lakes, streams, or other occupied campsites, as terrain permits.                                                                                                                                                                                                                              |
|                                               | REOB11                      | Monitor recreation resource conditions, visitor use levels, types of uses, and visitor expectations to guide recreation management actions.                                                                                                                                                                                                                                                                     |
|                                               | REOB12                      | Collaborate with other government agencies, recreation partners, volunteer organizations, and the recreation and tourism industry in recreation planning and delivery efforts to: <ul style="list-style-type: none"> <li>a) Provide support to local economies,</li> <li>b) Promote management efficiency, and</li> <li>c) Improve recreation opportunities and experiences available to the public.</li> </ul> |
|                                               | REOB13                      | Annually update recreation databases for developed sites, dispersed areas, and trails.                                                                                                                                                                                                                                                                                                                          |
|                                               | <b>Developed Recreation</b> |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                               | REOB14                      | Continue to improve accessibility on the Forest in compliance with all federal laws and agency guidelines.                                                                                                                                                                                                                                                                                                      |
|                                               | REOB15                      | Identify developed recreation sites with priority vegetation management needs, and develop comprehensive vegetation management plans to address those needs.                                                                                                                                                                                                                                                    |
|                                               | REOB16                      | Foster and strengthen partnerships between public and private sectors to effectively and efficiently manage recreation and tourism facilities.                                                                                                                                                                                                                                                                  |
|                                               | REOB17                      | Develop ADA transition plans for developed recreation sites and begin implementation of those plans to enhance recreation opportunities and experiences.                                                                                                                                                                                                                                                        |
|                                               | <b>Recreation Access</b>    |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                               | REOB18                      | Initiate a process of phased, site-specific travel management planning as soon as practicable. Prioritize planning based on areas where the most significant user conflicts and resource concerns are occurring. Identify and address inconsistent access management of roads, trails, and areas across Forest, Ranger District, and interagency boundaries.                                                    |
|                                               | REOB19                      | Manage cross-country travel to mitigate recreationist and big game conflicts on winter/spring ranges.                                                                                                                                                                                                                                                                                                           |
|                                               | REOB20                      | Mitigate degradation to Forest System trails from other resource management activities, including fire suppression, and special use activities                                                                                                                                                                                                                                                                  |
|                                               | REOB21                      | During fine-scale analyses in areas where recreational trails are identified as a potential concern or problem contributing to degradation to other resources, evaluate and document the location of the trail degradation and prioritize opportunities to mitigate effects.                                                                                                                                    |
|                                               | REOB22                      | During project planning and implementation, develop measures to mitigate degrading effects from National Forest System and non-National Forest System trails.                                                                                                                                                                                                                                                   |
|                                               | <b>Winter Recreation</b>    |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                               | REOB23                      | Provide networks of marked and designated snow machine, cross-country ski, and other winter travel routes and trailhead facilities, while meeting other resource goals and objectives.                                                                                                                                                                                                                          |
|                                               | REOB24                      | Provide winter recreation user information to educate users of wildlife needs and promote backcountry safety.                                                                                                                                                                                                                                                                                                   |
|                                               | REOB25                      | Provide opportunities for backcountry winter recreation in areas without wintering wildlife conflicts.                                                                                                                                                                                                                                                                                                          |
|                                               | REOB26                      | Support winter trail management through cooperative agreements with other agencies and groups.                                                                                                                                                                                                                                                                                                                  |

| Management Direction for Recreation Resources |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                          | Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Objectives                                    | REOB27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Conduct avalanche awareness classes and issue snow pack advisories, within budgetary and other constraints, with sufficient frequency to provide the public and employees with information about backcountry conditions.                                                                                                                                                                                                                                                                                        |
|                                               | <b>Special Uses</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                               | REOB28                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | When identifying the need for outfitter and guide services, and issuing and administering outfitter and guide permits, coordinate with the Idaho Outfitters and Guide Licensing Board.                                                                                                                                                                                                                                                                                                                          |
|                                               | <i>See also Objectives for TEPC Species (27, 28, 29, 30, 31, 32); SWRA Resources (03, 12, 13); Wildlife Resources (11); Non-native Plants (05, 06); Facilities and Roads (06); Heritage Program (14, 17); and Tribal Rights (03).</i>                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Standards                                     | <b>General Recreation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                               | REST01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Where Primitive, Semi-Primitive Non-Motorized, and Semi-Primitive Motorized ROS classes occur within designated wilderness areas, follow the wilderness management direction contained in the appropriate wilderness management plans.                                                                                                                                                                                                                                                                          |
|                                               | <b>Developed Recreation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                               | REST02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | When new recreation facilities and trails must be located in RCAs, they shall be developed such that degrading effects to RCAs are mitigated. Where reasonable and practical location alternatives exist, new recreation facilities and trails should be located outside of RCAs.                                                                                                                                                                                                                               |
|                                               | <b>Recreation Access</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                               | REST03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Access will be managed in accordance with the existing travel management maps and amendments, or as authorized by permit, contract, or special-use authorization.                                                                                                                                                                                                                                                                                                                                               |
|                                               | REST04                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | On all lands outside of designated travel ways, motorized use shall be prohibited unless otherwise authorized.                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                               | REST05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | In emergency situations, road, trail, and area access restrictions for up to one year may be implemented without public participation if needed to protect resources and/or to provide for public safety.                                                                                                                                                                                                                                                                                                       |
|                                               | <b>Recreation Special Uses</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                               | REST06                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | When a State or Federal license or permit is required for a recreation special use activity or operation on the Forest, that license or permit shall be a prerequisite to issuance of any special-use authorization.                                                                                                                                                                                                                                                                                            |
| Guidelines                                    | <i>See also Standards for TEPC Species (06, 11, 33, 34); SWRA Resources (01, 02, 03, 04, 06, 07, 08, 10, 11, 12); Wildlife Resources (02, 03, 04, 05, 06); Vegetation (02); Botanical Resources (01, 04); Non-native Plants (01, 03, 04, 06, 10); Timberland Resources (06); Mineral and Geology Resources (01, 02); Special Uses (06); Scenic Environment (01); Heritage Program (01); Tribal Rights and Interests (01, 05, 06); Wilderness, Recommended Wilderness, and IRAs (01); and Wild and Scenic Rivers (01).</i> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                               | <b>General Recreation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                               | REGU01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Recreation strategies and developments should be coordinated with State and local recreation resource planning efforts.                                                                                                                                                                                                                                                                                                                                                                                         |
|                                               | REGU02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Seasonal camping stay and group size limits should be established where needed to meet management goals.                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                               | REGU03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Where the recreation demand exceeds resource capabilities or significantly changes the recreation experience available to users, alternative management strategies should be evaluated and management should be adjusted as appropriate.                                                                                                                                                                                                                                                                        |
|                                               | REGU04                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Local Forest Service resource managers should facilitate and encourage involved user groups to resolve use conflicts among themselves. When the involved user groups accomplish resolution, the Forest Service should strongly consider recommendations and implement within the laws, regulations and policies that govern management of the National Forests. When the involved user groups do not accomplish resolution, the Forest Service should work to resolve the conflict based on the agency mission. |

| Management Direction for Recreation Resources |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                          | Number                      | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Guidelines                                    | REGU05                      | Management activities and facility development in Scenic Byway corridors with management plans should be sensitive to the goals contained within the corridor management plans.                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                               | REGU06                      | When proposed management actions may affect dispersed recreation sites, those potential effects should be evaluated during project-scale analysis.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                               | REGU07                      | Where recreation facilities or practices have been identified as potentially contributing to degradation of water quality, aquatic species or occupied sensitive and watch plant habitat, facilities and practices causing degradation should be considered for relocation, closure, changes in management strategy, alteration, or discontinuance.                                                                                                                                                                                                                                                           |
|                                               | REGU08                      | Cave management plans should be developed using an interdisciplinary approach and should consider all cave resources, including biological, hydrological, geological and cultural resources.                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                               | REGU09                      | All projects and activities should maintain or enhance the adopted ROS classes as displayed on the Forest ROS strategy maps.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                               | REGU10                      | Motorized transport is generally not consistent within Primitive and Semi-primitive Non-motorized areas. However, exceptions may include: <ul style="list-style-type: none"> <li>a) Search and rescue evacuation;</li> <li>b) Medical treatment of individuals;</li> <li>c) Wildland fire suppression;</li> <li>d) Prescribed fire activities;</li> <li>e) Law enforcement activities;</li> <li>f) Wildlife transplant or relocation activities;</li> <li>g) Trail construction and maintenance; and</li> <li>h) Watershed restoration and/or repair of other resource damage from natural events.</li> </ul> |
|                                               | REGU11                      | New road construction should not occur within the summer Primitive and Semi-Primitive Non-Motorized areas.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                               | REGU12                      | During the winter season, motorized use may be allowed to set cross-country skiing tracks or skating lanes within the Semi-Primitive Non-Motorized areas.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                               | REGU13                      | Facilities identified as necessary should blend with the surrounding landscape character and the ROS setting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                               | REGU14                      | Information and interpretive services or displays should be consistent with the ROS class.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                               | REGU15                      | Special-use permits may be issued for activities and facilities compatible with the ROS class.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                               | REGU16                      | ROS descriptions in Appendix F should be used to help guide facility development and recreation activity management within each ROS class.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                               | <b>Developed Recreation</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                               | REGU17                      | During planning for new sites, or the reconstruction of existing sites, developed recreation sites should be designed to channel foot traffic towards common use areas in order to preserve ground cover and “green islands” of vegetation within the site.                                                                                                                                                                                                                                                                                                                                                   |
|                                               | REGU18                      | Commercial livestock grazing should be avoided in developed recreation sites. Fence developed recreation sites within range allotments if necessary.                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                               | REGU19                      | Decisions to develop recreation facilities should be based on evidence and evaluation of any of the following: <ul style="list-style-type: none"> <li>a) Increased public need;</li> <li>b) Operating efficiency;</li> <li>c) The need to reduce concentration on, or conflicts at, existing sites; or</li> <li>d) The need to reduce resource degradation from recreation use and existing developments.</li> </ul>                                                                                                                                                                                          |
|                                               | REGU20                      | In developed recreation facilities, waste disposal methods should be bear-resistant.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Management Direction for Recreation Resources |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                          | Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Direction Description                                                                                                                                                                                                                                                                                                                   |
| Guidelines                                    | <b>Recreation Access</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                         |
|                                               | REGU21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Trailhead facilities should be provided and managed commensurate with the appropriate level of use, resource effect, and local priority. These facilities may be public or private, depending on their location.                                                                                                                        |
|                                               | REGU22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Funding priorities for trail maintenance should be based on: <ul style="list-style-type: none"> <li>a) The five maintenance levels and traffic classes of trail use,</li> <li>b) Resource degradation, and/or</li> <li>c) Type and degree of use.</li> </ul>                                                                            |
|                                               | REGU23                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Damage to or loss of Forest System trails from timber harvest, livestock grazing, road construction, mining, special uses, and prescribed fire activities should be repaired or mitigated by the appropriate party.                                                                                                                     |
|                                               | REGU24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | The Trail Roads Analysis Process or other appropriate method should be used to identify opportunities for road to trail conversions and trail decommissioning.                                                                                                                                                                          |
|                                               | REGU25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | State motorized grant fund investments should be consistent with Management Area ROS objectives.                                                                                                                                                                                                                                        |
|                                               | REGU26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Protection measures for National Forest System trails should be included in all timber sale contracts, annual operating plans for grazing, mining, and special use authorizations, and prescribed fire implementation documents.                                                                                                        |
|                                               | <b>Winter Recreation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                         |
|                                               | REGU27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Winter recreation opportunities should be managed to provide for user safety and to minimize user conflicts. Winter recreation management should recognize that some activities are not compatible in the same locations and should be separated when needed to maintain user safety and quality recreation experiences.                |
|                                               | REGU28                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | When resolving conflicts between winter recreation user groups, appropriate consideration and protection should be given to capital investments such as groomed and/or designated trails.                                                                                                                                               |
|                                               | <b>Recreation Special Uses</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                         |
|                                               | REGU29                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Special-use authorizations for public recreation uses should have operation plans. These plans should address adequate public service, health and safety, and resource protection.                                                                                                                                                      |
|                                               | REGU30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | When proposed services are compatible with the existing public recreation activities and when the proposed use will not degrade Forest resources, outfitter and guide special use permits may be issued. Public need should take precedence over permittee desires in any facility constructed wholly or partially with public dollars. |
|                                               | REGU31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Permitted outfitter and guide operations should blend with the adopted ROS setting and/or the wilderness plan for the area in which the operation's service is to be performed.                                                                                                                                                         |
|                                               | REGU32                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | The needs of both outfitted and non-outfitted users should be considered when setting use limits and/or restrictions.                                                                                                                                                                                                                   |
|                                               | REGU33                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Outfitter and guide bases of operations should be located on private lands, or, if necessary, located in conjunction with other permitted operations.                                                                                                                                                                                   |
|                                               | REGU34                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Historic qualities should be considered when reviewing proposed modifications of recreation residences, resorts, and other private structures under special use authorizations.                                                                                                                                                         |
|                                               | See also <i>Guidelines for TEPC Species (02)</i> ; <i>SWRA Resources (03, 05, 07, 08, 09, 10, 11, 12)</i> ; <i>Wildlife Resources (05, 06, 08, 11, 12, 13)</i> ; <i>Vegetation (01)</i> ; <i>Botanical Resources (01, 02, 03)</i> ; <i>Non-native Plants (03, 05)</i> ; <i>Fire Management (05)</i> ; <i>Rangeland Resources (10)</i> ; <i>Mineral and Geology Resources (05)</i> ; <i>Lands and Special Uses (01, 07, 08)</i> ; <i>Facilities and Roads (03, 09)</i> ; <i>Wilderness, Recommended Wilderness, and Inventoried Roadless Areas (04, 05)</i> ; and <i>Research Natural Areas (02)</i> . |                                                                                                                                                                                                                                                                                                                                         |

## Scenic Environment

Forest Service Manual direction for managing the scenic environment is in FSM 2380 - Landscape Management. Direction can also be found in Agriculture Handbook Number 462.

### DESIRED CONDITION

The Forest provides a range of diverse landscapes. The scenic environment within the Forest ranges from landscapes displaying little or no evidence of management activities, to landscapes that have dominant visible evidence of management activities. Scenic quality is maintained or enhanced in areas of high scenic value and other highly used recreation areas.

| Management Direction for Scenic Environment |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |    |                |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------------|--|---------------------------|--|----------------|--|---|--------------|----|------------|---|-----------|----|--------------|----|-------------------|----|------------|---|--------------|--|--|----|----------------------|
| Type                                        | Number                                                                                                                                                                                                                                                                                          | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                      |    |                |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
| Goals                                       | SCGO01                                                                                                                                                                                                                                                                                          | Manage the Forest’s scenic resources to maintain the recreation and visual resource values, while meeting other resource needs.                                                                                                                                                                                                                                                                                                                            |    |                |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
| Objectives                                  | SCOB01                                                                                                                                                                                                                                                                                          | Implement the Scenery Management System either through the Continuous Assessment and Planning process or as part of the next Forest Plan revision. Use the Visual Management System until the Scenery Management System can be implemented.                                                                                                                                                                                                                |    |                |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
|                                             | SCOB02                                                                                                                                                                                                                                                                                          | To facilitate the development of scenery management objectives, develop landscape character definitions, identify sense of place values, and inventory human-altered landscapes during landscape-scale assessments.                                                                                                                                                                                                                                        |    |                |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
| Standards                                   | SCST01                                                                                                                                                                                                                                                                                          | All projects shall be designed to meet the adopted Visual Quality Objectives (VQOs) as displayed on the Forest VQO map.                                                                                                                                                                                                                                                                                                                                    |    |                |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
|                                             | SCST02                                                                                                                                                                                                                                                                                          | Allow for short-term reductions in VQOs to accommodate Burned Area Emergency Rehabilitation (BAER) projects, emergency needs for protection of investments, and public safety needs. When reducing VQOs, attempt to meet the next -highest objective at the closest viewer distance or most relevant distance given the probable sensitive viewer.                                                                                                         |    |                |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
|                                             | See also Standards for Timberland Resources (02, 03) and Wild and Scenic Rivers (02).                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |    |                |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
| Guidelines                                  | SCGU01                                                                                                                                                                                                                                                                                          | Definitions of VQOs are those used in the Visual Management System, Agricultural Handbook Number 462. VQO abbreviations are given in the table, below. See glossary definitions for more explanation of VQOs and distance zones used below.                                                                                                                                                                                                                |    |                |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
|                                             |                                                                                                                                                                                                                                                                                                 | <table><tr><th colspan="2">Visual Quality Objectives</th><th colspan="2">Distance Zones</th></tr><tr><td>P</td><td>Preservation</td><td>fg</td><td>Foreground</td></tr><tr><td>R</td><td>Retention</td><td>mg</td><td>Middleground</td></tr><tr><td>PR</td><td>Partial Retention</td><td>bg</td><td>Background</td></tr><tr><td>M</td><td>Modification</td><td colspan="2" rowspan="2"></td></tr><tr><td>MM</td><td>Maximum Modification</td></tr></table> |    |                |  | Visual Quality Objectives |  | Distance Zones |  | P | Preservation | fg | Foreground | R | Retention | mg | Middleground | PR | Partial Retention | bg | Background | M | Modification |  |  | MM | Maximum Modification |
|                                             |                                                                                                                                                                                                                                                                                                 | Visual Quality Objectives                                                                                                                                                                                                                                                                                                                                                                                                                                  |    | Distance Zones |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
| P                                           |                                                                                                                                                                                                                                                                                                 | Preservation                                                                                                                                                                                                                                                                                                                                                                                                                                               | fg | Foreground     |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
| R                                           |                                                                                                                                                                                                                                                                                                 | Retention                                                                                                                                                                                                                                                                                                                                                                                                                                                  | mg | Middleground   |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
| PR                                          |                                                                                                                                                                                                                                                                                                 | Partial Retention                                                                                                                                                                                                                                                                                                                                                                                                                                          | bg | Background     |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
| M                                           | Modification                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |    |                |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
| MM                                          | Maximum Modification                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |    |                |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
| SCGU02                                      | Duration of visual impacts from ground disturbing and vegetation removal activities to allow for herbaceous vegetative recovery of ground cover may extend to three years in fgR, fgPR, mgR, and mgPR. Consider timely initiation of reseeding in areas where natural recovery is questionable. |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |    |                |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
| Timber Harvest Activities                   |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |    |                |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |
| SCGU03                                      | To meet fgR, visibility of stumps should be mitigated. There should be a general lack of visible ground disturbance.                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |    |                |  |                           |  |                |  |   |              |    |            |   |           |    |              |    |                   |    |            |   |              |  |  |    |                      |



| Management Direction for Scenic Environment |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                        | Number                      | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Guidelines                                  | SCGU04                      | Slash and harvest residues remaining after project completion should appear to be naturally occurring downed material in fgR and mostly naturally occurring downed material in fgPR. Techniques to mitigate visibility of slash include lopping to low heights, burning, physically removing material excess to other resource needs, and dispersing concentrations.                                                                    |
|                                             | SCGU05                      | Most timber changes in mgR should be textural, with some small, simulated natural openings where openings already occur, or a limited number of small natural-appearing openings that are developed normally over two or more harvest entries.                                                                                                                                                                                          |
|                                             | SCGU06                      | Ridgeline silhouettes in mgR, mgPR, and bgR should not have unnatural-appearing breaks along them.                                                                                                                                                                                                                                                                                                                                      |
|                                             | <b>Facility Development</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             | SCGU07                      | In fgR, roads should only be visible for a short distance from the sensitive travel way or use area. Other visible temporary excavation could occur providing the area is graded and natural-appearing contours are re-established within the same year and revegetation is initiated.                                                                                                                                                  |
|                                             | SCGU08                      | There should be minimal distraction from scenic quality in fgPR and mgR from road construction, reconstruction, and other excavation management.                                                                                                                                                                                                                                                                                        |
|                                             | SCGU09                      | Roads and other excavation may be visible in mgPR and bgPR, but should blend into the characteristic landscape of the surroundings.                                                                                                                                                                                                                                                                                                     |
|                                             | SCGU10                      | Roads and other excavation within the visual zone may dominate fgM and mgM landscapes, but their visual characteristics should be compatible with the natural surroundings.                                                                                                                                                                                                                                                             |
|                                             | SCGU11                      | Roads and other excavation may dominate MM views. When viewed as background, the visual characteristics should be those of natural occurrences within the surrounding area. Efforts should be made to reduce sharp contrasts at any distance.                                                                                                                                                                                           |
|                                             | SCGU12                      | When a structure or facility is created for public use, the design materials, color, and location should blend with the characteristic landscape so that visitors can enjoy the function and appearance.                                                                                                                                                                                                                                |
|                                             | SCGU13                      | When a structure or facility is created for other than public use, the materials, color, and location should be chosen to reduce visual contrast of the structure.                                                                                                                                                                                                                                                                      |
|                                             | SCGU14                      | The use of natural or neutral colors and non-reflective surfaces should be considered for structures. An exception to this would be when the function of the structure is to be seen.                                                                                                                                                                                                                                                   |
|                                             | SCGU15                      | Natural or neutral colors should be used in to help structures blend with the landscape.                                                                                                                                                                                                                                                                                                                                                |
|                                             | SCGU16                      | If the designated VQO cannot be met with overhead lines, electrical power lines of 33 KV or less should be placed underground, unless geologic structures prevent such installation.                                                                                                                                                                                                                                                    |
|                                             | <b>Fire Use</b>             |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                             | SCGU17                      | Wildland fire use and prescribed fire that emulates natural-appearing landscape character and utilizes natural fire/fuel breaks may be considered consistent with a VQO of Preservation. In some cases of wildland fire use, constructed fuel breaks may be consistent with a VQO of Preservation when they are low impact and do not negatively affect wilderness values. Such situations should be evaluated on a case-by-case basis. |

## Heritage Program

*Forest Service Manual management direction for the Heritage Program and cultural resources is in FSM 2360. Direction can also be found in the National Heritage Strategy.*

### DESIRED CONDITION

People visiting the National Forest can find opportunities to explore, enjoy, and learn about cultural heritage. As visitors travel through landscapes and experience diverse environments and cultures, they can make a personal connection with the land and people and have the opportunity to reflect on the relevance of the past and the land to their daily lives. Sites identified as significant, under the National Historic Preservation Act (NHPA), are inventoried, protected, and, if warranted, nominated to the National Register of Historic Places.

| Management Direction for the Heritage Program |                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                          | Number                                                   | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Goals                                         | HPGO01                                                   | Identify and manage cultural resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                               | HPGO02                                                   | Implement the National Heritage Strategy.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                               | HPGO03                                                   | Integrate the Heritage Program into land and resource management.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                               | <i>See also Goal 01 for Tribal Rights and Interests.</i> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Objectives                                    | <b>General</b>                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                               | HPOB01                                                   | Develop a comprehensive Cultural Resources Management Plan. Include in the Plan, as a minimum, the allocation of cultural resources for public education, research, and stewardship purposes.                                                                                                                                                                                                                                                                                                                                                              |
|                                               | HPOB02                                                   | Update and maintain a Cultural Resources Overview for the Forest. Include in the Cultural Resources Overview, as a minimum, the following topics: <ul style="list-style-type: none"> <li>a) The kinds of sites already known and their relative abundance on the Forest;</li> <li>b) Major prehistoric uses;</li> <li>c) Major ethnographic uses;</li> <li>d) Major historic themes; and</li> <li>e) The gaps in our knowledge about the prehistory and history of the Forest.</li> </ul> Maintain associated databases, atlases, and files on the Forest. |
|                                               | HPOB03                                                   | Develop and implement quality standards (e.g., Meaningful Measures) to guide management and measure Heritage Program success in achieving stewardship and public service objectives.                                                                                                                                                                                                                                                                                                                                                                       |
|                                               | HPOB04                                                   | Develop a pro-active program of cultural resource management consistent with federal guidelines for the implementation of Sections 106 and 110 of the NHPA.                                                                                                                                                                                                                                                                                                                                                                                                |
|                                               | <b>Stewardship</b>                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                               | HPOB05                                                   | Maintain an ongoing inventory to locate and identify historic properties on National Forest System lands.                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                               | HPOB06                                                   | Develop a predictive model to guide the design and completion of cultural resource inventories. Review inventory results annually to validate or refine the predictive model.                                                                                                                                                                                                                                                                                                                                                                              |
|                                               | HPOB07                                                   | Evaluate cultural resources to determine their eligibility as historic properties for listing on the National Register of Historic Places.                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                               | HPOB08                                                   | Nominate historic properties for listing on the National Register of Historic Places when necessary for management purposes. Prepare management plans for each listed property.                                                                                                                                                                                                                                                                                                                                                                            |

| Management Direction for the Heritage Program |                                                                                                                |                                                                                                                                                                                                                                       |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                          | Number                                                                                                         | Direction Description                                                                                                                                                                                                                 |
| Objectives                                    | HPOB09                                                                                                         | Protect historic properties through stabilization and monitoring efforts. Monitor historic properties that may be adversely affected by management activities.                                                                        |
|                                               | HPOB10                                                                                                         | Curate artifacts and records, and make them available for study by qualified researchers.                                                                                                                                             |
|                                               | HPOB11                                                                                                         | Prioritize and protect the most significant historic properties. Maintain a catalogue of priority heritage assets and endangered sites.                                                                                               |
|                                               | HPOB12                                                                                                         | Maintain site and project records in a format consistent with corporate databases.                                                                                                                                                    |
|                                               | HPOB13                                                                                                         | Increase public awareness, involvement, and appreciation of outstanding heritage accomplishments through the expansion of stewardship programs.                                                                                       |
|                                               | <b>Public Service</b>                                                                                          |                                                                                                                                                                                                                                       |
|                                               | HPOB14                                                                                                         | Involve interested parties during the initial stages of project planning about undertakings that may affect historic properties.                                                                                                      |
|                                               | HPOB15                                                                                                         | Expand heritage experiences and opportunities, including interpretive services, heritage tourism, environmental education, and volunteer programs such as Passport in Time to provide positive heritage experiences.                  |
|                                               | HPOB16                                                                                                         | Expand partnerships with individuals, local communities, and academic and private sector institutions to protect cultural resources and involve and educate the public.                                                               |
|                                               | <b>Context For Natural Resource Management</b>                                                                 |                                                                                                                                                                                                                                       |
|                                               | HPOB17                                                                                                         | Strengthen internal linkages with recreation, interpretive services, demonstration projects, environmental education, and others to assure integrated efforts and quality products.                                                   |
|                                               | HPOB18                                                                                                         | Include information that provides a context for understanding the role of human beings in past and present ecosystems in project/site scale analyses.                                                                                 |
|                                               | <i>See also Objectives for Botanical Resources (05, 06) and Tribal Rights and Interests (04).</i>              |                                                                                                                                                                                                                                       |
| Standards                                     | HPST01                                                                                                         | Review undertakings that may affect cultural resources to identify potential impacts. Compliance with Sections 106 and 110 of the NHPA shall be completed before the responsible agency official signs the project decision document. |
|                                               | HPST02                                                                                                         | Conduct cultural resource inventories in consultation with the appropriate Tribal and State Historic Preservation Offices and other individuals and organizations likely to have knowledge of historic properties in the area.        |
|                                               | HPST03                                                                                                         | Treat unevaluated cultural resource sites as significant until evaluated for National Register of Historic Places eligibility.                                                                                                        |
|                                               | <i>See also Standard 06 for Tribal Rights and Interests.</i>                                                   |                                                                                                                                                                                                                                       |
| Guidelines                                    | HPGU01                                                                                                         | Accurate and up-to-date site and survey information should be incorporated into appropriate databases.                                                                                                                                |
|                                               | HPGU02                                                                                                         | A management plan should be developed for each historic property nominated to the National Register of Historic Places. The plan should be drafted during the nomination process.                                                     |
|                                               | HPGU03                                                                                                         | The National Heritage Strategy should be used to guide decisions on issues related to the Heritage Program.                                                                                                                           |
|                                               | <i>See also Guidelines for Fire Management (05), Facilities and Roads (12), and Recreation Resources (34).</i> |                                                                                                                                                                                                                                       |

## Tribal Rights and Interests

*Forest Service Manual management direction for tribal rights and interests is in FSM 1563 – Tribal Governments. Additional direction related to government-to-government relationships can be found in FS-600, Forest Service National Resource Book on American Indian and Alaska Native Relations. Direction for Special Designation Areas, such as Cultural Special Interest Areas, is in FSM 2360 – Special Interest Areas.*

### DESIRED CONDITION

Tribes continue to have interest and reliance on ecosystems even as their cultures change, employing both traditional and contemporary ways of relating to their homelands and interest areas (lands where they traditionally ranged to sustain their way of life). Lands within the Forest help sustain American Indians' way of life, cultural integrity, social cohesion, and economic well-being.

Federal agencies take a more proactive role on the tribes' behalf, especially in areas of treaty interest, rights, traditional and cultural resources, and ecosystem integrity. Federal agencies provide opportunities for traditional American Indian land uses and resources. The presence of healthy habitats is fundamental to the achievement of both useable and harvestable levels of resources significant to American Indians, as well as to ecosystem integrity.

| Management Direction for the Tribal Rights and Interests |                                                                                                             |                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                     | Number                                                                                                      | Direction Description                                                                                                                                                                                                                                                                                                                          |
| Goals                                                    | TRGO01                                                                                                      | Enhance relationships with American Indian tribes in order to better understand and incorporate tribal cultural resources, values, needs, interests, and expectations in Forest management and allow cooperative activities where there are shared goals.                                                                                      |
|                                                          | TRGO02                                                                                                      | Facilitate the exercise of tribal rights to meet federal trust responsibilities (see Appendix H).                                                                                                                                                                                                                                              |
|                                                          | <i>See also Goals for Wildlife Resources (03), Botanical Resources (01, 03), and Heritage Program (01).</i> |                                                                                                                                                                                                                                                                                                                                                |
| Objectives                                               | TROB01                                                                                                      | Meet annually with designated tribal representatives to coordinate tribal uses of National Forest System lands as provided for through existing tribal rights with the U.S. Government                                                                                                                                                         |
|                                                          | TROB02                                                                                                      | Consider areas and resources important to American Indian tribal cultures when planning management activities or development proposals and resolve adverse effects to those sites.                                                                                                                                                             |
|                                                          | TROB03                                                                                                      | Work with designated tribal representatives during project planning to develop protection or mitigation measures for resources important to the tribes.                                                                                                                                                                                        |
|                                                          | TROB04                                                                                                      | Coordinate with tribes to identify Traditional Cultural Properties and recommend for establishment Cultural Special Interest Areas. Traditional Cultural Properties and Cultural Special Interest Areas may include areas of important cultural and spiritual use, reservoirs of cultural plants or resources, or important cultural features. |
|                                                          | TROB05                                                                                                      | Establish a consistent and acceptable approach to effective government-to-government consultation that provides for tribal participation and facilitates the integration of tribal interests and concerns into the planning process to inform decisions.                                                                                       |
|                                                          | TROB06                                                                                                      | Continue operating under, and update as needed, the Memorandum of Understanding with the Nez Perce Tribe.                                                                                                                                                                                                                                      |

| Management Direction for the Tribal Rights and Interests |        |                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                     | Number | Direction Description                                                                                                                                                                                                                                                  |
|                                                          |        | <i>See also Objectives for TEPC Species (18); SWRA Resources (05, 06, 11, 17, 20); Wildlife Resources (12); Vegetation (05); Botanical Resources (05, 06); Facilities and Roads (02, 05); and Heritage Program (02, 04, 14).</i>                                       |
| Standards                                                | TRST01 | Affected tribes shall be consulted prior to or during initial scoping of site-specific project proposals in order to identify tribal interests                                                                                                                         |
|                                                          | TRST02 | Affected tribes shall be consulted on land ownership adjustments (exchange, consolidation, or disposal) of Forest Service administered lands.                                                                                                                          |
|                                                          | TRST03 | Consult with potentially affected tribes during mid-, fine- and site/project scale analyses to coordinate recovery and restoration efforts. Where possible, assessments should be compatible with resources and places identified by other intergovernmental entities. |
|                                                          | TRST04 | During project planning, affected tribes shall be consulted regarding opportunities for restoration, enhancement, and maintenance of native plant communities that are of interest to tribes when proposed activities may affect those plant communities.              |
|                                                          | TRST05 | Decisions for environmental documents shall demonstrate how tribal interests raised during consultation or scoping were considered.                                                                                                                                    |
|                                                          | TRST06 | Management decisions affecting cultural resources important to tribes shall consider Indian values and perspectives, as mandated by Sections 106 and 110 of the NHPA.                                                                                                  |
|                                                          |        | <i>See also Standards 01 and 02 for Heritage Program.</i>                                                                                                                                                                                                              |
| Guidelines                                               | TRGU01 | Notify Tribes of land tenure adjustment opportunities within their ceded lands/territories.                                                                                                                                                                            |
|                                                          | TRGU02 | Consider opportunities for protection or enhancement of culturally significant plants that are known to occupy the project area and the Tribes have identified during project scoping or consultation.                                                                 |
|                                                          | TRGU03 | Fisheries supplementation, research, and monitoring activities designed to maintain or restore Wild and Scenic River values (ORVs) should be coordinated with potentially affected tribes.                                                                             |
|                                                          |        | <i>See also Guidelines for SWRA Resources (01, 10); Fire Management (05); Lands and Special Uses (01); and Facilities and Roads (04).</i>                                                                                                                              |

## Wilderness, Recommended Wilderness, and Inventoried Roadless Areas

*Forest Service Manual and Handbook direction for managing wilderness resources is in FSM 2320 - Wilderness Management, and FSH 2309.18 - Trails Management Handbook. More detailed direction is in the wilderness area-specific management plans.*

### DESIRED CONDITION

#### Wilderness

People visiting wilderness within the National Forest can find outstanding opportunities for primitive and unconfined recreation, including exploration, solitude, risk, and challenge. The area is primarily affected by the forces of nature, with man's imprint substantially unnoticeable.

#### Recommended Wilderness

People visiting recommended wilderness within the National Forest can find outstanding opportunities for primitive and unconfined recreation, including exploration, solitude, risk, and challenge. The area is primarily affected by the forces of nature with man's imprint substantially unnoticeable. The unique wilderness character of the area is preserved until Congress acts on the Forest Service recommendation.

#### Inventoried Roadless Areas

IRAs contribute to providing a range of uses and opportunities and do not contain classified roads. Some IRAs exhibit many values associated with undeveloped landscapes.

| Management Direction for Wilderness, Recommended Wilderness, and Inventoried Roadless Areas |                                   |                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                                                        | Number                            | Direction Description                                                                                                                                                                                                                                                   |
| Goals                                                                                       | <b>Wilderness</b>                 |                                                                                                                                                                                                                                                                         |
|                                                                                             | WRGO01                            | Protect wilderness values as defined in the 1964 Wilderness Act. Improve opportunities and experiences through the development of individual wilderness management plans, partnerships with permittees and user groups, and interpretive and educational opportunities. |
|                                                                                             | <b>Recommended Wilderness</b>     |                                                                                                                                                                                                                                                                         |
|                                                                                             | WRGO02                            | Manage recommended wilderness to protect wilderness values as defined in the Wilderness Act. Activities permitted in recommended wilderness do not compromise wilderness values nor reduce the area's potential for wilderness designation.                             |
|                                                                                             | <b>Inventoried Roadless Areas</b> |                                                                                                                                                                                                                                                                         |
|                                                                                             | WRGO03                            | Update Inventoried Roadless Area boundaries as appropriate to reflect new development or more accurate information.                                                                                                                                                     |
| <i>See also Goal 03 for Heritage Program.</i>                                               |                                   |                                                                                                                                                                                                                                                                         |

| Management Direction for Wilderness, Recommended Wilderness, and Inventoried Roadless Areas |                                                                                                                      |                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                                                                        | Number                                                                                                               | Direction Description                                                                                                                                                                                                                                                                                                                  |
| Objectives                                                                                  | <b>Wilderness</b>                                                                                                    |                                                                                                                                                                                                                                                                                                                                        |
|                                                                                             | WROB01                                                                                                               | Manage designated wilderness in accordance with the current management plan for the Frank Church - River of No Return Wilderness.                                                                                                                                                                                                      |
|                                                                                             | WROB02                                                                                                               | Manage high mountain lakes within designated wilderness to be consistent with policies for fish and wildlife management in National Forest and Bureau of Land Management wilderness (Forest Service, BLM, and IAFWA, August 1986). Jointly develop management agreements with the Idaho State Fish and Game Department for such areas. |
|                                                                                             | <b>Inventoried Roadless Areas</b>                                                                                    |                                                                                                                                                                                                                                                                                                                                        |
|                                                                                             | WROB03                                                                                                               | Evaluate any cases where classified roads exist within IRAs to determine whether the road's status or IRA boundary adjustments are appropriate, and make any needed adjustments.                                                                                                                                                       |
| Standards                                                                                   | <b>Recommended Wilderness</b>                                                                                        |                                                                                                                                                                                                                                                                                                                                        |
|                                                                                             | WRST01                                                                                                               | Changes to existing recreational settings (mapped ROS classes) are limited to only those that maintain or restore wilderness characteristics.                                                                                                                                                                                          |
|                                                                                             | <i>See also Standards for Lands and Special Uses (04) and Recreation Resources (01).</i>                             |                                                                                                                                                                                                                                                                                                                                        |
| Guidelines                                                                                  | <b>General</b>                                                                                                       |                                                                                                                                                                                                                                                                                                                                        |
|                                                                                             | WRGU01                                                                                                               | Use public education and interpretation programs to foster wilderness values, and to maintain environmental qualities and primitive recreation experiences.                                                                                                                                                                            |
|                                                                                             | <b>Wilderness</b>                                                                                                    |                                                                                                                                                                                                                                                                                                                                        |
|                                                                                             | WRGU02                                                                                                               | Interim management direction, covering the period of time prior to having an approved wilderness management plan in place, should be established once recommended wilderness areas are designated as wilderness.                                                                                                                       |
|                                                                                             | <b>Recommended Wilderness</b>                                                                                        |                                                                                                                                                                                                                                                                                                                                        |
|                                                                                             | WRGU03                                                                                                               | Non-conforming uses in recommended wilderness should not be promoted.                                                                                                                                                                                                                                                                  |
|                                                                                             | WRGU04                                                                                                               | State Off-Road Motor Vehicle capital investment funds should not be solicited or used in recommended wilderness.                                                                                                                                                                                                                       |
|                                                                                             | WRGU05                                                                                                               | Mechanical transport in recommended wilderness areas where it currently exists may be allowed to continue unless: <ul style="list-style-type: none"> <li>a) It degrades wilderness values,</li> <li>b) Resource damage occurs, or</li> <li>c) User conflicts result.</li> </ul>                                                        |
|                                                                                             | <b>Inventoried Roadless Areas</b>                                                                                    |                                                                                                                                                                                                                                                                                                                                        |
|                                                                                             | WRGU06                                                                                                               | Boundaries of IRAs should be reviewed and adjusted as appropriate during project-level planning for proposed development projects within or adjacent to such areas. Consider potential additions, as well as subtracting developments, when making reviews and adjustments.                                                            |
|                                                                                             | <i>See also Guidelines for Fire Management (05); Lands and Special Uses (01, 11); and Recreation Resources (31).</i> |                                                                                                                                                                                                                                                                                                                                        |

## Wild and Scenic Rivers

*Forest Service Handbook direction for managing eligible, suitable, and designated Wild and Scenic Rivers is in FSH 1909.12 - Land and Resource Management Planning, Chapter 8.2.*

The following direction applies to eligible, suitable, and designated river areas until a river management plan is implemented. River areas include the entire length of an eligible, suitable, or designated river and the adjacent river corridor extending 1/4 mile on either side of the high water mark. Wild and Scenic River segments are portions of the river delineated for evaluation and planning purposes.

### DESIRED CONDITION

River segments and their corridors that are eligible, suitable, or designated as Wild and Scenic Rivers are managed to retain their free-flowing status, classification, and outstandingly remarkable values for scenery, wildlife, cultural, fish, geology, hydrology, and ecological/botanical resources. Opportunities are provided so the public can understand the uniqueness of eligible, suitable, and designated Wild and Scenic Rivers. Suitable segments of Secesh River and the South Fork Salmon River are congressionally designated as Wild and Scenic Rivers.

| Management Direction for Wild and Scenic Rivers |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                            | Number | Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Goals                                           | WSGO01 | Manage river segments that are eligible or suitable for potential addition to the National Wild and Scenic Rivers System to meet the requirement of the Wild and Scenic River Act.                                                                                                                                                                                                                                                                                                                                                                                                           |
| Objectives                                      | WSOB01 | Emphasize the following in managing eligible and suitable Wild and Scenic Rivers: <ul style="list-style-type: none"> <li>a) Maintaining or enhancing the outstandingly remarkable values;</li> <li>b) Maintaining the free-flowing character;</li> <li>c) Maintaining or enhancing values compatible with the assigned classification; and</li> <li>d) Accommodating public use and enjoyment consistent with retaining the river's natural values.</li> </ul>                                                                                                                               |
| Standards                                       | WSST01 | When management actions are proposed that may compromise the outstandingly remarkable value, classification, or free-flowing character of an eligible Wild and Scenic River segment, a suitability study must be completed for that eligible river segment prior to initiating the actions.                                                                                                                                                                                                                                                                                                  |
|                                                 | WSST02 | Assign VQOs to the classifications of eligible, suitable, and designated Wild and Scenic River corridors as follows: <ul style="list-style-type: none"> <li>a) Preservation to a Wild classification,</li> <li>b) Retention to a Scenic classification,</li> <li>c) Partial Retention to a Recreational classification.</li> </ul>                                                                                                                                                                                                                                                           |
| Guidelines                                      | WSGU01 | Suitability studies for eligible segments on the Forest should be coordinated with: <ul style="list-style-type: none"> <li>a) Idaho Department of Water Resources where the State's Comprehensive Water Plans involve National Forest System lands.</li> <li>b) Bureau of Land Management for each study where eligible segments occur in both jurisdictions. The lead agency should be determined before the study begins.</li> <li>c) Other national forests where eligible segments occur in both jurisdictions. The lead Forest should be determined before the study begins.</li> </ul> |
|                                                 |        | <i>See also Guidelines for Fire Management (05); Lands and Special Uses (11); and Tribal Rights and Interests (03).</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |



## Research Natural Areas

*Detailed information concerning the values of each RNA can be found in the individual RNA establishment records. Any site-specific direction for the RNAs will be included in the development of the RNA management plans (see Objective 01, below).*

### DESIRED CONDITION

Research Natural Areas (RNAs) are areas where ecological processes generally prevail. They remain largely undisturbed by human uses or activities, and provide quality opportunities for non-manipulative scientific research, monitoring, observation, and study. The RNA network provides examples of representative forest habitats, shrublands, wetlands, riparian systems, grasslands, geologic formations, wildlife habitats, and aquatic communities. Management plans have been developed and implemented for all areas.

| Management Direction for Research Natural Areas |                                                                                      |                                                                                                                                                                                                    |
|-------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                            | Number                                                                               | Direction Description                                                                                                                                                                              |
| Goals                                           | RNGO01                                                                               | Maintain values for which the RNAs were established, as identified in the establishment records.                                                                                                   |
|                                                 | RNGO02                                                                               | Look for opportunities to establish additional RNAs in high priority areas.                                                                                                                        |
| Objectives                                      | RNOB01                                                                               | Develop and implement management plans for established RNAs.                                                                                                                                       |
|                                                 | RNOB02                                                                               | Consider recommending additional RNAs based on high priority needs as identified by, <i>The Representativeness Assessment of Research Natural Areas on National Forest System Lands in Idaho</i> . |
| Guidelines                                      | RNGU01                                                                               | Commercial livestock grazing in RNAs should be avoided unless specifically provided for in the establishment records.                                                                              |
|                                                 | RNGU02                                                                               | Potential degradation from motorized use should be considered when developing RNA Management Plans and Travel Management Planning.                                                                 |
|                                                 | <i>See also Guidelines for Fire Management (05) and Lands and Special Uses (11).</i> |                                                                                                                                                                                                    |

## Social and Economic

*Forest Service Manual and Handbook direction for social and economic resources is found in FSM 1700 - Civil Rights, FSM 1970 - Economic and Social Analysis, FSH 1709.11 - Civil Rights Handbook, and FSH 1909.17 - Economic and Social Analysis Handbook.*

### DESIRED CONDITION

Sustainable and predictable levels of goods and services are provided for local communities. Firewood, post and poles, sawlogs, forage, developed and dispersed recreation, and other goods and services are made available to the public consistent with management direction. Local economic development goals are considered along with sustainable resource outputs when developing land management objectives.

There is increased coordination among federal, state, county, and tribal governments, and a high level of collaboration with a broad range of stakeholders, where appropriate and feasible. This coordination and collaboration results in a better understanding of the tradeoffs between resource protection, commodity production, and other Forest uses.

| Management Direction for Social and Economic |                                                                                                                                                                                                     |                                                                                                                                                                                                                                          |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                         | Number                                                                                                                                                                                              | Direction Description                                                                                                                                                                                                                    |
| Goals                                        | SEGO01                                                                                                                                                                                              | Promote collaboration among federal, state, county and tribal governments in land management planning, implementation, and monitoring efforts to coordinate activities and improve the effectiveness in delivery of government services. |
|                                              | SEGO02                                                                                                                                                                                              | Promote cooperation among stakeholders by involving them in planning, implementing, and monitoring Forest land management activities to better understand the trade-offs needed to make informed decisions.                              |
|                                              | SEGO03                                                                                                                                                                                              | Develop sustainable land uses and management strategies that contribute to economic development goals.                                                                                                                                   |
|                                              | <i>See also Goals for Timberland Resources (02, 03, 04); Rangeland Resources (01); and Lands and Special Uses (02).</i>                                                                             |                                                                                                                                                                                                                                          |
| Objectives                                   | SEOB01                                                                                                                                                                                              | Provide a predictable supply of Forest goods and services within sustainable limits of the ecosystem that help meet public demand.                                                                                                       |
|                                              | SEOB02                                                                                                                                                                                              | Provide opportunities for cooperation by enhancing public involvement efforts in Forest activities through the media, stakeholder workshops, personal contacts, and other methods.                                                       |
|                                              | <i>See also Objectives for Timberland Resources (01, 02, 03); Facilities and Roads (02, 05); Heritage Program (15); and Guidelines for Facilities and Roads (10) and Recreation Resources (01).</i> |                                                                                                                                                                                                                                          |

## MANAGEMENT AREA DESCRIPTION AND DIRECTION

This introductory section is a user's guide for the Management Area descriptions and direction that follow. The Management Areas describe current resource conditions, management emphasis, goals, objectives, standards, and guidelines for the major resource programs within the area. Program areas are organized similar to Forest-wide direction, beginning with biophysical resources, and followed by socio-economic resources. In some cases, a program area may not have any additional direction at the Management Area level beyond that already provided at the Forest-wide level.

To provide more effective and efficient management, the Forest has been divided into smaller units called Management Areas that are organized around a combination of watershed and administrative boundaries. The Management Area Description and Direction section describes each of these areas in detail, highlights resource areas of importance or concern within each area, and prescribes more specific management direction to address specific concerns that were not covered in the more general Forest-wide direction. Each Management Area is divided into two separate but connected subsections: (1) Management Area Description, and (2) Management Area Direction. The intent and content of these subsections are described in detail below.

### Management Area Descriptions

The Management Area description summarizes the current conditions for important features and resources within each area. The purpose of this description is to familiarize the reader with the area and its special characteristics and concerns. These concerns also set the stage for management area direction that follows.

Each description begins with a general depiction of the area's size and location, and then discusses the main access routes to and within the area, and special features associated with the area. Then specific resources are described, starting with biophysical resources and finishing with social and economic resources.

Many of the biophysical resources (Soils, Water, Riparian and Aquatic, Vegetation, Wildlife) have their conditions rated in terms of how well they are currently functioning. These ratings are the result of recent Properly Functioning Condition (PFC) assessments that the Revision Team conducted with Forest personnel who were most familiar with the areas. District specialists were asked to rank conditions for their resources in relation to how much "risk" those resources were facing if a large disturbance event (wildfire, disease, rain-on-snow, etc.) were to occur. "Risk" for this exercise was assessed on a sliding scale of how resilient those resources would be to disturbance. The Revision Team assumed that if the resource conditions were well within their historical range of variability, the resources should be resilient and resistant to disturbance. If conditions were outside of the historical range, the resources would generally be less resilient and resistant, and therefore, at greater risk to uncharacteristic change from a disturbance.

Resource conditions rated at high risk are characterized as "not functioning properly" in the assessments. Resources rated at moderately high to low risk are characterized as "functioning at risk." Resources rated at very low or no risk are characterized as "functioning properly."

These PFC assessments were conducted at a variety of mid- and fine-scales and were based on available information from existing broad-, mid- and fine-scale assessments, as well as local experience and knowledge. The assessments are both qualitative and quantitative. Their main purpose was to provide a relative comparison of resource conditions from which specific management concerns and priorities might emerge. For instance, the Revision Team assumed that where resource conditions are “not functioning properly,” additional management area direction to restore (or begin restoring) those conditions within the planning period should be considered. Resource conditions “functioning at risk” might also need direction to help restore them, especially if those resources themselves were already considered at risk, such as listed species or 303(d) water bodies. Conversely, resource conditions “functioning properly” might only need a maintenance management strategy, or might not require attention until future planning periods. These strategies were based on the fact that the Forest can only accomplish so much during any planning period, so Forest managers must focus on addressing the most pressing needs first.

Air Quality was described by airsheds developed for Smoke Management Program operations. For more information on these airsheds, see the Air Quality and Smoke Management section, Chapter 3, Forest Plan Revision Final EIS. The management area descriptions summarize existing conditions using information available from a variety of sources. Descriptions include:

- Key sensitive areas that need to be considered during fire use planning and implementation;
- The closest ambient air and visibility monitoring data sources;
- County emissions data (1995-1999) for PM 10 and PM 2.5, including annual amounts and trends; and
- Amount of agricultural-related burning by county.

The descriptions can be used to help support fire use planning and implementation at the project level. Each management area has a list of the airsheds and counties that the area lies within or intersects, and a description of current conditions. Information contained in the descriptions will need to be supplemented over time as new data becomes available. Project planners will need to periodically re-evaluate current conditions and trends rather than rely on the summaries in the management areas. In particular, for projects that include Class I areas within 100 kilometers, data regarding seasonal patterns and trends will change and become more available over time due to information updates from the Regional Haze Monitoring Network.

Historical fire regimes and the vegetative conditions that contribute to uncharacteristic wildfire hazard were evaluated at the mid-scale. Historical fire regimes were assigned to the forested Potential Vegetation Groups or non-forested cover types based on scientific literature and expert knowledge of the vegetation groups. Hazard ratings were developed also using available scientific literature and expert input. The ratings represent departure between the effects of the historical and current fire regimes on vegetation, which in turn affects other ecosystem components and processes. The areas with the greatest departure are those in the historically non-lethal fire regimes where conditions are such that a fire occurring in the assessed conditions would be lethal. The areas with the lowest departure are in the historically lethal fire regimes.

The National Fire Plan (Schmidt et al. 2002) historical fire regimes correspond to the historical fire regimes developed for the assessment as follows:

| National Fire Plan Historical Fire Regimes     | Forest Plan Corresponding Fire Regimes                                    |
|------------------------------------------------|---------------------------------------------------------------------------|
| I (0-35 year frequency, low)                   | PVGs 1, 2, and 5 (nonlethal or nonlethal-mixed1)                          |
| II (0-35 year frequency, stand replacement)    | Communities where sagebrush is dominant or co-dominant (mixed1 or mixed2) |
| III (35-100+ year frequency, mixed)            | PVGs 3, 4, 6, 7, and 11 (mixed2 or mixed1-mixed2)                         |
| IV (35-100+ year frequency, stand replacement) | Climax aspen and pinyon-juniper stands (lethal)                           |
| V (200+ year frequency, stand replacement)     | PVGs 8, 9, 10 (lethal)                                                    |

The hazard ratings developed for the mid-scale assessment were defined as low, moderate, high, and extreme. The Condition Classes for the National Fire Plan and the hazard ratings described in the Forest Plan were developed using the same concept of departure. The Condition Classes correspond to the hazard ratings developed for the assessment as follows:

- Condition Class 1 = low departure
- Condition Class 2 = moderate departure
- Condition Class 3 = high and extreme departure

Each Management Area displays the percent of total Management Area acres assigned to the various historical fire regimes and hazard (departure) ratings.

## Management Area Direction

Management Area direction is designed to tier to Forest-wide direction, and to meet Forest-wide goals and desired conditions. However, Management Area direction is intended to be more specific than Forest-wide direction, addressing specific concerns related to each program area, and setting the stage for specific actions that can be implemented to resolve those concerns.

Management Areas use the same types of direction—goals, objectives, standards, and guidelines—that are defined in the Introduction to Chapter III. The distribution of this direction is somewhat different, however, at the Management Area level. Much of the Management Area direction is expressed as *objectives* to be implemented at this level in order to achieve Forest-wide goals and desired conditions.

Time frames for achieving Management Area objectives are essentially the same as for Forest-wide objectives—10 to 15 years (the planning period) unless otherwise stated. More specific time frames are not typically used because accomplishment can be delayed by funding, litigation, environmental changes, and other influences beyond the Forest’s control.

Standards and guidelines do appear in Management Areas to address two areas that Forest-wide direction cannot address specifically. First, they are used to provide more explicit protection or guidance than can be provided through Forest-wide direction. This more explicit direction is based on the site-specific needs or concerns of the area. Put another way, Forest-wide standards and guidelines generally apply to all Management Areas on the Forest; however, this direction may be refined or expanded at the Management Area level to address specific concerns unique to that Management Area.

The second type of standards and guidelines relates to Management Area Prescription Categories (MPCs) found within a Management Area. Each emphasis provided by an MPC carries with it varying degrees of constraints on the types and intensity of management practices that can be used to maintain or restore conditions that best align with the MPC emphasis. These constraints result from a common set of standards and guidelines that apply, regardless of the Management Area in which the MPC is applied. Application of this common set of MPC standards and guidelines helps ensure that management emphasis for the MPC is generally attained, regardless of location. Refer to the more detailed discussion of MPCs below.

## **MPC Maps and Tables**

Each Management Area has a map that precedes the area description. This map is designed to provide reference points for the reader. It displays the area boundaries and includes relevant communities, water bodies, and other features within or near the area. It also shows the Management Prescription Categories (MPCs) that have been assigned to each area. These prescriptions are also summarized by percentage in a table that begins each Management Area description. The purpose of the MPC map and table is to give the reader a quick and general impression of the management emphasis for each area. MPCs are described in detail below.

## **Management Prescription Categories**

Management prescriptions are defined as, “Management practices and intensity selected and scheduled for application on a specific area to attain multiple use and other goals and objectives” (36 CFR 219.3). MPCs are broad categories of management prescriptions that indicate the general management emphasis prescribed for a given area. They are based on Forest Service definitions developed at the national level, and represent management emphasis themes, ranging from Wilderness (1.0) to Concentrated Development (8.0). The national MPCs have been customized during Forest Plan revision to better fit the needs and issues of the Forest.

MPCs were assigned by subwatershed where possible. Although they are intended to show general management emphasis within a subwatershed, they do not necessarily define emphasis for every single acre within that subwatershed. As with most rule sets, there are exceptions within MPCs. For example, some administrative areas—such as Wilderness, Wild and Scenic River corridors, Research Natural Areas, and National Recreation Areas—cut across subwatershed boundaries, and these areas are managed according to the laws or policies governing their establishment. Also, there are many distinctive areas that may have different management requirements than the overall MPC emphasis/direction for the subwatershed. Examples include administrative and recreation sites, designated communications sites or utility corridors, mining sites, plantations, Riparian Conservation Areas, and cultural or historic sites.

MPC management emphasis is further defined by Forest-wide and Management Area direction. For instance, almost all MPCs could feature vegetation management to some degree. The type and intensity of vegetation management that may occur in a given MPC area is reflected in its general set of standards and guidelines (described below by MPC), and may be further refined within an individual area to reflect that unique Management Area needs or concerns.

Each MPC emphasis is described below. Following the emphasis description, the standards and guidelines for management practices and intensity that apply to each MPC are stated. Except where noted, these MPC standards and guidelines have also been incorporated into the management direction of each Management Area in which the MPC occurs.

### **1.1 – Existing Wilderness**

This prescription applies to areas designated by Congress as Wilderness. The main management objective is preserving wilderness attributes, including natural appearance, ecological integrity, opportunities for solitude, opportunities for primitive recreation, and identified special features. The area is managed to allow ecological processes to prevail, with little or no evidence of human development. Current wilderness management plans and approved fire management plans provide specific direction for management activities.

| <b>MPC 1.1 Standards</b> |                                                                                                                                                                               |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard                 | Management actions shall be designed and implemented in accordance with the Frank Church - River of No Return Wilderness Management Plan.                                     |
| Standard                 | Mechanical vegetation treatments, including salvage harvest, are prohibited.                                                                                                  |
| Standard                 | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty. |
| Standard                 | Fire suppression strategies and tactics shall be in accordance with the Frank Church - River of No Return Wilderness Management Plan.                                         |

### **1.2 – Recommended Wilderness**

This prescription applies to areas the Forest Service recommends for Wilderness designation. The primary management objective is to maintain wilderness attributes until Congress decides to designate the areas as wilderness or release them to some other form of management. Although these areas do not fall under the authority of the Wilderness Act, they are managed to maintain wilderness attributes where feasible, and to generally allow ecological processes to prevail.

| <b>MPC 1.2 Standards and Guideline</b> |                                                                                                                                                                                       |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard                               | Management actions, including wildland fire use and prescribed fire, must be designed and implemented in a manner that maintains wilderness values, as defined in the Wilderness Act. |
| Standard                               | Mechanical vegetation treatments, including salvage harvest, are prohibited.                                                                                                          |
| Standard                               | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.         |
| Standard                               | No new motorized or mechanical uses will be allowed, except where these uses must be allowed in response to reserved or outstanding rights, statute, or treaty.                       |
| Standard                               | Existing motorized or mechanical uses are allowed only if they do not lead to long-term adverse changes in wilderness values.                                                         |
| Guideline                              | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize the impacts of suppression activities on wilderness values.          |

### **2.1 – Wild and Scenic Rivers and Their Corridors**

This prescription applies to areas that have been Congressionally designated<sup>1</sup> as Wild, Scenic, or Recreational Rivers and their associated land corridors, which extend an average of 0.25 mile from each bank. Wild and Scenic Rivers and their corridors are managed to protect their free-flowing waters, outstandingly remarkable values (ORVs), and their classification status. A “Wild” classification is the most primitive or least developed. These rivers have essentially undeveloped corridors and are generally inaccessible except by trail. “Scenic” river corridors may have some development, and are accessible in places by roads. “Recreational” rivers are readily accessible by roads and often have development within their corridors.

| <b>MPC 2.1 Guidelines</b> |                                                                                                                                                                                                           |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Guideline                 | In Scenic or Recreational corridors, mechanical vegetation treatments, including salvage harvest, may be used as long as Outstandingly Remarkable Values (ORVs) are maintained within the river corridor. |
| Guideline                 | Prescribed fire and wildland fire use may be used in any river corridor as long as ORVs are maintained within the corridor.                                                                               |
| Guideline                 | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize the impacts of suppression activities on river classifications and ORVs.  |

### **2.2 – Research Natural Areas**

This prescription applies to areas that have been administratively established as Research Natural Areas and that provide unique opportunities for research. Existing and proposed Research Natural Areas are managed to protect the unique values for which they were established. Management plans are developed for each area to provide guidance and protection of values.

| <b>MPC 2.2 Standards and Guideline</b> |                                                                                                                                                                                                                                                                              |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard                               | Mechanical vegetation treatments, salvage harvest, prescribed fire, and wildland fire use may only be used to maintain values for which the areas were established, or to achieve other objectives that are consistent with the RNA establishment record or management plan. |
| Standard                               | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To maintain the values for which the RNA was established.                             |
| Guideline                              | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize fire suppression strategies and tactics that minimize impacts to values for which the RNA was established.                                                                        |

### **3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial and Hydrologic Resources**

This prescription is designed to minimize temporary-term risks and avoid short- and long-term risks from management actions to soil/hydrologic conditions and aquatic and terrestrial habitats. The objective of 3.1 is to keep management-related impacts from degrading existing conditions

<sup>1</sup> Eligible or suitable rivers are provided similar emphasis as designated rivers, but were not assigned to this MPC. Management direction for eligible or suitable rivers, including the MPC guidelines below, is included in the Management Area where the rivers are located, and in Forest-wide direction for Wild and Scenic Rivers.



for TEPCs fish, wildlife, and botanical species, or 303(d) impaired water bodies. Low levels of management activities occur, and these activities are expected to have minimal and temporary degrading effects to soils, water quality, riparian areas, and aquatic and terrestrial habitats. Other uses and activities, such as salvage harvest or Wildland Fire Use, may occur and may have some temporary effects, provided they do not retard attainment of short- and long-term objectives for aquatic and terrestrial habitat, or soil/hydrologic resources. Tools associated with this prescription—such as special order restrictions, operating plan adjustments, and prescribed fire—are typically of low intensity and designed to maintain existing conditions, primarily through ecological processes.

| MPC 3.1 Standards and Guideline |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard                        | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years). Degrade and degradation are defined in the glossary.                                                                                                                                                                                                  |
| Standard                        | Wildland fire use and prescribed fire may only be used where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species, or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species.                                                                                                                                                                                                                                    |
| Standard                        | Mechanical vegetative treatments, excluding salvage harvest, may only occur where:<br>a) The responsible official determines that wildland fire use or prescribed fire would result in unreasonable risk to public safety and structures, investments, or undesirable resource affects; and<br>b) They maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>c) They maintain or restore habitat for native and desired non-native wildlife and plant species. |
| Standard                        | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To address immediate response situations where, if the action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                                                                                                                                                               |
| Guideline                       | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                                                                                 |

### **3.2 – Active Restoration and Maintenance of Aquatic, Terrestrial and Hydrologic Resources**

This prescription is designed to minimize temporary- and short-term risks and avoid long-term risks from management actions to soil/hydrologic conditions and aquatic, botanical and terrestrial habitats. The objective of this prescription is to actively restore or maintain conditions for TEPCS fish, wildlife, and botanical species, or 303(d) impaired water bodies through a combination of management activities and natural processes. Management activities used to achieve this objective include watershed restoration, noxious weed treatments, and vegetative

treatments that include prescribed fire, wildland fire use, and mechanical. Restoration is focused on those components of the ecosystem that are not functioning properly, or are outside the range of desired conditions, while maintenance helps to preserve those components that are functioning properly.

| MPC 3.2 Standards and Guideline |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard                        | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary (up to 3 years) or short-term time periods, and must be designed to avoid resource degradation in the long term (greater than 15 years).                                                                                                                                                                                                                                                                |
| Standard                        | Vegetative restoration or maintenance treatments—including wildland fire use, mechanical, and prescribed fire—may only occur where they: <ul style="list-style-type: none"> <li>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or</li> <li>b) Maintain or restore habitat for native and desired non-native wildlife and plant species; or</li> <li>c) Reduce risk of impacts from wildland fire to human life, structures, and investments</li> </ul> |
| Standard                        | Road construction or reconstruction may only occur where needed: <ul style="list-style-type: none"> <li>a) To provide access related to reserved or outstanding rights, or</li> <li>b) To respond to statute or treaty, or</li> <li>c) To support aquatic, terrestrial, and watershed restoration activities, or</li> <li>d) To address immediate response situations where, if the action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.</li> </ul>          |
| Guideline                       | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                                                                             |

#### **4.1a – Undeveloped Recreation: Maintain Inventoried Roadless Areas**

This prescription applies to lands where dispersed and undeveloped recreation uses are the primary emphasis. Providing dispersed recreation opportunities in an inventoried roadless area is the main objective. Both motorized and non-motorized recreation opportunities may be provided. Other resource uses are allowed to the extent that they do not compromise the roadless and undeveloped character of the IRA. The area's environment appears predominantly natural, with slight evidence of the sights and sounds of people. Habitat and recreation uses are generally compatible, but recreation uses may be adjusted to meet the needs of TEPCS species.

| MPC 4.1a Standards and Guideline |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard                         | Management actions—including wildland fire use, prescribed fire, and special use authorizations—must be designed and implemented in a manner that does not adversely compromise the area's roadless and undeveloped character in the temporary, short term, and long term. "Adversely compromise" means an action that results in the reduction of roadless or undeveloped acres within any specific IRA. Exceptions to this standard are actions in the 4.1a road standard, below. |
| Standard                         | Road construction or reconstruction may only occur where needed: <ul style="list-style-type: none"> <li>a) To provide access related to reserved or outstanding rights, or</li> <li>b) To respond to statute or treaty.</li> </ul>                                                                                                                                                                                                                                                  |
| Guideline                        | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the roadless or undeveloped character of the area.                                                                                                                                                                                                                                                                            |

#### **4.1c – Undeveloped Recreation: Maintain Unroaded Character with Allowance for Restoration Activities**

This prescription applies to lands where dispersed recreation uses are the primary emphasis. Providing dispersed recreation opportunities in an unroaded landscape is the main objective. Both motorized and non-motorized recreation opportunities may be provided. Other resource uses are allowed to the extent that they do not compromise the area's ROS settings. The area's environment appears predominantly natural, with slight evidence of the sights and sounds of people. Habitat and recreation uses are generally compatible, but recreation uses may be adjusted to meet the needs of TEPCS species.

| <b>MPC 4.1c Standards and Guideline</b> |                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard                                | Management actions—including mechanical vegetation treatments, salvage harvest, wildland fire use, prescribed fire, special use authorizations, and road maintenance—must be designed and implemented in a manner that would be consistent with the unroaded landscape in the temporary, short term, and long term. Exceptions to this standard are actions in the 4.1c road standards, below. |
| Standard                                | Within Inventoried Roadless Areas (IRAs), road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                        |
| Standard*                               | Outside IRAs, road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To provide transportation systems that support accomplishment of Management Area ROS objectives.                                                                                          |
| Guideline                               | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the unroaded landscape.                                                                                                                                                                                                                  |

\* 4.1c allocations in most Management Areas occur completely within IRAs, and therefore, those Management Areas do not include this standard.

#### **4.2 – Roaded Recreation Emphasis**

This prescription applies to lands where dispersed and developed recreation uses are the primary emphasis. A wide range of recreational activities and developments occurs. Facilities are maintained, and both motorized and non-motorized recreation opportunities may be provided. Multiple uses such as timber harvest and grazing are allowed to the extent that they do not compromise recreation resource objectives. Human use and presence are generally obvious. The area has a predominantly natural-appearing environment, with moderate evidence of the sights and sounds of people. Generally, a mix of mechanical and fire activities are used to treat vegetation to achieve desired conditions for recreation settings and developments, and to reduce the risk of uncharacteristic vegetative damage or loss from insects, diseases, and fire.

| <b>MPC 4.2 Standard and Guideline</b> |                                                                                                                                                                                                                                                             |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard                              | Vegetation management actions—including wildland fire use, prescribed fire, and mechanical treatments—may be used to maintain or restore desired vegetation and fuel conditions provided they do not prevent achievement of recreation resource objectives. |
| Guideline                             | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to recreation developments and investments.                                                                         |

### **5.1 – Restoration and Maintenance Emphasis within Forested Landscapes**

This prescription applies to lands that are predominantly (> 50 percent) forested. Emphasis is on restoring or maintaining vegetation within desired conditions in order to provide a diversity of habitats, reduced risk from disturbance events, and sustainable resources for human use.

Commodity production is an outcome of restoring or maintaining the resilience/resistance of forested vegetation to disturbance events; achievement of timber growth and yield is not the primary purpose. The full range of treatment activities may be used. Restoration occurs through management activities and succession. Combinations of mechanical and fire treatments are used to restore forested areas while maintaining or improving resources such as soils, water quality, fish and wildlife habitat, and recreation settings. The risk of temporary and short-term degradation to the environment is minimized, but impacts may occur within acceptable limits as resources are managed to achieve long-term goals and objectives.

| <b>MPC 5.1 Guidelines</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Guideline                 | The full range of treatment activities may be used to restore and maintain desired vegetation and fuel conditions. The available vegetation treatment activities include wildland fire use. Salvage harvest may also occur.                                                                                                                                                                                                                                                                                                                           |
| Guideline                 | Road construction or reconstruction may occur where needed: <ul style="list-style-type: none"> <li>a) To provide access related to reserved or outstanding rights, or</li> <li>b) To respond to statute or treaty, or</li> <li>c) To achieve restoration and maintenance objectives for vegetation, water quality, aquatic habitat, or terrestrial habitat, or</li> <li>d) To support management actions taken to reduce wildfire risks in wildland-urban interface areas; or</li> <li>e) To meet access and travel management objectives.</li> </ul> |
| Guideline                 | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to habitats, developments, and investments.                                                                                                                                                                                                                                                                                                                                                                   |

### **5.2 – Commodity Production Emphasis within Forested Landscapes**

This prescription applies to lands that are predominantly forested. Emphasis is on achieving sustainable resource conditions that support commodity outputs, particularly timber production in forested settings, and forage production in non-forested settings. Management activities are also designed to maintain and restore forest ecosystem health to reduce potential for long-term impacts from uncharacteristic disturbance events. Goods and services are provided within the productive capacity of the land, and may or may not fully meet demand. Mitigation activities are an important element of project design. Forested landscapes range in appearance from near natural to altered where management activities are evident.

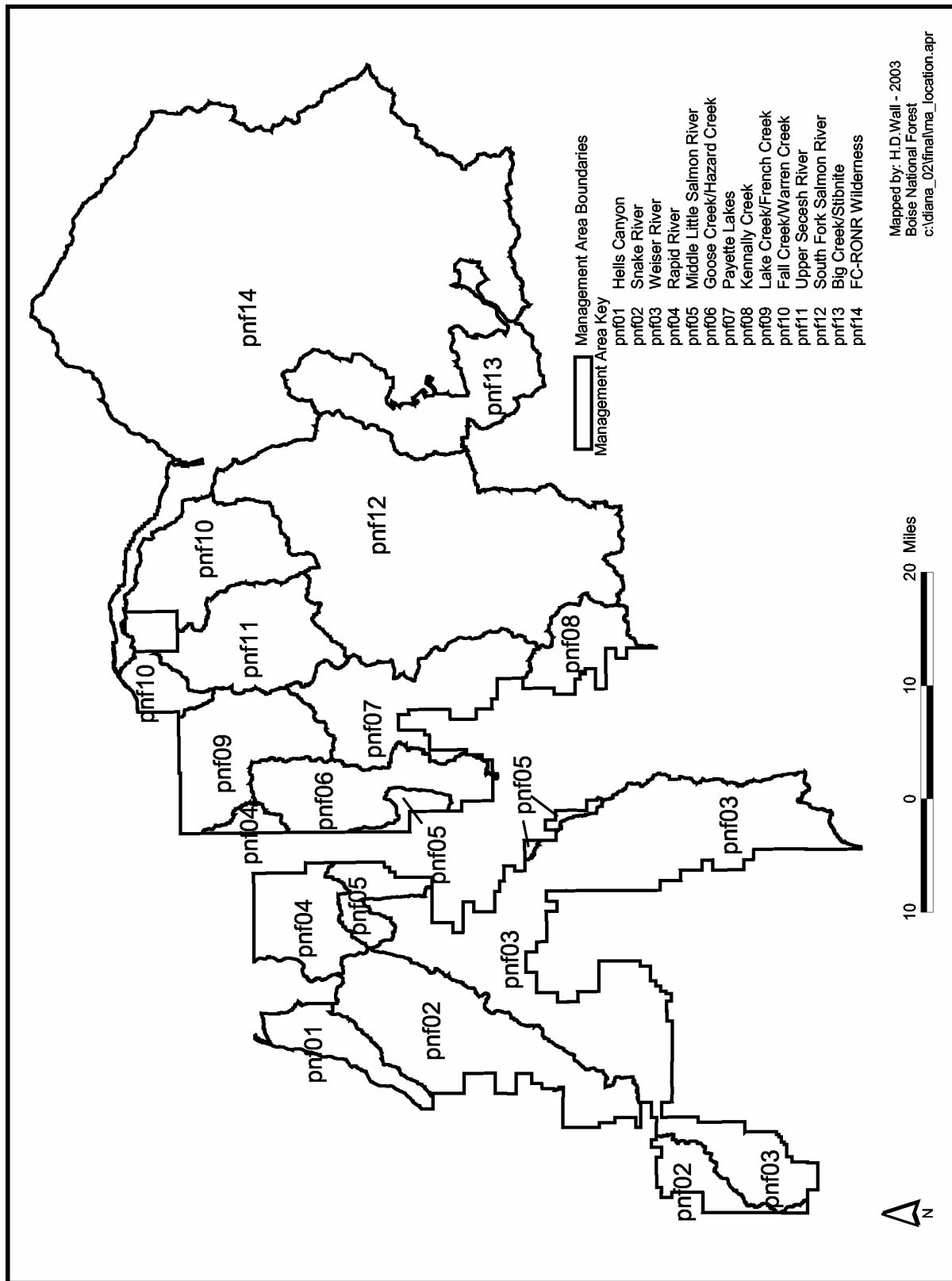
| <b>MPC 5.2 Standard and Guidelines</b> |                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard                               | Wildland fire use is prohibited.                                                                                                                                                                                                                                                                                                                           |
| Guideline                              | Prescribed fire may be used to: <ul style="list-style-type: none"> <li>a) Maintain or restore desired vegetative conditions on unsuited timberlands; or</li> <li>b) Maintain or restore desired fuel conditions for all vegetation types; or</li> <li>c) Maintain desired vegetative conditions on suited timberlands within PVGs 2 through 10.</li> </ul> |
| Guideline                              | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to developments and investments.                                                                                                                                                                                   |

**6.1 – Restoration and Maintenance Emphasis within Shrubland and Grassland Landscapes**

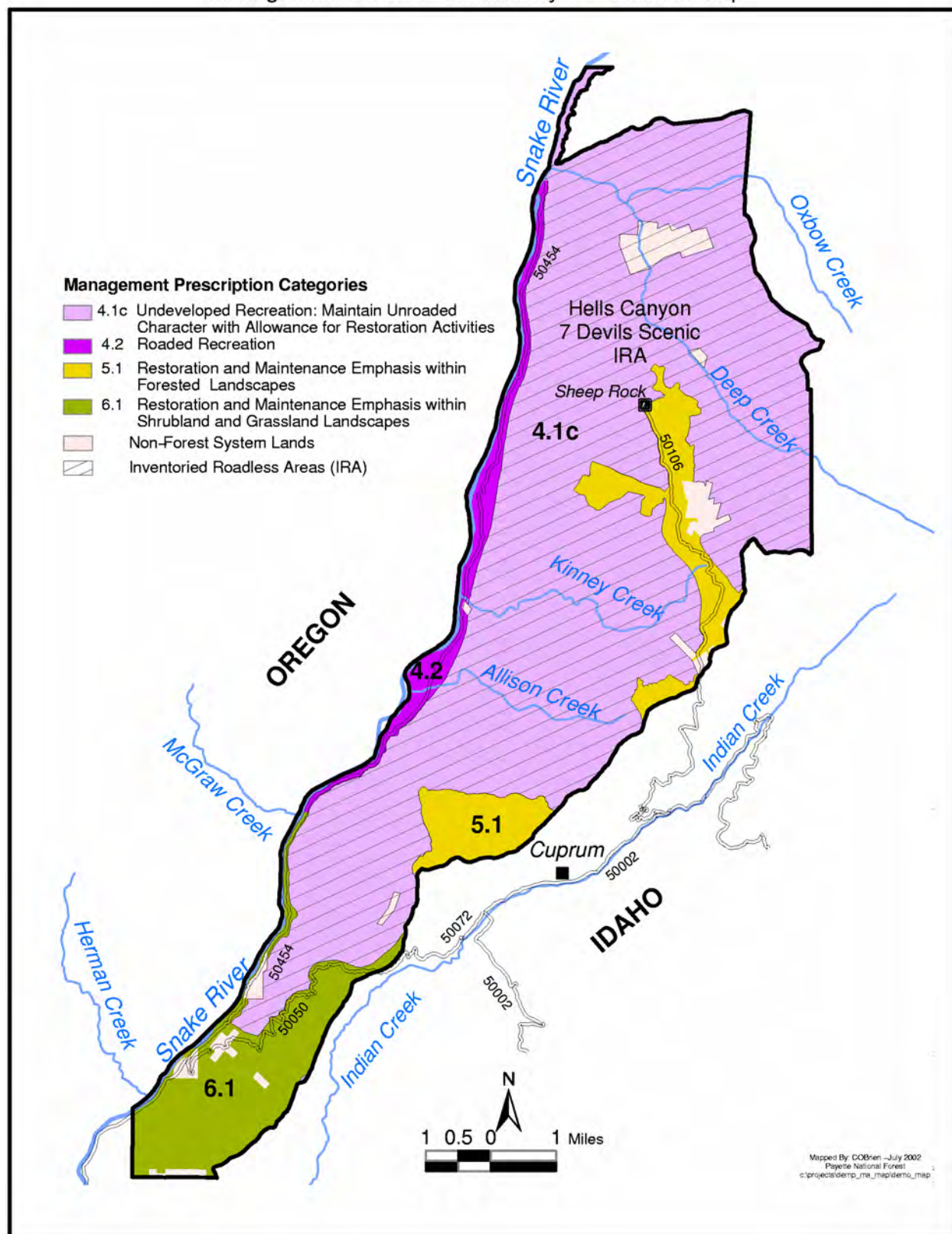
This prescription applies to lands that are predominantly (> 50 percent) shrubland and grassland. Emphasis is on restoring and maintaining vegetation within desired conditions in order to provide a diversity of habitats, reduced risk from disturbance events, and sustainable resources for human use. The full range of treatment activities may be used. Restoration occurs through management activities and succession. Combinations of mechanical and fire treatments are used to restore shrubland and grassland areas while maintaining or improving resources such as soils, water quality, fish and wildlife habitat, and recreation settings. The risk of temporary and short-term degrading effects to the environment are minimized, but impacts may occur within acceptable limits as resources are managed to achieve long-term goals and objectives.

| MPC 6.1 Guidelines |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Guideline          | The full range of treatment activities may be used to restore and maintain desired vegetation and fuel conditions. The available vegetation treatment activities include wildland fire use. Salvage harvest may also occur.                                                                                                                                                                                                                                                                                                                           |
| Guideline          | Road construction or reconstruction may occur where needed: <ul style="list-style-type: none"> <li>a) To provide access related to reserved or outstanding rights, or</li> <li>b) To respond to statute or treaty, or</li> <li>c) To achieve restoration and maintenance objectives for vegetation, water quality, aquatic habitat, or terrestrial habitat, or</li> <li>d) To support management actions taken to reduce wildfire risks in wildland-urban interface areas; or</li> <li>e) To meet access and travel management objectives.</li> </ul> |
| Guideline          | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to habitats, developments, and investments.                                                                                                                                                                                                                                                                                                                                                                   |

## Payette National Forest Management Areas



Management Area 01 –Hells Canyon –Location Map



## Management Area 1 Hells Canyon

### MANAGEMENT AREA DESCRIPTION

**Management Prescriptions** – Management Area 1 has the following management prescriptions (see map on preceding page for distribution of prescriptions).

| Management Prescription Category (MPC)                                             | Percent of Mgt. Area |
|------------------------------------------------------------------------------------|----------------------|
| 2.1 – Wild and Scenic Rivers                                                       | Trace                |
| 4.1c – Maintain Unroaded Character with Allowance for Restoration Activities       | 77                   |
| 4.2 – Roaded Recreation Emphasis                                                   | 4                    |
| 5.1 – Restoration and Maintenance Emphasis within Forested Landscapes              | 9                    |
| 6.1 – Restoration and Maintenance Emphasis within Shrubland & Grassland Landscapes | 10                   |

**General Location and Description** - Management Area 1 is comprised of lands administered by the Payette National Forest within the southern end of Hells Canyon on the Snake River (see map, preceding page). The area lies in Adams County, and is part of the Council Ranger District. The management area is an estimated 36,100 acres, which includes several private land inholdings that make up about 3 percent of the area. The largest inholdings are mining claims in the Deep and Copper Creek drainages. Much of the area is in the Hells Canyon/Seven Devils Scenic Area. The Scenic Area status was changed for much of Hells Canyon with the creation of the Hells Canyon NRA and Wilderness in 1975, but the status of this particular area was never administratively changed, and the area still has a separate management plan administered by the by the Payette National Forest.

The management area does not include the Hells Canyon Wilderness, which is administered by the Wallowa-Whitman National Forest in Oregon. The area is bordered by the Hells Canyon Wilderness to the north and northeast, by the Payette National Forest to the south and southeast, and by a mix of Wallowa-Whitman National Forest, Bureau of Land Management (BLM), and private lands to the west. The primary uses or activities in this management area have been dispersed recreation, livestock grazing, timber harvest, and mining.

**Access** - The main access to the area is by State Highway 71 from Cambridge, Idaho. Highway 71 becomes paved Forest Road 454 as it enters the Payette Forest north of Oxbow Dam and continues to Hells Canyon Dam. This road is owned and maintained by the Idaho Power Company. Other access routes include the Hornet Creek Road (Forest Road 002) to Forest Road 072 to the Kleinschmidt Grade (Forest Road 050), or Forest Road 002 to Forest Road 105 to Cuprum, then Forest Road 106 to Sheep Rock. The estimated density of classified roads for the entire area is 0.8 miles per square mile, and 74 percent of the area is inventoried as roadless. Total road density for area subwatersheds ranges between 0 and 2.3 miles per square mile. Trails follow and connect many of the major drainages in the roadless portion of the area.



**Special Features** - The area includes the Hells Canyon/Seven Devils Scenic Area, and is adjacent to the Hells Canyon National Recreation Area and Hells Canyon Wilderness Area administered by the Wallowa-Whitman National Forest. The Idaho-designated Hells Canyon Scenic Byway lies partly within this management area.

The Snake River corridor is an important recreation and wildlife area, and it also contains a number of cultural and historical sites, such as Redfish Cave and the Big Bar grave site of early settlers. Nez Perce winter villages and burial grounds were also located along the Snake River corridor. The historic Kleinschmidt Grade is a scenic, but very steep travel route from Cuprum to the Snake River. Horse Mountain Lookout, Kinney Point, and Sheep Rock are popular viewpoints.

The Hells Canyon/Seven Devils Inventoried Roadless Area comprises an estimated 74 percent of the management area. The Sheep Rock National Natural Landmark and National Recreation Trail are in this area. The road to the landmark is currently in poor condition. This area also has the majority of documented caves on the Forest. The Snake River below Hells Canyon Dam is a designated Wild and Scenic River. The Wallowa-Whitman National Forest manages the Wild and Scenic River corridor.

**Air Quality** – This management area lies within Montana/Idaho Airshed ID-14 and Adams County. Particulate matter is the primary pollutant of concern related to Forest management activities. There are no ambient air monitors located within the airshed. There are two Class I areas within 100 kilometers of this management area, the Hells Canyon and Eagle Cap Wildernesses. Visibility monitoring has been expanded for these areas.

Between 1995 and 1999, emissions trends within Adams County improved for PM 10, while PM 2.5 emissions remained constant. The most common sources of particulate matter within the county were wildfire, prescribed fire, and fugitive dust from unpaved roads. In addition to Forest management activities, crop residue and ditch burning may contribute to particulate matter emissions, although the amount of agricultural-related burning was very low within Adams County (less than 600 acres). There were no point sources within the county.

**Soil, Water, Riparian, and Aquatic Resources** - Elevations range from 1,667 feet at Hells Canyon Reservoir to 7,623 feet atop White Monument. Management Area 1 falls primarily within the Seven Devils Mountains Subsection. The main geomorphic landforms found in the area are steep glaciated and fluvial mountains, and oversteepened canyonlands. Slope gradients average 40 to 80 percent throughout much of the area, although some fairly gentle ridges and benches exist in the upper portion of the area. Most of the past road building and management activities have occurred on these upper ridges and benches, and along the Snake River corridor. The surface geology is dominated by Seven Devils volcanic rock, with scattered inclusions of metasedimentary and granitic rock. Soils generally have moderate to high surface erosion potential, and low to moderate productivity. All five subwatersheds within the management area are rated high for vulnerability (see table below). Geomorphic Integrity ratings for the subwatersheds vary from moderate (functioning at risk) to low (not functioning appropriately) (see table below). The potential for instability and erosion is fairly high in the oversteepened landforms that comprise much of the area.

The management area includes portions of the Deep Creek subwatershed in the Indian-McGraw Watershed of the Bush-Granite Subbasin, and portions of the Sawpit-Thirtytwo, Kinney-Kirby, and Copper-Limepoint Subwatersheds in the Brownlee Reservoir Watershed of the Hells Canyon Subbasin. Both watersheds and subbasins drain directly into the Snake River Basin. The major tributary streams to the Snake River in the area are Deep Creek, Oxbow Creek, Kinney Creek, and Limepoint Creek. There are no natural lakes in the area, but Hells Canyon Reservoir, formed by Hells Canyon Dam on the Snake River, comprises 18 miles of the management area's western boundary. The Water Quality Integrity rating for all subwatersheds is moderate (functioning at risk) (see table below). There have been localized impacts, including accelerated sediment and thermal changes due to timber harvest, mining, livestock grazing, and wildfire. Only one of the 5 subwatersheds in this area was listed in 1998 as having impaired water bodies under Section 303(d) of the Clean Water Act. This subwatershed is Deep Creek. The pollutants of concern are sediment and metals. There are currently no TMDL-assigned subwatersheds associated with this management area.

| Subwatershed Vulnerability |      |     | Geomorphic Integrity |      |     | Water Quality Integrity |      |     | No. 303(d) Subs | No. Subs With TMDLs | No. Public Water System Subs |
|----------------------------|------|-----|----------------------|------|-----|-------------------------|------|-----|-----------------|---------------------|------------------------------|
| High                       | Mod. | Low | High                 | Mod. | Low | High                    | Mod. | Low |                 |                     |                              |
| 5                          | 0    | 0   | 0                    | 3    | 2   | 0                       | 5    | 0   | 1               | 0                   | 0                            |

Anadromous fish species no longer exist within most area streams due to downstream dams that block their migration routes to and from the ocean. Below Hells Canyon Dam, however, there is limited habitat for chinook salmon, steelhead, and bull trout, and the Deep Creek subwatershed is designated critical habitat for chinook salmon. Above the dam, bull trout may occur in isolated populations, but no populations are currently known. Habitat is fragmented by Hells Canyon Reservoir and the naturally steep terrain. Native redband rainbow trout are scattered throughout area streams, as are introduced brook trout. Many other non-native species are stocked in Hells Canyon Reservoir, which is a popular sport fishery. Little spawning or rearing habitat for most fish species exists in this area due to the very high gradients of most stream channels. Overall, aquatic habitat is currently functioning at risk due to localized habitat alteration and fragmentation. Native fish populations are at risk due to the presence of non-native species and the habitat impacts described above. The Deep Creek subwatershed has been identified as important to the recovery of listed fish species, and as a high-priority area for active restoration.

**Vegetation** - Vegetation at lower elevations is typically grasslands, shrublands, ponderosa pine and Douglas-fir on south and west aspects, and Douglas-fir and grand fir forests on north and east aspects. Mid and upper elevations are dominated by shrubs and forest communities of Douglas-fir, grand fir, and subalpine fir, with pockets of western larch, lodgepole pine, whitebark pine, and aspen.

Over 40 percent of the management area is classified as non-forested, or comprised of rock, water, or shrubland and grassland vegetation groups, including Perennial Grass Montane, Perennial Grass Slopes, Bitterbrush, and Mountain Big Sagebrush. Some of the forested area has also moved from late to early successional stages due to tree mortality from recent wildland fires.

The dominant forested vegetation groups in the area are Cool Moist Grand Fir (16 percent), Warm Douglas-fir/Moist Ponderosa Pine (11 percent), Dry Ponderosa Pine/Xeric Douglas-fir (10 percent), and Dry Grand Fir (9 percent).

The primary risk to the Perennial Grass Montane group is the increase in non-native species such as cheatgrass and Medusa head rye. Noxious weeds and the Hells Canyon Reservoir have reduced Perennial Grass Slopes at lower elevations. In the shrubland and grassland groups, Mountain Big Sagebrush and Bitterbrush are functioning at risk due to the high percentage of old structural stages, lack of regeneration, and an increase in non-native species. Past fire exclusion and grazing impacts have contributed to old, decadent stand conditions that are less resilient to fire and other disturbances.

The Ponderosa Pine/Xeric Douglas-fir and Warm Dry Douglas-fir/Moist Ponderosa Pine groups are for the most part properly functioning, although dwarf mistletoe levels are moderate to high in some areas. The Dry Grand Fir and Cool Moist Grand Fir groups are functioning at risk. In managed areas, these groups have relatively low levels of large trees, snags, insects, and disease, and high levels of seral species and mid-aged structural stages. In unmanaged areas, these groups have high stand densities with shade-tolerant grand fir and high levels of insect and disease infestations, which have increased the risk of stand-replacing fire.

Riparian vegetation is functioning properly throughout much of the management area, with the exception of the Snake River corridor, where Hells Canyon Reservoir has inundated most of the original riparian vegetation.

**Botanical Resources** – Current Region 4 Sensitive plants may occur in this management area, including Hazel’s prickly phlox, Cusick’s camas, and Bartonberry. A proposed Region 4 Sensitive plant that may occur in the area is Idaho hawksbeard. Currently, no federally listed or proposed plant species have been found here, but potential habitat for Spalding’s silene, Ute ladies’-tresses, MacFarlane’s four o’clock, and slender moonwort may exist within the area. Spalding’s silene, a Threatened species, may occur in fescue grassland habitat types (Palouse prairie) up to 5,500 feet in elevation. Ute Ladies’-tresses, a Threatened orchid species, may have moderate to high potential habitat in riparian/wetland areas up to 7,000 feet. MacFarlane’s four o’clock, a Threatened species, may occur in river canyon grassland habitats (up to 3,000 feet). Slender moonwort, a Candidate species, is a diminutive fern that may occur in moderate to higher elevation grasslands, meadows, and small openings in spruce and lodgepole pine.

**Non-native Plants:** A number of noxious weeds have been introduced into the area, particularly along the main road corridors. An estimated 35 percent of the area is highly susceptible to invasion by noxious weeds and exotic plants. The main weeds of concern are spotted knapweed, rush skeletonweed, diffuse knapweed, whitetop, Scotch thistle, Dalmatian toadflax, and Canada thistle. The knapweeds, rush skeletonweed, and other weed species are currently found in small, scattered populations within the area. Canada thistle is found throughout the area.

Subwatersheds in the table below have an inherently high risk of weed establishment risk and spread from activities identified with a “yes” in the various activity columns. This risk is due to the amount of drainage area that is highly susceptible to noxious weed invasion and the relatively high level of exposure from those identified vectors or carriers of weed seed.

| Subwatershed      | Road-related Activities | Livestock Use | Timber Harvest | Recreation and Trail Use | ATV Off-Road Use |
|-------------------|-------------------------|---------------|----------------|--------------------------|------------------|
| Copper-Lime Point | No                      | Yes           | No             | Yes                      | No               |
| Kinney-Kirby      | No                      | No            | No             | Yes                      | No               |

**Wildlife Resources** - The wide range of elevations and vegetation types in the management area provide a variety of wildlife habitats. The Snake River corridor is managed as a key area for wintering bald eagles. Much of the lower elevation grasslands and shrublands provide important winter/spring range for elk and deer, as well as foraging habitat for mountain quail, and introduced turkey and chukar. Area forests provide habitat for a number of Region 4 sensitive species, including northern goshawk, flammulated owl, white-headed woodpecker, and peregrine falcon. Bighorn sheep, mountain goats, golden eagles, and many species of bats use the rocky bluffs that extend up steep canyonlands. Caves and mine adits may provide bat roosts and hibernacula habitat. Due to all the rocky cliffs, this area has excellent bighorn sheep habitat; however bighorn sheep may be threatened by disease transmission from domestic sheep. This area also provides nesting and foraging habitat for migratory landbirds, and summer range for mammals such as elk, deer, black bear, and mountain lion. Limited habitat exists for lynx, fisher, and wolverine. Big game migration routes have not been significantly affected by past management activities. Overall, terrestrial habitat is properly functioning, except for the winter range and riparian areas that have been flooded by Hells Canyon Reservoir or adversely affected by noxious weed invasion.

**Recreation Resources** - Paved road access, low elevation, high scenic quality, and introduced fish and game species make the Hells Canyon Reservoir area a heavily used, year-round recreation destination. Dispersed recreation such as fishing, hunting, hiking, sightseeing, and camping occurs throughout the area, and there are many dispersed campsites. The area is in Idaho Fish and Game Management Unit 22. Although this area is a national attraction, many of the users come from the Treasure Valley (Boise, Nampa, Caldwell), about 100 miles to the south. Over 40 miles of trail are maintained in the area, and most are closed to motorized vehicle use. Spelunking (cave exploring) is also increasing, as most of the caves known on the Forest occur here. Recreational rock-climbing is increasing. Most use occurs in the Flat Iron vicinity near Allison Creek. The upper entry portal for the Wild and Scenic Snake River is located just below Hells Canyon Dam, and many river users and sightseers drive through this management area to access the Hells Canyon Launch Site and Visitor Center on the Oregon side of the river. Recreation special uses in the area include a boat dock permit on Hells Canyon Reservoir (at Big Bar) and one outfitter/guide permit for guided snowmobiling.

A combination of developed and dispersed recreation opportunities are emphasized in this area, particularly in the Snake River corridor immediately adjacent to the Hells Canyon Reservoir. Emphasis is on maintaining existing dispersed sites and facilities, and on providing appropriate levels of additional development at key sites. Interpretation and education are also emphasized, as is trail maintenance. Trail funding is used to maintain trails, and trails are signed at all major junctions. The most heavily used trails, and those with erosion and water-related resource damage, have the highest priority for maintenance and repair.

**Scenic Environment** – Visually sensitive routes and use areas represent locations from which the scenic environment is considered especially important. These routes or areas generally have a more restrictive VQO assigned to them than areas not seen from such locations. The following is a list of visually sensitive routes or use areas with this management area. There may also be sensitive routes or use areas in adjacent management areas that could be affected by actions taken in this management area.

| Route or Area Type | Sensitivity Level | Name of Route or Area                                             |
|--------------------|-------------------|-------------------------------------------------------------------|
| Roads              | 1                 | Kleinschmidt Grade 050, Snake River 454                           |
| Roads              | 2                 | None                                                              |
| Trails             | 1                 | Oxbow Creek 215, Trail Creek 217, Deep Creek 219, Haley Ridge 220 |
| Trails             | 2                 | Kinney Creek 221, Eckels Creek 223, Lime Point Creek 224          |
| Use Areas          | 1                 | Horse Mountain Lookout, Sheep Rock Lookout                        |
| Use Areas          | 2                 | Kinney Point Lookout                                              |

**Cultural Resources** – Cultural themes in this area include Prehistoric, Settlement, Mining, and Recreation. The Snake River corridor contains a number of cultural and historical sites, such as Redfish Cave and the Big Bar grave site of early settlers. Nez Perce winter villages and burial grounds were also located along the Snake River corridor. The historic Kleinschmidt Grade is a scenic but very steep route to take from Cuprum to the Snake River. Signs of early settlement still occur along the river. Historic mining occurred along the river, as well as at higher elevations. The Hells Canyon Dam, built in the 1960s, created a reservoir that attracts thousands of recreationists every year.

**Timberland Resources** - Of the estimated 16,200 tentatively suited acres in this management area, 3,200 acres have been identified as being suited timberlands, or appropriate for timber production. This represents about 1 percent of the Forest's suited timberland acres. The suited timberland acres are found in MPCs 4.2, 5.1, and 6.1 (see MPC map for this management area). Lands in MPC 4.1c have been identified as not suited for timber production. Approximately 40 percent of these acres have been harvested in the past.

**Rangeland Resources** – The area currently contains a portion of one sheep allotment. Management Area 1 provides an estimated 5,100 acres of capable rangeland, which represents about 2 percent of the capable rangeland on the Forest.

**Mineral Resources** - Historic mining has occurred in this area, and some mining claims still exist. However, no claims currently have an approved plan of operation. The potential for mineral development is moderate to high over much of the area, although access in most of this steep, rugged country is poor.

**Fire Management** - Prescribed fire has been used to improve winter range conditions and reduce activity-generated fuels. Wildland fires have burned an estimated 16,500 acres (46 percent) of the management area in the last 15 years, the largest amount (10,000 acres) in the Windy Ridge Fire of 1992. Other large wildland fires were Eagle Bar (1988, 6,000 acres) and Emmett (1989, 500 acres). These fires burned at moderate to high intensity.

No National Fire Plan communities or wildland-urban interface areas have been identified in this management area. Historical fire regimes for the area are estimated to be: 5 percent lethal, 42 percent mixed1 or 2, and 53 percent non-lethal. An estimated 12 percent of the area regimes have vegetation conditions that are highly departed from their historical range. Most of this change has occurred in the historically non-lethal fire regimes, resulting in conditions where wildfire would likely be much larger and more intense and severe than historically. In addition, 51 percent of the area is in moderately departed conditions—16 percent in the mixed1/mixed2 fire regimes, and 35 percent in the non-lethal regimes. Wildfire in these areas may result in somewhat larger patch sizes of high intensity or severity, but not to the same extent as in the highly departed areas in non-lethal fire regimes.

**Land and Special Uses** – This area includes a portion of the Hells Canyon Dam Complex authorized by a Federal Energy Regulatory Commission (FERC) license. A special use authorization is issued to Idaho Power for a buried power line serving the Cuprum-Bear area. Idaho Power also operates and maintains the Pine Creek-Hell’s Canyon power transmission line. This power line right-of-way is located in a designated utility corridor and is authorized as part of the current FERC license for the Hell’s Canyon Dam Complex. When this hydropower project is re-licensed, the power line may be authorized under special use permit. Pine Telephone has a right-of-way authorization for buried telephone lines along the Snake River corridor.

## MANAGEMENT DIRECTION

In addition to Forest-wide Goals, Objectives, Standards, and Guidelines that provide direction for all management areas, the following direction has been developed specifically for this area.

| MPC/Resource Area                                                                                                                         | Direction           | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 4.1c<br/>Undeveloped<br/>Recreation:<br/>Maintain Unroaded<br/>Character with<br/>Allowance for<br/>Restoration<br/>Activities</b> | General<br>Standard | 0101   | Management actions—including mechanical vegetation treatments, salvage harvest, wildland fire use, prescribed fire, special use authorizations, and road maintenance—must be designed and implemented in a manner that would be consistent with the unroaded landscape in the temporary, short term, and long term. Exceptions to this standard are actions in the 4.1c road standards, below. |
|                                                                                                                                           | Road<br>Standard    | 0102   | Within Inventoried Roadless Areas (IRAs), road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                        |
|                                                                                                                                           | Road<br>Standard    | 0103   | Outside IRAs, road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To provide transportation systems that support accomplishment of Management Area ROS objectives.                                                                                          |
|                                                                                                                                           | Fire<br>Guideline   | 0104   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the unroaded landscape.                                                                                                                                                                                                                  |

| MPC/Resource Area                                                                                                                                         | Direction               | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 4.2<br/>Roaded<br/>Recreation<br/>Emphasis</b>                                                                                                     | Vegetation<br>Guideline | 0105   | Vegetation management actions—including wildland fire use, prescribed fire, and mechanical treatments—may be used to maintain or restore desired vegetation and fuel conditions provided they do not prevent achievement of recreation resource objectives.                                                                                                                                                                                                                    |
|                                                                                                                                                           | Fire<br>Guideline       | 0106   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to recreation developments and investments.                                                                                                                                                                                                                                                                                            |
| <b>MPC 5.1 and 6.1<br/>Restoration and<br/>Maintenance<br/>Emphasis within<br/>Forested (5.1) or<br/>Shrubland and<br/>Grassland (6.1)<br/>Landscapes</b> | Vegetation<br>Guideline | 0107   | The full range of treatment activities may be used to restore and maintain desired vegetation and fuel conditions. The available vegetation treatment activities include wildland fire use. Salvage harvest may also occur.                                                                                                                                                                                                                                                    |
|                                                                                                                                                           | Fire<br>Guideline       | 0108   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to habitats, developments, and investments.                                                                                                                                                                                                                                                                                            |
|                                                                                                                                                           | Road<br>Guideline       | 0109   | Road construction or reconstruction may occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To achieve restoration and maintenance objectives for vegetation, water quality, aquatic habitat, or terrestrial habitat, or<br>d) To support management actions taken to reduce wildfire risks in wildland-urban interface areas; or<br>e) To meet access and travel management objectives. |
| <b>Soil, Water,<br/>Riparian, and<br/>Aquatic Resources</b>                                                                                               | Objective               | 0110   | Coordinate with regulatory agencies and the private landowner of the Red Ledge Mine to initiate restoration of watershed conditions and habitat for chinook salmon, steelhead, and bull trout, and assist in the de-listing of the 303(d) status in the Deep Creek subwatershed.                                                                                                                                                                                               |
|                                                                                                                                                           | Guideline               | 0111   | Avoid ground-disturbing management activities on potentially unstable areas (high-risk landslide-prone areas, active portions of existing landslides...), particularly on oversteepened canyonland slopes in Hells Canyon, to reduce the risk of human-caused landslides.                                                                                                                                                                                                      |
| <b>Vegetation</b>                                                                                                                                         | Objective               | 0112   | Maintain or restore the Bitterbrush vegetation group along the lower portions of the Snake River breaks, with emphasis on restoring younger age class structure.                                                                                                                                                                                                                                                                                                               |
| <b>Botanical<br/>Resources</b>                                                                                                                            | Objective               | 0113   | Maintain or restore known populations and occupied habitats of Threatened, Endangered, Proposed, Candidate, or Region 4 Sensitive (TEPCS) plant species, including Hazel's prickly phlox, Cusick's camas, Bartonberry, and Idaho hawksbeard to contribute to the long-term viability of these species.                                                                                                                                                                         |
| <b>Non-native<br/>Plants</b>                                                                                                                              | Objective               | 0114   | Eradicate new and small infestations of spotted knapweed, diffuse knapweed, rush skeletonweed, and whitetop. Control density and population size of Scotch thistle, Dalmatian toadflax, and Canada thistle.                                                                                                                                                                                                                                                                    |
| <b>Wildlife<br/>Resources</b>                                                                                                                             | Objective               | 0115   | Increase white-headed woodpecker habitat by managing ponderosa pine stands within the Ponderosa Pine/Xeric Douglas-fir, Warm Dry Douglas-fir/Moist Ponderosa Pine, and Dry Grand Fir vegetation groups toward the desired ranges of size classes, canopy closures, species composition, snags, and coarse woody debris, as described in Appendix A.                                                                                                                            |

| MPC/Resource Area           | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Wildlife Resources</b>   | Objective | 0116   | Increase flammulated owl habitat by managing ponderosa pine stands within the Warm Dry Douglas-fir/Moist Ponderosa Pine and Dry Grand Fir vegetation groups toward the desired ranges of size classes, canopy closures, species composition, snags, and coarse woody debris, as described in Appendix A.                                                                                                                                                                                                                      |
|                             | Objective | 0117   | Maintain or restore shrubland and grassland communities for big-game winter/spring range along the Snake River corridor.                                                                                                                                                                                                                                                                                                                                                                                                      |
|                             | Objective | 0118   | Coordinate with Idaho Department of Fish and Game, Oregon Department of Fish and Wildlife, and domestic sheep permittees to reduce the risk of disease transmission between domestic and wild sheep.                                                                                                                                                                                                                                                                                                                          |
|                             | Guideline | 0119   | An increase in the white-headed woodpecker or flammulated owl habitat may be achieved by the following methods:<br>a) Reducing tree densities and ladder fuels under and around existing large ponderosa trees and snags to reduce the risk of tree-replacing fire and to restore more open canopy conditions.<br>b) Managing the firewood program to retain large-diameter ponderosa pine and large snags of other species through signing, public education, size restriction, area closures, or other appropriate methods. |
| <b>Recreation Resources</b> | Goal      | 0120   | Maintain a mix of both developed and dispersed camping opportunities within the Snake River corridor to provide a range of recreation opportunities and experiences.                                                                                                                                                                                                                                                                                                                                                          |
|                             | Objective | 0121   | Construct a level 3-type campground on a portion of the Big Bar dispersed site. Provide needed recreation improvements on other portions of the site, while maintaining the overall dispersed character to improve recreation experiences and maintain a range of camping opportunities.                                                                                                                                                                                                                                      |
|                             | Objective | 0122   | Construct campsite and other recreational improvements at Eagle Bar and Eckels Creek dispersed sites to improve recreation experiences.                                                                                                                                                                                                                                                                                                                                                                                       |
|                             | Objective | 0123   | Construct parking areas and provide information signs at the Deep Creek, Eagle Bar, Kinney Creek, Allison Creek, and Eckels Creek trailheads along the Snake River to improve recreation experiences.                                                                                                                                                                                                                                                                                                                         |
|                             | Objective | 0124   | Cooperate with other agencies and Idaho Power Company on a coordinated multi-resource information and education plan in the Snake River corridor to improve visitor education opportunities and to maintain resources.                                                                                                                                                                                                                                                                                                        |
|                             | Objective | 0125   | Upgrade the National Recreation Trail and facilities at the Sheep Rock National Natural Landmark. Widen trail to provide handicap access to the portion that accesses the Hells Canyon overlook.                                                                                                                                                                                                                                                                                                                              |
|                             | Objective | 0126   | Improve Forest Road 106 to Sheep Rock to enhance recreation opportunities and experiences.                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                             | Objective | 0127   | Repair trails where erosion and water-caused resource damage is occurring. Repairs may include rehabilitating eroded trail sections, rerouting sections away from streams, and installing bridges.                                                                                                                                                                                                                                                                                                                            |
|                             | Objective | 0128   | Maintain a mix of both developed and dispersed camping opportunities within the Hell's Canyon River corridor to provide a range of recreation opportunities and experiences.                                                                                                                                                                                                                                                                                                                                                  |



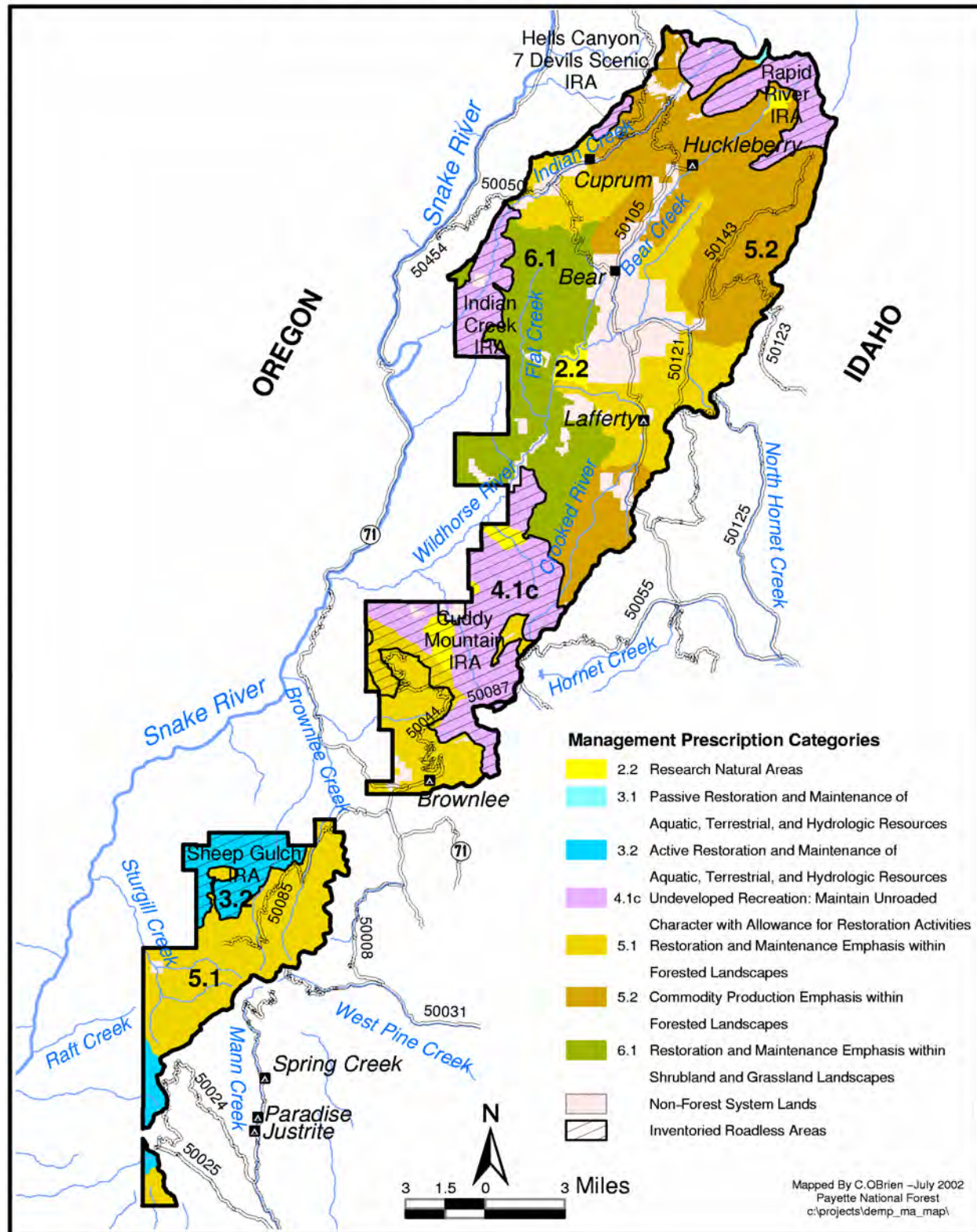
| MPC/Resource Area    | Direction      | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                      |        |
|----------------------|----------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------|
| Recreation Resources | Objective      | 0129   | Evaluate and incorporate methods to help prevent weed establishment and spread from concentrated recreation use in the Copper-Lime Point and Kinney-Kirby subwatersheds. Methods to consider include annual weed inspection and treatment of trailheads, campgrounds, and other high-use areas; and posting educational notices in these areas to inform the public of areas that are highly susceptible to weed invasion and measures they can take to help prevent weed establishment and spread. |                      |        |
|                      | Objective      | 0130   | Achieve or maintain the following ROS strategy:                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |        |
|                      |                |        | ROS Class                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Percent of Mgt. Area |        |
|                      |                |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Summer               | Winter |
|                      |                |        | Semi-Primitive Non-Motorized                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 54%                  | 81%    |
|                      |                |        | Semi-Primitive Motorized                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 26%                  | 14%    |
|                      | Roaded Natural | 20%    | 5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |        |
|                      |                |        | The above numbers reflect current travel regulations. These numbers may change as a result of future travel regulation planning.                                                                                                                                                                                                                                                                                                                                                                    |                      |        |
| Cultural Resources   | Objective      | 0131   | Conduct subsurface testing of the Eckles Creek prehistoric occupation site (PY-934/10AM77) to determine the content and extent of archeological deposits that are currently receiving impacts from recreational activities.                                                                                                                                                                                                                                                                         |                      |        |
|                      | Objective      | 0132   | Maintain the protective fence around the Big Bar prehistoric occupation and historic burial site (PY-1046/10AM45) to discourage vehicle traffic and soil erosion impacts.                                                                                                                                                                                                                                                                                                                           |                      |        |
|                      | Objective      | 0133   | Maintain and monitor the steel locked gate on the Red Fish Cave site (PY 567-10AM241) to protect this site from further vandalism.                                                                                                                                                                                                                                                                                                                                                                  |                      |        |
| Scenic Environment   | Objective      | 0134   | Maintain scenic values as seen along the Snake River corridor and the Sheep Rock National Recreation Trail to maintain high-value recreation experiences.                                                                                                                                                                                                                                                                                                                                           |                      |        |
| Timberland Resources | Standard       | 0135   | Timber management activities must accommodate recreation uses and needs in the Hells Canyon–Seven Devils Scenic Area.                                                                                                                                                                                                                                                                                                                                                                               |                      |        |
| Rangeland Resources  | Objective      | 0136   | Evaluate and incorporate methods to help prevent weed establishment in the Copper-Lime Point subwatershed from grazing activities in the appropriate pastures or allotments. Methods to be considered include changes in the timing, intensity, duration, or frequency of livestock use; the location of salting; and restoration of watering sites.                                                                                                                                                |                      |        |
| Fire Management      | Objective      | 0137   | Identify areas appropriate for Wildland Fire Use, emphasizing the roadless area next to the Hells Canyon Wilderness. Use wildland fire to restore or maintain vegetative desired conditions and to reduce fuel loadings.                                                                                                                                                                                                                                                                            |                      |        |
|                      | Objective      | 0138   | Use prescribed fire and mechanical treatments within and adjacent to Forest Service administrative sites to manage fuels to reduce wildfire hazards.                                                                                                                                                                                                                                                                                                                                                |                      |        |
|                      | Guideline      | 0139   | Coordinate with the Wallowa-Whitman National Forest to develop compatible wildland fire suppression and wildland fire use strategies.                                                                                                                                                                                                                                                                                                                                                               |                      |        |

| MPC/Resource Area             | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Lands and Special Uses</b> | Objective | 0140   | Cooperate with the Wallowa-Whitman and Nez Perce National Forests on the FERC re-licensing of Hells Canyon Dam Complex (Brownlee, Oxbow and Hells Canyon Dams). Use Forest Service authorities under the Federal Power Act to ensure the new license is consistent with Forest Plan direction. Provide terms and conditions that are necessary to mitigate project impacts on National Forest System lands. |
|                               | Objective | 0141   | Initiate a process to de-classify the Hell's Canyon-Seven Devils Scenic Area to reduce layers of management direction for the area and to clarify management intent.                                                                                                                                                                                                                                        |

### Hells Canyon from Black Point



Management Area 02 –Snake River –Location Map



## Management Area 2 Snake River

### MANAGEMENT AREA DESCRIPTION

**Management Prescriptions** - Management Area 2 has the following management prescriptions (see map on preceding page for distribution of prescriptions).

| Management Prescription Category (MPC)                                                   | Percent of Mgt. Area |
|------------------------------------------------------------------------------------------|----------------------|
| 2.2 – Research Natural Areas                                                             | 2                    |
| 3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources | Trace                |
| 3.2 – Active Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources  | 5                    |
| 4.1c – Maintain Unroaded Character with Allowance for Restoration Activities             | 19                   |
| 5.1 – Restoration and Maintenance Emphasis within Forested Landscapes                    | 33                   |
| 5.2 – Commodity Production Emphasis within Forested Landscapes                           | 26                   |
| 6.1 – Restoration and Maintenance Emphasis within Shrubland & Grassland Landscapes       | 15                   |

**General Location and Description** - Management Area 2 is comprised of lands administered by the Payette National Forest within the Snake River drainage south of Hells Canyon (see map, preceding page). The area lies in Adams and Washington Counties, and is part of the Council and Weiser Ranger Districts. The management area is an estimated 168,200 acres, which includes several private land inholdings (OX Ranch and the communities of Bear and Cuprum) that make up about 10 percent of the area. Management Area 2 is comprised of two long and relatively narrow north-south blocks of land that are bordered by Payette National Forest to the east, and by a mix of private, BLM, and State lands to the west. The Hells Canyon NRA and Wilderness Area lie to the north of the northern block, and the Cecil Andrus Wildlife Management Area is situated next to the southwest corner of the northern block. The primary uses or activities in this management area have been timber management, livestock grazing, dispersed recreation, irrigation, and mining.

**Access** - The main access to the area is by paved State Highway 71 from Cambridge, Idaho to Brownlee Guard Station, or by paved and graveled Hornet Creek Road (Forest Road 002) from Council to Bear and Cuprum. Other well-maintained and gravel-surfaced access routes include Forest Road 085 to Middle and West Brownlee Creeks and Forest Road 105 to the Bear Work Center. The estimated density of classified roads for this management area is 1.7 miles per square mile. Total road density for area subwatersheds ranges between 0.3 and 7.5 miles per square mile. Trails provide access to portions of the roadless areas, and most of these trails are open to some form of motorized use.

**Special Features** - An estimated 24 percent of the management area is inventoried as roadless, including all of the Sheep Gulch Roadless Area, most of the Indian Creek Roadless Area, and portions of the Cuddy Mountain, Hells Canyon/Seven Devils, and Rapid River Roadless Areas.

Five Research Natural Areas (Bear Creek, Rocky Comfort Flat, Cuddy Mountain, Emery Creek, and Lost Basin Grasslands) represent a variety of vegetation types in the management area. Bear Creek (409 acres) provides high-quality, representative grand fir habitat types in a range of structural conditions. Rocky Comfort Flat (996 acres) has Douglas-fir forest, mountain mahogany and sagebrush shrubland, bluebunch wheatgrass grassland communities, and habitat for rare and unusual plants. Cuddy Mountain (1,030 acres) has a range of forest and grassland associations on volcanic parent materials, including Douglas-fir, grand fir, black cottonwood, mountain big sage/bluebunch wheatgrass, and bluebunch wheatgrass/Sandberg's bluegrass. Emery Creek (685 acres) encompasses extensive areas of two Columbia Plateau grassland plant communities and several Douglas-fir habitat types. Lost Basin Grasslands (75 acres) has a diversity of grassland plant communities in excellent condition, and incidental examples of shrub-bunchgrass and Douglas-fir plant communities.

A portion of Crooked River is eligible for Wild and Scenic River status (see WSR Map in the map packet). This river segment has a Scenic classification, and is an estimated 3.2 miles long, with an associated river corridor of 1,030 acres.

**Air Quality** - This management area lies within Montana/Idaho Airshed ID-14 and portions of Adams and Washington Counties. Particulate matter is the primary pollutant of concern related to Forest management activities. No ambient air monitors are located within the airshed. There are two Class I areas within 100 kilometers of this management area, the Hells Canyon and Eagle Cap Wildernesses. Visibility monitoring has been expanded for these areas.

Between 1995 and 1999, emissions trends for both counties improved for PM 10, while PM 2.5 emissions remained constant. The most common sources of particulate matter within the counties were wildfire, prescribed fire, and fugitive dust from unpaved roads. In addition to Forest management activities, crop residue and ditch burning may contribute to particulate matter emissions, although the amount of agricultural-related burning was very low in Adams County (less than 600 acres) and low in Washington County (an estimated 3,300 acres). There were no point sources within either county.

**Soil, Water, Riparian, and Aquatic Resources** - Elevations range from 1,750 feet on Indian Creek to 8,005 feet atop Smith Mountain. Management Area 2 falls primarily within the Hornet Plateau and Sturgill Peak Plateau Uplands Subsections. The main geomorphic landforms found in the area are periglacial uplands and mountain slopes, plateaus and escarpments, and fluvial mountains. Slope gradients average 15 to 40 percent on the periglacial uplands and mountain slopes, 30 to 50 percent on the fluvial mountains, and 15 to 80 percent on the plateaus and escarpments. The surface geology is primarily Columbia River basalts, with scattered inclusions of granitic and metasedimentary rock. Soils generally have low to high surface erosion potential, and moderate to high productivity. Subwatershed vulnerability ratings range from low to high, with the majority being moderate (see table below). Geomorphic Integrity ratings for the subwatersheds vary from moderate (functioning at risk) to low (not functioning appropriately) (see table below). Localized impacts occur from roads, timber harvest, mining, wildfires, and livestock grazing. Although impacts have been fairly high in some areas, the basalt landtypes and productive soils in this area are inherently more stable and resilient than those in most other parts of the Forest.



The management area comprises portions of seven 5th field hydrologic units in the Brownlee Reservoir Subbasin: the Indian-McGraw, Bear Creek, Wildhorse River, Brownlee, Sturgill-Soda, Wolf-Conner, and Rock Creek Watersheds. All the watersheds drain directly into the Snake River Basin. The major tributary streams to the Snake River in the area are Indian Creek, Bear Creek, Wildhorse River, and Brownlee Creek. There are no natural lakes in the area, but three large reservoirs (Brownlee, Oxbow, and Hells Canyon) on the Snake River lie to the west of the area. Water Quality Integrity ratings for the subwatersheds vary from moderate (functioning at risk) to low (not functioning appropriately) (see table below). Localized impacts, include sediment loading and thermal changes due to water diversions, timber harvest, mining, natural landslides, and livestock grazing. Only one of the 28 subwatersheds in this area was listed in 1998 as having impaired water bodies under Section 303(d) of the Clean Water Act. This subwatershed is Dennett Creek. The pollutant concerns in this subwatershed are sediment, temperature, and flow alteration. There are currently no TMDL-assigned subwatersheds associated with this management area.

| Subwatershed Vulnerability |      |     | Geomorphic Integrity |      |     | Water Quality Integrity |      |     | No. 303(d) Subs | No. Subs With TMDLs | No. Public Water System Subs |
|----------------------------|------|-----|----------------------|------|-----|-------------------------|------|-----|-----------------|---------------------|------------------------------|
| High                       | Mod. | Low | High                 | Mod. | Low | High                    | Mod. | Low |                 |                     |                              |
| 4                          | 18   | 6   | 0                    | 9    | 19  | 0                       | 22   | 6   | 1               | 0                   | 0                            |

Anadromous fish species no longer exist within area streams due to downstream dams that block their migration routes to and from the ocean. Native redband trout occur throughout area streams, as do introduced brook trout. Threatened bull trout occur in isolated populations, but habitat is fragmented by roads and culverts, irrigation dams and ditches, thermal barriers and, in some cases, natural barrier falls. Although accelerated sediment is fairly high in some areas, sufficient spawning habitat exists. However, rearing habitat is functioning at risk due to elevated water temperatures. Bull trout occur within the Lower Indian, Middle Indian, Upper Indian, Upper Crooked River, Lower Crooked River, and Upper Bear Creek subwatersheds. Highly isolated local populations of bull trout exist in the Upper Crooked River, Lower Crooked, and Upper Bear Creek subwatersheds. Aquatic habitat is functioning at risk in some areas due to high water temperatures and habitat fragmentation. Native fish populations are at risk due to habitat impacts described above and the presence of non-native fish species. The Upper Indian Creek, Upper Crooked Creek, Lower Crooked Creek, and Upper Bear Creek subwatersheds have been identified as important to the bull trout recovery, and as high-priority areas for restoration.

**Vegetation** - Vegetation at lower elevations is typically grasslands, shrublands, ponderosa pine and Douglas-fir on south and west aspects, and Douglas-fir and grand fir forests on north and east aspects. Mid and upper elevations are dominated by shrubs and forest communities of Douglas-fir, grand fir, and subalpine fir, with pockets of western larch, lodgepole pine, whitebark pine, and aspen.

Just over 30 percent of the management area is comprised of rock, water, or shrubland and grassland vegetation groups, including Perennial Grass Montane, Perennial Grass Slopes, Montane Shrub, Bitterbrush, Mountain Big Sage, and Low Sage. The main forested vegetation groups in the area are Cool Moist Grand Fir (24 percent), Warm Douglas-fir/Moist Ponderosa

Pine (17 percent), Dry Grand Fir (13 percent), Warm Dry Subalpine Fir (9 percent), and Dry Ponderosa Pine/Xeric Douglas-fir (4 percent). Isolated patches of the Warm Dry Subalpine Fir group are scattered through the upper elevations, primarily on north slopes and in high basins (e.g., No Business Creek or Benton Creek). These patches provide the “fragmented lynx habitat” referred to in the Wildlife characterization. On the northern end of the management area, succession is moving these stands outside their historic range of variation due to lack of disturbance.

In the non-forested groups, Perennial Grass Montane and Perennial Grass Slopes are functioning at risk due to increases in non-native species such as cheat grass and Medusa head rye, and noxious weeds such as Scotch thistle, white top, and Dalmatian toadflax. Montane Shrub and Low Sage are at properly functioning condition. Mountain Big Sagebrush and Bitterbrush are functioning at risk due to the high percentage of older structural stages, lack of regeneration, and an increase in non-native species. Past fire exclusion and grazing impacts have contributed to older, more decadent stand conditions that are less resilient to fire and other disturbances.

The Ponderosa Pine/Xeric Douglas-fir and Warm Dry Subalpine Fir groups are at properly functioning condition, although dwarf mistletoe levels are moderate to high in the Douglas fir, ponderosa pine, and western larch components. The Warm Dry Douglas-fir/Moist Ponderosa Pine, Dry Grand Fir, and Cool Moist Grand Fir groups are functioning at risk. In managed areas, these groups have low levels of large trees, snags, logs, insects, and disease, and high levels of seral species and mid-aged structural stages. In unmanaged areas, these groups have high stand densities, with shade-tolerant grand fir and high levels of insect and disease infestations, which have increased the risk of stand-replacing fire.

Some riparian vegetation is functioning at risk due to localized impacts from roads, livestock grazing, and private land uses, particularly in the Brownlee Creek and Wildhorse River drainages. Composition has changed in many riparian areas due to roads, timber harvest, livestock grazing, and fire exclusion. Noxious weed species have increased and native sedge species have decreased. Cottonwoods and broadleaf shrubs have also decreased, and are not regenerating in many areas due to lack of fire disturbance, hydrologic changes, and non-native plant competition.

**Botanical Resources** - Several current Region 4 Sensitive species occur in this area, including Snake River goldenweed, Tolmie’s onion, puzzling halimolobos, and Cusick’s camas. Although no federally listed or proposed plant species are currently known to occur in the area, potential habitat for Ute ladies’-tresses, Spalding’s silene, and slender moonwort may exist within the area. Spalding’s silene, a Threatened species, may occur in fescue grassland habitat types up to 5,500 feet in elevation. Ute Ladies’-tresses, a Threatened species, may have moderate to high potential habitat in riparian/wetland areas up to 7,000 feet. Slender moonwort, a Candidate species, may occur in moderate to higher elevation grasslands, meadows, and small openings in spruce and lodgepole pine.

**Non-native Plants** - Many noxious weeds and exotic plants have been introduced into the area, particularly along the main road corridors. An estimated 26 percent of the area is highly susceptible to invasion by noxious weeds and exotic plant species. The main weeds of concern are spotted knapweed, diffuse knapweed, Scotch thistle, whitetop, Dalmatian toadflax, St.

Johnwort, and Canada thistle. Most weeds are currently found in small, scattered populations within the area. Canada thistle and St. Johnswort are dispersed throughout the area. Brownlee Campground is considered highly susceptible to noxious weed invasion and spread.

Subwatersheds in the table below have an inherently high risk of weed establishment and spread from activities identified with a “yes” in the various activity columns. This risk is due to the amount of drainage area that is highly susceptible to noxious weed invasion and the relatively high level of exposure from those identified vectors or carriers of weed seed.

| Subwatershed            | Road-related Activities | Livestock Use | Timber Harvest | Recreation & Trail Use | ATV Off-Road Use |
|-------------------------|-------------------------|---------------|----------------|------------------------|------------------|
| Rock Creek              | Yes                     | Yes           | Yes            | No                     | No               |
| Salt Creek-Black Canyon | Yes                     | No            | No             | No                     | No               |
| Lower Brownlee Creek    | Yes                     | No            | No             | No                     | Yes              |
| East Brownlee Creek     | Yes                     | No            | Yes            | No                     | No               |
| Middle Brownlee Creek   | Yes                     | Yes           | Yes            | No                     | Yes              |
| West Brownlee Creek     | Yes                     | Yes           | Yes            | No                     | Yes              |
| Dennett Creek           | Yes                     | No            | No             | No                     | No               |

**Wildlife Resources** - The wide range of elevations and vegetation types in this area provide a variety of wildlife habitats. Much of the lower-elevation grasslands and shrublands is winter/spring range for elk and deer, and habitat for introduced turkey and chukar. Mid-elevation mixed conifer forests provide habitat for Region 4 sensitive species, including northern goshawk, flammulated owl, summer habitat for mountain quail and white-headed woodpecker. Bighorn sheep, mountain goats, golden eagles, and many species of bats use the rocky bluffs that extend up the Snake River canyonlands. Bighorn sheep populations near the northwest corner of the management area are threatened by disease transmission from domestic sheep. High-elevation subalpine fir forests provide nesting and foraging habitat for many migratory land birds, as well as summer range for mammals such as elk, black bear, and mountain lion. Isolated habitat for the Threatened species, northern Idaho ground squirrel, occurs in the northern portion of the management area. Habitat for lynx, also a Threatened species, occurs in fragmented patches in this area. Because of this, only the northern corner of the area has been mapped as part of a Lynx Analysis Unit that extends into the Hells Canyon Wilderness and the Rapid River drainage. Overall, terrestrial habitat is functioning at risk for several reasons. Roads and harvest units in some areas have increased habitat fragmentation and vulnerability for game species. Past harvest units have relatively low levels of large trees, snags, and down logs for species dependent on those components. The introduction of exotic plant species and noxious weeds has lowered the quality of habitat and forage for some native species. Fire exclusion and conifer encroachment have reduced habitat for northern Idaho ground squirrels.

**Recreation Resources** - Dispersed recreation such as hunting, hiking, sightseeing, and camping occurs throughout the area. There are many dispersed campsites and five developed campgrounds. The area is in Idaho Fish and Game Management Units 22 and 31. Many of the users come from the Treasure Valley (Boise, Nampa, Caldwell), about 100 miles to the south, as well as local communities such as Council and Cambridge. Most of the trails in the area are



open to some form of motorized use. Roadless areas and travel corridors are managed to retain a natural-appearing setting and visual quality. Recreation special uses include two annual recreation events and two outfitter/guide permits.

Dispersed recreation is emphasized. Dispersed camping opportunities are maintained and resource protection measures are used where needed. Other types of dispersed recreation uses offer a mix of roaded and unroaded opportunities. Roads, areas, and trails are signed as to motorized access restrictions.

Developed recreation sites are maintained at current or improved levels. Renovation of existing developed sites occurs when current facility conditions no longer effectively serve the public.

Trail maintenance is emphasized. Trail funding is used to maintain trails at current or improved levels. The most heavily used trails and those with resource damage have maintenance priority. Trailhead signing indicates the types of trail use allowed.

**Scenic Environment** – Visually sensitive routes and use areas represent locations from which the scenic environment is considered especially important. These routes or areas generally have a more restrictive VQO assigned to them than areas not seen from such locations. The following is a list of visually sensitive routes or use areas with this management area. Some roads or trails may have segments that are listed at different sensitivity levels. There may also be sensitive routes or use areas in adjacent management areas that could be affected by actions taken in this management area.

| Route or Area Type | Sensitivity Level | Name of Route or Area                                                                                                                                                                 |
|--------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Roads              | 1                 | State Highway 71, Black Lake 112, Sheep Rock 106, Landore 105                                                                                                                         |
| Roads              | 2                 | Council-Cuprum 002, Lick Creek 143, Grouse Creek 123, Landore 105, Bear Creek 110, Cuddy Mountain 087                                                                                 |
| Trails             | 1                 | None                                                                                                                                                                                  |
| Trails             | 2                 | Little Bear Creek 226, Upper Bear Creek 228, Upper Lick Creek 229, Mickey Creek 230, Lick Creek Ridge 231, Crooked River 235, Grouse Creek-Grizzly Creek 252, 253, 254, 255, 257, 258 |
| Use Areas          | 1                 | Brownlee Campground, Lick Creek Lookout                                                                                                                                               |
| Use Areas          | 2                 | Lafferty Campground, Huckleberry Campground, Cuddy Point Lookout                                                                                                                      |

**Cultural Resources** – Cultural themes in this area include Mining, Native American, Homesteading/Ranching, and Forest Service Administration. Historic mining sites and communities such as Cuprum, Landore, and Decorah are located here, as are the Smith Mountain and Horse Mountain Fire Lookouts. Early ranching and homesteading sites include the Davis community and what is now the OX Ranch. Numerous upland prehistoric American Indian sites and travel routes exist in this area.

**Timberland Resources** - Of the estimated 94,700 tentatively suited acres in this management area, 64,100 acres have been identified as being suited timberlands, or appropriate for timber production. This represents about 19 percent of the Forest's suited timberland acres. The suited timberland acres are found in MPCs 5.2, 5.1, and 6.1 (see MPC map for this management area).

Lands in MPCs 2.2, 3.1, 3.2, and 4.1c have been identified as not suited for timber production. Past activities have included road building, logging, and plantations related to both green and salvage timber harvest. Forest products such as fuelwood, posts and poles, and Christmas trees are collected in designated areas. This area also includes the Calf Pen Progeny Test Area.

**Rangeland Resources** - The management area contains all or portions of 12 allotments, with one sheep allotment located primarily in the northern third of the area, and eleven cattle allotments located throughout the remaining area. Management Area 2 provides an estimated 42,900 acres of capable rangeland, which represents about 19 percent of the capable rangeland on the Forest.

**Mineral Resources** - Many mining claims exist in Management Area 2. Although no claim currently has an approved plan of operation, the potential for mineral development is considerable.

**Fire Management** - Prescribed fire is used for general vegetative restoration, to improve winter range conditions, and to reduce activity-generated and natural fuels. Wildland fires have burned an estimated 8,000 acres (5 percent) of the management area at moderate to high intensity in the last 15 years. The largest burns (7,500 acres) were the Windy Ridge Fire of 1992 and the Fawn Creek Fire of 1991 (344 acres).

Cuprum is a National Fire Plan community, and Upper Indian Creek, Middle Indian Creek, and Upper Crooked River subwatersheds are considered wildland-urban interface areas due to residential development adjacent to the Forest. The Upper Indian Creek and Middle Indian Creek subwatersheds are also considered to pose risks to life and property from potential post-fire floods and debris flows. Historical fire regimes for the area are estimated to be: 1 percent lethal, 50 percent mixed<sup>1</sup> or 2, and 49 percent non-lethal. An estimated 11 percent of the area regimes have vegetation conditions that are highly departed from their historical range. Most of this change has occurred in the historically non-lethal fire regimes, resulting in conditions where wildfire would likely be much larger and more intense and severe than historically. In addition, 48 percent of the area is in moderately departed conditions—21 percent in the mixed<sup>1</sup>/mixed<sup>2</sup> fire regimes, and 27 percent in the non-lethal regimes. Wildfire in these areas may result in somewhat larger patch sizes of high intensity or severity, but not to the same extent as in the highly departed areas in non-lethal fire regimes.

**Lands and Special Uses** – A special use authorization is issued to Idaho Power for the Oxbow-McCall power transmission line, a designated utility corridor. Idaho Power also maintains the Brownlee-Boise Bench 3 and 4, power transmission lines. These power lines are located in designated utility corridors and are authorized as part of the current FERC license for the Hell's Canyon Dam Complex. When this hydropower project is re-licensed, the power line may be authorized under special use permit. Other authorizations issued to Idaho Power include buried power lines serving the Cuprum-Bear area and the microwave site on Lynes Point.

Cambridge Telephone Company is authorized for buried telephone lines serving the Cuprum-Bear and Crooked River areas. Midvale Telephone Company is authorized for buried telephone cables serving the Brownlee Reservoir area.

Lynes Point and Smith Mountain are designated communication sites. These sites are designated for both commercial and non-commercial uses.

There are numerous isolated parcels of private land scattered throughout the area. These private lands often depend on access across the National Forest System lands using system roads and in some situations may require authorization to use and occupy the Forest for road access. There are five private road easements. Adams County has been issued a Highway Easement Deed for the right-of-way on the Council-Cuprum Road.

There is one authorization for a domestic water system, and one for operation and maintenance of an irrigation ditch. Two permittees have submitted applications for their agricultural water systems, requesting that a permanent conditional easement be issued per Public Law 99-545, commonly known as the *Colorado Ditch Bill*.

## MANAGEMENT DIRECTION

In addition to Forest-wide Goals, Objectives, Standards, and Guidelines that provide direction for all management areas, the following direction has been developed specifically for this area.

| MPC/Resource Area                                                                                                        | Direction           | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------|---------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 2.2<br/>Research Natural<br/>Areas</b>                                                                            | General Standard    | 0201   | Mechanical vegetation treatments, salvage harvest, prescribed fire, and wildland fire use may only be used to maintain values for which the areas were established, or to achieve other objectives that are consistent with the RNA establishment record or management plan.                                                                                                                                                                                                                                                                         |
|                                                                                                                          | Road Standard       | 0202   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To maintain the values for which the RNA was established.                                                                                                                                                                                                                                                                                                     |
|                                                                                                                          | Fire Guideline      | 0203   | The full range of fire suppression strategies may be used to suppress wildfires. Fire suppression strategies and tactics should minimize impacts to the values for which the RNA was established.                                                                                                                                                                                                                                                                                                                                                    |
| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | General Standard    | 0204   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years).                                                                                                                                                                                                                                                       |
|                                                                                                                          | Vegetation Standard | 0205   | Mechanical vegetation treatments, excluding salvage harvest, may only occur where:<br>a) The responsible official determines that wildland fire use or prescribed fire would result in unreasonable risk to public safety and structures, investments, or undesirable resource affects; and<br>b) They maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>c) They maintain or restore habitat for native and desired non-native wildlife and plant species. |

| MPC/Resource Area                                                                                                                         | Direction              | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b>                  | Fire<br>Standard       | 0206   | Wildland fire use and prescribed fire may only be used where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species, or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species.                                                                                                                                                                      |
|                                                                                                                                           | Road<br>Standard       | 0207   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To address immediate response situations where, if the action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                                                                                                 |
|                                                                                                                                           | Fire<br>Guideline      | 0208   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                   |
| <b>MPC 3.2<br/>Active Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b>                   | General<br>Standard    | 0209   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary (up to 3 years) or short-term time periods, and must be designed to avoid resource degradation in the long term (greater than 15 years).                                                                                                                                                                                                      |
|                                                                                                                                           | Vegetation<br>Standard | 0210   | Vegetation restoration or maintenance treatments—including wildland fire use, mechanical, and prescribed fire—may only occur where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species; or<br>c) Reduce risk of impacts from wildland fire to human life, structures, and investments. |
|                                                                                                                                           | Road<br>Standard       | 0211   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To support aquatic, terrestrial, and watershed restoration activities, or<br>d) To address immediate response situations where, if the action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                 |
|                                                                                                                                           | Fire<br>Guideline      | 0212   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                   |
| <b>MPC 4.1c<br/>Undeveloped<br/>Recreation:<br/>Maintain Unroaded<br/>Character with<br/>Allowance for<br/>Restoration<br/>Activities</b> | General<br>Standard    | 0213   | Management actions allowed—including mechanical vegetation treatments, salvage harvest, wildland fire use, prescribed fire, special use authorizations, and road maintenance—must be designed and implemented in a manner that would be consistent with the unroaded landscape in the temporary, short term, and long term. Exceptions to this standard are actions in the 4.1c road standards, below.                                                                                 |
|                                                                                                                                           | Road<br>Standard       | 0214   | Within IRAs, road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                                                                             |

| MPC/Resource Area                                                                                                                         | Direction         | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>MPC 4.1c<br/>Undeveloped<br/>Recreation:<br/>Maintain Unroaded<br/>Character with<br/>Allowance for<br/>Restoration<br/>Activities</b> | Road<br>Standard  | 0215   | Outside IRAs, road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To provide transportation systems that support accomplishment of Management Area ROS objectives.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                           | Fire<br>Guideline | 0216   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the unroaded landscape.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>MPC 5.1<br/>Restoration and<br/>Maintenance<br/>Emphasis within<br/>Forested<br/>Landscapes</b>                                        | Road<br>Standard  | 0217   | There shall be no net increase in road densities in the MPC 5.1 portion of the Lower Crooked Creek subwatershed unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that:<br>a) For resources that are within their range of desired conditions, the increase in road densities shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>b) For resources that are in a degraded condition, the increase in road densities shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>c) Adverse effects to TEPC species or their habitat are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitat.<br>An exception to this standard is where additional roads are required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations).             |
|                                                                                                                                           | Road<br>Standard  | 0218   | New roads and landings shall be located outside of RCAs in the MPC 5.1 portion of the Lower Crooked Creek subwatershed unless it can be demonstrated through a project-level NEPA analysis and Biological Assessment that:<br>a) For resources that are within their range of desired conditions, any new road or landing in an RCA shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>b) For resources that are in a degraded condition, any new road or landing in an RCA shall not further degrade nor retard attainment of desired conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>c) Adverse effects to TEPC species or their habitats are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitats.<br>An exception to this standard is where construction of new roads in RCAs is required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations). |
|                                                                                                                                           | Fire<br>Guideline | 0219   | The full range of treatment activities may be used to restore and maintain desired vegetation and fuel conditions. The available vegetation treatment activities include wildland fire use. Salvage harvest may also occur.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| MPC/Resource Area                                                                                  | Direction         | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <b>MPC 5.1<br/>Restoration and<br/>Maintenance<br/>Emphasis within<br/>Forested<br/>Landscapes</b> | Fire<br>Guideline | 0220   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to habitats, developments, and investments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                    | Road<br>Guideline | 0221   | Road construction or reconstruction may occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To achieve restoration and maintenance objectives for vegetation, water quality, aquatic habitat, or terrestrial habitat; or<br>d) To support management actions taken to reduce wildfire risks in wildland-urban interface areas; or<br>e) To meet access and travel management objectives.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>MPC 5.2<br/>Commodity<br/>Production<br/>Emphasis within<br/>Forested<br/>Landscapes</b>        | Road<br>Standard  | 0222   | There shall be no net increase in road densities in the 5.2 MPC portions of the Upper Crooked Creek and Upper Bear Creek subwatersheds unless it can be demonstrated through a project-level NEPA analysis and Biological Assessment that:<br>a) For resources that are within their range of desired conditions, the increase in road densities shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>b) For resources that are in a degraded condition, the increase in road densities shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>c) Adverse effects to TEPC species or their habitat are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitat.<br>An exception to this standard is where additional roads are required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations).                       |
|                                                                                                    | Fire<br>Standard  | 0223   | Wildland fire use is prohibited.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                    | Road<br>Standard  | 0224   | New roads and landings shall be located outside of RCAs in the MPC 5.2 portions of the Upper Crooked Creek and Upper Bear Creek subwatersheds unless it can be demonstrated through a project-level NEPA analysis and Biological Assessment that:<br>a) For resources that are within their range of desired conditions, any new road or landing in an RCA shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>b) For resources that are in a degraded condition, any new road or landing in an RCA shall not further degrade nor retard attainment of desired conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>c) Adverse effects to TEPC species or their habitats are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitats.<br>An exception to this standard is where construction of new roads in RCAs is required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations). |

| MPC/Resource Area                                                                                                     | Direction         | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <b>MPC 5.2<br/>Commodity<br/>Production<br/>Emphasis within<br/>Forested<br/>Landscapes</b>                           | Fire<br>Guideline | 0225   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to developments and investments.                                                                                                                                                                                                                                                                                                       |
|                                                                                                                       | Fire<br>Guideline | 0226   | Prescribed fire may be used to:<br>a) Maintain or restore desired vegetative conditions on unsuited timberlands; or<br>b) Maintain or restore desired fuel conditions for all vegetation types; or<br>c) Maintain desired vegetative conditions on suited timberlands within PVGs 2 through 10.                                                                                                                                                                                |
| <b>MPC 6.1<br/>Restoration and<br/>Maintenance<br/>Emphasis within<br/>Shrubland and<br/>Grassland<br/>Landscapes</b> | Fire<br>Guideline | 0227   | The full range of treatment activities may be used to restore and maintain desired vegetation and fuel conditions. The available vegetation treatment activities include wildland fire use. Salvage harvest may also occur.                                                                                                                                                                                                                                                    |
|                                                                                                                       | Fire<br>Guideline | 0228   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to habitats, developments, and investments.                                                                                                                                                                                                                                                                                            |
|                                                                                                                       | Road<br>Guideline | 0229   | Road construction or reconstruction may occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To achieve restoration and maintenance objectives for vegetation, water quality, aquatic habitat, or terrestrial habitat; or<br>d) To support management actions taken to reduce wildfire risks in wildland-urban interface areas; or<br>e) To meet access and travel management objectives. |
| <b>Soil, Water,<br/>Riparian, and<br/>Aquatic Resources</b>                                                           | Objective         | 0230   | Restore riparian vegetation and floodplain function by reducing the adverse effects of roads through relocation, reconstruction, or obliteration in the Brownlee Creek and Wildhorse River drainages.                                                                                                                                                                                                                                                                          |
|                                                                                                                       | Objective         | 0231   | Initiate restoration of watershed conditions and fish habitat in the Upper Indian Creek, Upper Bear Creek, and Upper Crooked River, and Lower Crooked Creek subwatersheds to help strengthen bull trout populations.                                                                                                                                                                                                                                                           |
|                                                                                                                       | Guideline         | 0232   | Avoid land-disturbing management activities on potentially unstable areas (landslide-prone areas or active portions of existing landslides), particularly on oversteepened canyonland slopes in the Sturgill, West Brownlee, Cottonwood/Robinette, Dennett, Lower Brownlee, and East Brownlee drainages.                                                                                                                                                                       |
| <b>Vegetation</b>                                                                                                     | Objective         | 0233   | Allow natural succession to dominate in the Warm Dry Subalpine Fir group south of Cuddy Mountain. Increase early seral conifer species (Douglas-fir, western larch, Engelmann spruce, and lodgepole pine) in the Warm Dry Subalpine Fir group from Cuddy Mountain north to Smith Mountain.                                                                                                                                                                                     |
|                                                                                                                       | Objective         | 0234   | Maintain and promote native grasses and aspen where they occur, and maintain or restore desired conditions for age and canopy class structure in sagebrush and bitterbrush cover types.                                                                                                                                                                                                                                                                                        |
|                                                                                                                       | Objective         | 0235   | Restore structure and composition of shrub and deciduous tree components in those portions of riparian areas where these components are missing or on a downward trend due to historic livestock use, fire exclusion, conifer encroachment, roads, and non-native plants.                                                                                                                                                                                                      |

| MPC/Resource Area          | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <b>Vegetation</b>          | Objective | 0236   | Restore herbaceous and hydric plant composition in Brownlee Creek and Wildhorse River drainages to move toward desired conditions for species composition in these areas.                                                                                                                                                                                                                                                                                                                                                     |
| <b>Botanical Resources</b> | Objective | 0237   | Maintain or restore known populations and occupied habitats of TEPCS plant species, including Snake River goldenweed, Tolmie's onion, puzzling halimolobos, and Cusick's camas to contribute to the long-term viability of these species.                                                                                                                                                                                                                                                                                     |
|                            | Objective | 0238   | Continue long-term monitoring of Snake River goldenweed to determine whether the viability of local populations is maintained over the long term.                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Non-native Plants</b>   | Objective | 0239   | To reduce impacts on native plants and other resources, eradicate new and small infestations of spotted knapweed and diffuse knapweed. Control density and size of Scotch thistle, whitetop, Canada thistle, and Dalmatian toadflax populations. Contain St. Johnswort.                                                                                                                                                                                                                                                       |
| <b>Wildlife Resources</b>  | Goal      | 0240   | Restore northern Idaho ground squirrel habitat quality, abundance, and connectivity to promote recovery of the species.                                                                                                                                                                                                                                                                                                                                                                                                       |
|                            | Objective | 0241   | Implement the recovery plan for the northern Idaho ground squirrel, when approved, to promote recovery of the species.                                                                                                                                                                                                                                                                                                                                                                                                        |
|                            | Objective | 0242   | Increase white-headed woodpecker habitat by managing ponderosa pine stands within the Ponderosa Pine/Xeric Douglas-fir, Warm Dry Douglas-fir/Moist Ponderosa Pine, and Dry Grand Fir vegetation groups toward the desired ranges of size classes, canopy closures, species composition, snags, and coarse woody debris, as described in Appendix A. The ranges of these components may vary by management prescription.                                                                                                       |
|                            | Objective | 0243   | Increase flammulated owl habitat by managing ponderosa pine stands within the Warm Dry Douglas-fir/Moist Ponderosa Pine and Dry Grand Fir vegetation groups toward the desired ranges of size classes, canopy closures, species composition, snags, and coarse woody debris, as described in Appendix A. The ranges of these components may vary by management prescription category.                                                                                                                                         |
|                            | Guideline | 0244   | An increase in the white-headed woodpecker or flammulated owl habitat may be achieved by the following methods:<br>a) Reducing tree densities and ladder fuels under and around existing large ponderosa trees and snags to reduce the risk of tree-replacing fire and to restore more open canopy conditions.<br>b) Managing the firewood program to retain large-diameter ponderosa pine and large snags of other species through signing, public education, size restriction, area closures, or other appropriate methods. |
|                            | Objective | 0245   | Maintain or restore shrubland and grassland communities to provide for big-game winter/spring range along the Snake River breaks.                                                                                                                                                                                                                                                                                                                                                                                             |
|                            | Objective | 0246   | Coordinate with Idaho Department of Fish and Game to reduce bull elk vulnerability through the use of security areas and reductions in open road density to move toward State herd composition objectives.                                                                                                                                                                                                                                                                                                                    |
|                            | Objective | 0247   | Coordinate with Idaho Department of Fish and Game, Oregon Department of Fish and Wildlife, and domestic sheep permittees to reduce the risk of disease transmission between domestic and wild sheep.                                                                                                                                                                                                                                                                                                                          |



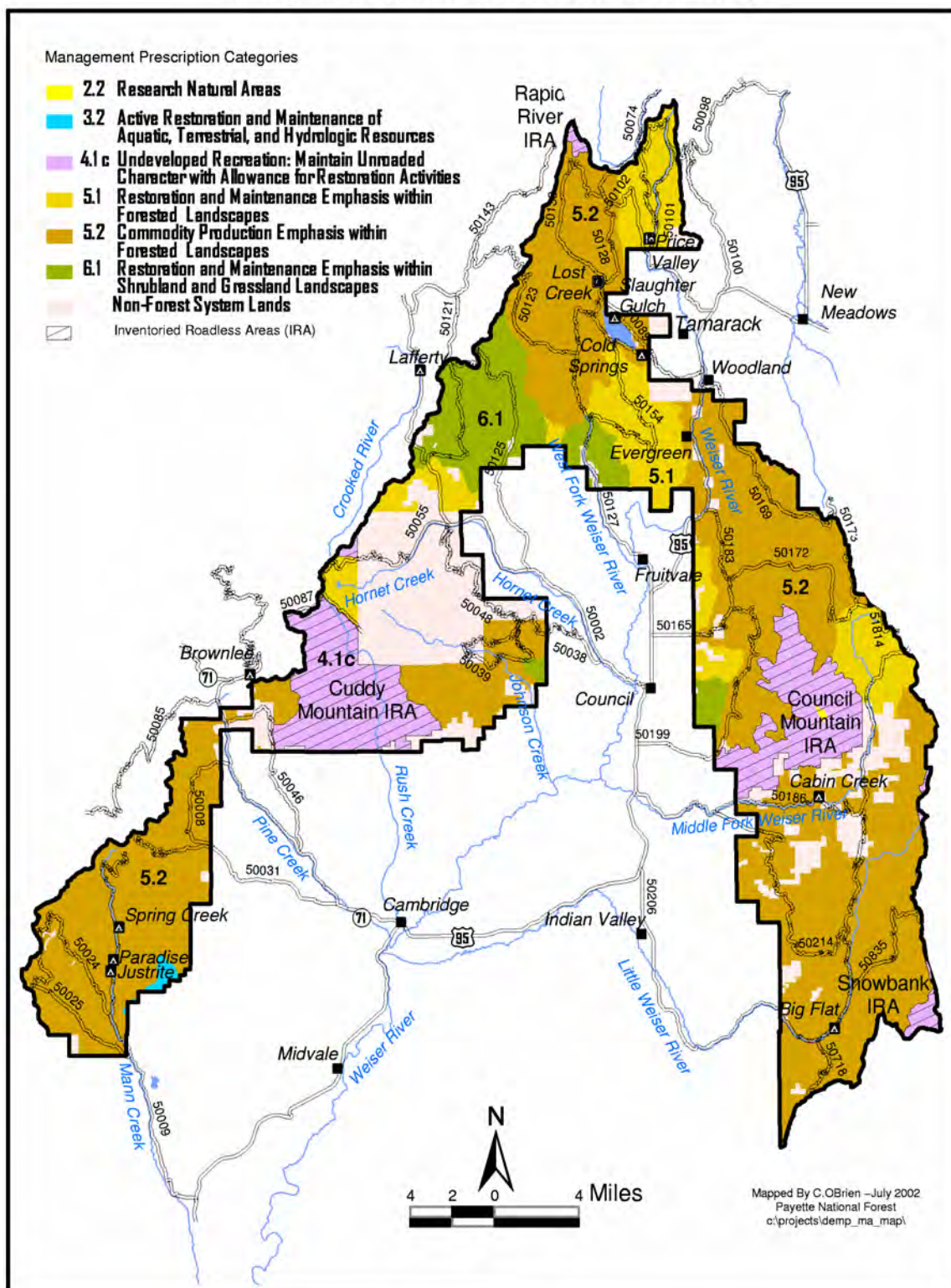
| MPC/Resource Area           | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Wildlife Resources</b>   | Standard  | 0248   | The northern Idaho ground squirrel will receive priority consideration for all management activities that occur within their known occupied habitat. The intent of this standard is not to exclude all other activities within this habitat, but rather to reduce or minimize potential impacts to this species while emphasizing habitat improvement within and adjacent to known sites.                                                                       |
|                             | Standard  | 0249   | Vegetation treatments must be designed and implemented to maintain or improve existing wildlife habitat values in forest stringers south of Cuddy Mountain. Forest stringers in this area are defined as narrow fingers of forested vegetation less than 500 feet wide, or isolated patches of forested vegetation less than 10 acres in size.                                                                                                                  |
| <b>Recreation Resources</b> | Objective | 0250   | Evaluate developed campgrounds and upgrade as needed to provide universal access and to accommodate larger camp trailers and recreation vehicles.                                                                                                                                                                                                                                                                                                               |
|                             | Objective | 0251   | Evaluate the need for dispersed campsites and establish sites within areas where they will have relatively low impacts to important biophysical resources.                                                                                                                                                                                                                                                                                                      |
|                             | Objective | 0252   | Construct parking areas and provide information signs at key trailhead locations. Parking for a minimum of two or three vehicles is needed in most cases to improve recreation experiences.                                                                                                                                                                                                                                                                     |
|                             | Objective | 0253   | Repair trails where erosion and water-caused resource damage is occurring. Repairs may include rehabilitating eroded trail sections, rerouting sections away from streams, and installing bridges.                                                                                                                                                                                                                                                              |
|                             | Objective | 0254   | Seek to acquire trail easements through private lands to improve access to National Forest recreation opportunities.                                                                                                                                                                                                                                                                                                                                            |
|                             | Objective | 0255   | Develop a travel access plan for areas adjacent to the Cecil Andrus Wildlife Management Area to create more effective management and recreation opportunities, which will better serve the public and maintain wildlife resources. Coordinate planning efforts with Idaho Department of Fish and Game.                                                                                                                                                          |
|                             | Objective | 0256   | Develop a scenic overlook and interpretive site at Brownlee Summit to enhance visitor experiences.                                                                                                                                                                                                                                                                                                                                                              |
|                             | Objective | 0257   | Improve trail signing, especially in areas near Cuddy Mountain and Sturgill Peak where past management activities have made trail location difficult.                                                                                                                                                                                                                                                                                                           |
|                             | Objective | 0258   | Evaluate and incorporate methods to help prevent weed establishment and spread from off-road ATV/motorbike use in the Middle Brownlee Creek subwatershed. Methods to consider include annual weed inspection and treatment of trailheads and other high-use areas; and posting educational notices in these areas to inform the public of areas that are susceptible to weed invasion and measures they can take to help prevent weed establishment and spread. |

| MPC/Resource Area    | Direction | Number                                                                                                                                                                                                                                  | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                  |           |                      |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
|----------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------|--|--------|--------|-------------------------------|----|-----|---------------------------|-----|-----|----------------|----|----|-----------------|-----|-----|
| Recreation Resources | Objective | 0259                                                                                                                                                                                                                                    | Achieve or maintain the following ROS strategy: <table><tr><th rowspan="2">ROS Class</th><th colspan="2">Percent of Mgt. Area</th></tr><tr><th>Summer</th><th>Winter</th></tr><tr><td>Semi -Primitive Non-Motorized</td><td>0%</td><td>42%</td></tr><tr><td>Semi -Primitive Motorized</td><td>20%</td><td>10%</td></tr><tr><td>Roaded Natural</td><td>9%</td><td>7%</td></tr><tr><td>Roaded Modified</td><td>71%</td><td>41%</td></tr></table>    | ROS Class | Percent of Mgt. Area |  | Summer | Winter | Semi -Primitive Non-Motorized | 0% | 42% | Semi -Primitive Motorized | 20% | 10% | Roaded Natural | 9% | 7% | Roaded Modified | 71% | 41% |
|                      |           |                                                                                                                                                                                                                                         | ROS Class                                                                                                                                                                                                                                                                                                                                                                                                                                         |           | Percent of Mgt. Area |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
|                      |           |                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Summer    | Winter               |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
|                      |           |                                                                                                                                                                                                                                         | Semi -Primitive Non-Motorized                                                                                                                                                                                                                                                                                                                                                                                                                     | 0%        | 42%                  |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
|                      |           |                                                                                                                                                                                                                                         | Semi -Primitive Motorized                                                                                                                                                                                                                                                                                                                                                                                                                         | 20%       | 10%                  |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
|                      |           |                                                                                                                                                                                                                                         | Roaded Natural                                                                                                                                                                                                                                                                                                                                                                                                                                    | 9%        | 7%                   |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
| Roaded Modified      | 71%       | 41%                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |                      |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
| Standard             | 0260      | All new developed recreation facilities shall be located outside occupied NIDGS habitat.                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |                      |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
| Guideline            | 0261      | Consider Brownlee Campground as a high priority area for noxious weed inspection, eradication, and prevention. Noxious weed detection, management, and prevention should be practiced and promoted at this facility on an annual basis. |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |                      |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
| Cultural Resources   | Objective | 0262                                                                                                                                                                                                                                    | Document surface area and do limited archeological testing on the Steen Creek prehistoric occupation site (PY-330/10AM107) that was disturbed during timber harvest activities to meet state and federal requirements for management of historic properties .                                                                                                                                                                                     |           |                      |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
| Timberland Resources | Objective | 0263                                                                                                                                                                                                                                    | Reduce the acres of Douglas-fir dwarf mistletoe infection in the upper elevations of the Hitt Mountains by regenerating stands and planting ponderosa pine and non-host species, if possible, or by creating openings without infected residual trees.                                                                                                                                                                                            |           |                      |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
|                      | Objective | 0264                                                                                                                                                                                                                                    | Reduce the opportunity for noxious weed establishment and spread by keeping suitable weed sites to a minimum during timber harvest activities in the Rock Creek, East Brownlee, Middle Brownlee, and West Brownlee subwatersheds. Consider such methods as designated skid trails, winter skidding, minimal fire line construction, broadcast burning rather than pile burning, or keeping slash piles small to reduce heat transfer to the soil. |           |                      |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
|                      | Guideline | 0265                                                                                                                                                                                                                                    | Existing noxious weed infestations should be treated on landings, skid trails, and helibases in the project area before timber harvest activities begin in the Rock Creek, East Brownlee, Middle Brownlee, and West Brownlee subwatersheds.                                                                                                                                                                                                       |           |                      |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
| Rangeland Resources  | Objective | 0266                                                                                                                                                                                                                                    | Provide rangeland management systems to help restore riparian vegetation and bank stability in the Brownlee Creek and Wildhorse River drainages.                                                                                                                                                                                                                                                                                                  |           |                      |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
|                      | Objective | 0267                                                                                                                                                                                                                                    | Evaluate and incorporate methods to help prevent weed establishment and spread from livestock grazing activities in the Middle Brownlee Creek and Rock Creek subwatersheds. Methods to consider include changes in the timing, intensity, duration, or frequency of livestock use; the location of salting; and restoration of watering sites.                                                                                                    |           |                      |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
|                      | Standard  | 0268                                                                                                                                                                                                                                    | Livestock salting shall be located outside occupied NIDGS habitat.                                                                                                                                                                                                                                                                                                                                                                                |           |                      |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
|                      | Guideline | 0269                                                                                                                                                                                                                                    | Coordinate livestock use and activity with NIDGS habitat needs.                                                                                                                                                                                                                                                                                                                                                                                   |           |                      |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |
| Fire Management      | Objective | 0270                                                                                                                                                                                                                                    | Identify areas appropriate for Wildland Fire Use, emphasizing areas next to the Rapid River Inventoried Roadless Area and Hells Canyon Wilderness. Use wildland fire to restore or maintain vegetative desired conditions and to reduce fuel loadings.                                                                                                                                                                                            |           |                      |  |        |        |                               |    |     |                           |     |     |                |    |    |                 |     |     |

| MPC/Resource Area             | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire Management</b>        | Objective | 0271   | Use prescribed fire and mechanical treatments within and adjacent to wildland-urban interface areas and Forest Service administrative sites to manage fuels to reduce wildfire hazards. Develop and prioritize vegetation treatment plans for wildland-urban interface in coordination with local and tribal governments, agencies, and landowners.                                                                                                                                                                                                                                                                                                                                                                                             |
|                               | Objective | 0272   | Use prescribed fire to increase early seral conifer species in the higher-elevation vegetation groups from Cuddy Mountain north to Smith Mountain.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                               | Objective | 0273   | Coordinate and emphasize fire education and prevention programs with private landowners to help reduce wildfire hazards and risks. Work with landowners to increase defensible space around structures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                               | Standard  | 0274   | Once a Wildland Fire Situation Analysis (WFSA) is approved, heavy equipment shall not be used to construct fire lines within occupied NIDGS habitat unless:<br>a) The line officer or designee determines that imminent safety to human life or protection of structures is an issue; OR<br>b) The incident resource advisor determines and documents an escaped fire would cause more degradation to occupied NIDGS habitat than would result from heavy equipment disturbance.<br>In no case will the decision to use heavy equipment in occupied NIDGS habitat be delayed when the line officer or designee determines safety or loss of human life or protection of structures is at imminent risk.                                         |
|                               | Standard  | 0275   | Once a WFSA is approved, incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities shall be located outside of occupied NIDGS habitat unless the only suitable location for such activities is determined and documented by the line officer or designee to be within occupied NIDGS habitat. In no case will the decision to place these activities inside occupied NIDGS habitat be delayed when the line officer or designee determines safety or loss of human life or structures is at imminent risk.                                                                                                                                                                                          |
|                               | Standard  | 0276   | Once a WFSA is approved, avoid delivery of chemical retardant, foam, or additives to all surfaces within occupied NIDGS habitat unless:<br>a) The line officer or designee determines that imminent safety to human life or protection of structures is an issue; OR<br>b) The incident resource advisor determines and documents an escaped fire would cause more degradation to occupied NIDGS habitat, than would be caused by chemical, foam or additive delivery to the habitat.<br>In no case will the decision to avoid delivery of chemical retardant, foam or additives to occupied NIDGS habitat be delayed when the line officer or designee determines safety or loss of human life or protection of structures is at imminent risk |
|                               | Guideline | 0277   | Coordinate with the Wallowa-Whitman National Forest, State of Idaho, and the BLM to develop compatible wildland fire suppression and wildland fire use strategies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Lands and Special Uses</b> | Objective | 0278   | Prepare new site plans for the Lynes Point and Smith Mountain communications sites to meet agency policy requirements and to eliminate the potential for use conflicts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| MPC/Resource Area             | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Lands and Special Uses</b> | Objective | 0279   | Use land ownership adjustments to acquire northern Idaho ground squirrel habitat to contribute to recovery efforts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                               | Guideline | 0280   | Give preference to analysis and approval of authorizations for new rights-of-way or other utility-related facilities requested within the utility corridors in this area (Oxbow-McCall power line corridor, Council-Cuprum Road corridor).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Facilities and Roads</b>   | Objective | 0281   | <p>Evaluate and incorporate methods to help prevent weed establishment and spread from road management activities in the Rock Creek, Salt Creek-Black Canyon, Lower Brownlee Creek, East Brownlee Creek, West Brownlee Creek, and Dennett Creek subwatersheds. Methods to consider include:</p> <ul style="list-style-type: none"> <li>a) When decommissioning roads, treat weeds before roads are made impassable.</li> <li>b) Schedule road maintenance activities when weeds are least likely to be viable or spread. Blade from least to most infested sites.</li> <li>c) Consult or coordinate with the district noxious weed coordinator when scheduling road maintenance activities.</li> <li>d) Periodically inspect road systems and rights of way.</li> <li>e) Avoid accessing water for dust abatement through weed-infested sites, or utilize mitigation to minimize weed seed transport.</li> </ul> |

Management Area 03 – Weiser River –Location Map



## Management Area 3 Weiser River

### MANAGEMENT AREA DESCRIPTION

**Management Prescriptions** – Management Area 3 has the following management prescriptions (see map on preceding page for distribution of prescriptions).

| Management Prescription Category (MPC)                                             | Percent of Mgt. Area |
|------------------------------------------------------------------------------------|----------------------|
| 2.2 – Research Natural Areas                                                       | Trace                |
| 4.1c – Maintain Unroaded Character with Allowance for Restoration Activities       | 13                   |
| 5.1 – Restoration and Maintenance Emphasis within Forested Landscapes              | 14                   |
| 5.2 – Commodity Production Emphasis within Forested Landscapes                     | 65                   |
| 6.1 – Restoration and Maintenance Emphasis within Shrubland & Grassland Landscapes | 8                    |

**General Location and Description** - Management Area 3 is comprised of lands administered by the Payette National Forest within the Weiser River drainage (see map, preceding page). The area lies in Adams and Washington Counties, and is administered by the Council, Weiser, and New Meadows Ranger Districts. The management area is an estimated 352,800 acres, which includes numerous state and private land inholdings. The largest inholdings are a block of State lands (28,000 acres) northwest of Council, and a cluster of land parcels (20,000 acres) owned by Boise Corporation south and east of Council Mountain. The management area forms a large semi-circle around the predominantly agricultural communities of Council, Cambridge, and Indian Valley. The area is bordered primarily by National Forest System lands on the outside of the semi-circle, and by private and Bureau of Land Management lands on the inside of the semi-circle. The primary uses or activities in Management Area 3 have been timber management, livestock grazing, irrigation, and dispersed recreation.

**Access** - The main access to the area is by U.S. Highway 95 that heads north from Weiser, Idaho to Council and New Meadows. From Highway 95, some of the main access routes to the Forest include Forest Road 009 along Mann Creek, Forest Road 008 along West Pine Creek, Forest Road 038 to Johnson Creek, Forest Road 002 along Hornet Creek, Forest Road 127 along the West Fork of the Weiser River, Forest Road 074 up Price Valley, Forest Road 089 from Highway 95 to Lost Valley Reservoir, and Forest Road 186 along the East Fork of the Weiser River. The density of classified roads for the area is an estimated 1.6 miles per square mile, and much of the area has been intensively managed for timber and livestock grazing. Total road density for area subwatersheds ranges between 0 and 8.8 miles per square mile. Trails provide access to portions of the roadless areas. Private landowners restrict access to some areas of the Forest.

The Forest has a cost-share agreement in this area with Boise Corporation and the State of Idaho for building and maintaining a cooperative road system in which all costs and responsibilities are shared. Boise Corporation lands occur in the Middle Fork Weiser River and Mill/Warm Spring

Watersheds, and State lands occur primarily in the Hornet Creek, Goodrich-Bacon, Upper Weiser River, and West Fork Weiser River Watersheds.

**Special Features** - The Council Mountain Research Natural Area (111 acres) has a representation of sagebrush and subalpine meadow communities, and small stringers of subalpine fir plant communities on basalt substrates. Lost Valley Reservoir provides developed and dispersed recreation opportunities, and is an important source of stored water for irrigation in the Weiser River system. This management area has the highest concentration of prehistoric cultural resource sites on the Forest.

An estimated 11 percent of the management area is inventoried as roadless, including all of the Council Mountain (16,567 acres) Roadless Area, and portions of the Cuddy Mountain, Rapid River, Snowbank, and Poison Creek Roadless Areas. Rush Creek Falls is a scenic waterfall; however, it is difficult to reach because private landowners currently block access to the nearby Forest trailhead.

**Air Quality** - This management area lies within Montana/Idaho Airshed ID-14 and portions of Adams and Washington Counties. Particulate matter is the primary pollutant of concern related to Forest management activities. No ambient air monitors are located within the airshed. There are three Class I areas within 100 kilometers of this Management Area—the Hells Canyon, Eagle Cap, and Sawtooth Wildernesses. Visibility monitoring has been expanded for these areas.

Between 1995 and 1999, emissions trends for both counties improved for PM 10, while PM 2.5 emissions remained constant. The most common sources of particulate matter within the counties were wildfire, prescribed fire, and fugitive dust from unpaved roads. In addition to Forest management activities, crop residue and ditch burning may contribute to particulate matter emissions, although the amount of agricultural-related burning was very low within Adams County (less than 600 acres) and low in Washington County (an estimated 3,300 acres). There were no point sources within either county.

**Soil, Water, Riparian, and Aquatic Resources** - Elevations range from 3,400 feet on the Middle Fork of the Weiser River to 8,126 feet atop Council Mountain. Management Area 3 falls primarily within the Hornet Plateau and Sturgill Peak Plateau Uplands Subsections. The main geomorphic landforms found in the area are periglacial uplands and mountain slopes, plateaus and escarpments, and fluvial mountains. Slope gradients range from 15 to 40 percent on the periglacial uplands and mountain slopes, 30 to 50 percent on the fluvial mountains, and 15 to 80 percent on the plateaus and escarpments. Columbia River basalts dominate the surface geology, with scattered inclusions of metasedimentary and granitic rock. Soils generally have low to moderate surface erosion potential, and moderate to high productivity. Subwatershed vulnerability ratings range from low to high, with the majority being low (see table below). Geomorphic Integrity ratings for the subwatersheds vary from moderate (functioning at risk) to low (not functioning appropriately), with the majority being low (see table below). There are localized impacts from roads, timber harvest, livestock grazing, and recreation. Although impacts have been fairly high in some areas, the basalt landtypes and productive soils in this area are inherently more stable and resilient than those in many other parts of the Forest.

The management area is spread out across portions of fourteen watersheds that all drain into the Weiser River Subbasin. The main streams in the area are Mann Creek, Pine Creek, Rush Creek, Hornet Creek, West Fork Weiser River, mainstem Weiser River, East Fork Weiser River, Middle Fork Weiser River, and Little Weiser River. Most standing water in the area is in reservoirs, as there are few natural lakes. The largest body of standing water is Lost Valley Reservoir (989 acres). Lower Mann Creek and Upper Monroe Creek subwatersheds are considered portions of the state-regulated public water system for the city of Weiser.

Water Quality Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately) (see table below). Water quality has been affected by localized impacts, which include sediment loading and thermal changes due to water diversions, roads, timber harvest, livestock grazing, and recreation. Four of the 51 subwatersheds in this area were listed in 1998 as having impaired water bodies under Section 303(d) of the Clean Water Act. These subwatersheds are Johnson Creek, Lower West Fork Weiser, Upper West Fork Weiser, and Lower Lost Creek. The pollutants of concern for these subwatersheds have not been identified. There are currently no TMDL-assigned subbasins associated with this management area.

| Subwatershed Vulnerability |      |     | Geomorphic Integrity |      |     | Water Quality Integrity |      |     | No. 303(d) Subs | No. Subs With TMDLs | No. Public Water System Subs |
|----------------------------|------|-----|----------------------|------|-----|-------------------------|------|-----|-----------------|---------------------|------------------------------|
| High                       | Mod. | Low | High                 | Mod. | Low | High                    | Mod. | Low |                 |                     |                              |
| 1                          | 4    | 46  | 0                    | 14   | 37  | 16                      | 20   | 15  | 4               | 0                   | 2                            |

The Hells Canyon dam complex has eliminated migration to and from the area for native anadromous chinook salmon and steelhead, and these species no longer exist within the subbasin. Native redband rainbow trout occur in many area streams, as do introduced rainbow, brook, cutthroat, and brown trout. Threatened bull trout occur in isolated populations in the Upper Hornet Creek, Upper East Fork Weiser River, Upper Little Weiser River, and Anderson Creek subwatersheds. These populations and their habitats are fragmented by roads and culverts, irrigation dams and ditches, and thermal barriers. High densities of brook trout occur in most of the subwatersheds. Overall, aquatic habitat is currently functioning at risk due to elevated water temperatures, habitat fragmentation, and accelerated sediment. Native fish populations are at risk due to these habitat impacts and the presence of non-native species. The Upper Little Weiser River, Upper East Fork Weiser River, Middle Hornet Creek, and Anderson Creek subwatersheds have been identified as important to the recovery of listed fish species, and as high-priority areas for restoration.

**Vegetation** - Vegetation at lower elevations is typically grasslands, shrublands, ponderosa pine and Douglas-fir on south and west aspects, and Douglas-fir, western larch, and grand fir forests on north and east aspects. Mid and upper elevations are dominated by shrubs and forest communities of Douglas-fir, grand fir, and subalpine fir, with pockets of western larch, lodgepole pine, aspen, and whitebark pine.

Just over 20 percent of the management area is comprised of rock, water, or shrubland and grassland vegetation groups, including Perennial Grass Montane, Perennial Grass Slopes,



Montane Shrub, Mountain Big Sage, Bitterbrush, and Low Sage. The main forested vegetation groups in the area are Cool Moist Grand Fir (23 percent), Warm Dry Douglas-fir/Moist Ponderosa Pine (19 percent), Dry Grand Fir (16 percent), and Warm Dry Subalpine Fir (11 percent), and Dry Ponderosa Pine/Xeric Douglas-fir (4 percent). Isolated patches of the Warm Dry Subalpine Fir group are scattered through the upper elevations, primarily on north slopes and in high basins (e.g., Sturgill Peak). These patches provide the “fragmented lynx habitat” referred to in the Wildlife characterization. On the northern end of the management area, succession is moving these stands outside their historic range of variation due to lack of disturbance.

In the shrubland and grassland groups, Perennial Grass Montane and Perennial Grass Slopes are functioning at risk due to the increase in undesirable species such as chicory, coneflower, and mullein, and noxious weeds such as Canada thistle, spotted knapweed, rush skeletonweed, and Dalmatian toadflax. Montane Shrub and Low Sage are at properly functioning condition. Mountain Big Sagebrush and Bitterbrush are functioning at risk due to the high levels of old structure and decadence, lack of regeneration, and an increase in non-native species. Past fire exclusion and grazing impacts have contributed to old, decadent stand conditions that are less resilient to fire and other disturbances.

The Ponderosa Pine/Xeric Douglas-fir and Warm Dry Subalpine Fir groups are at properly functioning condition, although dwarf mistletoe levels are moderate to high in the Douglas-fir component. The Warm Dry Douglas-fir/Moist Ponderosa Pine, Dry Grand Fir, and Cool Moist Grand Fir groups are functioning at risk. In managed areas, these groups have low levels of large trees, snags, logs, insects, and disease, and high levels of seral species and mid-aged structural stages. In unmanaged areas, these groups have high stand densities with shade-tolerant grand fir and high levels of insect and disease infestations, which have increased the risk of stand-replacing fire. These conditions are outside those associated with historical fire regimes, which has increased the risk of uncharacteristic fire.

Some riparian vegetation is functioning at risk due to localized impacts from roads, livestock grazing, and private land uses, particularly in the Beaver Creek and Warm Springs Creek drainages. Also, riparian vegetation in lower Lost Creek is adversely affected by fluctuating flows from Lost Valley Reservoir. Vegetation composition has changed in many riparian areas due to roads, timber harvest, livestock grazing, and fire exclusion. Exotic plant species have increased and sedge species have decreased. Cottonwoods and broadleaf shrubs have also decreased, and are not regenerating in many areas due to lack of fire disturbance, hydrologic changes, and competition from non-native plants.

**Botanical Resources** - Current Region 4 Sensitive species found in this area include Snake River goldenweed, giant helleborine orchid, and Tolmie’s onion. Proposed Region 4 Sensitive species that may occur in this area include squaw apple, dwarf gray rabbitbrush, and Mahala-mat ceanothus. Currently, no federally listed or proposed plant species are known to occur in the area, although potential habitat for Ute ladies’-tresses and Spalding’s silene may exist. Spalding’s silene, a Threatened species, may occur in fescue grassland habitat types from 1,500 to 5,500 feet in elevation. Ute ladies’-tresses, a Threatened species, may have low potential habitat in riparian/wetland areas up to 7,000 feet.

**Non-native Plants** - Many noxious weeds and exotic plants have been introduced into the area, particularly along the main road corridors. An estimated 20 percent of the area is highly susceptible to invasion by noxious weeds and exotic plant species. The main weeds of concern are spotted and diffuse knapweed, rush skeletonweed, leafy spurge, Scotch thistle, whitetop, Dalmatian toadflax, which currently occur in scattered populations within the area. Yellow toadflax, yellow star thistle, and Canada thistle also occur within the area. Justrite, Paradise, and Spring Creek Campgrounds are considered highly susceptible to noxious weed invasion and spread.

Subwatersheds in the table below have an inherently high risk of weed establishment risk and spread from activities identified with a “yes” in the various activity columns. This risk is due to the amount of drainage area that is highly susceptible to noxious weed invasion and the relatively high level of exposure from those identified vectors or carriers of weed seed.

| Subwatershed          | Road- related Activities | Livestock Use | Timber Harvest | ATV Off-Road Use | Recreation & Trail Use |
|-----------------------|--------------------------|---------------|----------------|------------------|------------------------|
| Lower Mann Creek      | No                       | Yes           | No             | No               | No                     |
| Middle Mann Creek     | Yes                      | Yes           | Yes            | Yes              | No                     |
| Upper Mann Creek      | Yes                      | Yes           | Yes            | Yes              | No                     |
| Upper Monroe Creek    | Yes                      | Yes           | No             | Yes              | No                     |
| Sage Creek            | Yes                      | Yes           | No             | Yes              | No                     |
| Upper Keithly Creek   | Yes                      | Yes           | Yes            | Yes              | No                     |
| Lower Pine Creek      | Yes                      | Yes           | Yes            | Yes              | No                     |
| West Pine Creek       | Yes                      | Yes           | Yes            | Yes              | No                     |
| Upper Pine Creek      | Yes                      | Yes           | Yes            | Yes              | No                     |
| Lower WF Weiser River | No                       | No            | No             | Yes              | No                     |

**Wildlife Resources** - The wide range of elevations and vegetation types in the management area provide a variety of wildlife habitats. The Lost Valley Reservoir area has nesting bald eagles. Much of the lower elevation grasslands and shrublands is important winter/spring range for elk and deer, and habitat for introduced turkey and chukar. Stringer stands are important habitat components for big game all year long. Forests provide habitat for a number of Region 4 sensitive species, including northern goshawk, flammulated owl, white-headed woodpecker, and great gray owls. The entire area provides nesting and forage habitat for migratory land birds, and general habitat for wide-ranging mammals like elk, bear, and mountain lion. Habitat and populations of northern Idaho ground squirrel, a Threatened species, exist in the northern and northwestern portions of the management area. Habitat for Threatened lynx occurs in fragmented patches in this area, and three Lynx Analysis Units have been mapped. Overall, terrestrial habitat is functioning at risk for the following reasons. Roads and harvest units have increased habitat fragmentation and vulnerability for game species, while lowering levels of large trees, large-diameter snags, and down logs for species dependent on those components. Succession to stands dominated by closed canopy Douglas-fir has reduced habitat for white-headed woodpecker and flammulated owl. In the roaded portions of the area, mature and old trees still exist, but they are in small block sizes that are highly fragmented. The introduction of exotic plants and noxious weeds has lowered the quality of habitat and forage for some native species. Fire exclusion and conifer encroachment have reduced habitat for northern Idaho ground squirrels.

**Recreation Resources** - Easy road access, campgrounds, and introduced fish species make the Lost Valley Reservoir area a well-used, summer recreation destination. Dispersed recreation such as hunting, hiking, site seeing, and camping occurs throughout Management Area 3, and there are many dispersed campsites and seven developed campgrounds. Several of the dispersed campsites are in northern Idaho ground squirrel habitat. The area is in Idaho Fish and Game Management Units 22, 23, 31, and 32A. Much of the recreational use comes from nearby towns (Weiser, Council, Cambridge, New Meadows), although users from the Treasure Valley (Boise, Nampa, Caldwell) are increasing. Most trails in the area are open to some form of motorized vehicle use. Trail access onto the Forest is restricted in some localized areas due to private landowners. Visual sensitivity is emphasized in roadless areas and along the main travel corridors. Recreation special uses in the area include two annual recreation events and two outfitter/guide permits. Unauthorized motorized use is occurring on yearlong and seasonally closed roads, thereby affecting wildlife security and vulnerability. Both recreational and permitted woodcutters are reducing large snag availability for primary and secondary cavity nesters in the Upper Weiser River drainages.

Dispersed recreation is emphasized. Dispersed camping opportunities are maintained and, resource protection measures are used where needed. Other types of dispersed recreation uses offer a mix of roaded and unroaded opportunities. Roads, areas, and trails are signed as to motorized access restrictions.

Developed recreation sites are maintained at current or improved levels. Renovation of existing developed sites occurs when current facility conditions no longer effectively serve the public.

Trail maintenance is emphasized. Trail funding is used to maintain trails at current or improved levels. The most heavily used trails and those with resource damage have maintenance priority. Trailhead signing indicates the types of trail use allowed.

**Scenic Environment** – Visually sensitive routes and use areas represent locations from which the scenic environment is considered especially important. Visual sensitivity in this area is emphasized in roadless areas and along the main travel corridors. These routes or areas generally have a more restrictive VQO assigned to them than areas not seen from such locations. The following is a list of visually sensitive routes or use areas with this management area. There may also be sensitive routes or use areas in adjacent management areas that could be affected by actions taken in this management area.

| Route or Area Type | Sensitivity Level | Name of Route or Area                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Roads              | 1                 | Mann Creek 009, US Highway 95, State Highway 71                                                                                                                                                                                                                                                                                                                                                 |
| Roads              | 2                 | Lancaster 012, Adams Creek 025, Fourth of July Creek 024, Short Goose 013, Council-Cuprum 002, West Fork Weiser 127, Grouse Creek 123, Lost Creek 154, Lost Valley Reservoir 089, Railroad Saddle 128, West Branch 102, Smokey Boulder 074, East Branch 101, Mud Creek 100, Shingle Flat 183, East Fork Weiser 172, Granite Creek 245, Old Cascade 165, West Fork Weiser 186, Little Weiser 206 |
| Trails             | 1                 | None                                                                                                                                                                                                                                                                                                                                                                                            |

| Route or Area Type | Sensitivity Level | Name of Route or Area                                                                                                                                              |
|--------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Trails             | 2                 | Council Mountain 198, Deseret Cabin-Squaw Flat 201, Crystal Creek 205, Granite Creek 210, Johnson Creek Connector 245, 256, East Fork Pine Creek 263, Big Flat 352 |
| Use Areas          | 1                 | Spring Creek, Cold Springs, and Evergreen Campgrounds                                                                                                              |
| Use Areas          | 2                 | Justrite, Paradise, Slaughter, Cabin Creek, and Big Flat Campgrounds, Sturgill Peak Lookout                                                                        |

**Cultural Resources** – Cultural themes in this area include Prehistoric, Civilian Conservation Corps (CCC), Forest Service Administration, Timber, and Ranching. This management area has the highest concentration of prehistoric cultural resource sites on the Forest. Historically, this area has many examples of depression era facilities constructed by the CCC, including campgrounds, fire lookouts, administrative sites, and roads. A number of administrative sites on the Council Ranger District are on the National Register of Historic Places. Much of the area has been grazed by livestock since the late 1800s and harvested for timber throughout the 1900s.

**Timberland Resources** - Of the estimated 217,200 tentatively suited acres in this management area, 162,700 acres have been identified as being suited timberlands, or appropriate for timber production. This represents about 49 percent of the Forest's suited timberland acres. Historically, this area has produced the majority of timber on the Forest. The suited timberland acres are found in MPCs 5.1, 5.2, and 6.1 (see MPC map for this management area). Lands in MPCs 2.2 and 4.1c have been identified as not suited for timber production.

Management Area 3 also includes the Lost Lake Progeny Test Area, and the Calamity and Bull Corral Seed Production Areas. These sites have been developed to test and evaluate the growth and development of trees from different genetic sources, and to produce seeds of desirable genetic quality. Forest products such as fuelwood, posts and poles, and Christmas trees are also collected in the management area.

**Rangeland Resources** - The management area contains all or portions of sixteen allotments, with three sheep allotments located primarily in the northern third of the area, and thirteen cattle allotments located throughout the remaining area. Grazing on the Warm Springs Allotment frequently exceeds utilization standards within riparian areas. Management Area 3 provides an estimated 95,600 acres of capable rangeland, which represents about 42 percent of the capable rangeland on the Forest.

**Mineral Resources** - Most past mining activity and claims have occurred on the west side of the management area, around Cuddy Mountain, and southwest of Hitt Mountain. Numerous mining claims exist in this area. The potential for mineral development is high in the Cuddy and Hitt Mountain areas, and relatively low elsewhere.

**Fire Management** - Wildfires have only burned about 200 acres (.06 percent) of this large management area over the last 15 years. The largest amounts (117 acres) were in the Rock Jack Fire of 1996 and the Cuddy Complex of 1994 (77 acres). This low amount of fire is well below historic levels and has allowed fire regimes to change and fuel loading to increase in unmanaged low-elevation stands. Although fuels are increasing to hazardous levels in some untreated

stands, the overall fire hazard is moderate to low due to the high level of past timber management in the area. The Price Valley Guard Station functions as a helibase, with air and heli-rappel crew support during the fire season. Prescribed fire has been used to improve winter/spring range conditions and to reduce activity-generated and natural fuels. The physical configuration of this management area does not allow for effective wildland fire use.

Woodland, Tamarack, and Evergreen are National Fire Plan communities, and Upper Pine Creek, Upper Weiser River, and Gaylord-Woodland subwatersheds are considered wildland-urban interface areas due to residential development adjacent to the Forest. These same subwatersheds are also considered to pose risks to life and property from potential post-fire floods and debris flows. Historical fire regimes for the area are estimated to be: 5 percent lethal, 45 percent mixed<sup>1</sup> or 2, and 50 percent non-lethal. An estimated 18 percent of the area regimes have vegetation conditions that are highly departed from their historical range. Most of this change has occurred in the historically non-lethal fire regimes, resulting in conditions where wildfire would likely be much larger and more intense and severe than historically. In addition, 39 percent of the area is in moderately departed conditions—20 percent in the mixed<sup>1</sup>/mixed<sup>2</sup> fire regimes, and 19 percent in the non-lethal regimes. Wildfire in these areas may result in somewhat larger patch sizes of high intensity or severity, but not to the same extent as in the highly departed areas in non-lethal fire regimes.

**Lands and Special Uses** – A special-use authorization is issued to Idaho Power for the Brownlee-Paddock and Cambridge-New Meadows power transmission lines, which are in designated utility corridors. Idaho Power also operates and maintains the Oxbow-McCall and Brownlee-Boise Bench 1, 2, 3, and 4 power transmission lines. These power lines are also located in designated utility corridors and are authorized as part of the current FERC license for the Hell's Canyon Dam Complex. When this hydropower project is re-licensed, the power line may be authorized under special-use permit.

Adams County has been issued a Highway Easement Deed for the right-of-way on the Council-Cuprum road. There are several private road easements issued for access to private property. Other authorizations include permits for buried telephone lines.

Several private water systems are authorized. There are currently 14 irrigation ditches and 9 domestic water systems operated under permit in this area. Two reservoirs with dams, Hornet and Lost Valley Reservoir, are operated under a USDI easement. Several private landowners have submitted applications requesting permanent conditional easements be issued for their agricultural water systems per Public Law 99-545.

The Natural Resources Conservation Service has an authorization to operate and maintain Snotel sites located in Squaw Flat and Bear Saddle. This site is used primarily for measuring the water content of snow pack. Boise State University operates a seismograph monitoring site under special use permit. The three designated communication sites in this area are located at Cow Mountain, Indian Mountain, and Sturgill Peak. All are designated for non-commercial, government use only.

## MANAGEMENT DIRECTION

In addition to Forest-wide Goals, Objectives, Standards, and Guidelines that provide direction for all management areas, the following direction has been developed specifically for this area.

| MPC/Resource Area                                                                                                                         | Direction           | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 2.2<br/>Research Natural<br/>Areas</b>                                                                                             | General<br>Standard | 0301   | Mechanical vegetation treatments, salvage harvest, and prescribed fire may only be used to maintain values for which the areas were established, or to achieve other objectives that are consistent with the RNA establishment record or management plan.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                           | Road<br>Standard    | 0302   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To maintain the values for which the Research Natural Area was established.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                           | Fire<br>Guideline   | 0303   | The full range of fire suppression strategies may be used to suppress wildfires. Fire suppression strategies and tactics should minimize impacts to the values for which the RNA was established.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>MPC 4.1c<br/>Undeveloped<br/>Recreation:<br/>Maintain Unroaded<br/>Character with<br/>Allowance for<br/>Restoration<br/>Activities</b> | General<br>Standard | 0304   | Management actions allowed—including mechanical vegetation treatments, salvage harvest, prescribed fire, road maintenance, and special use authorizations—must be designed and implemented in a manner that would be consistent with the unroaded landscape in the temporary, short term, and long term. Exceptions to this standard are actions in the 4.1c road standard, below.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                           | Road<br>Standard    | 0305   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                           | Fire<br>Guideline   | 0306   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the unroaded landscape.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>MPC 5.1<br/>Restoration and<br/>Maintenance<br/>Emphasis within<br/>Forested<br/>Landscapes</b>                                        | Road<br>Standard    | 0307   | There shall be no net increase in road densities in the MPC 5.1 portion of the Middle Hornet Creek subwatershed unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that:<br>a) For resources that are within their range of desired conditions, the increase in road densities shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>b) For resources that are in a degraded condition, the increase in road densities shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>c) Adverse effects to TEPC species or their habitat are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitat.<br>An exception to this standard is where additional roads are required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations). |

| MPC/Resource Area                                                                                  | Direction         | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------|-------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 5.1<br/>Restoration and<br/>Maintenance<br/>Emphasis within<br/>Forested<br/>Landscapes</b> | Road<br>Standard  | 0308   | <p>New roads and landings shall be located outside of RCAs in the MPC 5.1 portion of the Middle Hornet subwatershed unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that:</p> <ul style="list-style-type: none"> <li>a) For resources that are within their range of desired conditions, the addition of a new road or landing in an RCA shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and</li> <li>b) For resources that are in a degraded condition, the addition of a new road or landing in an RCA shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and</li> <li>c) Adverse effects to TEPC species or their habitats are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitats.</li> </ul> <p>An exception to this standard is where construction of new roads in RCAs is required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations).</p> |
|                                                                                                    | Fire<br>Guideline | 0309   | The full range of treatment activities, except wildland fire use, may be used to restore and maintain desired vegetation and fuel conditions. Salvage harvest may also occur.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                    | Fire<br>Guideline | 0310   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to habitats, developments, and investments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                                                    | Road<br>Guideline | 0311   | <p>Road construction or reconstruction may occur where needed:</p> <ul style="list-style-type: none"> <li>a) To provide access related to reserved or outstanding rights, or</li> <li>b) To respond to statute or treaty, or</li> <li>c) To achieve restoration and maintenance objectives for vegetation, water quality, aquatic habitat, or terrestrial habitat, or</li> <li>d) To support management actions taken to reduce wildfire risks in wildland-urban interface areas; or</li> <li>e) To meet access and travel management objectives.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>MPC 5.2<br/>Commodity<br/>Production<br/>Emphasis within<br/>Forested<br/>Landscapes</b>        | Fire<br>Standard  | 0312   | Wildland fire use is prohibited.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                    | Fire<br>Guideline | 0313   | <p>Prescribed fire may be used to:</p> <ul style="list-style-type: none"> <li>a) Maintain or restore desired vegetative conditions on unsuited timberlands; or</li> <li>b) Maintain or restore desired fuel conditions for all vegetation types; or</li> <li>c) Maintain desired vegetative conditions on suited timberlands within PVGs 2 through 10.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                    | Fire<br>Guideline | 0314   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to developments and investments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>MPC 6.1</b>                                                                                     | Fire<br>Guideline | 0315   | The full range of treatment activities, except wildland fire use, may be used to restore and maintain desired vegetation and fuel conditions. Salvage harvest may also occur.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

| MPC/Resource Area                                                                                                     | Direction         | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------|-------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 6.1<br/>Restoration and<br/>Maintenance<br/>Emphasis within<br/>Shrubland and<br/>Grassland<br/>Landscapes</b> | Fire<br>Guideline | 0316   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to habitats, developments, and investments.                                                                                                                                                                                                                                                                                                   |
|                                                                                                                       | Road<br>Guideline | 0317   | Road construction or reconstruction may occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To achieve restoration and maintenance objectives for vegetation, water quality, aquatic habitat, or terrestrial habitat, or<br>d) To support management actions taken to reduce wildfire risks in wildland-urban interface areas; or<br>e) To meet access and travel management objectives.        |
| <b>Soil, Water,<br/>Riparian, and<br/>Aquatic Resources</b>                                                           | Objective         | 0318   | Improve water quality and assist in de-listing 303(d) water bodies by reducing road-related accelerated sediment through a combination of road decommissioning, relocation, reconstruction, and maintenance in the Mann Creek, Pine Creek, West Fork Weiser River, East Branch Weiser River, East Fork Weiser River, Middle Fork Weiser River, and Little Weiser River drainages. The Little Weiser River drainage includes the Upper Little Weiser and Anderson Creek subwatersheds. |
|                                                                                                                       | Objective         | 0319   | Restore riparian vegetation and floodplain function throughout the management area by reducing road-related impacts through relocation, reconstruction, or obliteration.                                                                                                                                                                                                                                                                                                              |
|                                                                                                                       | Objective         | 0320   | Restore riparian areas by relocating or hardening dispersed recreation sites in the Mann Creek, Cabin Creek, Lost Creek, and Anderson Creek drainages, and the horse camping area in the Jungle Creek drainage.                                                                                                                                                                                                                                                                       |
|                                                                                                                       | Objective         | 0321   | Avoid genetic hybridization of isolated populations of bull trout, while improving connectivity between genetically similar fish subpopulations and necessary fish habitat components in the Upper Hornet Creek, Upper East Fork Weiser River, Upper Little Weiser River, and Anderson Creek subwatersheds.                                                                                                                                                                           |
|                                                                                                                       | Objective         | 0322   | Reduce riparian road density and stream crossings in all drainages, with emphasis on those with bull trout populations or suitable habitat.                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                       | Objective         | 0323   | Initiate restoration of watershed conditions and fish habitat in the Upper East Fork Weiser River, Upper Little Weiser River, Middle Hornet, and Anderson Creek subwatersheds to help strengthen bull trout populations.                                                                                                                                                                                                                                                              |
| <b>Vegetation</b>                                                                                                     | Objective         | 0324   | Allow natural succession to dominate in the Warm Dry Subalpine Fir group along ridges and alpine summits. Increase early seral conifer species (Douglas-fir, western larch, Engelmann spruce, and lodgepole pine) in the Warm Dry Subalpine Fir group on the east side and north of Cuddy Mountain.                                                                                                                                                                                   |
|                                                                                                                       | Objective         | 0325   | Maintain and promote native grasses and aspen where they occur, and maintain or restore desired conditions for age and canopy class structure in sagebrush and bitterbrush cover types.                                                                                                                                                                                                                                                                                               |
|                                                                                                                       | Objective         | 0326   | Restore structure and composition of shrub and deciduous tree components in those portions of riparian areas where these components are missing or on a downward trend.                                                                                                                                                                                                                                                                                                               |



| MPC/Resource Area          | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Vegetation</b>          | Objective | 0327   | Restore herbaceous and hydric plant composition in the Beaver Creek and Warm Springs Creek drainages to move toward desired conditions for species composition in these areas.                                                                                                                                                                                                                                          |
| <b>Botanical Resources</b> | Objective | 0328   | Maintain or restore known populations and occupied habitats of TEPCS plant species, including Snake River goldenweed, giant helleborine orchid, Tolmie's onion, squaw apple, dwarf gray rabbitbrush, and Mahala-mat ceanothus to contribute to the long-term viability of these species.                                                                                                                                |
|                            | Objective | 0329   | Continue long-term monitoring of Snake River goldenweed to determine whether the viability of local populations is maintained over the long-term.                                                                                                                                                                                                                                                                       |
| <b>Non-native Plants</b>   | Objective | 0330   | To reduce impacts on native plants and other resources, eradicate new and small infestations of spotted knapweed, rush skeletonweed, and leafy spurge. Control density and size of Scotch thistle, Dalmatian toadflax, and whitetop populations. Contain or reduce yellow toadflax and Canada thistle where they occur in the area.                                                                                     |
| <b>Wildlife Resources</b>  | Goal      | 0331   | Restore northern Idaho ground squirrel habitat quality, abundance, and connectivity to promote recovery of the species.                                                                                                                                                                                                                                                                                                 |
|                            | Objective | 0332   | Implement the recovery plan for the northern Idaho ground squirrel, when approved, to promote recovery of the species                                                                                                                                                                                                                                                                                                   |
|                            | Objective | 0333   | Improve enforcement of yearlong and seasonal road closures through signing and on-the-ground patrols to allow for improved big-game security.                                                                                                                                                                                                                                                                           |
|                            | Objective | 0334   | Coordinate with Idaho Department of Fish and Game to reduce bull elk vulnerability through the use of security areas and reductions in open road density to move toward State herd composition objectives.                                                                                                                                                                                                              |
|                            | Objective | 0335   | Maintain or restore the quality and abundance of forage in the Mountain Big Sagebrush and Bitterbrush vegetation groups to improve big-game winter/spring range habitat.                                                                                                                                                                                                                                                |
|                            | Objective | 0336   | Maintain or improve bald eagle nest sites at Lost Valley Reservoir to provide eagle nesting and roosting habitat and contribute to recovery of the species.                                                                                                                                                                                                                                                             |
|                            | Objective | 0337   | Increase white-headed woodpecker habitat by managing ponderosa pine stands within the Ponderosa Pine/Xeric Douglas-fir, Warm Dry Douglas-fir/Moist Ponderosa Pine, and Dry Grand Fir vegetation groups toward the desired ranges of size classes, canopy closures, species composition, snags, and coarse woody debris, as described in Appendix A. The ranges of these components may vary by management prescription. |
|                            | Objective | 0338   | Increase flammulated owl habitat by managing ponderosa pine stands within the Warm Dry Douglas-fir/Moist Ponderosa Pine and Dry Grand Fir vegetation groups toward the desired ranges of size classes, canopy closures, species composition, snags, and coarse woody debris, as described in Appendix A. The ranges of these components may vary by management prescription category.                                   |
|                            | Standard  | 0339   | The northern Idaho ground squirrel will receive priority consideration for all management activities that occur within their known occupied habitat. The intent of this standard is not to exclude all other activities within this habitat, but rather to reduce or minimize potential impacts to this species while emphasizing habitat improvement within and adjacent to known sites.                               |

| MPC/Resource Area           | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <b>Wildlife Resources</b>   | Standard  | 0340   | Vegetation treatments must be designed and implemented to maintain or improve existing wildlife habitat values in forest stringers south of Cuddy Mountain. Forest stringers in this area are defined as narrow fingers of forested vegetation less than 500 feet wide, or isolated patches of forested vegetation less than 10 acres in size.                                                                                                                                                                                |
|                             | Guideline | 0341   | An increase in the white-headed woodpecker or flammulated owl habitat may be achieved by the following methods:<br>a) Reducing tree densities and ladder fuels under and around existing large ponderosa trees and snags to reduce the risk of tree-replacing fire and to restore more open canopy conditions.<br>b) Managing the firewood program to retain large-diameter ponderosa pine and large snags of other species through signing, public education, size restriction, area closures, or other appropriate methods. |
| <b>Recreation Resources</b> | Objective | 0342   | Develop a Recreation Management Plan for the Lost Valley Reservoir area to reduce impacts to northern Idaho ground squirrel habitat.                                                                                                                                                                                                                                                                                                                                                                                          |
|                             | Objective | 0343   | Improve dispersed recreation facilities in the vicinity of Lost Valley Reservoir to manage increased recreation use and mitigate impacts on northern Idaho ground squirrel habitat.                                                                                                                                                                                                                                                                                                                                           |
|                             | Objective | 0344   | Construct a developed campground adjacent to Lost Valley Reservoir that is not within northern Idaho ground squirrel habitat, as a replacement for the Slaughter Gulch dispersed site.                                                                                                                                                                                                                                                                                                                                        |
|                             | Objective | 0345   | Close and rehabilitate the Slaughter Gulch dispersed recreation site to reduce impacts to and restore northern Idaho ground squirrel habitat.                                                                                                                                                                                                                                                                                                                                                                                 |
|                             | Objective | 0346   | Remove existing pit toilets and evaluate new locations for new or replacement vault toilets to reduce resource impacts from existing facilities.                                                                                                                                                                                                                                                                                                                                                                              |
|                             | Objective | 0347   | Develop a winter recreation parking facility in the vicinity of Price Valley Guard Station to accommodate increasing snowmobile use.                                                                                                                                                                                                                                                                                                                                                                                          |
|                             | Objective | 0348   | Evaluate developed campgrounds and upgrade as needed to provide universal access and to accommodate larger camp trailers and recreation vehicles.                                                                                                                                                                                                                                                                                                                                                                             |
|                             | Objective | 0349   | Develop and maintain a day use picnic area and interpretation site at the old Hornet Guard Station location to enhance recreational opportunities.                                                                                                                                                                                                                                                                                                                                                                            |
|                             | Objective | 0350   | Develop and maintain a group camping area at Horse Cabin Flats to enhance recreational opportunities.                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                             | Objective | 0351   | Develop and maintain a day use picnic area at the Mann Creek Guard Station site to enhance recreational opportunities.                                                                                                                                                                                                                                                                                                                                                                                                        |
|                             | Objective | 0352   | Evaluate the need for dispersed campsites and establish sites within areas where they will have relatively low impacts to important biophysical resources.                                                                                                                                                                                                                                                                                                                                                                    |
|                             | Objective | 0353   | Construct parking areas and provide information signs at key trailhead locations to provide parking and information for trail users. Parking for a minimum of two or three vehicles is needed in most cases.                                                                                                                                                                                                                                                                                                                  |

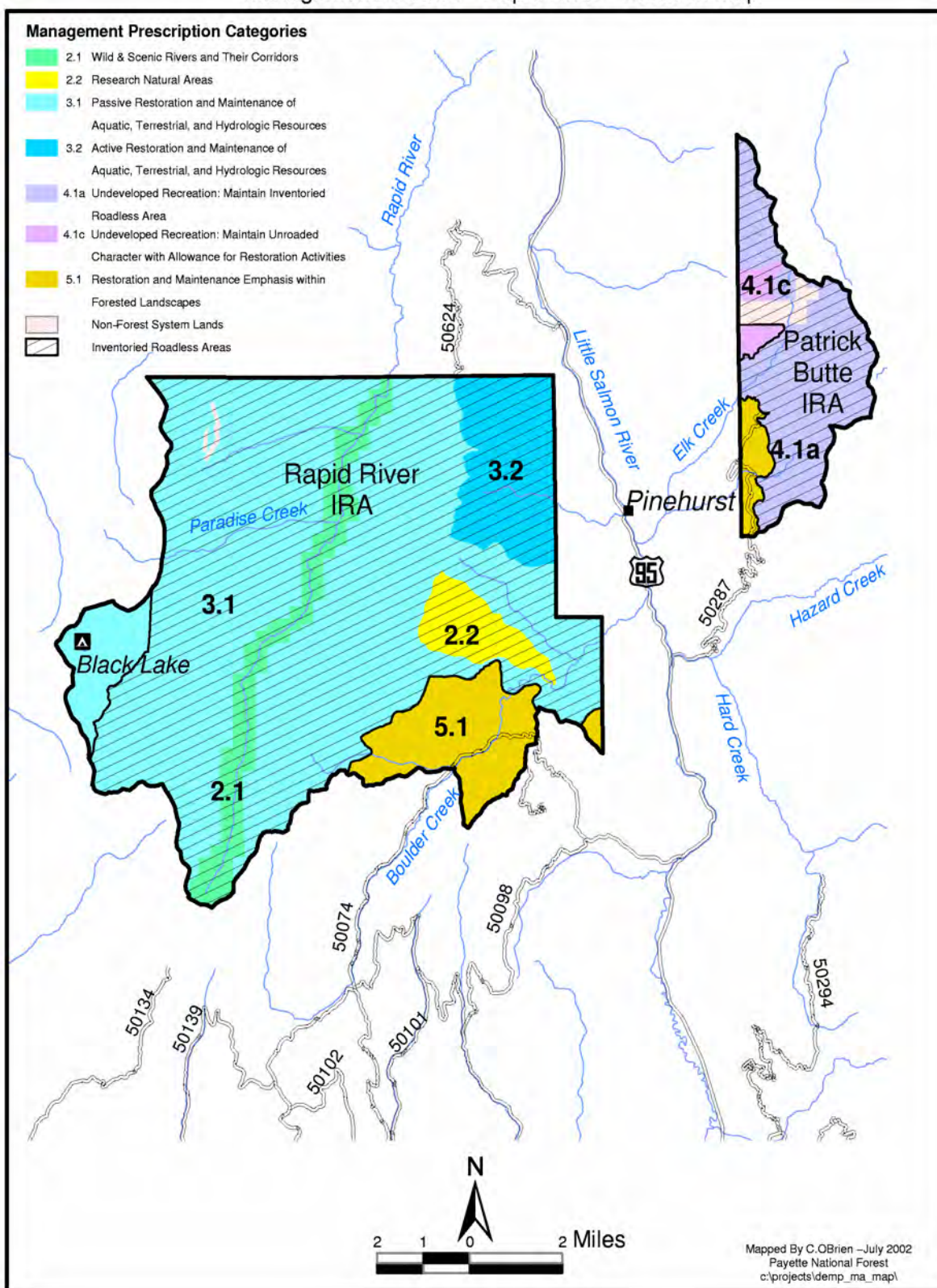
| MPC/Resource Area            | Direction | Number                                                                                                                                                                                                                                                                 | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |        |
|------------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------|
| Recreation Resources         | Objective | 0354                                                                                                                                                                                                                                                                   | Repair trails where erosion and water-caused resource damage is occurring. Repairs may include rehabilitating eroded trail sections, rerouting sections away from streams, and installing bridges.                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |        |
|                              | Objective | 0355                                                                                                                                                                                                                                                                   | Seek to acquire trail easements through private lands to improve recreation access.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |        |
|                              | Objective | 0356                                                                                                                                                                                                                                                                   | Improve access to Rush Creek Falls by improving the Boundary Trail (#245) and the Rush Creek Trail (#262).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |        |
|                              | Objective | 0357                                                                                                                                                                                                                                                                   | Improve trail signing especially in areas near Council Mountain, Cuddy Mountain and Sturgill Peak where past management activities have made trail location difficult.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      |        |
|                              | Objective | 0358                                                                                                                                                                                                                                                                   | Evaluate and incorporate methods to help prevent weed establishment and spread from off-road ATV/motorbike use in the Middle Mann Creek, Upper Mann Creek, Upper Monroe Creek, Sage Creek, Upper Keithly Creek, Lower Pine Creek, West Pine Creek, Upper Pine Creek, and Lower West Fork Weiser River subwatersheds. Methods to consider include annual weed inspection and treatment of trailheads and other high use areas; and posting educational notices in these areas to inform the public of areas that are highly susceptible to weed invasion and measures they can take to help prevent weed establishment and spread. |                      |        |
|                              | Objective | 0359                                                                                                                                                                                                                                                                   | Achieve or maintain the following ROS strategy:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |        |
|                              |           |                                                                                                                                                                                                                                                                        | ROS Class                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Percent of Mgt. Area |        |
|                              |           |                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Summer               | Winter |
| Semi-Primitive Non-Motorized |           |                                                                                                                                                                                                                                                                        | 1%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10%                  |        |
| Semi-Primitive Motorized     |           |                                                                                                                                                                                                                                                                        | 11%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 37%                  |        |
| Roaded Natural               |           |                                                                                                                                                                                                                                                                        | 16%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1%                   |        |
| Roaded Modified              | 72%       | 52%                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |        |
|                              |           |                                                                                                                                                                                                                                                                        | The above numbers reflect current travel regulations. These numbers may change as a result of future travel regulation planning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |        |
| Standard                     | 0360      | All new developed recreation facilities shall be located outside occupied NIDGS habitat.                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |        |
| Guideline                    | 0361      | Consider Justrite, Paradise, and Spring Creek Campgrounds as high priority areas for noxious weed inspection, eradication, and prevention. Noxious weed detection, management, and prevention should be practiced and promoted at these facilities on an annual basis. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |        |
| Cultural Resources           | Objective | 0362                                                                                                                                                                                                                                                                   | Prepare management plans for all properties listed on the National Register of Historic Places, including Indian Mountain Fire Lookout (PY-616) and Council Ranger Station Administrative Site (PY-540) to meet federal requirements for the management of historic properties.                                                                                                                                                                                                                                                                                                                                                   |                      |        |
|                              | Objective | 0363                                                                                                                                                                                                                                                                   | Continue data recovery on damaged historic property at PY-399 to meet federal requirements for the management of historic properties.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |        |
|                              | Objective | 0364                                                                                                                                                                                                                                                                   | Continue to source obsidian artifacts from PY-399 and other sites through chemical identification to meet federal requirements for identification of historic properties.                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |        |
|                              | Objective | 0365                                                                                                                                                                                                                                                                   | Maintain the historic character of Sturgill Peak Lookout to meet federal requirements for the management of historic properties.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |        |

| MPC/Resource Area           | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <b>Timberland Resources</b> | Objective | 0366   | Reduce the acres of Douglas-fir dwarf mistletoe infection in the upper elevations of the Hitt Mountains by regenerating stands and planting ponderosa pine and non-host species, if possible, or by creating openings without infected residual trees.                                                                                                                                                                                                                                               |
|                             | Objective | 0367   | Reduce the opportunity for noxious weed establishment and spread by keeping suitable weed sites to a minimum during timber harvest activities in the Middle Mann Creek, Upper Mann Creek, Upper Keithly Creek, Lower Pine Creek, West Pine Creek, and Upper Pine Creek subwatersheds. Consider such methods as designated skid trails, winter skidding, minimal fireline construction, broadcast burning rather than pile burning, or keeping slash piles small to reduce heat transfer to the soil. |
|                             | Guideline | 0368   | Existing noxious weed infestations should be treated on landings, skid trails, and helibases in the project area before timber harvest activities begin in the Middle Mann Creek, Upper Mann Creek, Upper Keithly Creek, Lower Pine Creek, West Pine Creek, and Upper Pine Creek subwatersheds.                                                                                                                                                                                                      |
| <b>Rangeland Resources</b>  | Objective | 0369   | Establish grazing capacities and provide management systems that help restore riparian vegetation in the Beaver Creek, Warm Springs Creek, and lower Lost Creek drainages.                                                                                                                                                                                                                                                                                                                           |
|                             | Objective | 0370   | Evaluate and incorporate methods to help prevent weed establishment and spread from livestock grazing activities in the Middle Mann Creek, Upper Mann Creek, Upper Monroe Creek, Sage Creek, Upper Keithly Creek, Lower Pine Creek, West Pine Creek, and Upper Pine Creek subwatersheds. Methods to consider include changes in the timing, intensity, duration, or frequency of livestock use; the location of salting; and restoration of watering sites.                                          |
|                             | Objective | 0371   | Make allotment management planning on the Warm Springs Allotment a priority.                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                             | Objective | 0372   | Establish grazing capacities and provide management systems that help restore riparian vegetation on the Warm Springs Allotment.                                                                                                                                                                                                                                                                                                                                                                     |
|                             | Objective | 0373   | Determine the best class of livestock (cow/calves, steer, ewe/lambs or yearling sheep) to graze the Warm Springs allotment to minimize impacts to riparian areas.                                                                                                                                                                                                                                                                                                                                    |
|                             | Standard  | 0374   | Livestock salting shall be located outside occupied NIDGS habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                             | Guideline | 0375   | Coordinate livestock use and activity with NIDGS habitat needs.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Fire Management</b>      | Objective | 0376   | Use prescribed fire and mechanical treatments within and adjacent to wildland-urban interface areas and Forest Service administrative sites to manage fuels to reduce wildfire hazards. Develop and prioritize vegetation treatment plans for wildland-urban interface in coordination with local and tribal governments, agencies, and landowners.                                                                                                                                                  |
|                             | Objective | 0377   | Use prescribed fire to increase early seral conifer species in the higher-elevation vegetation groups from Cuddy Mountain north to Smith Mountain.                                                                                                                                                                                                                                                                                                                                                   |
|                             | Objective | 0378   | Coordinate and emphasize fire education and prevention programs with private landowners to help reduce wildfire hazards and risks. Work with landowners to increase defensible space around structures.                                                                                                                                                                                                                                                                                              |

| MPC/Resource Area             | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire Management</b>        | Standard  | 0379   | <p>Once a Wildland Fire Situation Analysis (WFSA) is approved, heavy equipment shall not be used to construct fire lines within occupied NIDGS habitat unless:</p> <ul style="list-style-type: none"> <li>a) The line officer or designee determines that imminent safety to human life or protection of structures is an issue; OR</li> <li>b) The incident resource advisor determines and documents an escaped fire would cause more degradation to occupied NIDGS habitat than would result from heavy equipment disturbance.</li> </ul> <p>In no case will the decision to use heavy equipment in occupied NIDGS habitat be delayed when the line officer or designee determines safety or loss of human life or protection of structures is at imminent risk.</p>                                         |
|                               | Standard  | 0380   | <p>Once a WFSA is approved, incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities shall be located outside of occupied NIDGS habitat unless the only suitable location for such activities is determined and documented by the line officer or designee to be within occupied NIDGS habitat. In no case will the decision to place these activities inside occupied NIDGS habitat be delayed when the line officer or designee determines safety or loss of human life or structures is at imminent risk.</p>                                                                                                                                                                                                                                                   |
|                               | Standard  | 0381   | <p>Once a WFSA is approved, avoid delivery of chemical retardant, foam, or additives to all surfaces within occupied NIDGS habitat unless:</p> <ul style="list-style-type: none"> <li>a) The line officer or designee determines that imminent safety to human life or protection of structures is an issue; OR</li> <li>b) The incident resource advisor determines and documents an escaped fire would cause more degradation to occupied NIDGS habitat, than would be caused by chemical, foam or additive delivery to the habitat.</li> </ul> <p>In no case will the decision to avoid delivery of chemical retardant, foam or additives to occupied NIDGS habitat be delayed when the line officer or designee determines safety or loss of human life or protection of structures is at imminent risk</p> |
|                               | Guideline | 0382   | <p>Coordinate with the Boise National Forest, State of Idaho, and the BLM to develop compatible wildland fire suppression and wildland fire use strategies.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Lands and Special Uses</b> | Objective | 0383   | <p>Acquire an avigation easement for Price Valley Guard Station Helibase flight path to allow for the future use of Price Valley as a helibase in the midst of wildland-urban interface subdivision developments.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                               | Objective | 0384   | <p>Use land ownership adjustments to acquire northern Idaho ground squirrel habitat to contribute to recovery efforts.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                               | Objective | 0385   | <p>Acquire state land parcel (Section 16) north of Lost Valley Reservoir to improve management of northern Idaho ground squirrel habitat.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                               | Objective | 0386   | <p>Acquire state land within Rush Creek Subwatershed in order to maintain the semi-primitive recreation setting and opportunities in this portion of the Cuddy Mountain Roadless Area.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                               | Objective | 0387   | <p>Prepare site plans for the Sturgill Peak, Cow Mountain, and Indian Mountain communications sites to meet agency policy and eliminate potential use conflicts.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

| MPC/Resource Area             | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Lands and Special Uses</b> | Objective | 0388   | Use land exchange opportunities and easement acquisitions to acquire land parcels and/or road easements to improve access to the Rush Peak/Rush Falls portion of the Forest.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                               | Objective | 0389   | Issue a Federal Roads and Trails Act easement to Adams County for the 0.6-mile section of the Lost Valley Reservoir loop road, from U.S. Highway 95 to the first cattle guard.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                               | Guideline | 0390   | Give preference to analysis and approval of authorizations for new rights-of-way or other utility-related facilities requested within the utility corridors in this area (Oxbow-McCall power line corridor, Council-Cuprum Road corridor, State Highway 71 corridor, and Cambridge-New Meadows power line corridor).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Facilities and Roads</b>   | Objective | 0391   | Coordinate transportation system development, management, and decommissioning with cost-share cooperators to develop a shared transportation system serving the lands of all parties.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                               | Objective | 0392   | Maintain Price Valley Guard Station as a heli-rappel base to train and board fire-fighting personnel, and to maintain and store fire-fighting equipment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                               | Objective | 0393   | Evaluate and use methods to help prevent weed establishment and spread from road management activities in the Middle Mann Creek, Upper Mann Creek, Upper Monroe Creek, Sage Creek, Upper Keithly Creek, Lower Pine Creek, West Pine Creek, and Upper Pine Creek subwatersheds. Methods to consider include: <ul style="list-style-type: none"> <li>a) When decommissioning roads, treat weeds before roads are made impassable.</li> <li>b) Schedule road maintenance when weeds are least likely to be viable or spread. Blade from least to most infested sites.</li> <li>c) Consult or coordinate with the district noxious weed coordinator when scheduling road maintenance activities.</li> <li>d) Periodically inspect road systems and rights of way.</li> <li>e) Avoid accessing water for dust abatement through weed-infested sites, or utilize mitigation to minimize weed seed transport.</li> </ul> |

Management Area 04 –Rapid River –Location Map



## Management Area 4 Rapid River

### MANAGEMENT AREA DESCRIPTION

**Management Prescriptions** - Management Area 4 has the following management prescriptions (see map on preceding page for distribution of prescriptions).

| Management Prescription Category (MPC)                                                   | Percent of Mgt. Area |
|------------------------------------------------------------------------------------------|----------------------|
| 2.1 – Wild and Scenic Rivers                                                             | 6                    |
| 2.2 – Research Natural Areas                                                             | 3                    |
| 3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources | 62                   |
| 3.2 – Active Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources  | 8                    |
| 4.1a - Undeveloped Recreation: Maintain Inventoried Roadless Areas                       | 11                   |
| 4.1c – Undeveloped Rec.: Maintain Unroaded Character with Allowance for Restoration      | 1                    |
| 5.1 – Restoration and Maintenance Emphasis within Forested Landscapes                    | 9                    |

**General Location and Description** - Management Area 4 is comprised of lands administered by the Payette National Forest within the Rapid River and Little Salmon River drainages (see map, preceding page). The area includes a small portion of the Hells Canyon National Recreation Area, which is administered by the Wallowa-Whitman National Forest out of Enterprise, Oregon. Management Area 4 lies in Adams and Idaho Counties, and is part of the New Meadows Ranger District. The area is an estimated 62,900 acres, which includes small private land inholdings that make up about 1 percent of the area. The area is comprised of a large section west of the Little Salmon River, and a small section east of the Little Salmon River in the Elk Creek drainage. The western section is bordered by the Hells Canyon Wilderness Area to the west, the Payette National Forest to the south, the Nez Perce National Forest to the north, and a mix of BLM, private, and State lands to the east. The eastern section is bordered by Payette National Forest to the north, east, and south, and a mix of State, BLM, and private lands to the west. The primary uses in this management area have been dispersed recreation, watershed and fish habitat protection, livestock grazing, and timber management.

**Access** - Access routes to the area include the graveled Smoky-Boulder Road (Forest Road 074) and native-surfaced Forest Road 112 to Black Lake, the Hazard-Tepee Road (Forest Road 287), and the White Bird Ridge Road (Nez Perce Forest Road 624). The density of classified roads for the area is an estimated 0.3 miles per square mile, as most of the area is inventoried as roadless. Total road density for area subwatersheds ranges between 0 and 2.4 miles per square mile. A network of trails provides access to portions of the roadless areas. Access to the Forest is limited in the Little Salmon River corridor due to private land ownership.



The Forest has a cost-share agreement with Boise Corporation and the State of Idaho for building and maintaining a cooperative road system in which all costs and responsibilities are shared. Boise Corporation lands occur in the Trail Creek Subwatershed, and State lands occur primarily in the Elk Creek and Rattlesnake-Fall Subwatersheds.

**Special Features** - Rapid River is a designated Wild and Scenic River for all of its length in this management area. This river segment has a Wild classification, and is an estimated 13.1 miles long, with an associated river corridor of 4,185 acres.

Important habitat for Threatened chinook salmon, steelhead, and bull trout exists in Rapid River and Boulder Creek. Important elk and deer winter/spring range occurs in the Rapid River drainage. Pollock Mountain Lookout provides excellent views of the area. The Black Lake area is a popular recreation destination in the Hells Canyon NRA, which is managed by the Wallowa-Whitman National Forest. The Pony Creek Research Natural Area (1,900 acres) encompasses a diversity of habitat types, and represents a transition area between northern and southern Idaho vegetation.

An estimated 86 percent of the management area is inventoried as roadless, including portions of the Rapid River (47,103 of 57,733 acres on the Payette NF, 23,300 acres on adjacent Nez Perce NF) and Patrick Butte (7,033 acres of 80,676 acres) Roadless Areas.

**Air Quality** - This management area lies primarily within Montana/Idaho Airshed ID-15 and Adams County. Particulate matter is the primary pollutant of concern related to Forest management activities. There is an ambient air monitor located in McCall within the airshed to evaluate current background levels, trends, and seasonal patterns of particulate matter. There are two Class I areas within 100 kilometers of this management area, the Hells Canyon and Eagle Cap Wildernesses. Visibility monitoring has been expanded for these areas.

Between 1995 and 1999, emissions trends within Adams County improved for PM 10, while PM 2.5 emissions remained constant. The most common sources of particulate matter in the county were wildfire, prescribed fire, and fugitive dust from unpaved roads. In addition to Forest management activities, crop residue and ditch burning may contribute to particulate matter emissions, although the amount of agricultural-related burning was very low within Adams County (less than 600 acres). There were no point sources within the county.

**Soil, Water, Riparian, and Aquatic Resources** - Elevations range from 2,200 feet on Rapid River to 8,747 feet atop Jackley Mountain. Management Area 4 falls within the Seven Devils Mountains, Hornet Plateau, and Granite Mountain Uplands Subsections. The main geomorphic landforms found in the area are glaciated mountains and uplands, periglacial uplands and mountain slopes, plateaus and escarpments, and fluvial mountains and steep canyonlands. Slope gradients range from 10 to 80 percent in the glaciated mountains and uplands, 15 to 40 percent on the periglacial uplands and mountain slopes, 30 to 80 percent on the fluvial mountains and steep canyonlands, and 15 to 80 percent on the plateaus and escarpments. The surface geology is a mix of Seven Devils volcanics and Columbia River basalts, with border zone metamorphics in the Elk Creek area. Soils generally have low to moderate surface erosion potential, and low to moderate productivity. Subwatershed vulnerability ratings range from low to high, with the

majority being low (see table below). Geomorphic Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately), with half rated high (see table below).

The management area comprises portions of the Rapid River, Lower Little Salmon, and Middle Little Salmon Watersheds that drain into the Little Salmon River Subbasin, which flows north to the Salmon River. Portions of the Lower Boulder Creek and Trail Creek Subwatersheds of the Middle Little Salmon Watershed lie within the management area. The main streams in the area are Rapid River, Boulder Creek, Lockwood Creek, Fall Creek, and Elk Creek. There are several high mountain lakes at the eastern edge of the Seven Devils Mountains, and in the upper Elk Creek drainage. Water Quality Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) (see table below). Water quality is generally functioning appropriately, although the upper portion of lower Boulder Creek has localized areas where road culverts and lack of large woody debris are concerns. Unauthorized use by ATVs has also caused erosion and sediment deposition problems. Two of the 10 subwatersheds in this area were listed in 1998 as having impaired water bodies under Section 303(d) of the Clean Water Act. These subwatersheds are Indian-Denny and Elk Creek. The pollutant of concern for both subwatersheds is sediment. There are currently no TMDL-assigned subbasins associated with this management area.

| Subwatershed Vulnerability |      |     | Geomorphic Integrity |      |     | Water Quality Integrity |      |     | No. 303(d) Subs | No. Subs With TMDLs | No. Public Water System Subs |
|----------------------------|------|-----|----------------------|------|-----|-------------------------|------|-----|-----------------|---------------------|------------------------------|
| High                       | Mod. | Low | High                 | Mod. | Low | High                    | Mod. | Low |                 |                     |                              |
| 1                          | 3    | 6   | 5                    | 3    | 2   | 6                       | 4    | 0   | 2               | 0                   | 0                            |

The area has designated critical habitat for chinook salmon. Threatened chinook salmon, steelhead, and bull trout occur in the Rapid River and Boulder Creek drainages. The Rapid River Watershed is considered an aquatic stronghold for these species. Strong local populations of bull trout exist in the Lower Boulder, Copper-Castle, Upper Rapid River, Fry Pan-Paradise, and Lake Fork Creek subwatersheds. Native redband rainbow trout also occur in some area streams, as do introduced brook trout. Non-native species, such as brook trout, pose a threat to bull trout and other native species through hybridization and competition for space and food at all life stages. The Rapid River Fish Hatchery lies downstream from the Rapid River portion of the management area. Aquatic habitat is at properly functioning condition in Rapid River; however, habitat is at risk in Boulder Creek due to accelerated sediment from roads, grazing, and timber harvest, and reduced stream flows from irrigation diversions. The Lower Boulder Creek subwatershed has been identified as important to the recovery of listed fish species, and as a high-priority area for active restoration. The Upper Rapid River and Copper-Castle subwatersheds have strong populations, excellent watershed conditions, and associated aquatic habitat that serve as conservation pools to assist in recovery of listed fish species.

**Vegetation** - Vegetation at lower elevations is typically grasslands, shrublands, ponderosa pine and Douglas-fir on south and west aspects, and Douglas-fir and grand fir forests on north and east aspects. Mid and upper elevations are dominated by forest communities of Douglas-fir, grand fir, and subalpine fir, with pockets of lodgepole pine and aspen.

An estimated 12 percent of the area is rock, water, shrubland, or grassland--predominantly Perennial Grass Slopes. The main forested vegetation groups are Cool Moist Grand Fir (24 percent), Warm Dry Subalpine Fir (22 percent), Dry Grand Fir (15 percent), and Warm Moist/Hydric Subalpine Fir (12 percent).

The Perennial Grass Slopes, Warm Moist/Hydric Subalpine Fir, and Warm Dry Subalpine fir groups are functioning properly. The Cool Moist Grand Fir is functioning properly, but the risk of uncharacteristic fire is increasing due to fire exclusion and the increase in climax species and old structural stages. The Dry Grand Fir group is functioning at risk for an uncharacteristic fire that would not be within historical norms. Fire exclusion has created high stand densities and fuel loadings, a high percentage of grand fir, and shifted this group from a mixed severity to a lethal fire regime.

Riparian vegetation is functioning properly in most areas.

**Botanical Resources** – Puzzling halimolobos, a Region 4 Sensitive species, is found in this management area. Currently, no federally listed or proposed plant species are known to occur in the area, although potential habitat for Ute ladies'-tresses, Spalding's silene, and slender moonwort may exist. Ute's ladies'-tresses, a Threatened orchid species, may have moderate potential habitat in riparian/wetland areas up to 7,000 feet. Spalding's silene, a Threatened species, may occur in fescue grassland habitats from 1,500 to 5,500 feet. Slender moonwort, a Candidate species, may occur in moderate to higher elevation grasslands, meadows, and small openings in spruce and lodgepole pine.

**Non-native Plants** – A number of noxious weeds and exotic plants have been found within the area. Although only 9 percent of the management area is considered highly susceptible to invasion by non-native plants, efforts are still made to detect and minimize expansion of undesired species. The main noxious weed of concern is spotted knapweed. Canada thistle, yellow toadflax, and St. Johnswort also occur within the area.

**Wildlife Resources** - The wide range of elevations and vegetation types in the management area provide a variety of wildlife habitats. The lower elevation grasslands and forests in Rapid River provide important winter/spring range for elk and deer. Forests provide habitat for a number of Region 4 sensitive species, including northern goshawk, flammulated owl, white-headed woodpecker, great gray owl, boreal owl, three-toed woodpecker, and spotted frog. Habitat for lynx, a threatened species, exists throughout this area and has been mapped in Lynx Analysis Units. The entire area also provides nesting and forage habitat for migratory landbirds, and general habitat for wide-ranging mammals like elk, bear, and mountain lion. Overall, terrestrial habitat is at properly functioning condition in the high-elevation subalpine fir types, but is functioning at risk to uncharacteristic wildfire in lower-elevation grand fir and Douglas-fir types. Most of the area is without roads or harvest areas, and levels of habitat fragmentation and human-caused disturbance are generally very low. In the roaded portions of the area, mature and old trees still exist, but they are in small, fragmented blocks. Illegal ATV use is occurring within designated non-motorized areas, and increasing big-game vulnerability during hunting season.

**Recreation Resources** - Dispersed recreation and trail opportunities (e.g., hunting, camping, fishing, hiking, and horse riding) are the recreation emphases in this management area. Both motorized and non-motorized opportunities are provided on a network of trails. Recreation experiences are primarily semi-primitive. However, high quality opportunities for primitive recreation exist in the Rapid River Watershed in the western portion of the area. Non-motorized trail opportunities are the recreation emphasis for the Rapid River Watershed. There are many dispersed campsites in the management area but only one developed campground (at Black Lake). The area is in Idaho Fish and Game Management Unit 23. Recreation use comes from local communities (McCall, New Meadows, Riggins), as well as from the Treasure Valley (Boise, Nampa, Caldwell). Two outfitter and guide operations are permitted to use the area at this time. Non-permitted outfitter and guide operations are also occurring, causing conflict with permitted outfitter and guides.

Unauthorized cross-country ATV travel has caused resource damage in riparian areas and created eroded non-system trails throughout the management area. User conflicts are escalating between motorized and non-motorized recreationists within the Rapid River Watershed. Trails designed for 2-wheel motorized vehicles are being used illegally by 4-wheel ATVs.

**Scenic Environment** – Much of the area is considered to have high visual sensitivity. Visually sensitive routes and use areas represent locations from which the scenic environment is considered especially important. These routes or areas generally have a more restrictive VQO assigned to them than areas not seen from such locations. The following is a list of visually sensitive routes or use areas with this management area. There may also be sensitive routes or use areas in adjacent management areas that could be affected by actions taken in this management area.

| Route or Area Type | Sensitivity Level | Name of Route or Area                                                                                                                                                                        |
|--------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Roads              | 1                 | Black Lake 112, Hazard Teepee 287, Viewshed from US Highway 95                                                                                                                               |
| Roads              | 2                 | Smokey Boulder 047                                                                                                                                                                           |
| Trails             | 1                 | Rapid River 177, Black Lake Creek 188, Twin Lakes Creek 328, Echols Ridge 187, North Star Creek 183, Fry Pan Creek 279, Elk Lake 347, Paradise Creek, 186, Trail Creek 185, Copper Creek 190 |
| Trails             | 2                 | Cow Camp 081, Rapid River Ridge 178, Indian Springs 184, Cub Creek 362, Bryan Mountain 323, Hard Butte 344, Sheep Mountain 157, Dempsey Flat 369                                             |
| Use Areas          | 1                 | Pollock Mountain Lookout, Black Lake Campground                                                                                                                                              |
| Use Areas          | 2                 | Trail 081 trailhead                                                                                                                                                                          |

**Cultural Resources** – The main cultural themes in this area are Prehistoric and Mining. This area was likely used for centuries by American Indian ancestors for hunting, fishing, gathering, and as travel ways between the Snake and Salmon River corridors and Meadows Valley. Historic mining occurred around the Black Lake and Seven Devils areas in the upper reaches of the Rapid River Watershed.

**Timberland Resources** - Of the estimated 44,000 tentatively suited acres in this management area, 4,400 acres have been identified as being suited timberlands, or appropriate for timber production. This represents about 1 percent of the Forest's suited timberland acres. The suited timberland acres are found in MPC 5.1 (see MPC map for this management area). Lands in MPCs 2.1, 2.2, 3.1, 3.2, 4.1a, and 4.1c have been identified as not suited for timber production. No timber harvest has taken place in the roadless portion of Rapid River due mostly to concerns with access, economic efficiency, and protection of water quality and listed species. Harvest has occurred in the roaded portions of the management area.

**Rangeland Resources** - The management area contains all or portions of four allotments, with two sheep allotments located primarily in the western third of the area, and two cattle allotments located throughout the remaining area. This area has an estimated 9,400 acres of capable rangeland, which represents about 4 percent of the capable rangeland on the Forest.

**Mineral Resources** - Although the western portion of the management area has had a colorful history of hard rock exploration, no activity occurs today. The potential for mineral development is considered high in the western portion of the management area, and moderate to low over the rest of the area.

**Fire Management** - Prescribed fire has been used to improve winter/spring habitat conditions, maintain water quality, and restore vegetation to historic conditions in portions of the Rapid River Watershed. An estimated 9,670 acres have been treated since 1984. Only one large wildland fire has occurred in the last 15 years. The Curren Fire burned an estimated 20,000 acres within the Rapid River drainage in 1989. Recent research has demonstrated that fire exclusion among dry forest types in the area has changed fire regimes, forest structure, and fire risk. In the absence of fire, forest succession has resulted in increases in stand density and fuel loadings. Because these conditions predispose dry forest types to lethal wildfires, an aggressive program of prescribed fire is planned in the Rapid River Watershed over the next planning period. Similar conditions occur in the Little Salmon River drainage, however wildland-urban interface access and protection concerns there may require a combination of fire and mechanical treatments to safely reduce the risk of wildfire.

Pinehurst is a National Fire Plan community, and Lower Boulder Creek and Rattlesnake-Fall are considered wild land-urban interface subwatersheds due to residential development adjacent to the Forest. The same subwatersheds are also considered to pose risks to life and property from potential post-fire floods and debris flows. Historical fire regimes for the area are estimated to be: 16 percent lethal, 62 percent mixed<sup>1</sup> or 2, and 23 percent non-lethal. An estimated 22 percent of the area regimes have vegetation conditions that are highly departed from their historical range. Twelve percent of this change has occurred in the historically non-lethal fire regimes, resulting in conditions where wildfire would likely be much larger and more intense and severe than historically. In addition, 25 percent of the area regimes have vegetation conditions that are moderately departed from their historical range. Wildfire in these areas may result in larger patch sizes of high intensity or severity, but not to the same extent as in the highly departed areas in non-lethal fire regimes.

**Lands and Special Uses** - There is a special use authorization for a small FERC-exempted hydropower facility.

## MANAGEMENT DIRECTION

In addition to Forest-wide Goals, Objectives, Standards, and Guidelines that provide direction for all management areas, the following direction has been developed specifically for this area.

| MPC/Resource Area                                                                                                        | Direction           | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------|---------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 2.1<br/>Wild and Scenic<br/>Rivers</b>                                                                            | Standard            | 0401   | Manage Rapid River to its assigned Wild and Scenic River classification standards, and preserve the outstandingly remarkable values (ORVs) and the rivers' free-flowing status.                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                          | Fire Guideline      | 0402   | Prescribed fire and wildland fire use may be used in any river corridor as long as ORVs are maintained within the corridor.                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                                                                          | Fire Guideline      | 0403   | The full range of fire suppression strategies may be used to suppress wildfires. Fire suppression strategies and tactics should minimize impacts to river classifications and Outstandingly Remarkable Values.                                                                                                                                                                                                                                                                                                                                       |
| <b>MPC 2.2<br/>Research Natural<br/>Areas</b>                                                                            | Standard            | 0404   | Allow non-motorized travel only in the Pony Creek RNA (Forest Trail 181) to help maintain the features for which the area was established.                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                          | Vegetation Standard | 0405   | Mechanical vegetation treatments, salvage harvest, prescribed fire, and wildland fire use may only be used to maintain values for which the areas were established, or to achieve other objectives that are consistent with the RNA establishment record or management plan.                                                                                                                                                                                                                                                                         |
|                                                                                                                          | Road Standard       | 0406   | Road construction and reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To maintain the values for which the RNA was established.                                                                                                                                                                                                                                                                                                    |
|                                                                                                                          | Fire Guideline      | 0407   | The full range of fire suppression strategies may be used to suppress wildfires. Fire suppression strategies and tactics should minimize impacts to the values for which the RNA was established.                                                                                                                                                                                                                                                                                                                                                    |
| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | General Standard    | 0408   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years).                                                                                                                                                                                                                                                       |
|                                                                                                                          | Vegetation Standard | 0409   | Mechanical vegetation treatments, excluding salvage harvest, may only occur where:<br>a) The responsible official determines that wildland fire use or prescribed fire would result in unreasonable risk to public safety and structures, investments, or undesirable resource affects; and<br>b) They maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>c) They maintain or restore habitat for native and desired non-native wildlife and plant species. |

| MPC/Resource Area                                                                                                        | Direction              | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------|------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | Fire<br>Standard       | 0410   | Wildland fire use and prescribed fire may only be used where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species, or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species.                                                                                                                                                                      |
|                                                                                                                          | Road<br>Standard       | 0411   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To address immediate response situations where, if the action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                                                                                                 |
|                                                                                                                          | Fire<br>Guideline      | 0412   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies or tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                    |
| <b>MPC 3.2<br/>Active Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b>  | General<br>Standard    | 0413   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary (up to 3 years) or short-term (3-15 years) time periods, and must be designed to avoid degradation of existing conditions in the long term (greater than 15 years).                                                                                                                                                                           |
|                                                                                                                          | Vegetation<br>Standard | 0414   | Vegetation restoration or maintenance treatments—including wildland fire use, mechanical, and prescribed fire—may only occur where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species; or<br>c) Reduce risk of impacts from wildland fire to human life, structures, and investments. |
|                                                                                                                          | Road<br>Standard       | 0415   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To support aquatic, terrestrial, and watershed restoration activities, or<br>d) To address immediate response situations where, if the action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                 |
|                                                                                                                          | Fire<br>Guideline      | 0416   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                   |
| <b>MPC 4.1a<br/>Undeveloped<br/>Recreation:<br/>Maintain<br/>Inventoried<br/>Roadless Areas</b>                          | General<br>Standard    | 0417   | Management actions—including wildland fire use, prescribed fire, and special use authorizations—must be designed and implemented in a manner that does not adversely compromise the area’s roadless and undeveloped character in the temporary, short term, and long term. “Adversely compromise” means an action that results in the reduction of roadless or undeveloped acres within any specific IRA. Exceptions to this standard are actions in the 4.1a Road standard, below.    |
|                                                                                                                          | Road<br>Standard       | 0418   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                                                                                          |

| MPC/Resource Area                                                                                                     | Direction        | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------|------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 4.1a</b>                                                                                                       | Fire Guideline   | 0419   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the roadless or undeveloped character of the area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>MPC 4.1c<br/>Undeveloped Recreation:<br/>Maintain Unroaded Character with Allowance for Restoration Activities</b> | General Standard | 0420   | Management actions—including mechanical vegetation treatments, salvage harvest, wildland fire use, prescribed fire, special use authorizations, and road maintenance—must be designed and implemented in a manner that would be consistent with the unroaded landscape in the temporary, short term, and long term. “Adversely compromise” means an action that results in the reduction of roadless or undeveloped acres within any specific IRA. Exceptions to this standard are actions in the 4.1c road standards, below.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                       | Road Standard    | 0421   | Within Inventoried Roadless Areas (IRAs), road construction and reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                       | Road Standard    | 0422   | Outside IRAs, road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To provide transportation systems that support accomplishment of Management Area ROS objectives.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                       | Fire Guideline   | 0423   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the unroaded landscape.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>MPC 5.1<br/>Restoration and Maintenance<br/>Emphasis within Forested Landscapes</b>                                | Road Standard    | 0424   | There shall be no net increase in road densities in the MPC 5.1 portion of the Lower Boulder Creek subwatershed unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that:<br>a) For resources that are within their range of desired conditions, the increase in road densities shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>b) For resources that are already in a degraded condition, the increase in road densities shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>c) Adverse effects to TEPC species or their habitat are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitat.<br><br>An exception to this standard is where additional roads are required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations). |

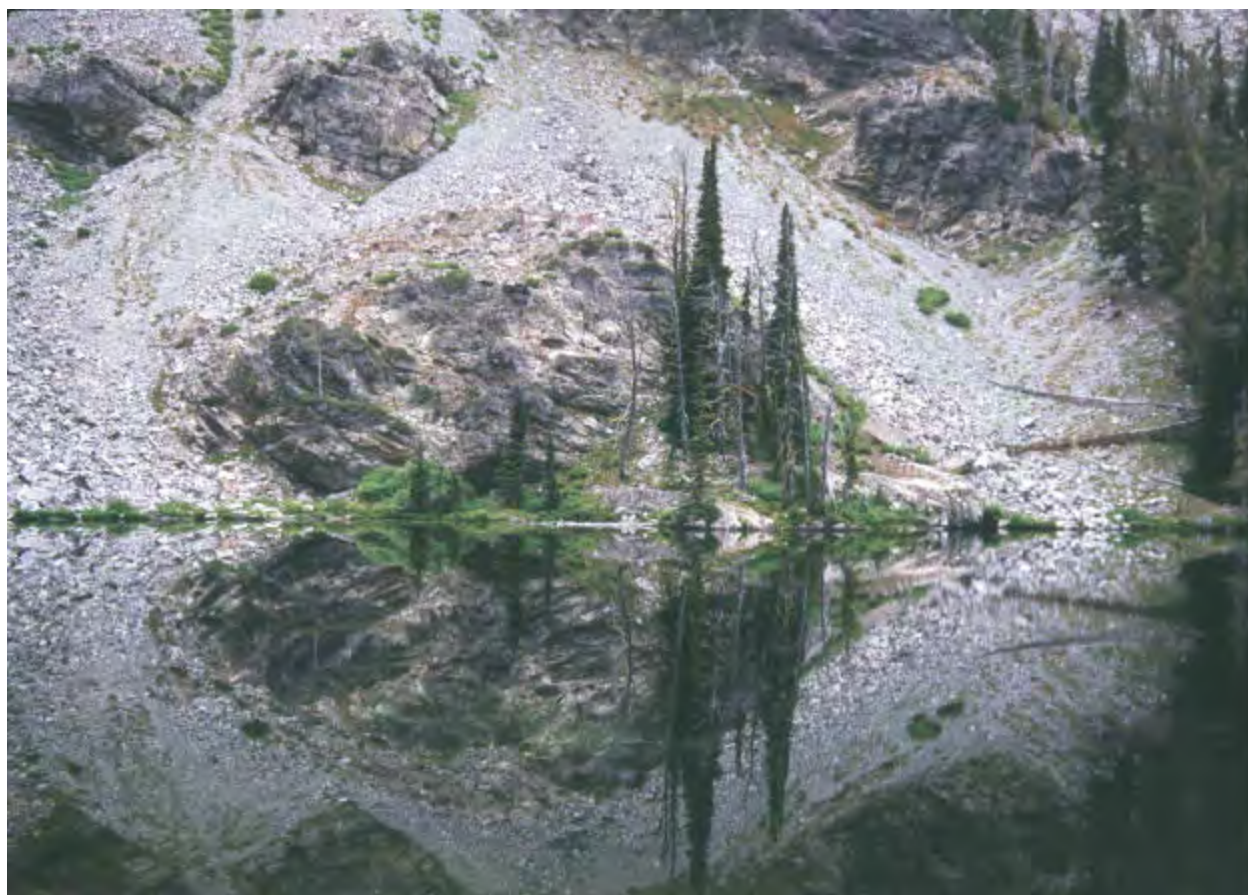


| MPC/Resource Area                                                                                  | Direction               | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------|-------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 5.1<br/>Restoration and<br/>Maintenance<br/>Emphasis within<br/>Forested<br/>Landscapes</b> | Road<br>Standard        | 0425   | <p>New roads and landings shall be located outside of RCAs in the MPC 5.1 portion of the Lower Boulder Creek subwatershed unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that:</p> <ul style="list-style-type: none"> <li>a) For resources that are within their range of desired conditions, the addition of a new road or landing in an RCA shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and</li> <li>b) For resources that are already in a degraded condition, the addition of a new road or landing in an RCA shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and</li> <li>c) Adverse effects to TEPC species or their habitats are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitats.</li> </ul> <p>An exception to this standard is where construction of new roads in RCAs is required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations).</p> |
|                                                                                                    | Road<br>Guideline       | 0426   | <p>Road construction or reconstruction may occur where needed:</p> <ul style="list-style-type: none"> <li>a) To provide access related to reserved or outstanding rights, or</li> <li>b) To respond to statute or treaty, or</li> <li>c) To achieve restoration and maintenance objectives for vegetation, water quality, aquatic habitat, or terrestrial habitat; or</li> <li>d) To support management actions taken to reduce wildfire risks in wildland-urban interface areas; or</li> <li>e) To meet access and travel management objectives.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                    | Vegetation<br>Guideline | 0427   | The full range of treatment activities may be used to restore and maintain desired vegetation and fuel conditions. The available vegetation treatment activities include wildland fire use. Salvage harvest may also occur.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                    | Fire<br>Guideline       | 0428   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to habitats, developments, and investments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                                                    |                         |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Soil, Water,<br/>Riparian, and<br/>Aquatic Resources</b>                                        | Objective               | 0429   | Improve water quality by reducing road-related accelerated sediment through a combination of road closure, obliteration, decommissioning, relocation, reconstruction, and maintenance in the upper portion of the Lower Boulder Creek subwatershed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                                                    | Objective               | 0430   | Coordinate with Hells Canyon NRA to reclaim Iron Springs Mine to improve water quality in Paradise Creek.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                    | Objective               | 0431   | Improve soil productivity in the Paradise Flat and Holbrook Saddle areas by stabilizing gullies and headcuts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                    | Objective               | 0432   | Maintain existing high-quality fish habitat in the Rapid River watershed to maintain the aquatic stronghold for threatened fish species.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                                                    | Objective               | 0433   | Restore fish habitat in the upper portion of the Lower Boulder Creek subwatershed by emphasizing aquatic connectivity (removal of fish barrier culverts) and reducing riparian road densities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| MPC/Resource Area                                   | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Soil, Water, Riparian, and Aquatic Resources</b> | Objective | 0434   | Maintain habitat conditions to provide for strong local populations of bull trout in the Copper-Castle, Fry Pan-Paradise, Lake Fork Creek, Upper Rapid River, and Lower Boulder Creek subwatersheds.                                                                                                                                                                                                                                                                                                                          |
|                                                     | Objective | 0435   | Continue ongoing culvert removal projects to resolve existing fish passage problems, primarily in Lower Boulder Creek subwatershed.                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                     | Objective | 0436   | Enforce motorized trail designations and restrictions with increased on-the-ground patrols to minimize erosion and sedimentation problems in riparian areas.                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Vegetation</b>                                   | Objective | 0437   | Use a mix of prescribed and wildland fire, and mechanical treatments to restore or maintain vegetative composition and structure, and to reduce fuel loadings.                                                                                                                                                                                                                                                                                                                                                                |
| <b>Botanical Resources</b>                          | Objective | 0438   | Maintain or restore known populations and occupied habitats of TEPCS plant species, including puzzling halimolobos, to contribute to the long-term viability of these species.                                                                                                                                                                                                                                                                                                                                                |
| <b>Non-native Plants</b>                            | Objective | 0439   | To reduce impacts on native plants and other resources, eradicate new and small infestations of spotted knapweed. Contain Canada thistle, St. Johnswort, and yellow toadflax. Emphasize prevention or eradication of new noxious weed infestations.                                                                                                                                                                                                                                                                           |
| <b>Wildlife Resources</b>                           | Objective | 0440   | Maintain or restore shrub communities for big-game winter/spring range in the lower Rapid River Watershed.                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                     | Objective | 0441   | Increase white-headed woodpecker and flammulated owl habitat by managing ponderosa pine stands within the Warm Dry Douglas-fir/Moist Ponderosa Pine and Dry Grand Fir vegetation groups toward the desired ranges of size classes, canopy closures, species composition, snags, and coarse woody debris, as described in Appendix A.                                                                                                                                                                                          |
|                                                     | Guideline | 0442   | An increase in the white-headed woodpecker or flammulated owl habitat may be achieved by the following methods:<br>a) Reducing tree densities and ladder fuels under and around existing large ponderosa trees and snags to reduce the risk of tree-replacing fire and to restore more open canopy conditions.<br>b) Managing the firewood program to retain large-diameter ponderosa pine and large snags of other species through signing, public education, size restriction, area closures, or other appropriate methods. |
| <b>Recreation Resources</b>                         | Objective | 0443   | Continue to permit outfitter and guide service within the Rapid River corridor to contribute to the range of recreation opportunities and experiences.                                                                                                                                                                                                                                                                                                                                                                        |
|                                                     | Objective | 0444   | Help prevent illegal outfitting by identifying and reporting illegal outfitter and guide operations to the Idaho Outfitter and Guide Licensing Board and Idaho Fish and Game Department.                                                                                                                                                                                                                                                                                                                                      |
|                                                     | Objective | 0445   | Enforce motorized trail designations and restrictions with increased on-the-ground patrols to allow for improved big-game security during hunting season.                                                                                                                                                                                                                                                                                                                                                                     |
|                                                     | Objective | 0446   | Remove pit toilets and replace with vault toilets to reduce resource impacts and improve recreation experiences.                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                     | Objective | 0447   | Resolve user conflicts arising from unauthorized motorized use by enforcing motorized trail designations and restrictions.                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                     | Objective | 0448   | Manage motorized recreation to address erosion, flow channeling, soil compaction, and loss of vegetation.                                                                                                                                                                                                                                                                                                                                                                                                                     |

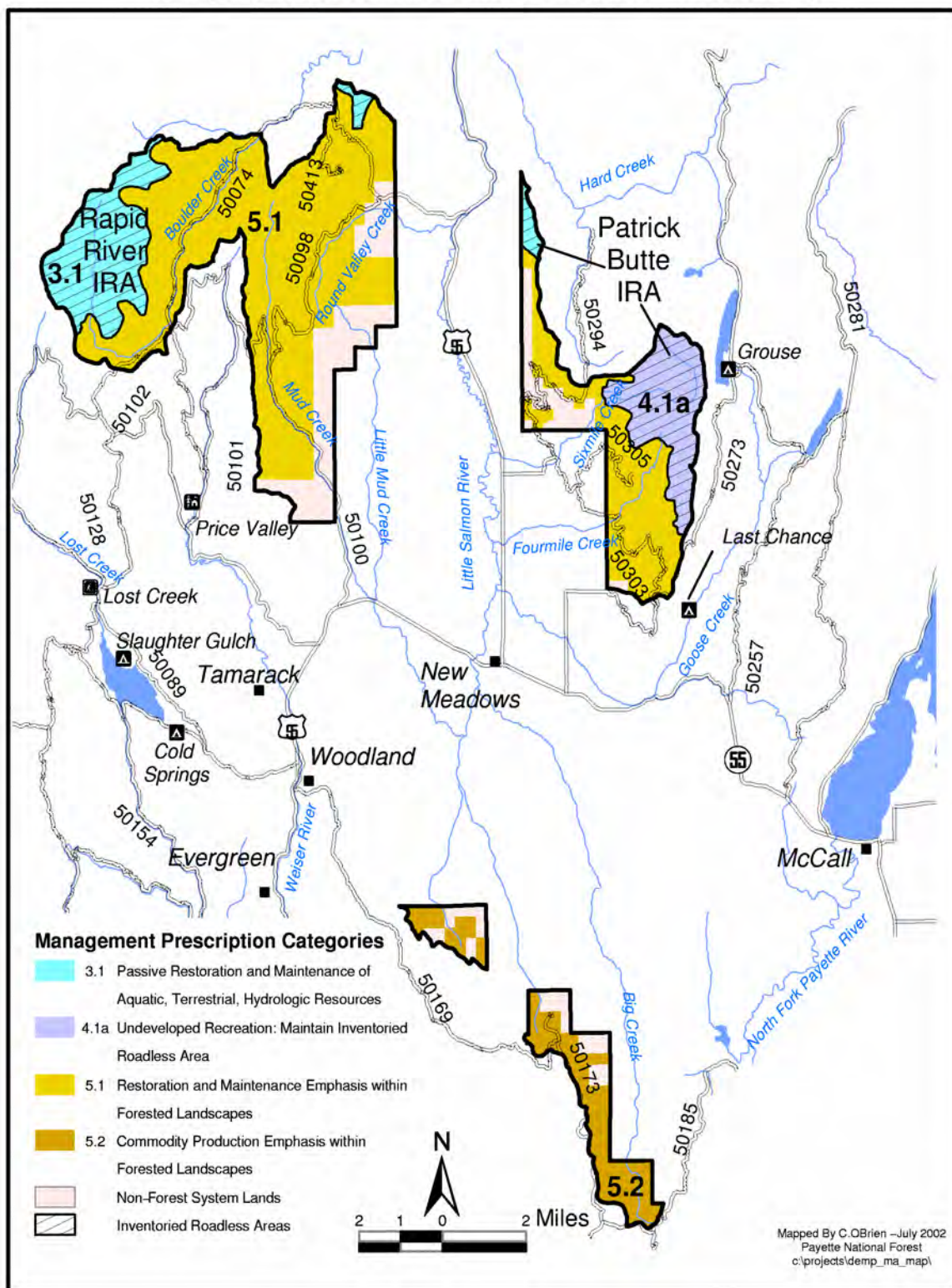
| MPC/Resource Area                                                                                                               | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                              |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
|---------------------------------------------------------------------------------------------------------------------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------|-----------|----------------------|--|--------|--------|------------------------------|-----|-----|--------------------------|-----|-----|----------------|----|----|-----------------|-----|-----|
| Recreation Resources                                                                                                            | Objective | 0449   | Rehabilitate pioneered, non-system trails to mitigate erosion, flow channeling, soil compaction, and loss of vegetation.                                                                                                                                                                                                                                                                      |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
|                                                                                                                                 | Objective | 0450   | Where a viable alternative exists, relocate trails that are currently within riparian areas to mitigate erosion and sedimentation.                                                                                                                                                                                                                                                            |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
|                                                                                                                                 | Objective | 0451   | Where motorized use is consistent with the recreation emphasis and will not cause unacceptable resource damage, reconstruct existing 2-wheel motorized trails to accommodate 4-wheel ATVs.                                                                                                                                                                                                    |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
|                                                                                                                                 | Objective | 0452   | Make travel management planning a priority in the Rapid River Watershed.                                                                                                                                                                                                                                                                                                                      |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
|                                                                                                                                 | Objective | 0453   | Achieve or maintain the following ROS strategy:                                                                                                                                                                                                                                                                                                                                               |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
|                                                                                                                                 |           |        | <table><tr><th rowspan="2">ROS Class</th><th colspan="2">Percent of Mgt. Area</th></tr><tr><th>Summer</th><th>Winter</th></tr><tr><td>Semi-Primitive Non-Motorized</td><td>28%</td><td>38%</td></tr><tr><td>Semi-Primitive Motorized</td><td>57%</td><td>48%</td></tr><tr><td>Roaded Natural</td><td>3%</td><td>4%</td></tr><tr><td>Roaded Modified</td><td>12%</td><td>10%</td></tr></table> |                      |        | ROS Class | Percent of Mgt. Area |  | Summer | Winter | Semi-Primitive Non-Motorized | 28% | 38% | Semi-Primitive Motorized | 57% | 48% | Roaded Natural | 3% | 4% | Roaded Modified | 12% | 10% |
|                                                                                                                                 |           |        | ROS Class                                                                                                                                                                                                                                                                                                                                                                                     | Percent of Mgt. Area |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
|                                                                                                                                 |           |        |                                                                                                                                                                                                                                                                                                                                                                                               | Summer               | Winter |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
| Semi-Primitive Non-Motorized                                                                                                    |           |        | 28%                                                                                                                                                                                                                                                                                                                                                                                           | 38%                  |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
| Semi-Primitive Motorized                                                                                                        |           |        | 57%                                                                                                                                                                                                                                                                                                                                                                                           | 48%                  |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
| Roaded Natural                                                                                                                  | 3%        | 4%     |                                                                                                                                                                                                                                                                                                                                                                                               |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
| Roaded Modified                                                                                                                 | 12%       | 10%    |                                                                                                                                                                                                                                                                                                                                                                                               |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
| The above numbers reflect current travel regulations. These numbers may change as a result of future travel regulation planning |           |        |                                                                                                                                                                                                                                                                                                                                                                                               |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
| Cultural Resources                                                                                                              | Objective | 0454   | Document the historic Pollock Mountain Fire Lookout (PY-360) and nominate it to the National Historic Lookout Register.                                                                                                                                                                                                                                                                       |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
|                                                                                                                                 | Objective | 0455   | Document the historic Indian Springs, Weiser National Forest, Ranger Station (PY-803) to meet federal requirements for management of historic properties.                                                                                                                                                                                                                                     |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
|                                                                                                                                 | Objective | 0456   | Mark burial site PY-1154 to meet state and federal legal requirements for protection of historic properties.                                                                                                                                                                                                                                                                                  |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
| Timberland Resources                                                                                                            | Standard  | 0457   | For this planning period (10-15 years), salvage and intermediate treatments in the 5.1 MPC portion of the Lower Boulder Creek subwatershed are allowed, but regeneration harvests are prohibited.                                                                                                                                                                                             |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
| Fire Management                                                                                                                 | Objective | 0458   | Identify areas appropriate for Wildland Fire Use, emphasizing Inventoried Roadless Areas. Use wildland fire to restore or maintain vegetative desired conditions and to reduce fuel loadings.                                                                                                                                                                                                 |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
|                                                                                                                                 | Objective | 0459   | Use prescribed fire and mechanical treatments within and adjacent to wildland-urban interface areas to manage fuels to reduce wildfire hazards. Develop and prioritize vegetation treatment plans for wildland-urban interface in coordination with local and tribal governments, agencies, and landowners.                                                                                   |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
|                                                                                                                                 | Objective | 0460   | Coordinate and emphasize fire education and prevention programs with private landowners to help reduce wildfire hazards and risks. Work with landowners to increase defensible space around structures.                                                                                                                                                                                       |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
|                                                                                                                                 | Guideline | 0461   | Coordinate with the Nez Perce and Wallowa-Whitman National Forests, BLM, and State of Idaho to develop compatible wildland fire suppression and wildland fire use strategies.                                                                                                                                                                                                                 |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |
| Lands and Special Uses                                                                                                          | Objective | 0462   | Acquire and provide public access to Elk Lake in the Elk Creek Subwatershed, and to Forest Trail #355 in the Lower Boulder Creek Subwatershed to improve recreation opportunities.                                                                                                                                                                                                            |                      |        |           |                      |  |        |        |                              |     |     |                          |     |     |                |    |    |                 |     |     |

| MPC/Resource Area             | Direction | Number | Management Direction Description                                                                                                                                                                                                                      |
|-------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Lands and Special Uses</b> | Objective | 0463   | Acquire and grant rights-of-way to meet the resource access needs of the Forest Service, the public, and cost-share cooperators, Boise Corporation and the State of Idaho.                                                                            |
| <b>Facilities and Roads</b>   | Objective | 0464   | Maintain Pollock Mountain Lookout as a fixed-based fire -detection facility. Repair the lookout if needed to ensure safe operations.                                                                                                                  |
|                               | Guideline | 0465   | Coordinate transportation system development, management, and decommissioning with the Boise Corporation and State of Idaho cost-share cooperators to develop a shared transportation system serving the lands of all parties to the extent possible. |

**Satan Lake**



Management Area 05 –Middle Little Salmon River –Location Map



## Management Area 5 Middle Little Salmon River

### MANAGEMENT AREA DESCRIPTION

**Management Prescriptions** - Management Area 5 has the following management prescriptions (see map on preceding page for distribution of prescriptions).

| Management Prescription Category (MPC)                                                   | Percent of Mgt. Area |
|------------------------------------------------------------------------------------------|----------------------|
| 3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources | 14                   |
| 4.1a - Undeveloped Recreation: Maintain Inventoried Roadless Areas                       | 10                   |
| 5.1 – Restoration and Maintenance Emphasis within Forested Landscapes                    | 66                   |
| 5.2 – Commodity Production Emphasis within Forested Landscapes                           | 10                   |

**General Location and Description** - Management Area 5 is comprised of lands administered by the Payette National Forest within the Little Salmon River drainage (see map, preceding page) east and west of Meadows Valley. The area lies in Adams County, and is administered by the New Meadows and Council Ranger Districts. The management area is an estimated 41,900 acres, of which about 14 percent (5,800 acres) is private land inholdings mostly owned by the Boise Cascade Corporation. The management area consists of several relatively small and separated parcels of land along the Forest boundary that are bordered by Payette National Forest on one side and mostly private land on the other. Meadows Valley ranchers or the Boise Corporation own much of the bordering private land. The primary uses or activities in this management area have been timber management, livestock grazing, and dispersed recreation.

**Access** - The main access to the area is by U.S. Highway 95 from New Meadows to Riggins, Idaho. Access routes off Highway 95 onto the Forest include the graveled Forest Road 074 (Smoky-Boulder Road), Forest Road 100 (Mud Creek Road), and Forest Road 303 (Meadows Slope Road) to Threemile Creek. The density of classified roads is an estimated 3.8 miles per square mile, as most of this area has been previously roaded and managed for timber production. Total road density for area subwatersheds ranges between 2.4 and 8.8 miles per square mile. An estimated 10 miles of existing classified and unclassified road have been decommissioned or obliterated in the past ten years. There are relatively few trails in the area, although several trailheads provide access into nearby roadless areas (Rapid River and Patrick Butte).

The Forest has a cost-share agreement with Boise Corporation and the State of Idaho for building and maintaining a cooperative road system in which all costs and responsibilities are shared. Boise Corporation lands occur in the Round Valley Creek, Mud Creek, Sixmile-Threemile, Upper Little Salmon River, and Big Creek Subwatersheds. State of Idaho lands are in the Mud Creek Subwatershed and the Blue Bunch Ridge area.

**Special Features** – Upper Boulder Creek drains into important habitat for Threatened chinook salmon, steelhead trout, and bull trout. The western portion of the area has potential habitat for Threatened northern Idaho ground squirrel. The Lick Creek Lookout provides excellent views of the area. An estimated 20 percent of the management area is inventoried as roadless, including small portions the Rapid River and Patrick Butte Roadless Areas.

**Air Quality** - Portions of this management area lie within Montana/Idaho Airsheds ID-14 and ID-15 and Adams and Valley Counties. Particulate matter is the primary pollutant of concern related to Forest management activities. An ambient air monitor is located in McCall within the airshed to evaluate current background levels, trends, and seasonal patterns of particulate matter. There are two Class I areas within 100 kilometers of this management area, the Hells Canyon and Eagle Cap Wildernesses. Visibility monitoring has been expanded for these areas.

Between 1995 and 1999, emissions trends in both counties improved for PM 10, while PM 2.5 emissions remained constant. The most common sources of particulate matter in the counties were wildfire, prescribed fire, and fugitive dust from unpaved roads. In addition to Forest management activities, crop residue and ditch burning may contribute annually to particulate matter emissions, although the amount of agricultural-related burning was very low within both counties (less than 600 acres). There were no point sources within either county.

**Soil, Water, Riparian, and Aquatic Resources** - Elevations range from 3,800 feet where Round Valley Creek leaves the Forest to above 8,000 feet on Granite Mountain. Management Area 5 falls primarily within the Hornet Plateau and Granite Mountain Uplands Subsections. The main geomorphic landforms found in the area are periglacial uplands and mountain slopes, plateaus and escarpments, and fluvial mountains. Slope gradients range from 15 to 40 percent on the periglacial uplands and mountain slopes, 30 to 50 percent on the fluvial mountains, and 15 to 40 percent on the plateaus and escarpments. The surface geology is predominantly Columbia River basalts, with border zone metamorphics along the eastern edge. Soils generally have low to moderate surface erosion potential, and moderate to high productivity. Subwatershed vulnerability ratings range from low to high, with the majority being low (see table below). Geomorphic Integrity ratings for the subwatersheds vary from moderate (functioning at risk) to low (not functioning appropriately), with the majority being low (see table below). Localized impacts are due primarily to sedimentation and stream channel modification from the many roads located adjacent to streams.

The management area comprises all or portions of the Middle Little Salmon and Upper Little Salmon Watersheds that drain into the Little Salmon River Subbasin, which flows north to the Salmon River. The area includes the Upper Boulder Creek, Round Valley Creek, Middle Little Salmon, Trail, and Sixmile-Threemile subwatersheds in the Middle Little Salmon Watershed, and the entire Upper Little Salmon Watershed. The main streams in the area are Boulder Creek, Round Valley Creek, Mud Creek, Sixmile Creek, Fourmile Creek, and Threemile Creek. There are no lakes or large reservoirs in the area. Water Quality Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately), with the majority being moderate (see table below). Localized impacts are due primarily to accelerated sediment from roads, timber harvest, and livestock grazing. Two of the nine subwatersheds in this area were listed in 1998 as having impaired

water bodies under Section 303(d) of the Clean Water Act. These subwatersheds are Upper Little Salmon and Big Creek. The pollutants of concern are sediment and nutrients. There are currently no TMDL-assigned subbasins associated with this management area.

| Subwatershed Vulnerability |      |     | Geomorphic Integrity |      |     | Water Quality Integrity |      |     | No. 303(d) Subs | No. Subs With TMDLs | No. Public Water System Subs |
|----------------------------|------|-----|----------------------|------|-----|-------------------------|------|-----|-----------------|---------------------|------------------------------|
| High                       | Mod. | Low | High                 | Mod. | Low | High                    | Mod. | Low |                 |                     |                              |
| 1                          | 0    | 8   | 0                    | 1    | 8   | 1                       | 6    | 2   | 1               | 0                   | 0                            |

The management area has designated critical habitat for chinook salmon. It contains habitat for a number of fish species including Threatened chinook salmon, steelhead trout, and bull trout in upper Boulder Creek and Trail Creek. Strong local populations of bull trout exist in the upper Boulder Creek drainage. Native redband rainbow trout and native cutthroat trout occur in area streams, as do introduced brook trout. Development of U.S. Highway 95 in the early 1900s probably created a migration barrier that restricts anadromous fish to the Little Salmon River below Round Valley Creek. Several irrigation ditches currently affect the movement of water and sediment through the watershed. High road densities, private development, and past timber harvests have contributed to chronic accelerated sediment levels in most area streams. Old or improperly installed road culverts have also contributed to habitat fragmentation by restricting fish passage. The Final Basinwide Salmon Recovery Strategy ("All H Paper" 2000) identified the Little Salmon River as a high priority for restoration on non-federal lands, and that actions on federal lands should link to this priority where appropriate. Restoration emphases are on resolving stream flow, passage, and diversion problems within ten years. Aquatic habitat within this area has been substantially altered by human activities and is functioning at risk. Non-native species, such as brook trout, pose a threat to bull trout and other native species through hybridization and competition for space and food at all life stages. The Upper Boulder Creek subwatershed has been identified as important to the recovery of listed fish species, and as a high-priority area for restoration.

**Vegetation** - Vegetation at lower elevations is typically grasslands, shrublands, ponderosa pine and Douglas-fir on south and west aspects, and Douglas-fir and grand fir forests on north and east aspects. Mid and upper elevations are dominated by forest communities of Douglas-fir, grand fir, and subalpine fir, with pockets of lodgepole pine and aspen.

Less than 5 percent of the area is rock, water, shrubland, or grassland. The main forested vegetation groups are Dry Grand Fir (20 percent), Cool Moist Grand Fir (39 percent), Warm Moist Subalpine Fir, Warm Dry Subalpine Fir (16 percent), and Warm Dry Douglas-fir/Moist Ponderosa Pine (14 percent).

The Warm Moist and Warm Dry Subalpine Fir groups are at properly functioning condition. Stand-replacement fires are within historic norms for these groups. The Dry Grand Fir, Cool Moist Grand Fir, and Warm Dry Douglas-fir/Moist Ponderosa Pine groups are functioning at risk due to changes in stand structure from past timber harvest. Intensive harvesting throughout much of the area has removed many of the large ponderosa pine, Douglas-fir, and western larch, leaving young and mid-aged plantations.



Riparian vegetation is functioning at risk in some areas due primarily to localized impacts from roads, timber harvest, and livestock grazing.

**Botanical Resources** – Puzzling halimolobos, a current Region 4 Sensitive species, is known to occur within this management area. Currently, no federally listed or Proposed plant species are known to occur in the area, although potential habitat for Ute ladies'-tresses and Spalding's silene may exist. Ute ladies'-tresses, a Threatened orchid species, may have moderate potential habitat in riparian/wetland areas up to 7,000 feet. Spalding's silene, a Threatened species, may occur in fescue grassland habitat types from 1,500 to 5,500 feet. Slender moonwort, a Candidate species, may occur in moderate to higher elevation grasslands, meadows, and small openings in spruce and lodgepole pine.

**Non-native Plants** – A number of noxious weeds and exotic plants have been introduced to the management area, particularly along road corridors. An estimated 10 percent of the area is highly susceptible to invasion by noxious weeds and exotic plant species. The main weeds of concern are spotted knapweed and Dalmatian toadflax, which currently occur in scattered populations within the area. Canada thistle, St. Johnswort, and yellow toadflax are also found in the area. Subwatersheds in the table below have an inherently high risk of weed establishment and spread from activities identified with a "yes" in the various activity columns. This risk is due to the amount of drainage area that is highly susceptible to noxious weed invasion and the relatively high level of exposure from those identified vectors or carriers of weed seed.

| Subwatershed         | Road-related Activities | Livestock Use | Timber Harvest | Recreation & Trail Use | ATV Off-Road Use |
|----------------------|-------------------------|---------------|----------------|------------------------|------------------|
| Middle Little Salmon | No                      | No            | Yes            | No                     | No               |

**Wildlife Resources** - The wide range of elevations and vegetation types in the management area provide a variety of wildlife habitats. The lower elevation grasslands and shrublands provide limited winter range for elk and deer, as well as foraging habitat for mountain quail, and introduced turkey. Forested habitat exists for a number of Region 4 sensitive species, including fisher, northern goshawk, flammulated owl, white-headed woodpecker, great gray and boreal owls, and three-toed woodpeckers. The entire area provides nesting and forage habitat for migratory land birds, and general habitat for wide-ranging mammals like elk, bear, and mountain lion. Habitat for the Threatened northern Idaho ground squirrel exists in the western portion of the area. Lynx habitat has been mapped in Lynx Analysis Units within the area. Overall, terrestrial habitat is functioning at risk due to timber harvest and roads that have resulted in low levels of large trees, snags, and logs, and relatively high levels of fragmentation within the area. Mature and old trees exist but often in poor juxtaposition and in small block sizes in the roaded portions of the area.

**Recreation Resources** - No developed recreation sites occur within the area. Dispersed recreation—such as hunting, hiking, sightseeing, and camping—occurs throughout the area. The Ant Basin Trailhead is highly used by recreationists because it provides the closest motorized access to the east side of Rapid River. The trailhead is too small to accommodate existing use, and the road access to the trailhead from Yantis Ditch is in poor condition. The area is in Idaho Fish and Game Management Unit 23. Most recreation is road-oriented, and there are few trails

or recreation destinations; however, potential exists for developing snowcat skiing in the eastern portion of the area. Much of the recreation use comes from local communities such as McCall, New Meadows, and Riggins. Dispersed camping and trail opportunities are the recreation emphasis in this management area.

**Scenic Environment** – Visually sensitive routes and use areas represent locations from which the scenic environment is considered especially important. These routes or areas generally have a more restrictive VQO assigned to them than areas not seen from such locations. The following is a list of visually sensitive routes or use areas with this management area. There may also be sensitive routes or use areas in adjacent management areas that could be affected by actions taken in this management area.

| Route or Area Type | Sensitivity Level | Name of Route or Area         |
|--------------------|-------------------|-------------------------------|
| Roads              | 1                 | Viewshed from U.S. Highway 95 |
| Roads              | 2                 | Brown Creek 294               |

**Cultural Resources** – Cultural themes in this area include Prehistoric, Ranching, and Timber. This area was likely used for centuries by American Indians for hunting, fishing, gathering, and as a travel way between the Snake and Salmon River corridors and Long Valley. Historically, local residents have used the area for livestock grazing, irrigation, and timber harvest.

**Timberland Resources** - Of the estimated 32,800 tentatively suited acres in this management area, 21,400 acres have been identified as being suited timberlands, or appropriate for timber production. This represents about 6 percent of the Forest's suited timberland acres. The suited timberland acres are found in MPCs 5.2 and 5.1 (see MPC map for this management area). Lands in MPCs 3.1 and 4.1a have been identified as not suited for timber production.

Most of the area has been managed in the past for timber, and many plantations of different sizes and ages exist. This area includes the Boulder Creek Progeny Test Area and the Circle C Seed Production Area. These sites have been developed to test and evaluate the growth and development of trees from different genetic sources, and to produce seeds of desirable genetic quality. Forest products such as fuelwood, posts and poles, and Christmas trees are also collected in the management area.

**Rangeland Resources** - The management area contains all or portions of three sheep and four cattle allotments. The area provides an estimated 8,900 acres of capable rangeland, which represents about 4 percent of the capable rangeland on the Forest.

**Mineral Resources** - Little mineral activity occurs in this area, and few claims exist. The potential for mineral development is considered low over most of the management area.

**Fire Management** - Prescribed fire has been used to reduce activity-generated fuels in the roaded portion of the area. No large fires have occurred in this area in the last 15 years. Fire hazard is generally low due to the amount of timber and activity fuels management that has occurred throughout the area. There are no National Fire Plan communities in this area, but Round Valley Creek subwatershed is considered to be a wildland-urban interface area due to

subdivision development adjacent to the Forest. This subwatershed is also considered to pose risks to life and property from potential post-fire floods and debris flows. The Sixmile-Threemile, Middle Little Salmon, and Upper Mud Creek subwatersheds also have increasing residential development near the Forest.

Historical fire regimes in the area are estimated to be: 6 percent lethal, 59 percent mixed<sup>1</sup> or 2, and 36 percent non-lethal. An estimated 21 percent of the area regimes have vegetation conditions that are highly departed from their historical range. Most of this change has occurred in the historically non-lethal fire regimes, resulting in conditions where wildfire would likely be much larger and more intense and severe than historically. In addition, 35 percent of the area regimes have vegetation conditions that are moderately departed from their historical range. Wildfire in these areas may result in somewhat larger patch sizes of high intensity or severity, but not to the same extent as in the highly departed areas in non-lethal fire regimes.

**Special Uses** - A special use authorization is issued to Idaho Power for a transmission power line (Oxbow-McCall). An easement has been issued for a water system used for agriculture. A private landowner has submitted an application requesting a permanent conditional easement for his water system per Public Law 99-545, commonly known as the “Colorado Ditch Bill”.

## MANAGEMENT DIRECTION

In addition to Forest-wide Goals, Objectives, Standards, and Guidelines that provide direction for all management areas, the following direction has been developed specifically for this area.

| MPC/Resource Area                                                                                                        | Direction              | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------|------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | General<br>Standard    | 0501   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years).                                                                                                                                                                                                                                                       |
|                                                                                                                          | Vegetation<br>Standard | 0502   | Mechanical vegetative treatments, excluding salvage harvest, may only occur where:<br>a) The responsible official determines that wildland fire use or prescribed fire would result in unreasonable risk to public safety and structures, investments, or undesirable resource affects; and<br>b) They maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>c) They maintain or restore habitat for native and desired non-native wildlife and plant species. |
|                                                                                                                          | Fire<br>Standard       | 0503   | Wildland fire use and prescribed fire may only be used where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species, or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species.                                                                                                                                                                                                                                    |

| MPC/Resource Area                                                                                                        | Direction           | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | Road<br>Standard    | 0504   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To address immediate response situations where, if the action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                          | Fire<br>Guideline   | 0505   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>MPC 4.1a<br/>Undeveloped<br/>Recreation:<br/>Maintain<br/>Inventoried<br/>Roadless Areas</b>                          | General<br>Standard | 0506   | Management actions—including wildland fire use, prescribed fire, and special use authorizations—must be designed and implemented in a manner that does not adversely compromise the area’s roadless and undeveloped character in the temporary, short term, and long term. “Adversely compromise” means an action that results in the reduction of roadless or undeveloped acres within any specific IRA. Exceptions to this standard are actions in the 4.1a Roads standard, below.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                          | Road<br>Standard    | 0507   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                          | Fire<br>Guideline   | 0508   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the roadless or undeveloped character of the area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>MPC 5.1<br/>Restoration and<br/>Maintenance<br/>Emphasis within<br/>Forested<br/>Landscapes</b>                       | Timber<br>Standard  | 0509   | For this planning period (10-15 years), salvage and intermediate treatments in the 5.1 MPC portion of the Upper Boulder Creek subwatershed are allowed, but regeneration harvests are prohibited.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                                          | Road<br>Standard    | 0510   | There shall be no net increase in road densities in the MPC 5.1 portion of the Upper Boulder Creek, Sixmile-Threemile, Upper Mud Creek, Round Valley Creek, and Middle Little Salmon subwatersheds unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that:<br>a) For resources that are within their range of desired conditions, the increase in road densities shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>b) For resources that are already in a degraded condition, the increase in road densities shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>c) Adverse effects to TEPC species or their habitat are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitat.<br>An exception to this standard is where additional roads are required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations). |

| MPC/Resource Area                                                                                  | Direction               | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>MPC 5.1<br/>Restoration and<br/>Maintenance<br/>Emphasis within<br/>Forested<br/>Landscapes</b> | Road<br>Standard        | 0511   | <p>New roads and landings shall be located outside of RCAs in the MPC 5.1 portion of the Upper Boulder Creek subwatershed unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that:</p> <ul style="list-style-type: none"> <li>a) For resources that are within their range of desired conditions, the addition of a new road or landing in an RCA shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and</li> <li>b) For resources that are already in a degraded condition, the addition of a new road or landing in an RCA shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and</li> <li>c) Adverse effects to TEPC species or their habitats are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitats.</li> </ul> <p>An exception to this standard is where construction of new roads in RCAs is required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations).</p> |
|                                                                                                    | Vegetation<br>Guideline | 0512   | The full range of vegetation treatment activities may be used to restore or maintain desired vegetation and fuel conditions. The available vegetation treatment activities include wildland fire use. Salvage harvest may also occur.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                    | Fire<br>Guideline       | 0513   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to habitats, developments, and investments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                                                    | Road<br>Guideline       | 0514   | <p>Road construction or reconstruction may occur where needed:</p> <ul style="list-style-type: none"> <li>a) To provide access related to reserved or outstanding rights, or</li> <li>b) To respond to statute or treaty, or</li> <li>c) To achieve restoration and maintenance objectives for vegetation, water quality, aquatic habitat, or terrestrial habitat; or</li> <li>d) To support management actions taken to reduce wildfire risks in wildland-urban interface areas; or</li> <li>e) To meet access and travel management objectives.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>MPC 5.2<br/>Commodity<br/>Production<br/>Emphasis within<br/>Forested<br/>Landscapes</b>        | Fire<br>Standard        | 0515   | Wildland fire use is prohibited.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                    | Fire<br>Guideline       | 0516   | <p>Prescribed fire may be used to:</p> <ul style="list-style-type: none"> <li>a) Maintain or restore desired vegetative conditions on unsuited timberlands; or</li> <li>b) Maintain or restore desired fuel conditions for all vegetation types; or</li> <li>c) Maintain desired vegetative conditions on suited timberlands within PVGs 2 through 10.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                                                    | Fire<br>Guideline       | 0517   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to developments and investments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>SWRA Resources</b>                                                                              | Objective               | 0518   | Improve water quality and geomorphic integrity by reducing road-related accelerated sediment throughout the management area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

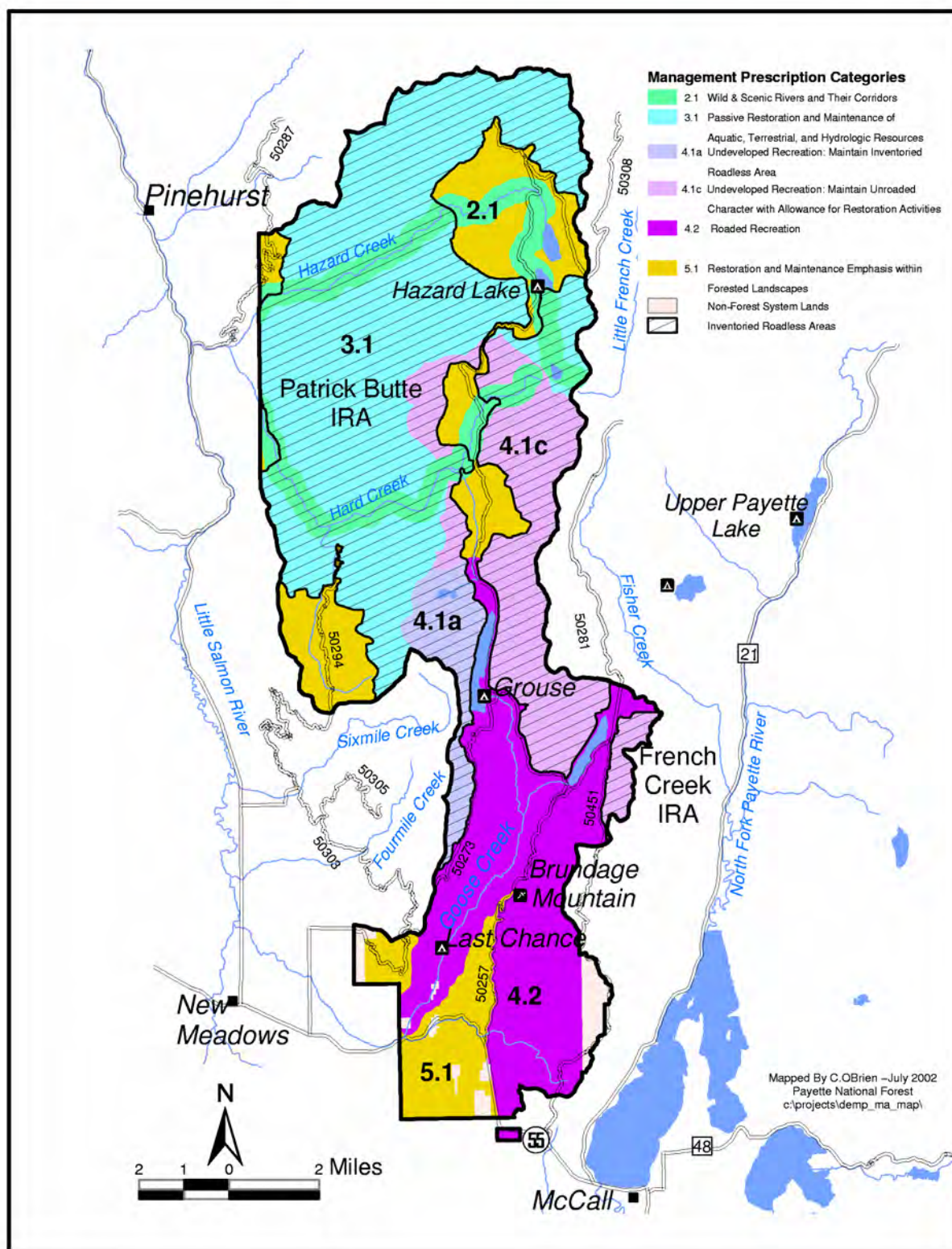
| MPC/Resource Area                                   | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Soil, Water, Riparian, and Aquatic Resources</b> | Objective | 0519   | Restore riparian vegetation and floodplain function in localized areas throughout the management area by reducing road-related impacts through relocation, reconstruction, or decommissioning.                                                                                                                                                                                                                                                                                                                                |
|                                                     | Objective | 0520   | Restore fish habitat for native species--including threatened chinook salmon, steelhead trout, and bull trout--in the Upper Boulder Creek subwatershed, by reducing road-related accelerated sediment and continuing to remove culverts that impede migration of these species.                                                                                                                                                                                                                                               |
|                                                     | Objective | 0521   | Fulfill agreement with Boise Corporation and BLM to restore native cutthroat trout habitat in Trail Creek.                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                     | Objective | 0522   | Restore equivalent clearcut area (ECA) values toward the range of desired resource conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Vegetation</b>                                   | Objective | 0523   | Use a mix of prescribed fire, wildland fire, and mechanical treatments to restore or maintain vegetative composition and structure, and to reduce fuel loadings in the management area.                                                                                                                                                                                                                                                                                                                                       |
| <b>Botanical Resources</b>                          | Objective | 0524   | Maintain or restore known populations and occupied habitats of TEPCS plant species, including puzzling halimolobos to contribute to the long-term viability of these species.                                                                                                                                                                                                                                                                                                                                                 |
| <b>Non-native Plants</b>                            | Objective | 0525   | To reduce impacts on native plants and other resources, eradicate new and small infestations of spotted knapweed and Dalmatian toadflax. Contain infestations of Canada thistle, St. Johnswort, and yellow toadflax.                                                                                                                                                                                                                                                                                                          |
| <b>Wildlife Resources</b>                           | Goal      | 0526   | Restore northern Idaho ground squirrel habitat quality, abundance, and connectivity to promote recovery of the species.                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                     | Objective | 0527   | Implement the recovery plan for the northern Idaho ground squirrel, when approved, to promote recovery of the species.                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                     | Objective | 0528   | Increase white-headed woodpecker and flammulated owl habitat by managing ponderosa pine stands within the Warm Dry Douglas-fir/Moist Ponderosa Pine and Dry Grand Fir vegetation groups toward the desired ranges of size classes, canopy closures, species composition, snags, and coarse woody debris, as described in Appendix A. The ranges of these components may vary by management prescription.                                                                                                                      |
|                                                     | Standard  | 0529   | The northern Idaho ground squirrel will receive priority consideration for all management activities that occur within their known occupied habitat. The intent of this standard is not to exclude all other activities within this habitat, but rather to reduce or minimize potential impacts to this species while emphasizing habitat improvement within and adjacent to known sites.                                                                                                                                     |
|                                                     | Guideline | 0530   | An increase in the white-headed woodpecker or flammulated owl habitat may be achieved by the following methods:<br>a) Reducing tree densities and ladder fuels under and around existing large ponderosa trees and snags to reduce the risk of tree-replacing fire and to restore more open canopy conditions.<br>b) Managing the firewood program to retain large-diameter ponderosa pine and large snags of other species through signing, public education, size restriction, area closures, or other appropriate methods. |
| <b>Recreation Resources</b>                         | Objective | 0531   | Provide for additional parking at the Ant Basin trailhead to accommodate increasing trail use.                                                                                                                                                                                                                                                                                                                                                                                                                                |

| MPC/Resource Area        | Direction | Number | Management Direction Description                                                                                                                                                      |                      |        |
|--------------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------|
| Recreation Resources     | Objective | 0532   | Provide informational signing at the Ant Basin Trailhead to inform Rapid River trail users of motorized and non-motorized trail designations in Rapid River to resolve user conflict. |                      |        |
|                          | Objective | 0533   | Replace the pit toilet with a vault toilet at Yellow Jacket Creek to reduce resource impacts and improve recreation experiences.                                                      |                      |        |
|                          | Objective | 0534   | Evaluate the need for, and possible location of, a winter parking facility on the Smokey-Boulder Road. Construct the facility if the evaluation finds it to be warranted.             |                      |        |
|                          | Objective | 0535   | Achieve or maintain the following ROS strategy:                                                                                                                                       |                      |        |
|                          |           |        | ROS Class                                                                                                                                                                             | Percent of Mgt. Area |        |
|                          |           |        |                                                                                                                                                                                       | Summer               | Winter |
|                          |           |        | Semi-Primitive Non-Motorized                                                                                                                                                          | 1%                   | 0%     |
| Semi-Primitive Motorized |           |        | 13%                                                                                                                                                                                   | 35%                  |        |
|                          |           |        |                                                                                                                                                                                       |                      |        |
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| MPC/Resource Area             | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire Management</b>        | Standard  | 0544   | Once a Wildland Fire Situation Analysis (WFSA) is approved, heavy equipment shall not be used to construct fire lines within occupied NIDGS habitat unless:<br>a) The line officer or designee determines that imminent safety to human life or protection of structures is an issue; OR<br>b) The incident resource advisor determines and documents an escaped fire would cause more degradation to occupied NIDGS habitat than would result from heavy equipment disturbance.<br>In no case will the decision to use heavy equipment in occupied NIDGS habitat be delayed when the line officer or designee determines safety or loss of human life or protection of structures is at imminent risk.                                         |
|                               | Standard  | 0545   | Once a WFSA is approved, incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities shall be located outside of occupied NIDGS habitat unless the only suitable location for such activities is determined and documented by the line officer or designee to be within occupied NIDGS habitat. In no case will the decision to place these activities inside occupied NIDGS habitat be delayed when the line officer or designee determines safety or loss of human life or structures is at imminent risk.                                                                                                                                                                                          |
|                               | Standard  | 0546   | Once a WFSA is approved, avoid delivery of chemical retardant, foam, or additives to all surfaces within occupied NIDGS habitat unless:<br>a) The line officer or designee determines that imminent safety to human life or protection of structures is an issue; OR<br>b) The incident resource advisor determines and documents an escaped fire would cause more degradation to occupied NIDGS habitat, than would be caused by chemical, foam or additive delivery to the habitat.<br>In no case will the decision to avoid delivery of chemical retardant, foam or additives to occupied NIDGS habitat be delayed when the line officer or designee determines safety or loss of human life or protection of structures is at imminent risk |
| <b>Lands and Special Uses</b> | Objective | 0547   | Acquire and grant rights-of-way and permits to meet the resource access needs of the Forest Service, the public and cost-share cooperators. The main cooperator in this area is Boise Corporation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                               | Objective | 0548   | Use land ownership adjustments to acquire northern Idaho ground squirrel habitat to contribute to recovery efforts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Facilities and Roads</b>   | Objective | 0549   | Maintain the Lick Creek Fire Lookout as a fixed-base fire-detection facility to help in fire detection and suppression efforts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                               | Objective | 0550   | Improve Road 079 from Yantis Ditch to Ant Basin Trailhead (Trail 519) to provide improved access for existing recreation use.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                               | Guideline | 0551   | Coordinate transportation system development, management, and decommissioning with Boise Corporation and State of Idaho cost-share cooperators to develop a shared transportation system serving the lands of all parties to the extent possible.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |



Management Area 06 –Goose Creek/Hazard Creek –Location Map



## Management Area 6 Goose Creek/Hazard Creek

### MANAGEMENT AREA DESCRIPTION

**Management Prescriptions** - Management Area 6 has the following management prescriptions (see map on preceding page for distribution of prescriptions).

| Management Prescription Category (MPC)                                                   | Percent of Mgt. Area |
|------------------------------------------------------------------------------------------|----------------------|
| 3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources | 41                   |
| 4.1a - Undeveloped Recreation: Maintain Inventoried Roadless Areas                       | 4                    |
| 4.1c – Undeveloped Rec.: Maintain Unroaded Character with Allowance for Restoration      | 15                   |
| 4.2 – Roaded Recreation Emphasis                                                         | 20                   |
| 5.1 – Restoration and Maintenance Emphasis within Forested Landscapes                    | 20                   |

**General Location and Description** - Management Area 6 is comprised of land administered by the Payette National Forest within the Goose Creek, Hazard Creek, and Upper Little Salmon River Watersheds of the Little Salmon River drainage (see map, preceding page). The area lies in Adams, Valley, and Idaho Counties, north of New Meadows and McCall, and is part of the New Meadows and McCall Ranger Districts. The management area is an estimated 78,800 acres, which includes several small private and state inholdings that make up less than 2 percent of the area. The area is bordered by Payette National Forest to the north and northeast, State land to the southeast, private land to the south, and a mix of private, BLM, and State lands to the west.

**Access** - The main access to the area is from the south via paved State Highway 55 between McCall and New Meadows, Idaho, and paved and gravel-surfaced Forest Road 257 from Highway 55 to Hazard Lake. Other access routes from U.S. Highway 95 include the native-surfaced Brown Creek Road (Forest Road 294) and Hazard-Tepee Road (Forest Road 287). The density of classified roads for the entire area is an estimated 0.8 mile per square mile. Total road density for area subwatersheds ranges between 0.4 and 7.1 miles per square mile. Most of the roads occur in the Goose Creek Watershed at the southern end of the management area. A network of trails provides access to portions of the roadless areas in the north. The primary uses or activities in this management area have been developed and dispersed recreation, special uses, timber management, and livestock grazing.

The Forest has a cost-share agreement with Boise Corporation for building and maintaining a cooperative road system in which all costs and responsibilities are shared. Boise Cascade lands are in or adjacent to the Brown Creek portion of the Lower Hard Creek Subwatershed.

**Special Features** – State Highway 55 has been designated as a state and federal scenic byway. The Brundage Mountain Resort is a year-round resort that draws over 100,000 visitors a year to the area. Little Ski Hill provides winter sports opportunities. Goose Lake, Brundage Reservoir, and Hazard Lake are popular fishing and camping areas. Maintained trails lead to Goose Creek

Falls, Granite Mountain Fire Lookout, and many of the high alpine lakes. The Forest has recently expanded and improved Last Chance and Grouse Campgrounds. An estimated 59 percent of the management area is inventoried as roadless, including a large portion of the Patrick Butte Roadless Area, and a small portion of the French Creek Roadless Area.

Two eligible Wild and Scenic Rivers fall within this management area, Hard Creek and Hazard Creek. Hard Creek has one segment in the area with a classification of Wild. Hazard Creek also has one segment with a classification of Wild. Both streams are considered eligible for Wild and Scenic River status because of their outstandingly remarkable geologic and hydrologic values. Together the river segments are 25 miles long, with an estimated 8,000 acres of associated river corridors.

**Air Quality** - This management area lies within Montana/Idaho Airshed ID-15 and portions of Valley and Idaho Counties. Particulate matter is the primary pollutant of concern related to Forest management. There is an ambient air monitor located in McCall within the airshed to evaluate current background levels, trends, and seasonal patterns of particulate matter. Three Class I areas are within 100 kilometers of this management area: the Hells Canyon, Eagle Cap, and Selway-Bitterroot Wildernesses. Visibility monitoring has been expanded for these areas.

Between 1995 and 1999, emissions trends in both counties improved for PM 10, while PM 2.5 emissions remained constant. The most common sources of particulate matter within the counties were wildfire, prescribed fire, and fugitive dust from unpaved roads. In addition to Forest management activities, crop residue and ditch burning may contribute annually to particulate matter emissions. The amount of agricultural-related burning was very low within Valley County (less than 600 acres) and moderate within Idaho County (an estimated 13,500 acres). There were no point sources within either county.

**Soil, Water, Riparian, and Aquatic Resources** - Elevations range from 3,600 feet where Hazard Creek leaves the Forest boundary to 8,659 feet atop Hard Butte. Management Area 6 falls within the Granite Mountain Uplands Subsection. The main geomorphic landforms found in the area are glaciated mountains and uplands, periglacial uplands and mountain slopes, fluvial mountains and steep canyonlands, and depositional lands. Slope gradients generally range from 10 to 80 percent in the glaciated mountains and uplands, 15 to 40 percent on the periglacial uplands and mountain slopes, 30 to 80 percent on the fluvial mountains and steep canyonlands, and 0 to 20 percent on the depositional lands. The surface geology is a mix of Idaho batholith granitics and border zone metamorphics. Soils generally have moderate to high surface erosion potential, and low to moderate productivity. Subwatershed vulnerability ratings range from low to high, with the majority being moderate (see table below). Geomorphic Integrity ratings for the subwatersheds vary from moderate (functioning at risk) to low (not functioning appropriately), with the majority being low (see table below). In the Goose Creek Watershed there are altered water flows from the reservoirs, and accelerated sediment from roads, timber harvest, private land uses, and livestock grazing. There have been less management-related impacts in the Hazard Creek Watershed.

The management area comprises portions of the Goose Creek, Hazard Creek, and Upper Little Salmon River Watersheds that drain into the Little Salmon River Subbasin, which flows north to the Salmon River. The main streams in the area are Hazard Creek, Hard Creek, Goose Creek, and Little Goose Creek. The area also includes at least eighteen alpine lakes and three reservoirs: Goose Lake, Brundage Reservoir, and Twin Lakes. Used for irrigation in Meadows Valley downstream, these reservoirs and a number of irrigation ditches have altered the natural flows within Goose and Brundage Creeks, and, to some degree, within the Little Salmon River below Goose Creek. Water Quality Integrity ratings for the subwatersheds vary from moderate (functioning at risk) to low (not functioning appropriately), with the majority being moderate (see table below). Water quality is functioning at risk in the Goose Creek Watershed due to altered water flows from the reservoirs, and accelerated sediment from roads, timber harvest, private land uses, and livestock grazing. Water quality is functioning at less risk in the Hazard Creek Watershed; however, there has been localized sedimentation from roads, timber harvest, and illegal ATV use. Only one of the seven subwatersheds in this area was listed in 1998 as having impaired water bodies under Section 303(d) of the Clean Water Act. Temperature is identified as the pollutant of concern for Brundage Reservoir in the Upper Goose Creek subwatershed. There are currently no TMDL-assigned subbasins associated with this management area.

| Subwatershed Vulnerability |      |     | Geomorphic Integrity |      |     | Water Quality Integrity |      |     | No. 303(d) Subs | No. Subs With TMDLs | No. Public Water System Subs |
|----------------------------|------|-----|----------------------|------|-----|-------------------------|------|-----|-----------------|---------------------|------------------------------|
| High                       | Mod. | Low | High                 | Mod. | Low | High                    | Mod. | Low |                 |                     |                              |
| 1                          | 5    | 1   | 0                    | 3    | 4   | 0                       | 5    | 2   | 1               | 0                   | 0                            |

The management area has designated critical habitat for chinook salmon. However, natural barrier falls have historically limited fish migration in the Goose Creek and Hazard Creek drainages, and much of these watersheds are inaccessible to anadromous fish. Development of U.S. Highway 95 and Meadows Valley in the earlier part of this century further restricted anadromous fish passage to the lower reaches of the Little Salmon River. Chinook salmon and steelhead trout can access lower Hazard and Hard Creeks. Bull trout and cutthroat trout also occur in these streams. Native redband rainbow trout occur throughout the area. Three reservoirs and two irrigation ditches affect the movement of water and sediment, and influence water temperatures in the Goose Creek Watershed. Hatchery-raised cutthroat trout, rainbow trout, kokanee salmon, and brook trout have been stocked into the watershed reservoirs and streams. High road densities, private development, and extensive timber harvest have contributed to high sediment levels in Little Goose Creek. Although native redband rainbow trout still occur in the Goose Creek Watershed, chinook salmon, steelhead trout, and bull trout do not. Fish habitat and species mix in this watershed have been substantially altered by human activities. The Final Basinwide Salmon Recovery Strategy ("All H Paper" 2000) identified the Little Salmon River as a high priority for restoration on non-federal lands, and recommended that actions on federal lands should link to this priority where appropriate. Restoration emphasis is on resolving stream flow, passage, and diversion problems within ten years.

Aquatic habitat is functioning properly for the most part in the Hazard Creek Watershed; however, there has been some localized sedimentation from roads and timber harvest. Habitat is functioning at risk in parts of the Goose Creek Watershed due to stream flow alteration and accelerated sediment. Native fish populations are at risk due to these habitat impacts and the presence of non-native species that compete with native fish for space and food. The Lower Hard Creek and Lower Hazard Creek subwatersheds have been identified as important to the recovery of listed fish species, and as high-priority areas for passive restoration.

**Vegetation** - Vegetation at lower elevations is typically grasslands, shrublands, ponderosa pine and Douglas-fir forests on south and west aspects, and Douglas-fir and grand fir forests on north and east aspects. Mid elevations are dominated by forest communities of Douglas-fir, grand fir, and subalpine fir, with pockets of lodgepole pine and aspen. Subalpine fir and whitebark pine are found at upper elevations.

An estimated 12 percent of the area is rock, water, shrubland, or grassland. The main forested vegetation groups are Warm Dry Subalpine Fir (24 percent), Warm Moist/Hydric Subalpine Fir (17 percent), Cool Moist Grand Fir (15 percent), High Elevation Subalpine Fir (14 percent), and Dry Grand Fir (11 percent).

The Montane Shrub group is at properly functioning condition. The Perennial Grass Montane Group is functioning at risk due to loss of Idaho fescue from livestock grazing and the introduction of noxious weeds and exotic species.

The Warm Moist/Hydric Subalpine Fir, High Elevation Subalpine Fir, and Warm Dry Subalpine Fir groups are at properly functioning condition. Many of the stands in these groups have recently burned, and are at the beginning of their successional cycle. The Dry Grand Fir and Cool Moist Grand Fir groups are functioning at risk due to changes in stand structure from past timber harvest. Intensive harvesting in the southern part of the area has removed many of the large ponderosa pine, Douglas-fir, and western larch, leaving young and mid-aged plantations that are healthy and thrifty.

Riparian vegetation is functioning at risk in some areas due primarily to localized impacts from roads and timber harvest.

**Botanical Resources** – Current Region 4 Sensitive plant species in this management area include puzzling halimolobos, Blandow's helodium, and Tobias' saxifrage. Tobias' saxifrage is found on open granitic, subalpine slopes (7,000 to 8,500 feet) and is endemic to Payette National Forest. It is a U.S. Fish and Wildlife Service species of concern. Currently, no federally listed or proposed plant species are known to occur in the area, but potential habitat for Ute ladies'-tresses, Spalding's silene, and slender moonwort may exist. Ute ladies'-tresses, a Threatened species, may have moderate potential habitat in riparian/wetland areas up to 7,000 feet. Spalding's silene, a Threatened species, may occur in fescue grassland habitat types from 1,500 to 5,500 feet. Slender moonwort, a Candidate species, may occur in moderate to higher elevation grasslands, meadows, and small openings in spruce and lodgepole pine.

**Non-native Plants** – A number of noxious weeds and exotic plants have been found within the area, particularly along the main road corridors. An estimated 17 percent of the management area is considered highly susceptible to invasion by noxious weeds and exotic plants. The main weeds of concern are spotted knapweed, leafy spurge, rush skeletonweed, and Scotch thistle, which are currently found in scattered populations at lower elevations of the management area. Canada thistle, St. Johnswort, and yellow toadflax are found throughout the area.

The Little Goose Creek subwatershed has an inherently high risk of weed establishment risk and spread from timber harvest and road-related activities. This risk is due to the amount of drainage area that is highly susceptible to noxious weed invasion and the relatively high level of exposure from those identified vectors or carriers of weed seed.

**Wildlife Resources** - The wide range of elevations and vegetation types in the management area provide a variety of wildlife habitats. Area forests provide habitat for a number of Region 4 sensitive species, including fisher, northern goshawk, flammulated owl, white-headed woodpecker, wolverine, great gray and boreal owl, three-toed woodpecker, and spotted frog. Lynx habitat has been mapped within the Lynx Analysis Units. The entire area provides nesting and forage habitat for migratory landbirds, and general habitat for wide-ranging mammals like elk, bear, and mountain lion. Overall, terrestrial habitat is functioning at risk due to timber harvest and roads that have resulted in low levels of large-diameter trees and snags, logs, and localized habitat fragmentation in the managed portions of the area. Wildfires have also converted thousands of acres of old structural stage stands to open or young structural stages in the unmanaged portions. Mature and old trees exist but often in poor juxtaposition and in small block sizes in the roaded portions of the area. Illegal ATV use is occurring within designated non-motorized areas, and increasing big-game vulnerability during hunting season.

**Recreation Resources** – This area is one of the highest recreation use areas on the Forest, and that use can be characterized as high in the summer, and even higher in the winter. Recreation facilities include Brundage Mountain Resort, Little Ski Hill, three developed campgrounds, and three winter sports parking areas. This area is extensively used for alpine skiing, back-country skiing, snowmobiling, snowboarding, snowcat skiing, hiking, ATV use, motorcycling, mountain biking, hunting, fishing, camping, boating, berry picking, sightseeing, rock-hounding, driving for pleasure, and fuelwood gathering. Although ATV use is authorized in some places in the management area, resource damage is occurring where use is occurring illegally. Illegal ATV use is originating from the Morgan Lake/Bascom Creek Trailhead, Grassy Mountain Lakes Trailhead and Buck Lake Trailhead. In all three areas, resource damage (i.e., erosion, rutting, and damage to vegetation) is occurring due to ATV users pioneering cross-country trails to access new areas. User conflicts are escalating in the Buck Lake area due to illegal ATV use. Trails designed for 2-wheel motorized vehicles are being used illegally by 4-wheel ATVs.

Three outfitter and guides have recreational use permits for the area at this time. Recreational use has been increasing dramatically over the past decade and is expected to continue to increase. Brundage Mountain Resort has submitted an expansion plan that could substantially increase year-round use in this area. About half of the use in this area originates locally. The area is in Idaho Fish and Game Management Unit 23. A well-maintained network of trails provides a variety of motorized and non-motorized opportunities.

Providing winter recreation opportunities is the recreation emphasis in this management area. The Forest is working with the community and winter user groups to resolve potential conflicts.

**Scenic Environment** – Due to the high recreational use and interest, much of the area has objectives designed to maintain high visual quality. Visually sensitive routes and use areas represent locations from which the scenic environment is considered especially important. These routes or areas generally have a more restrictive VQO assigned to them than areas not seen from such locations. The following is a list of visually sensitive routes or use areas with this management area. Some roads or trails may have segments that are listed at different sensitivity levels. There may also be sensitive routes or use areas in adjacent management areas that could be affected by actions taken in this management area.

| Route or Area Type | Sensitivity Level | Name of Route or Area                                                                                                                               |
|--------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Roads              | 1                 | State Highway 55, Goose Creek 453, viewshed from U.S. Highway 95, Goose Lake 257, Granite Lake 446                                                  |
| Roads              | 2                 | Goose Creek 453, Meadows -Goose Lake 273, Elk Meadows 308, Black Forest 347                                                                         |
| Trails             | 1                 | Goose Creek 353, Granite Mountain 165, Grass Mountain 163, Morgan Lake 372, Upper Hazard Lake 169, Hidden Lake Loop 511                             |
| Trails             | 2                 | Vance Creek 160, Hard Creek 164                                                                                                                     |
| Use Areas          | 1                 | Brundage Mountain Ski Resort, Brundage Mountain Lookout, Black Lake, Rainbow Lake, Grassy Mountain Lakes, Grouse Campground, Hazard Lake Campground |
| Use Areas          | 2                 | Last Chance Campground, Goose Creek Overlook, North Goose Lake Boat Launch and dispersed campsite                                                   |

**Cultural Resources** – Cultural themes in this area include Prehistoric, Transportation, Ranching, Timber, and Recreation. This area was likely used for centuries by American Indians for hunting, fishing, gathering, and as a travel way between the Snake and Salmon River corridors and Long Valley. Historically, early wagon roads through this area brought miners and supplies to Warren, and ranchers and other settlers to Long Valley. Portions of State Highway 55 were built prior to 1920. This area has been grazed by livestock since the late 1800s, and harvested for timber since the 1930s. The construction of dams at Goose Lake and Brundage Reservoir attracted summer recreationists to the area as early as the 1920s. Winter recreation began in earnest with Little Ski Hill in the late 1930s, and increased dramatically with the Brundage Mountain Ski Area in the early 1960s.

**Timberland Resources** - Of the estimated 54,600 tentatively suited acres in this management area, 23,500 acres have been identified as being suited timberlands, or appropriate for timber production. This represents about 7 percent of the Forest's suited timberland acres. The suited timberland acres are found in MPCs 4.2 and 5.1 (see MPC map for this management area). Lands in MPCs 3.1, 4.1a, and 4.1c have been identified as not suited for timber production.

Most of the roaded portion of the management area has been managed for timber, and many plantations of different sizes and ages exist. Almost all of the roaded area is considered tentatively suited for timber management, whereas only about one third of the roadless portion of

the management area is considered tentatively suited, due mostly to concerns with access, economic efficiency, and protection of listed species. In the roaded portions, forest products such as fuelwood, posts and poles, and Christmas trees have also been collected.

**Rangeland Resources** - The management area contains all or portions of eight allotments, with five sheep allotments located primarily in the northern portion of the area, and three cattle allotments located in the southern portion of the area. This area provides an estimated 14,400 acres of capable rangeland, representing about 6 percent of the capable rangeland on the Forest.

**Mineral Resources** - Some past placer and lode mining has occurred. Upper Little Goose Creek area is a popular rock-hounding area (principally low quality sapphires in alluvial gravels), and has had recent exploration activity for diamonds. Mineral potential is considered low to moderate over most of the management area.

**Fire Management** - Prescribed fire has been used to reduce natural and activity-generated fuels in the roaded portion of the area. An estimated 20,000 acres have burned in wildfires in the last 15 years, the largest amount in the Corral Fire (16,000 acres) of 1994 and the Warm Springs Fire (2,500 acres) of 1992. Little Goose Creek subwatershed is considered to be a wildland-urban interface area due to the presence of Brundage Mountain Resort, Little Ski Hill, Rock Flat subdivision, and the adjacent Bear Basin subdivision. This subwatershed is also considered to pose risks to life and property from potential post-fire floods and debris flows. The Lower Goose Creek subwatershed, and the lower portion of the Upper Goose Creek subwatershed also have increasing residential development near the Forest.

Area fire regimes are estimated to be: 20 percent lethal, 62 percent mixed<sup>1</sup> or 2, and 18 percent non-lethal. An estimated 18 percent of the area regimes have vegetation conditions that are highly departed from their historical range. Twelve percent of this change has occurred in the historically non-lethal fire regimes, resulting in conditions where wildfire would likely be much larger and more intense and severe than historically. In addition, 22 percent of the area regimes have vegetation conditions that are moderately departed from their historical range. Wildfire in these areas may result in larger patch sizes of high intensity or severity, but not to the same extent as in the highly departed areas in non-lethal fire regimes.

**Lands and Special Uses** - Special use authorizations have been issued for Brundage Reservoir, Goose Lake, and Twin Lakes. All three of the reservoir permittees have submitted applications requesting a permanent conditional easement be issued per Public Law 99-545, commonly known as the "Colorado Ditch Bill".

Two other irrigation uses, Delbaerre-Campbell Ditch and Goose Creek Canal, are existing water diversion systems. The water users on these systems have also submitted applications requesting permanent conditional easements per Public Law 99-545. One other water use in this area is a private spring development.



Special-use authorizations for utility rights-of-way include one to Citizens Communications for buried telephone lines, and one to Idaho Power for distribution power lines. Idaho Power also has authorizations for the McCall–New Meadows and the McCall–Brundage transmission lines; these are designated utility corridors.

A highway easement deed is issued to the State of Idaho authorizing a right-of-way for Idaho State Highway 55. Adams County has a Public Road Easement for access to the Alpine Meadows Estates in the Rock Flat area and three private road authorizations have been issued to land owners for access to their property.

A communication site is designated on Brundage Mountain; this site contains parcels used for both commercial and non-commercial uses. An authorization has been issued to the Southern Idaho Timber Protective Association for a fire lookout tower (Brundage Mountain Lookout).

The Natural Resources Conservation Service maintains and operates two automated Snotel sites in the area; one in Bear Basin and the other near Brundage Reservoir. Both sites are operated under a special use permit.

A conservation easement was acquired from a private landowner in the Rock Flat area to help protect a Sensitive plant species. A FERC license was issued to Western Hydroelectric, Inc. in July 1990 for commercial development of hydropower on Goose Creek. The construction phase of this project has not been started and a special use authorization has not yet been issued.

## MANAGEMENT DIRECTION

In addition to Forest-wide Goals, Objectives, Standards, and Guidelines that provide direction for all management areas, the following direction has been developed specifically for this area.

| MPC/Resource Area                             | Direction        | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------|------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 2.1<br/>Wild and Scenic<br/>Rivers</b> | General Standard | 0601   | Manage the Hazard Creek and Hard Creek eligible river corridors to their assigned classification standards, and preserve the outstandingly remarkable values (ORVs) and free-flowing status until the segments undergo a suitability study and the study finds them suitable for designation by Congress, or releases them from further consideration as Wild and Scenic Rivers. |
|                                               | Fire Guideline   | 0602   | Prescribed fire and wildland fire use may be used in any river corridor as long as ORVs are maintained within the corridor.                                                                                                                                                                                                                                                      |
|                                               | Fire Guideline   | 0603   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize the impacts of suppression activities on river classifications and ORVs.                                                                                                                                                                         |
| <b>MPC 3.1</b>                                | General Standard | 0604   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years).                                                                                   |

| MPC/Resource Area                                                                                                        | Direction              | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------|------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | Vegetation<br>Standard | 0605   | Mechanical vegetation treatments, excluding salvage harvest, may only occur where:<br>a) The responsible official determines that wildland fire use or prescribed fire would result in unreasonable risk to public safety and structures, investments, or undesirable resource affects; and<br>b) They maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>c) They maintain or restore habitat for native and desired non-native wildlife and plant species. |
|                                                                                                                          | Fire<br>Standard       | 0606   | Wildland fire use and prescribed fire may only be used where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species, or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species.                                                                                                                                                                                                                                    |
|                                                                                                                          | Road<br>Standard       | 0607   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To address immediate response situations where, if the action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                                                                                                                                                               |
|                                                                                                                          | Fire<br>Guideline      | 0608   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                                                                                 |
| <b>MPC 3.2<br/>Active Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b>  | General<br>Standard    | 0609   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary (up to 3 years) or short-term (3-15 years) time periods, and must be designed to avoid degradation of existing conditions in the long term (greater than 15 years).                                                                                                                                                                                                                                         |
|                                                                                                                          | Vegetation<br>Standard | 0610   | Vegetation restoration or maintenance treatments—including wildland fire use, mechanical, and prescribed fire—may only occur where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species; or<br>c) Reduce risk of impacts from wildland fire to human life, structures, and investments.                                                               |
|                                                                                                                          | Road<br>Standard       | 0611   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To support aquatic, terrestrial, and watershed restoration activities, or<br>d) To address immediate response situations where, if the action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                                                                               |
|                                                                                                                          | Fire<br>Guideline      | 0612   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                                                                                 |

| MPC/Resource Area                                                                                                                         | Direction            | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 4.1a<br/>Undeveloped<br/>Recreation:<br/>Maintain<br/>Inventoried<br/>Roadless Areas</b>                                           | General Standard     | 0613   | Management actions—including wildland fire use, prescribed fire, and special use authorizations—must be designed and implemented in a manner that does not adversely compromise the area’s roadless and undeveloped character in the temporary, short term, and long term. “Adversely compromise” means an action that results in the reduction of roadless or undeveloped acres within any specific IRA. Exceptions to this standard are actions in the 4.1a Roads standard, below.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                           | Road Standard        | 0614   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                                                           | Fire Guideline       | 0615   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the roadless or undeveloped character of the area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>MPC 4.1c<br/>Undeveloped<br/>Recreation:<br/>Maintain Unroaded<br/>Character with<br/>Allowance for<br/>Restoration<br/>Activities</b> | General Standard     | 0616   | Management actions—including mechanical vegetation treatments, salvage harvest, wildland fire use, prescribed fire, special use authorizations, and road maintenance—must be designed and implemented in a manner that would be consistent with the unroaded landscape in the temporary, short term, and long term. Exceptions to this standard are actions in the 4.1c road standard, below.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                                                           | Road Standard        | 0617   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                                                           | Fire Guideline       | 0618   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the unroaded landscape.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>MPC 4.2<br/>Roaded<br/>Recreation<br/>Emphasis</b>                                                                                     | Road Standard        | 0619   | There shall be no net increase in road densities in the MPC 4.2 portion of the Little Goose Creek subwatershed unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that:<br>a) For resources that are within their range of desired conditions, the increase in road densities shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>b) For resources that are already in a degraded condition, the increase in road densities shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>c) Adverse effects to TEPC species or their habitat are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitat.<br>An exception to this standard is where additional roads are required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations). |
|                                                                                                                                           | Vegetation Guideline | 0620   | Vegetation management actions—including wildland fire use, prescribed fire, and mechanical treatments—may be used to maintain or restore desired vegetation and fuel conditions provided they do not prevent achievement of recreation resource objectives.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                           | Fire Guideline       | 0621   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to recreation developments and investments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

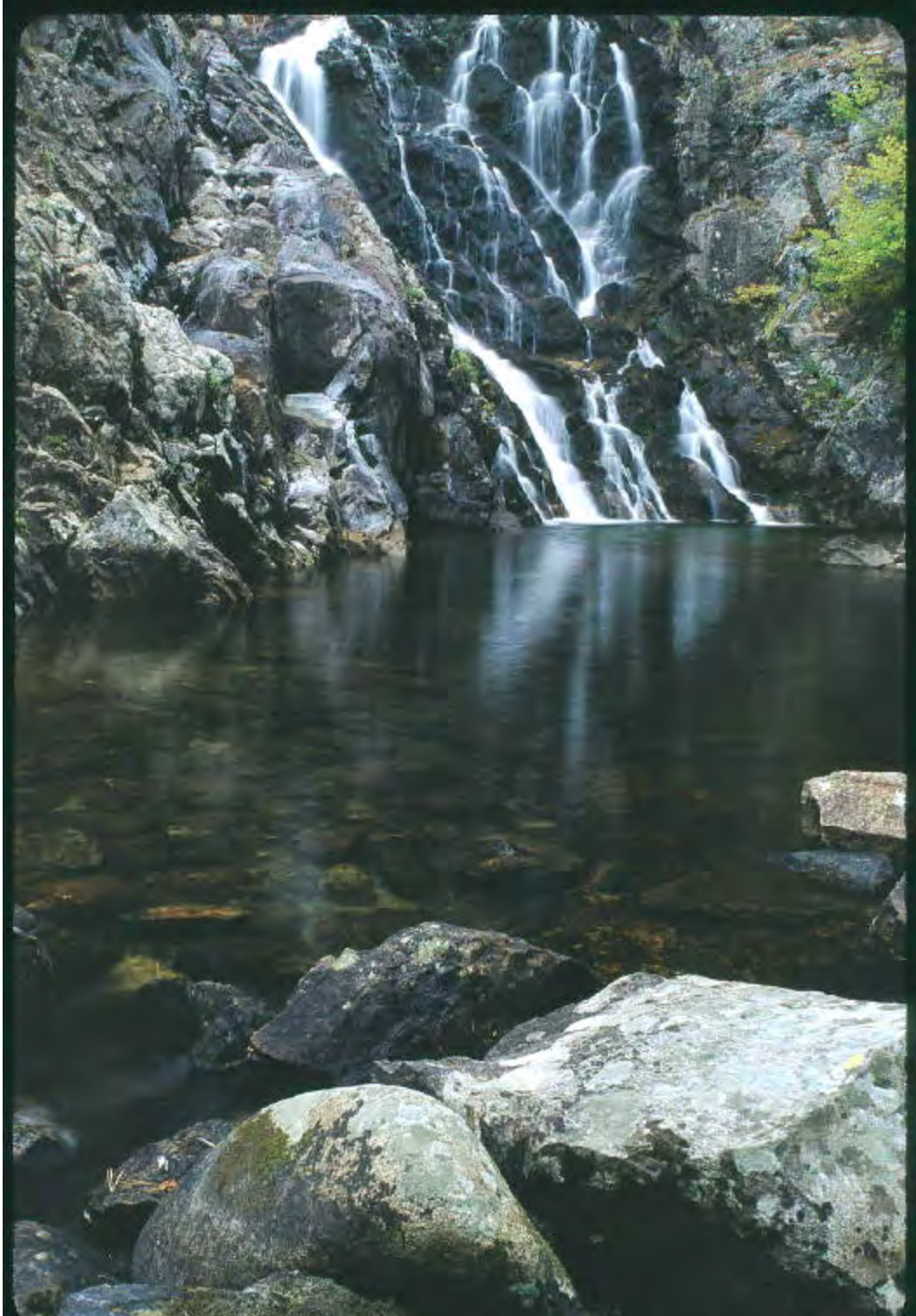
| MPC/Resource Area                                                                                  | Direction               | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------|-------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 5.1<br/>Restoration and<br/>Maintenance<br/>Emphasis within<br/>Forested<br/>Landscapes</b> | Road<br>Standard        | 0622   | <p>There shall be no net increase in road densities in the MPC 5.1 portion of the Lower Goose Creek subwatershed and in the MPC 5.1 portions of the Little Goose Creek subwatershed unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that:</p> <ul style="list-style-type: none"> <li>a) For resources that are within their range of desired conditions, the increase in road densities shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and</li> <li>b) For resources that are already in a degraded condition, the increase in road densities shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and</li> <li>c) Adverse effects to TEPC species or their habitat are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitat.</li> </ul> <p>An exception to this standard is where additional roads are required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations).</p> |
|                                                                                                    | Vegetation<br>Guideline | 0623   | The full range of vegetation treatment activities may be used to restore or maintain desired vegetation and fuel conditions. The available vegetation treatment activities include wildland fire use. Salvage harvest may also occur.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                    | Fire<br>Guideline       | 0624   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to habitats, developments, and investments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                    | Road<br>Guideline       | 0625   | <p>Road construction or reconstruction may occur where needed:</p> <ul style="list-style-type: none"> <li>a) To provide access related to reserved or outstanding rights, or</li> <li>b) To respond to statute or treaty, or</li> <li>c) To achieve restoration and maintenance objectives for vegetation, water quality, aquatic habitat, or terrestrial habitat; or</li> <li>d) To support management actions taken to reduce wildfire risks in wildland-urban interface areas; or</li> <li>e) To meet access and travel management objectives.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Soil, Water,<br/>Riparian, and<br/>Aquatic Resources</b>                                        | Goal                    | 0626   | Improve water quality and geomorphic integrity by reducing road-related accelerated sediment in the Goose Creek Watershed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                    | Objective               | 0627   | Identify and implement actions to reduce impacts to soil and water from Hartley Meadows Road.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                    | Objective               | 0628   | Work with Brundage Mountain Resort to address accelerated erosion from roads and trails.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                    | Objective               | 0629   | Reduce soil compaction and restore vegetation by restricting dispersed camping to specific sites around Goose Lake Reservoir and Brundage Reservoir.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                    | Objective               | 0630   | Enforce motorized trail designations and restrictions with increased on-the-ground patrols to minimize erosion and sedimentation problems in riparian areas.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                    | Objective               | 0631   | Improve stream crossings on Forest Trails 344 and 347 to reduce impacts to water quality and fish habitat, and increase user safety.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| MPC/Resource Area                                   | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Soil, Water, Riparian, and Aquatic Resources</b> | Objective | 0632   | Work with the State of Idaho and Brundage Reservoir users to remove Brundage Reservoir from the 303(d) list by taking action to improve temperature regime.                                                                                                                                                                                                                                                                                                                                                                   |
|                                                     | Objective | 0633   | Maintain fish habitat for chinook salmon, steelhead, and bull trout in the Lower Hazard Creek and Lower Hard Creek subwatersheds through passive restoration strategies to help promote the recovery of these listed fish species.                                                                                                                                                                                                                                                                                            |
| <b>Vegetation</b>                                   | Objective | 0634   | Use a mix of prescribed fire, wildland fire, and mechanical treatments to restore or maintain vegetative composition and structure, and to reduce fuel loadings in the management area.                                                                                                                                                                                                                                                                                                                                       |
| <b>Botanical Resources</b>                          | Objective | 0635   | Maintain or restore known populations and occupied habitats of TEPCS plant species, including puzzling halimolobos, Blandow's helodium, and Tobias' saxifrage to contribute to the long-term viability of these species.                                                                                                                                                                                                                                                                                                      |
|                                                     | Objective | 0636   | Implement the Forest Service approved portions of the conservation strategy for Tobias' saxifrage to maintain viability of the species.                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Non-native Plants</b>                            | Objective | 0637   | To reduce impacts on native plants and other resources, eradicate new and small infestations of spotted knapweed, leafy spurge, Scotch thistle, and rush skeletonweed. Contain infestations of yellow toadflax, Canada thistle, and St. Johnswort.                                                                                                                                                                                                                                                                            |
| <b>Wildlife Resources</b>                           | Objective | 0638   | Reduce open road densities in the Goose Creek Watershed to reduce big-game vulnerability.                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                     | Objective | 0639   | Increase white-headed woodpecker and flammulated owl habitat by managing ponderosa pine stands within the Dry Grand Fir vegetation group toward the desired ranges of size classes, canopy closures, species composition, snags, and coarse woody debris, as described in Appendix A.                                                                                                                                                                                                                                         |
|                                                     | Guideline | 0640   | An increase in the white-headed woodpecker or flammulated owl habitat may be achieved by the following methods:<br>a) Reducing tree densities and ladder fuels under and around existing large ponderosa trees and snags to reduce the risk of tree-replacing fire and to restore more open canopy conditions.<br>b) Managing the firewood program to retain large-diameter ponderosa pine and large snags of other species through signing, public education, size restriction, area closures, or other appropriate methods. |
| <b>Recreation Resources</b>                         | Objective | 0641   | Manage and facilitate the resolution of conflicts between winter recreationists.                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                     | Objective | 0642   | Enforce motorized trail designations and restrictions with increased on-the-ground patrols to allow for improved big-game security during hunting season.                                                                                                                                                                                                                                                                                                                                                                     |
|                                                     | Objective | 0643   | Expand Hazard Lake Campground to provide for increased recreation demand.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                     | Objective | 0644   | Consider and evaluate the expansion of the Brundage Mountain Resort and Little Ski Hill.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                     | Objective | 0645   | Relocate lower Goose Creek Trail from Last Chance Campground to Goose Creek Falls to reduce impacts to Goose Creek and improve public safety.                                                                                                                                                                                                                                                                                                                                                                                 |

| MPC/Resource Area             | Direction            | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
|-------------------------------|----------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------|--|--------|--------|-------------------------------|-----|----|---------------------------|-----|-----|----------------|-----|----|-----------------|-----|
| Recreation Resources          | Objective            | 0646   | Install a trail bridge crossing at Hazard Creek at the terminus of Forest Development Road 339 to improve recreation access and reduce impacts to water quality and fish habitat.                                                                                                                                                                                                                                                                                                                                                                                                     |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
|                               | Objective            | 0647   | Resolve user conflicts arising from unauthorized motorized use in the Buck Lake area by enforcing motorized trail designations and restrictions.                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
|                               | Objective            | 0648   | Maintain Bascom Canyon as a non-motorized area to minimize erosion and sedimentation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
|                               | Objective            | 0649   | Manage motorized recreation to address erosion, flow channeling, soil compaction, and loss of vegetation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
|                               | Objective            | 0650   | Rehabilitate pioneered, non-system trails to mitigate erosion, flow channeling, soil compaction and loss of vegetation.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
|                               | Objective            | 0651   | Where alternatives exist, relocate trails that are currently within riparian areas to mitigate erosion and sedimentation.                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
|                               | Objective            | 0652   | Where motorized use is consistent with the recreation emphasis and will not cause unacceptable resource damage, reconstruct existing 2-wheel motorized trails to accommodate 4-wheel ATVs.                                                                                                                                                                                                                                                                                                                                                                                            |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
|                               | Objective            | 0653   | Achieve or maintain the following ROS strategy: <table><tr><th rowspan="2">ROS Class</th><th colspan="2">Percent of Mgt. Area</th></tr><tr><th>Summer</th><th>Winter</th></tr><tr><td>Semi -Primitive Non-Motorized</td><td>21%</td><td>0%</td></tr><tr><td>Semi -Primitive Motorized</td><td>39%</td><td>91%</td></tr><tr><td>Roaded Natural</td><td>24%</td><td>4%</td></tr><tr><td>Roaded Modified</td><td>16%</td><td>5%</td></tr></table> <p>The above numbers reflect current travel regulations. These numbers may change as a result of future travel regulation planning</p> | ROS Class | Percent of Mgt. Area |  | Summer | Winter | Semi -Primitive Non-Motorized | 21% | 0% | Semi -Primitive Motorized | 39% | 91% | Roaded Natural | 24% | 4% | Roaded Modified | 16% |
| ROS Class                     | Percent of Mgt. Area |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
|                               | Summer               | Winter |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
| Semi -Primitive Non-Motorized | 21%                  | 0%     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
| Semi -Primitive Motorized     | 39%                  | 91%    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
| Roaded Natural                | 24%                  | 4%     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
| Roaded Modified               | 16%                  | 5%     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
| Scenic Environment            | Objective            | 0654   | Maintain scenic values as seen from the Highway 55 corridor (Goose Creek Canyon), Highway 95 corridor, Bear Creek Lodge, Little Ski Hill, and Brundage Mountain Resort and Forest Road 257 to maintain a natural-appearing setting in high-use recreation areas and for visitors in and near the Forest.                                                                                                                                                                                                                                                                              |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
| Timberland Resources          | Objective            | 0655   | Reduce the opportunity for noxious weed establishment and spread by keeping suitable weed sites to a minimum during timber harvest activities in the Little Goose Creek subwatershed. Consider such methods as designated skid trails, winter skidding, minimal fire line construction, broadcast burning rather than pile burning, or keeping slash piles small to reduce heat transfer to the soil.                                                                                                                                                                                 |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
|                               | Guideline            | 0656   | Existing noxious weed infestations should be treated on landings, skid trails, and helibases in the project area before timber harvest activities begin in the Little Goose Creek subwatershed.                                                                                                                                                                                                                                                                                                                                                                                       |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
| Rangeland Resources           | Objective            | 0657   | Improve upland vegetation composition on Grassy Mountain to reduce erosion and increase plant species diversity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |
| Mineral Resources             | Objective            | 0658   | Withdraw from mineral entry the gem-collecting area in upper Little Goose Creek. Develop a management plan for a public collecting area to maintain this recreation opportunity.                                                                                                                                                                                                                                                                                                                                                                                                      |           |                      |  |        |        |                               |     |    |                           |     |     |                |     |    |                 |     |

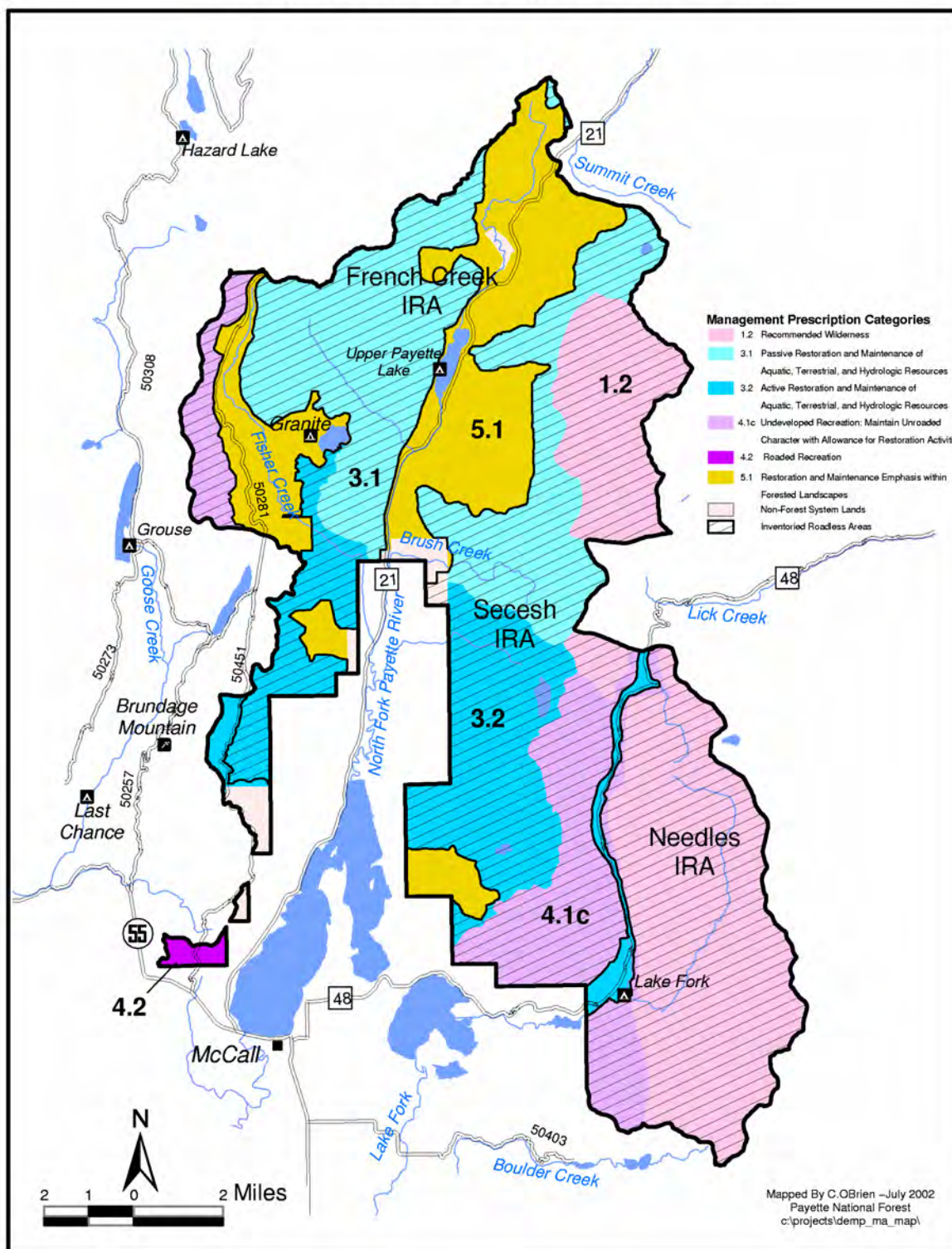
| MPC/Resource Area             | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire Management</b>        | Objective | 0659   | Identify areas appropriate for Wildland Fire Use, emphasizing Inventoried Roadless Areas. Use wildland fire to restore or maintain vegetative desired conditions and to reduce fuel loadings.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                               | Objective | 0660   | Use prescribed fire and mechanical treatments within and adjacent to wildland-urban interface areas and Forest Service administrative sites to manage fuels to reduce wildfire hazards. Develop and prioritize vegetation treatment plans for wildland-urban interface in coordination with local and tribal governments, agencies, and landowners.                                                                                                                                                                                                                                                                                                                                                                                |
|                               | Objective | 0661   | Coordinate and emphasize fire education and prevention programs with private landowners to help reduce wildfire hazards and risks. Work with landowners to increase defensible space around structures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Lands and Special Uses</b> | Objective | 0662   | Maintain and administer the conservation easement adjacent to Rock Flat to help protect the swamp onion, a Sensitive plant species.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                               | Objective | 0663   | Update the existing site plan for the Brundage Mountain communications site to meet agency policy and eliminate potential use conflicts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                               | Objective | 0664   | Acquire and grant rights of way and permits to meet the resource access needs of the Forest Service, public users, and cost-share cooperators. The main cooperator in this area is Boise Corporation, with lands in or adjacent to the Brown Creek portion of the Lower Hard Creek Subwatershed.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Facilities and Roads</b>   | Objective | 0665   | Evaluate and implement measures to reduce road maintenance issues and potential public safety concerns associated with rockslides at Clow Point along the Goose Lake Road, Forest Service Road 257.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                               | Objective | 0666   | Coordinate transportation system development, management, and decommissioning with Boise Corporation cost-share cooperators to develop a shared transportation system serving the lands of all parties to the extent possible.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                               | Objective | 0667   | Evaluate and incorporate methods to help prevent weed establishment and spread from road management activities in the Little Goose Creek subwatershed. Methods to be considered include:<br>a) When decommissioning roads, treat weeds before roads are made impassable.<br>b) Schedule road maintenance activities when weeds are least likely to be viable or spread. Blade from least to most infested sites.<br>c) Consult or coordinate with the district noxious weed coordinator when scheduling road maintenance activities.<br>d) Periodically inspect road systems and rights of way.<br>e) Avoid accessing water for dust abatement through weed-infested sites, or utilize mitigation to minimize weed seed transport. |

**Goose Creek Falls**





Management Area 07 –Payette Lakes –Location Map



## Management Area 7 Payette Lakes

### MANAGEMENT AREA DESCRIPTION

**Management Prescriptions** - Management Area 7 has the following management prescriptions (see map, preceding page for distribution of prescriptions).

| Management Prescription Category (MPC)                                                   | Percent of Mgt. Area |
|------------------------------------------------------------------------------------------|----------------------|
| 1.2 – Recommended Wilderness                                                             | 27                   |
| 3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources | 23                   |
| 3.2 – Active Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources  | 17                   |
| 4.1c – Undeveloped Rec.: Maintain Unroaded Character with Allowance for Restoration      | 13                   |
| 4.2 – Roaded Recreation Emphasis                                                         | 1                    |
| 5.1 – Restoration and Maintenance Emphasis within Forested Landscapes                    | 19                   |

**General Location and Description** - Management Area 7 is comprised of lands administered by the Payette National Forest within the North Fork Payette River drainage north and east of McCall, Idaho (see map, preceding page). The management area lies in Valley County, and is part of the McCall Ranger District. The area is an estimated 102,400 acres, about 98 percent of which are lands administered by the Forest Service. The area is bordered by Payette National Forest to the north, east, and west, and by primarily State lands to the south. The primary uses or activities in this area have been dispersed recreation, timber management, and livestock grazing.

**Access** - The main access to the area is by paved Warren Wagon Road (Forest Highway 021) from McCall to Secesh Summit; and by native-surfaced Lick Creek Road (Forest Highway 048) from McCall to Lick Creek Summit. The density of classified roads is an estimated 0.4 miles per square mile. Total road density for area subwatersheds ranges between 0 and 2.2 miles per square mile. Road-building opportunities have generally been confined to gentler landforms, such as depositional lands. These areas have the highest road densities. Other landforms are steep, rocky, or wet. These areas have few or no roads and are typically inventoried roadless areas. Trails provide access to many of the roadless portions of the area.

The Forest has a cost-share agreement with the State of Idaho for building and maintaining a cooperative road system in which all costs and responsibilities are shared. State lands occur primarily in the Cougar-Pearl, Copet-Box, Payette Lake, and Little Payette Lake Subwatersheds.

**Special Features** - The proposed Slick Rock National Natural Landmark is a popular area for rock climbing. The management area provides a municipal watershed, scenic backdrop, and recreational playground for the city of McCall. An estimated 75 percent of the area is inventoried as roadless, including portions of the French Creek, Secesh, and Needles Roadless Areas. The Forest has recommended large portions of the Secesh and Needles areas for Wilderness designation.

**Air Quality** - This management area lies within Montana/Idaho Airshed ID-15 and Valley County. Particulate matter is the primary pollutant of concern related to Forest management activities. There is an ambient air monitor located in McCall within the airshed to evaluate current background levels, trends, and seasonal patterns of particulate matter. Portions of this management area are within 100 kilometers of four Class I areas: the Hells Canyon, Eagle Cap, Sawtooth Wilderness, and Selway-Bitterroot Wildernesses. Visibility monitoring has been expanded for these areas.

Between 1995 and 1999, emissions trends in Valley County improved for PM 10, while PM 2.5 emissions remained constant. The most common sources of particulate matter within the county were wildfire, prescribed fire, and fugitive dust from unpaved roads. In addition to Forest management activities, crop residue and ditch burning may contribute annually to particulate matter emissions, although the amount of agricultural-related burning was very low within Valley County (less than 600 acres). There are no point sources within the county.

**Soil, Water, Riparian, and Aquatic Resources** - Elevations range from 5,200 feet near Payette Lake to 8,875 feet atop Sawtooth Peak. The most common geomorphic landforms in this management area are glacial mountains and trough lands, frost-churned uplands and mountain slopes, and depositional lands. Slope gradients average between 40 to 80 percent on glacial mountains, 30 to 60 percent on glacial trough lands, 15 to 40 percent on frost-churned uplands and slopes, and 0 to 20 percent on depositional lands. Granitic rocks of the Idaho batholith dominate the surface geology. Soils generally have moderate to high surface erosion potential, and low to moderate productivity. Subwatershed vulnerability ratings range from moderate to low, with the majority being moderate (see table below). Geomorphic Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately) (see table below). Recent wildfires have burned a large portion of the management area. Past roading, timber harvest, livestock grazing, and recreation have had additional localized impacts on stream sediment levels and riparian vegetation.

The management area comprises portions of the Upper North Fork Payette River, Upper Lake Fork Creek, and Payette Lake Watersheds in the North Fork Payette River Subbasin. This subbasin drains south into the Payette River. The main streams are the North Fork Payette River, Fisher Creek, Twentymile Creek, and the North and East Forks of Lake Fork Creek. Because of the glaciated landscape and the relatively high amount of snowfall in the area, this area has some of the highest water yields on the Forest. Popular lakes include Upper Payette, Granite, Box, Blackwell, Pearl, Snowslide, Deep, and Twentymile Lakes. The first four of these lakes have been augmented by dams to increase water storage for irrigation. Subwatershed Water Quality Integrity ratings vary from moderate (functioning at risk) to low (not functioning appropriately), with the majority being moderate (see table below). Past roading, timber harvest, livestock grazing, and recreation have had localized impacts on stream sediment levels and riparian vegetation. Also, several reservoirs have contributed to channel modification by altering natural stream flows. Three of the 10 subwatersheds in this area were listed in 1998 as having impaired water bodies under Section 303(d) of the Clean Water Act. These subwatersheds are Payette Lake, Little Payette Lake, and Cougar-Pearl. The pollutant of concern is not identified. The Middle North Fork Payette River, Little Payette Lake, North Fork Lake Creek, and East Fork Lake Creek subwatersheds have an assigned TMDL.

Six of the ten subwatersheds in the management area are managed as a public water system for the city of McCall and surroundings. Forest representatives have collaborated with other federal and state agencies to produce a watershed management plan for the municipal watershed, which is now being implemented. An inventory of roads within the municipal watershed was completed for the assessment supporting the management plan. To improve watershed conditions, an estimated 10 miles of existing roads were decommissioned (obliterated and removed from the Forest Road System), and identified problem areas were addressed.

| Subwatershed Vulnerability |      |     | Geomorphic Integrity |      |     | Water Quality Integrity |      |     | # 303(d) Subs | # Subs With TMDLs | # Public Water System Subs |
|----------------------------|------|-----|----------------------|------|-----|-------------------------|------|-----|---------------|-------------------|----------------------------|
| High                       | Mod. | Low | High                 | Mod. | Low | High                    | Mod. | Low |               |                   |                            |
| 0                          | 7    | 3   | 3                    | 3    | 4   | 0                       | 8    | 2   | 3             | 4                 | 6                          |

Anadromous fish species no longer occur within this area due to downstream dams that block their migration routes to and from the ocean. Native redband rainbow trout occur in the area, as do non-native brook trout. Kokanee salmon migrate from Payette Lake up the North Fork Payette River to spawn in the fall. Bull trout were historically identified in Fisher Creek and Lake Fork Creek, but the extent of their historic distribution is unknown. Currently, known bull trout occurrence within this area is based on one observation of three bull trout in the North Fork of Lake Fork Creek. Aquatic habitat is functioning at risk in some areas due to habitat fragmentation from irrigation dams, diversions, and roads, high sediment levels, and impacts to riparian areas. Native fish populations are at risk due to these habitat impacts and the presence of non-native species.

**Vegetation** - The dominant potential vegetation groups in this area are those associated with subalpine fir--Warm Dry (28 percent), Warm Moist/Hydric (34 percent), High Elevation (20 percent)--which, interspersed with rock, water, Alpine Meadows and Mountain Forbs (8 percent), comprise around 90 percent of the management area. The subalpine fir groups had a substantial component of old and mature Engelmann spruce, much of which succumbed to a spruce bark beetle outbreak in the late 1980s and early 1990s. These dead trees provided ample fuel for the Corral and Blackwell Fires that burned through a large percentage of the subalpine fir groups in 1994. The bark beetle outbreak and wildfires, while within historic norms for these vegetation types and fire regimes, converted many of the stands from an old to open forest structure. Composition has also shifted to a higher percentage of seral tree, shrub, and forbs species.

The Cool Moist Grand Fir group comprises about 2 percent of the area and is functioning at risk due to impacts from timber management, roads, and fire exclusion. Impacts include low levels of the large tree, snag, and down log components and high levels of open and young structural stages in areas managed for timber. In the unmanaged areas, stand densities and fuel loadings are at the high end of historic norms. This group makes up a small portion of the management area, primarily near Fall Creek and Bear Basin.

Mountain Forbs communities are at properly functioning condition. Alpine Meadows are near properly functioning condition but have localized impacts from livestock grazing and handling. Impacts include lowered water tables and shifts in plant species composition in some areas.

Riparian vegetation is not functioning properly in localized areas due to impacts from roads, timber harvest, livestock grazing, and recreation. These impacts include the loss of overstory structure, changes to species composition and distribution, and the introduction of non-native plant species.

**Botanical Resources** - Tobias' saxifrage, a current Region 4 Sensitive species, occurs in this area. Tobias' saxifrage is found on open granitic, subalpine slopes (7,000 to 8,500 feet) and is endemic to Payette National Forest. It is a U.S. Fish and Wildlife Service species of concern. Proposed Region 4 Sensitive species that occur in this area include Sierra sanicle, and green bug moss. Currently, no federally listed or proposed plant species are known to occur in the area, but potential habitat for Ute ladies'-tresses and slender moonwort may exist. Ute ladies'-tresses, a Threatened species, may have moderate to high potential habitat in riparian/wetland areas up to 7,000 feet. Slender moonwort, a Candidate species, may occur in moderate to higher elevation grasslands, meadows, and small openings in spruce and lodgepole pine.

**Non-native Plants** - A number of noxious weeds and exotic plants have been found within the management area, particularly along the main road corridors. About 7 percent of the area is considered highly susceptible to invasion by noxious weeds and exotic plants. The main weed of concern is spotted knapweed, which currently occurs in small, scattered populations. Yellow toadflax and Canada thistle also occur in the area.

The Middle North Fork Payette River subwatershed has an inherently high risk of weed establishment and spread from timber harvest activities. This risk is due to the amount of drainage area that is highly susceptible to noxious weed invasion and the relatively high level of exposure from the identified vectors or carriers of weed seed.

**Wildlife Resources** - Most of the area is too high in elevation to provide winter range for elk and deer, but many winter in nearby Long Valley. Lower-elevation grand fir forests provide a small amount of potential habitat for several Region 4 sensitive species, including northern goshawk, great gray owl, and fisher. Higher-elevation subalpine fir forests provide habitat for boreal owl, great gray owl, three-toed woodpecker, wolverine, fisher, lynx, and many migratory land birds, as well as summer range for mammals such as elk, deer, black bear, and mountain lion. Lynx habitat has been mapped within Lynx Analysis Units. This area is in the Central Idaho Wolf Recovery Area, and gray wolves have been observed here. Overall, terrestrial habitat is functioning at risk in the area. The Blackwell and Corral Fires in 1994 burned a high percentage of the high-elevation forests, converting them from an old forest to open structural stage, and reducing habitat for species dependent on old forest structure. Habitat has also been fragmented in localized areas by roads and past harvest units.

**Recreation Resources** - The proximity to McCall, picturesque mountains and lakes, and a good network of access roads and trails make this a heavily used recreation area. Recreation use includes hunting, fishing, hiking, mountain biking, motorcycling, snowmobiling, ATV use, backcountry skiing, snowshoeing, sightseeing, rock climbing, and camping. This management area has seen a steady increase in winter recreation use. There are many dispersed campsites and two developed campgrounds, Upper Payette Lake and Lake Fork. The Upper Payette Lake Campground was recently expanded. The Lake Fork Campground is next to the Lake Fork

Guard Station. The area is in Idaho Fish and Game Management Unit 24. One outfitter and guide operation currently conducts snowmobile tours in the area. Because this area and nearby McCall are popular recreation destinations, users come from both local and regional population centers. The roadless portion of the area has a good network of trails, about half of which are open to some form of motorized vehicle use.

The recreation emphasis in this area is on providing summer developed and dispersed recreation opportunities.

**Scenic Environment** – Visually sensitive routes and use areas represent locations from which the scenic environment is considered especially important. These routes or areas generally have a more restrictive VQO assigned to them than areas not seen from such locations. The following is a list of visually sensitive routes or use areas with this management area. There may also be sensitive routes or use areas in adjacent management areas that could be affected by actions taken in this management area.

| Route or Area Type | Sensitivity Level | Name of Route or Area                                                                                                                              |
|--------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Roads              | 1                 | Granite Lake 446, Warren Wagon Road (Forest Highway 21), Upper Hazard 339                                                                          |
| Roads              | 2                 | Fisher Creek 281, Brundage Mountain 451, Pearl Creek 432                                                                                           |
| Trails             | 1                 | Paddy Flat-Lake Fork Creek 103, Fall Creek Saddle 108, Crestline 109, Box Lake 110, Twenty Mile Creek 085, Twenty Mile Lakes 315, Victor Creek 117 |
| Trails             | 2                 | East Fork Lake Fork Creek 104, Fitsum Summit 087, Maki Lake 135, Fall Creek Saddle 108, Deep Creek 336, Cougar Creek 114                           |
| Use Areas          | 1                 | Granite Lake Campground, Upper Payette Lake Campground, Twenty Mile Lakes, Snowslide Lake                                                          |
| Use Areas          | 2                 | Lake Fork Campground                                                                                                                               |

**Cultural Resources** – Cultural themes in this area include Prehistoric, Transportation, Forest Service Administration, and Recreation. This area was likely used for centuries by ancestors of the Nez Perce, Shoshone-Bannock, and Shoshone-Paiute for hunting, fishing, gathering, and as a travel way to and from the South Fork Salmon River drainage. Historically, trappers visited Long Valley as early as 1832, but the area was the last major valley on the Forest to be settled due to its high elevation. Around 1900, McCall became an important stop on routes to the mining towns such as Warren and Thunder Mountain. The McCall Ranger District has three administration sites on the National Register of Historic Places. Recreationists have long been attracted to the lakes and mountains around McCall.

**Timberland Resources** - Of the estimated 71,200 tentatively suited acres in this management area, 16,600 acres have been identified as being suited timberlands, or appropriate for timber production. This represents about 5 percent of the Forest's suited timberland acres. The suited timberland acres are found in MPCs 4.2 and 5.1 (see MPC map for this management area). Lands in MPCs 1.2, 3.1, 3.2, and 4.1c have been identified as not suited for timber production.

Several bark beetle and fire salvage sales have occurred in the last decade. The level of past timber management is high in roaded or previously roaded areas, and low to nonexistent elsewhere. Forest products such as fuelwood, posts and poles, and Christmas trees are collected in designated areas.

**Rangeland Resources** - The management area contains all or portions of ten sheep allotments located throughout the area. The area provides an estimated 12,400 acres of capable rangeland, which represents about 5 percent of the capable rangeland on the Forest.

**Mineral Resources** - Although a number of lode and placer mining claims exist in Management Area 7; the area has little or no active mining activity, and the potential for development of locatable or leasable mineral resources is low. The demand for common variety minerals (decorative or landscape rock, gravel, sand) has increased along with the level of new construction in the McCall area. The potential for development of this resource is moderate, although the demand is expected to continue to increase.

**Fire Management** – Prescribed fire has been used to reduce activity-generated fuels. During the last 15 years, over 50 percent of this management area has been burned by wildfire. The 1994 Blackwell and Corral Fires burned an estimated 60,000 acres, most of which was stand replacing. Other notable fires were the Golden Lake Fire (1987, 700 acres), the Squaw Lake Fire (1992, 300 acres), and the Fall/Frog Complex (1996, 340 acres). McCall is considered a National Fire Plan community, and Payette Lake and Middle North Fork Payette are considered wildland-urban interface subwatersheds due to subdivision development adjacent to the Forest. These subwatersheds are also considered to pose risks to life and property from potential post-fire floods and debris flows. Historical fire regimes for the area are estimated to be: 39 percent lethal, 56 percent mixed<sup>1</sup> or 2, and only 5 percent non-lethal. Only 4 percent of the area regimes have vegetation conditions that are highly departed from their historical range, although most of this change is in the historically non-lethal fire regimes, where wildfire would likely be much larger and more intense and severe than historically. In addition, 15 percent of the area regimes have vegetation conditions that are moderately departed from their historical range. Wildfire in these areas may result in larger patch sizes of high intensity or severity, but not to the same extent as in the highly departed areas in non-lethal fire regimes.

**Lands and Special Uses** - Special-use authorizations are issued for power lines and telephone lines along Warren Wagon Road. A public road easement is issued to Valley County for a right-of-way on Warren Wagon Road (Forest Highway 21). The Natural Resources Conservation Service maintains and operates a Snotel site on Secesh Summit. A permit is issued to the Fish and Wildlife Service for the use and maintenance of a one-room log cabin (Trapper Cabin).

There are several water uses authorized by special use permit. A well for domestic water use is authorized by permit. There are two reservoirs authorized under US Department of Interior (USDI) easements for the operation and maintenance of Maki Lake and Shaw Twin Lakes. Special-use authorizations have been issued for the operation and maintenance of Upper Payette Lake, Blackwell Lake, Box Lake, and Granite Lake. All four of these permittees have submitted applications requesting a permanent conditional easement be issued per Public Law 99-545, commonly known as the *Colorado Ditch Bill*.

The Bear Basin Road, Forest Road 451, is a primary access route to National Forest System lands in the western portion of the Management Area. The first section of the road, from its junction with State Highway 55 to the Forest boundary, was conveyed to the Forest Service in 1970 through an easement from Brown Tie and Lumber Company. This section of road also provides access to a private subdivision. Property owners use the road year-round, but have been reluctant to accept a road use permit for winter snowplowing.

**Facilities and Roads** – The Lake Fork Guard Station is currently used for crew quarters and stock support.

Lick Creek Road (Forest Highway 048) is a primary access route to National Forest System lands, including the South Fork Salmon River area and the community of Yellow Pine. The roadbed is native-surfaced, and there are numerous drainage problems that contribute sediment to Lake Fork Creek. The native material surface is also very rough and difficult to maintain, reducing user comfort.

## MANAGEMENT DIRECTION

In addition to Forest-wide Goals, Objectives, Standards, and Guidelines that provide direction for all management areas, the following direction has been developed specifically for this area.

| MPC/Resource Area                             | Direction           | Number | Management Direction Description                                                                                                                                                                                                                                                               |
|-----------------------------------------------|---------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 1.2<br/>Recommended<br/>Wilderness</b> | General Standard    | 0701   | Management actions, including wildland fire use and prescribed fire, must be designed and implemented in a manner that maintains wilderness values, as defined in the Wilderness Act.                                                                                                          |
|                                               | Vegetation Standard | 0702   | Mechanical vegetation treatments, including salvage harvest, are prohibited.                                                                                                                                                                                                                   |
|                                               | Recreation Standard | 0703   | No new motorized or mechanical uses will be allowed, except where these uses must be allowed in response to reserved or outstanding rights, statute, or treaty.                                                                                                                                |
|                                               | Recreation Standard | 0704   | Existing motorized or mechanical uses are allowed only if they do not lead to long-term adverse changes in wilderness values.                                                                                                                                                                  |
|                                               | Road Standard       | 0705   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                  |
|                                               | Fire Guideline      | 0706   | The full range of fire suppression strategies may be used to suppress wildfires. Fire suppression tactics should minimize impacts to wilderness values.                                                                                                                                        |
| <b>MPC 3.1</b>                                | General Standard    | 0707   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years). |



| MPC/Resource Area                                                                                                        | Direction              | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------|------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | Vegetation<br>Standard | 0708   | Mechanical vegetative treatments, excluding salvage harvest, may only occur where:<br>a) The responsible official determines that wildland fire use or prescribed fire would result in unreasonable risk to public safety and structures, investments, or undesirable resource affects; and<br>b) They maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>c) They maintain or restore habitat for native and desired non-native wildlife and plant species. |
|                                                                                                                          | Fire<br>Standard       | 0709   | Wildland fire use and prescribed fire may only be used where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species, or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species.                                                                                                                                                                                                                                    |
|                                                                                                                          | Road<br>Standard       | 0710   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To address immediate response situations where, if action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                                                                                                                                                                   |
|                                                                                                                          | Fire<br>Guideline      | 0711   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                                                                                 |
| <b>MPC 3.2<br/>Active Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b>  | General<br>Standard    | 0712   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary (up to 3 years) or short-term (3-15 years) time periods, and must be designed to avoid degradation of existing conditions in the long-term (greater than 15 years).                                                                                                                                                                                                                                         |
|                                                                                                                          | Vegetation<br>Standard | 0713   | Vegetation restoration or maintenance treatments—including wildland fire use, mechanical, and prescribed fire—may only occur where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species; or<br>c) Reduce risk of impacts from wildland fire to human life, structures, and investments.                                                               |
|                                                                                                                          | Road<br>Standard       | 0714   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To support aquatic, terrestrial, and watershed restoration activities, or<br>d) To address immediate response situations where, if action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                                                                                   |
|                                                                                                                          | Fire<br>Guideline      | 0715   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                                                                                 |

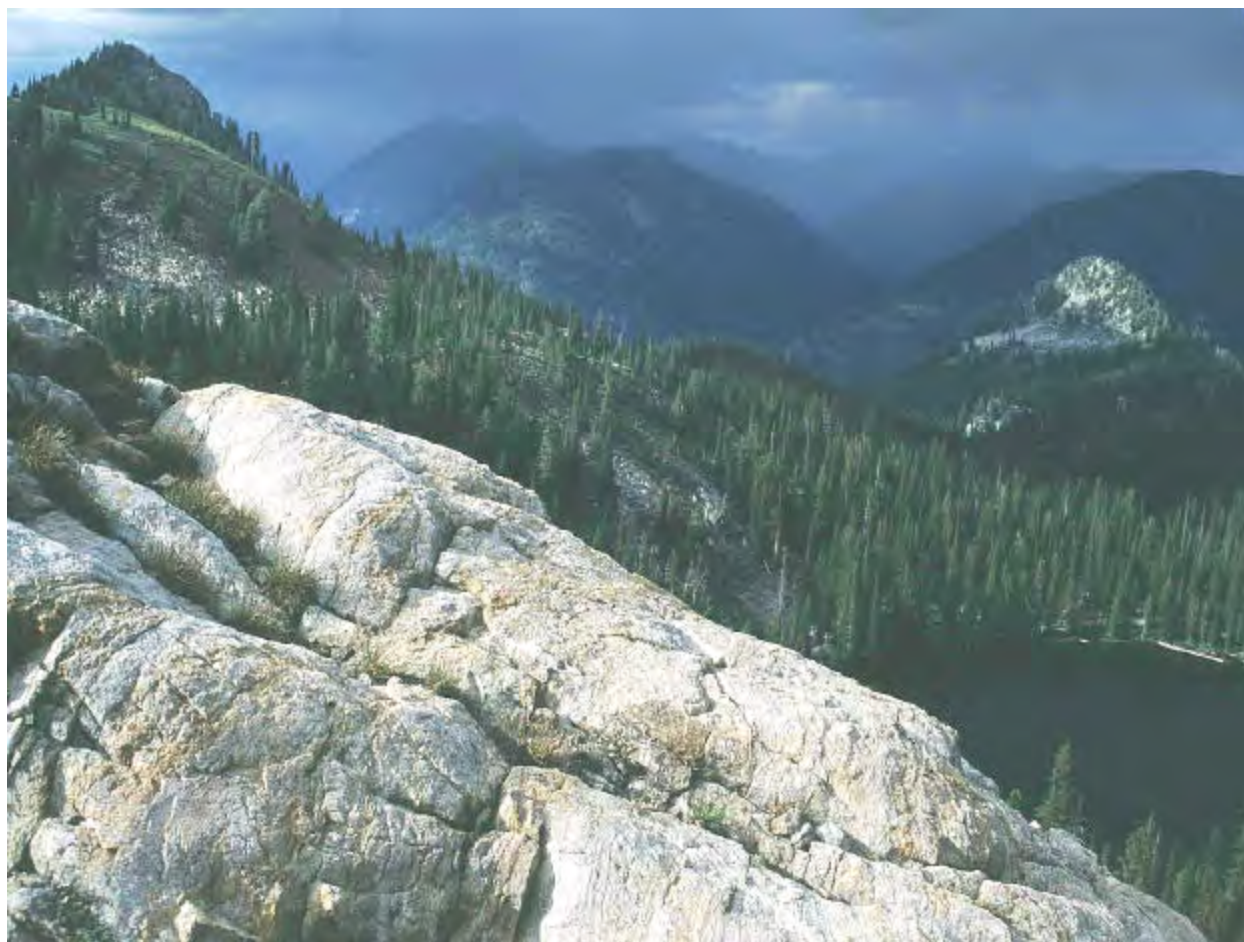
| MPC/Resource Area                                                                                                                         | Direction               | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 4.1c<br/>Undeveloped<br/>Recreation:<br/>Maintain Unroaded<br/>Character with<br/>Allowance for<br/>Restoration<br/>Activities</b> | General<br>Standard     | 0716   | Management actions—including mechanical vegetation treatments, salvage harvest, wildland fire use, prescribed fire, special use authorizations, and road maintenance—must be designed and implemented in a manner that would be consistent with the unroaded landscape in the temporary, short term, and long term. Exceptions to this standard are actions in the 4.1c Roads standards, below.                                                                                |
|                                                                                                                                           | Road<br>Standard        | 0717   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                           | Fire<br>Guideline       | 0718   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the unroaded landscape.                                                                                                                                                                                                                                                                                                  |
| <b>MPC 4.2<br/>Roaded<br/>Recreation<br/>Emphasis</b>                                                                                     | Vegetation<br>Guideline | 0719   | Vegetation management actions—including wildland fire use, prescribed fire, and mechanical treatments—may be used to maintain or restore desired vegetation and fuel conditions provided they do not prevent achievement of recreation resource objectives.                                                                                                                                                                                                                    |
|                                                                                                                                           | Fire<br>Guideline       | 0720   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to recreation developments and investments.                                                                                                                                                                                                                                                                                            |
| <b>MPC 5.1<br/>Restoration and<br/>Maintenance<br/>Emphasis within<br/>Forested<br/>Landscapes</b>                                        | Vegetation<br>Guideline | 0721   | The full range of vegetation treatment activities may be used to restore or maintain desired vegetation and fuel conditions. The available vegetation treatment activities include wildland fire use. Salvage harvest may also occur.                                                                                                                                                                                                                                          |
|                                                                                                                                           | Fire<br>Guideline       | 0722   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to habitats, developments, and investments.                                                                                                                                                                                                                                                                                            |
|                                                                                                                                           | Road<br>Guideline       | 0723   | Road construction or reconstruction may occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To achieve restoration and maintenance objectives for vegetation, water quality, aquatic habitat, or terrestrial habitat; or<br>d) To support management actions taken to reduce wildfire risks in wildland-urban interface areas; or<br>e) To meet access and travel management objectives. |
| <b>Soil, Water,<br/>Riparian, and<br/>Aquatic Resources</b>                                                                               | Objective               | 0724   | Improve water quality and geomorphic integrity by reducing road-related accelerated sediment in the Upper North Fork Payette River and Payette Lake Watersheds, which comprise the public water system for the city of McCall and surroundings. Decommission existing roads in the watersheds that are no longer needed for public access or long-term management.                                                                                                             |
|                                                                                                                                           | Objective               | 0725   | Restore riparian areas in the North Fork Payette River and Lake Fork Creek drainages by reducing localized impacts from historic and current sheep grazing related to stream down-cutting, loss of vegetation, and changes in vegetation composition.                                                                                                                                                                                                                          |
|                                                                                                                                           | Objective               | 0726   | Identify recreational campsites or parking areas that are contributing unacceptable levels of accelerated sediment or compaction to the North Fork Payette River and Lake Fork Creek riparian areas. Relocate or harden sites where needed to reduce compaction and erosion to riparian areas by end of planning period.                                                                                                                                                       |

| MPC/Resource Area                                   | Direction | Number | Management Direction Description                                                                                                                                                                                                                                             |
|-----------------------------------------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Soil, Water, Riparian, and Aquatic Resources</b> | Objective | 0727   | Maintain the meadow ecosystem and restore wet meadows in the Bear Basin area by reducing soil compaction, accelerated erosion, and loss of vegetation from motorized recreation. Install information signs and designate the area as non-motorized on the Forest Travel Map. |
|                                                     | Objective | 0728   | Restore hydrologic function in the Sater Meadows area by restoring stream channel morphology and riparian vegetation.                                                                                                                                                        |
|                                                     | Objective | 0729   | Improve native and desired non-native fish habitat in the Upper Lake Fork Creek Watershed by reducing accelerated sediment associated with the Lick Creek Road (Forest Road 339).                                                                                            |
|                                                     | Guideline | 0730   | Implement watershed restoration and other management activities in the Upper North Fork Payette River Watershed consistent with Big Payette Lake Water Quality Management Plan to address concerns within the public water system.                                           |
| <b>Vegetation</b>                                   | Objective | 0731   | Use a mix of prescribed and wildland fire to restore or maintain vegetative composition and structure, and to reduce fuel loadings in the Needles and Secesh Recommended Wilderness Areas.                                                                                   |
| <b>Botanical Resources</b>                          | Objective | 0732   | Maintain or restore known populations and occupied habitats of TEPCS plant species, including Tobias' saxifrage, Sierra sanicle, and green bug moss, to contribute to the long-term viability of these species.                                                              |
|                                                     | Objective | 0733   | Implement the Forest Service approved portions of the conservation strategy for Tobias' saxifrage to maintain viability of the species.                                                                                                                                      |
| <b>Non-native Plants</b>                            | Objective | 0734   | Manage designated non-native, invasive weeds in an integrated approach, to comply with the Strategic and Annual Operating Plans established by the Upper Payette River Cooperative Weed Management Area participants.                                                        |
|                                                     | Objective | 0735   | To reduce impacts on native plants and other resources, eradicate new and small infestations of spotted knapweed. Contain or reduce infestations of Canada thistle and yellow toadflax.                                                                                      |
| <b>Recreation Resources</b>                         | Objective | 0736   | Provide interpretive information and a parking area at the Slick Rock proposed National Natural Landmark to enhance visitor experiences.                                                                                                                                     |
|                                                     | Objective | 0737   | Establish a developed camping area at or near Granite Lake and manage dispersed use to reduce impacts to riparian areas.                                                                                                                                                     |
|                                                     | Objective | 0738   | Replace the existing toilet at Granite Lake with a state-of-the-art toilet to improve the recreationist's experience.                                                                                                                                                        |
|                                                     | Objective | 0739   | Provide parking and dispersed camping areas near Sater Meadows to reduce recreation impacts to the meadow complex.                                                                                                                                                           |
|                                                     | Objective | 0740   | Replace the existing toilet at Black Lee dispersed camping site with a state-of-the-art toilet to improve the recreationist's experience.                                                                                                                                    |
|                                                     | Objective | 0741   | Improve the last mile of Pearl Creek Road to access the Pearl Lake/Brush Lake trailhead. Improve and maintain this trailhead.                                                                                                                                                |

| MPC/Resource Area                                                                                                               | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                              |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
|---------------------------------------------------------------------------------------------------------------------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------|--|--------|--------|------------------------------|-----|-----|--------------------------|-----|-----|----------------|-----|----|-----------------|----|-----|
| Recreation Resources                                                                                                            | Objective | 0742   | Achieve or maintain the following ROS strategy: <table><tr><th rowspan="2">ROS Class</th><th colspan="2">Percent of Mgt. Area</th></tr><tr><th>Summer</th><th>Winter</th></tr><tr><td>Semi-Primitive Non-Motorized</td><td>48%</td><td>25%</td></tr><tr><td>Semi-Primitive Motorized</td><td>30%</td><td>60%</td></tr><tr><td>Roaded Natural</td><td>21%</td><td>0%</td></tr><tr><td>Roaded Modified</td><td>1%</td><td>15%</td></tr></table> | ROS Class | Percent of Mgt. Area |  | Summer | Winter | Semi-Primitive Non-Motorized | 48% | 25% | Semi-Primitive Motorized | 30% | 60% | Roaded Natural | 21% | 0% | Roaded Modified | 1% | 15% |
|                                                                                                                                 |           |        | ROS Class                                                                                                                                                                                                                                                                                                                                                                                                                                     |           | Percent of Mgt. Area |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
|                                                                                                                                 |           |        |                                                                                                                                                                                                                                                                                                                                                                                                                                               | Summer    | Winter               |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
|                                                                                                                                 |           |        | Semi-Primitive Non-Motorized                                                                                                                                                                                                                                                                                                                                                                                                                  | 48%       | 25%                  |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
|                                                                                                                                 |           |        | Semi-Primitive Motorized                                                                                                                                                                                                                                                                                                                                                                                                                      | 30%       | 60%                  |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
|                                                                                                                                 |           |        | Roaded Natural                                                                                                                                                                                                                                                                                                                                                                                                                                | 21%       | 0%                   |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
|                                                                                                                                 |           |        | Roaded Modified                                                                                                                                                                                                                                                                                                                                                                                                                               | 1%        | 15%                  |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
| The above numbers reflect current travel regulations. These numbers may change as a result of future travel regulation planning |           |        |                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
| Scenic Environment                                                                                                              | Objective | 0743   | Maintain scenic values as seen from Warren Wagon Road, Lick Creek Road, and the Payette Lakes to maintain a natural-appearing setting for visitors traveling through or near the Forest.                                                                                                                                                                                                                                                      |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
| Timberland Resources                                                                                                            | Objective | 0744   | Reduce the opportunity for noxious weed establishment and spread by keeping suitable weed sites to a minimum during timber harvest activities in the Middle North Fork Payette River subwatershed. Consider such methods as designated skid trails, winter skidding, minimal fire line construction, broadcast burning rather than pile burning, or keeping slash piles small to reduce heat transfer to the soil.                            |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
|                                                                                                                                 | Guideline | 0745   | Existing noxious weed infestations should be treated on landings, skid trails, and helibases in the project area before timber harvest activities begin in the Middle North Fork Payette River subwatershed.                                                                                                                                                                                                                                  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
| Rangeland Resources                                                                                                             | Objective | 0746   | In recommended wilderness areas, and areas with a semi-primitive recreation management prescription, mitigate conflicts between recreation and livestock grazing.                                                                                                                                                                                                                                                                             |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
|                                                                                                                                 | Objective | 0747   | Mitigate livestock impacts that affect hydrologic function and plant species composition in alpine meadows such as Sater Meadows.                                                                                                                                                                                                                                                                                                             |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
| Fire Management                                                                                                                 | Objective | 0748   | Identify areas appropriate for Wildland Fire Use, emphasizing Inventoried Roadless Areas. Use wildland fire to restore or maintain vegetative desired conditions and to reduce fuel loadings.                                                                                                                                                                                                                                                 |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
|                                                                                                                                 | Objective | 0749   | Use prescribed fire and mechanical treatments within and adjacent to wildland-urban interface areas and Forest Service administrative sites to manage fuels to reduce wildfire hazards. Develop and prioritize vegetation treatment plans for wildland-urban interface in coordination with local and tribal governments, agencies, and landowners.                                                                                           |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
|                                                                                                                                 | Objective | 0750   | Coordinate and emphasize fire education and prevention programs with private landowners to help reduce wildfire hazards and risks. Work with landowners to increase defensible space around structures.                                                                                                                                                                                                                                       |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
|                                                                                                                                 | Guideline | 0751   | Coordinate with the State of Idaho to develop compatible wildland fire suppression and wildland fire use strategies.                                                                                                                                                                                                                                                                                                                          |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
| Lands and Special Uses                                                                                                          | Objective | 0752   | Acquire Squaw Meadows to maintain key resources and municipal watershed values.                                                                                                                                                                                                                                                                                                                                                               |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |
|                                                                                                                                 | Objective | 0753   | Transfer the road easement on Bear Basin Road (Forest Road 451) to the City of McCall to transfer road maintenance responsibility from the Forest Service to the city.                                                                                                                                                                                                                                                                        |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |                 |    |     |

| MPC/Resource Area             | Direction | Number | Management Direction Description                                                                                                                                                                       |
|-------------------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Lands and Special Uses</b> | Objective | 0754   | Acquire and grant rights-of-way and permits to meet the resource and access needs of the Forest Service and cost-share cooperators. The main cost-share cooperator in this area is the State of Idaho. |
| <b>Facilities and Roads</b>   | Objective | 0755   | Maintain existing facilities at Lake Fork Guard Station for crew quarters and stock support.                                                                                                           |
|                               | Objective | 0756   | Improve the Lick Creek Road (Forest Highway 048) to provide proper drainage and a road surface that reduces accelerated sediment and increases user comfort.                                           |
|                               | Guideline | 0757   | Coordinate transportation system development, management, and decommissioning with cost-share cooperators to develop a shared transportation system serving the lands of all parties.                  |
| <b>Special Features</b>       | Objective | 0758   | Establish the proposed Slick Rock National Natural Landmark to give recognition to special values and preserve recreational experiences.                                                               |

### Above Anderson Lake

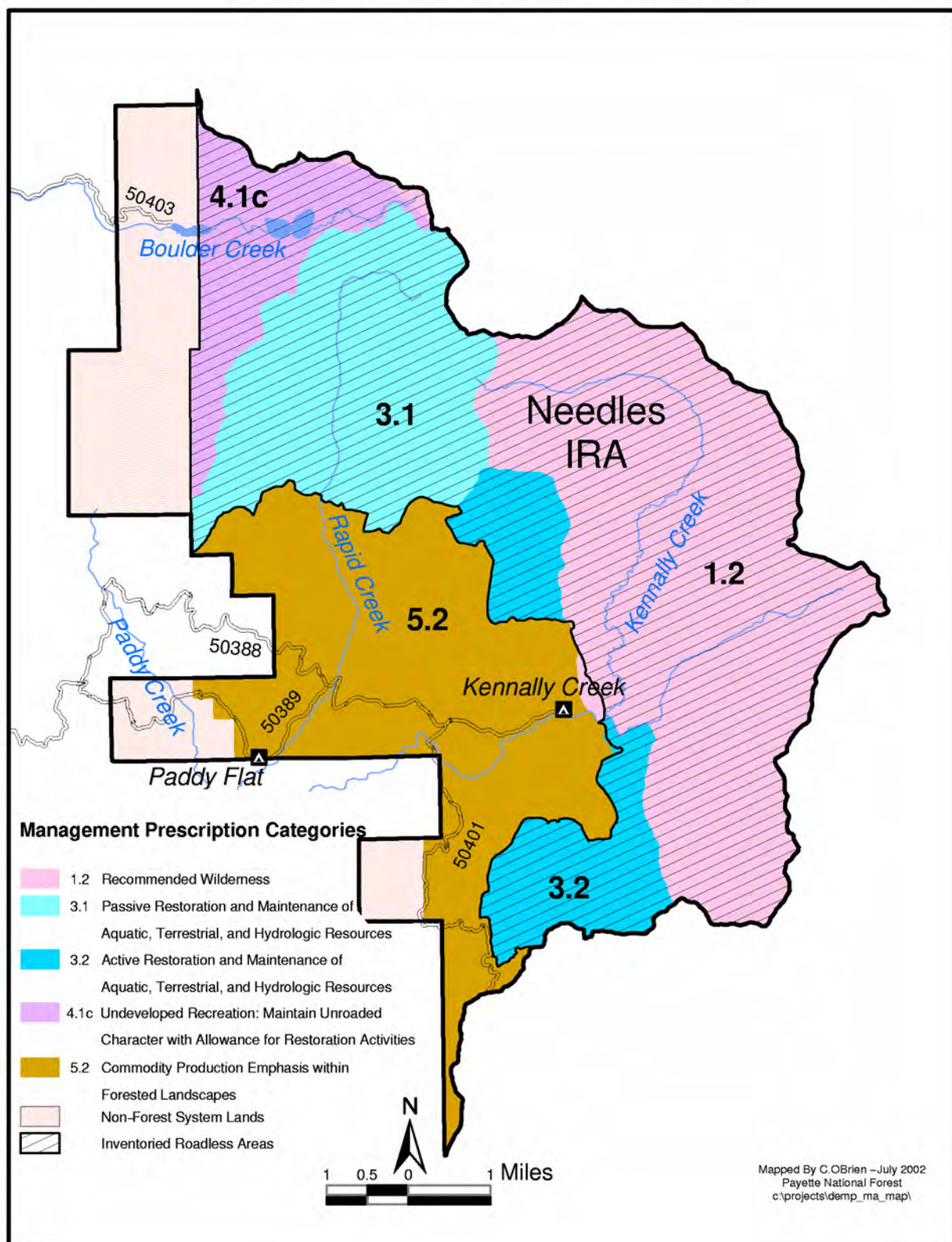


**Near Slab Butte**





Management Area 08 –Kennally Creek –Location Map



## Management Area 8 Kennally Creek

### MANAGEMENT AREA DESCRIPTION

**Management Prescriptions** - Management Area 8 has the following management prescriptions (see map on preceding page for distribution of prescriptions).

| Management Prescription Category (MPC)                                                   | Percent of Mgt. Area |
|------------------------------------------------------------------------------------------|----------------------|
| 1.2 – Recommended Wilderness                                                             | 36                   |
| 3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources | 18                   |
| 3.2 – Active Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources  | 10                   |
| 4.1c – Undeveloped Rec.: Maintain Unroaded Character with Allowance for Restoration      | 8                    |
| 5.2 – Commodity Production Emphasis within Forested Landscapes                           | 28                   |

**General Location and Description** - Management Area 8 is comprised of lands administered by the Payette National Forest within the Kennally and Boulder Creek drainages southeast of McCall, Idaho (see map, preceding page). The area lies in Valley County, and is part of the McCall Ranger District. The management area is an estimated 39,500 acres, about 12 percent of which are State lands, and less than 1 percent are private lands. All of these inholdings are along the western edge of the management area. The area is bordered by Payette National Forest to the north and east, Boise National Forest to the south, and a mix of private, State, and BLM lands to the west. The primary uses or activities in this area have been timber management, dispersed recreation, and livestock grazing.

**Access** - The main access to the area is by gravel-surfaced Paddy Flat Road (Forest Road 388) from State Highway 55 to Kennally Creek Campground, or by paved and graveled county road to Boulder Meadows Reservoir. The density of classified roads for the management area is an estimated 1.0 mile per square mile, although total road density for area subwatersheds ranges between 0 and 8.3 miles per square mile. Roughly half the area has a fairly high road density, and the other half is inventoried as roadless. Several trails provide access to portions of the roadless area.

The Forest has a cost-share agreement with the Boise Corporation and the State of Idaho for building and maintaining a cooperative road system in which all costs and responsibilities are shared. Boise Corporation lands occur in the Rapid Creek Subwatershed, and State lands occur primarily in the Upper Boulder Creek, Rapid Creek, and Middle Kennally Creek Subwatersheds.

**Special Features** – A portion of the Needles Inventoried Roadless Area (23,993 of 131,266 acres on Payette NF) comprises an estimated 61 percent of this management area. The Forest has recommended part of this roadless area for Wilderness designation.



**Air Quality** - This management area lies within Montana/Idaho Airshed ID-15 and Valley County. Particulate matter is the primary pollutant of concern related to Forest management activities. There is an ambient air monitor located within the airshed in McCall to evaluate current background levels, trends, and seasonal patterns of particulate matter. Portions of this MA are within 100 kilometers of three Class I areas: the Hells Canyon, Eagle Cap, and Sawtooth Wildernesses. Visibility monitoring has been expanded for these areas.

Between 1995 and 1999, emissions trends in Valley County improved for PM 10, while PM 2.5 emissions remained constant. The most common sources of particulate matter within the county were wildfire, prescribed fire, and fugitive dust from unpaved roads. In addition to Forest management activities, crop residue and ditch burning may contribute to particulate matter emissions, although the amount of agricultural-related burning for was very low within Valley County (less than 600 acres). There were no point sources within the county.

**Soil, Water, Riparian, and Aquatic Resources** - Elevations range from 5,250 feet where Camp Creek leaves the Forest to 8,457 feet atop Buckhorn Mountain. The most common geomorphic landforms in the management area are glacial mountains and trough lands, frost-churned uplands and mountain slopes, fluvial mountain slopes, and depositional lands. Slope gradients average between 40 to 80 percent on glacial mountains, 30 to 60 percent on glacial trough lands, 30 to 80 percent on fluvial mountain slopes, 15 to 40 percent on frost-churned uplands and slopes, and 0 to 20 percent on depositional lands. Granitic rocks of the Idaho batholith dominate the surface geology. Soils generally have moderate to high surface erosion potential, low to moderate productivity, and high phosphorus levels. Subwatershed vulnerability ratings range from low to moderate, with the majority being moderate (see table below). Geomorphic Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately) (see table below). There are localized impacts from roads, timber harvest, livestock grazing, and recreation in the roaded portion of the area. Impacts include accelerated sediment, streambank degradation, and stream channel modification.

The management area comprises portions of the Boulder Creek and Kennally Creek Watersheds in the North Fork Payette River Subbasin. The main streams in the area are Boulder Creek, Rapid Creek, and Kennally Creek. Popular lakes include Boulder, Rapid, Louie, and Kennally Lakes. Water Quality Integrity ratings for the subwatersheds vary from moderate (functioning at risk) to low (not functioning appropriately), with the majority being moderate (see table below).

There are localized impacts in the roaded portions primarily from roads and timber harvest. Impacts include elevated temperatures from loss of riparian vegetation, and accelerated sediment from disturbance. Accelerated phosphorus and sediment contributions from this area flow downstream to Cascade Reservoir, which is listed as an impaired water body under Section 303(d) of the Clean Water Act, with an assigned TMDL. In 1998, a Watershed Management Plan was developed for the reservoir and its tributaries to address water quality concerns. The plan calls for a thirty percent reduction in sediment within the watershed. Roads, timber harvest, livestock grazing, and recreation are the primary causes of accelerated sediment in this area. An estimated 10 miles of existing road have been decommissioned and removed from the Forest Road System, and 5 miles of road have been graveled in the last decade. Only one of six subwatersheds was listed in 1998 as having an impaired water body under Section 303(d) of the

Clean Water Act. This subwatershed is Upper Boulder Creek. The pollutants listed were dissolved oxygen, flow alteration, nutrients, sediment, and temperature. All of the subwatersheds in this area have an assigned TMDL.

| Subwatershed Vulnerability |      |     | Geomorphic Integrity |      |     | Water Quality Integrity |      |     | # 303(d) Subs | # Subs With TMDLs | # Public Water System Subs |
|----------------------------|------|-----|----------------------|------|-----|-------------------------|------|-----|---------------|-------------------|----------------------------|
| High                       | Mod. | Low | High                 | Mod. | Low | High                    | Mod. | Low |               |                   |                            |
| 0                          | 4    | 2   | 1                    | 3    | 2   | 0                       | 5    | 1   | 1             | 6                 | 0                          |

In 1924, the Black Canyon Dam eliminated access for native anadromous chinook salmon, sockeye salmon, and steelhead trout, and these species no longer occur within the management area. Threatened bull trout and native cutthroat trout have never been observed in the area. Aquatic habitat is functioning at risk in some areas due to habitat fragmentation from roads, off-Forest irrigation dams, high sediment levels, and impacts to riparian areas. Native fish species are at risk due to the introduction of non-native species and habitat impacts described above.

**Vegetation** - Vegetation at lower elevations is typically Douglas-fir and ponderosa pine on south and west aspects, and Douglas-fir, lodgepole pine, and grand fir forests on north and east aspects. Mid elevations are dominated by forest communities of lodgepole pine, grand fir, and subalpine fir, with pockets of aspen. Subalpine fir and whitebark pine are found at upper elevations.

Only about 3 percent of the area is rock, water, shrubland, or grassland, including the Alpine Meadows vegetation group. The main forested vegetation groups are Warm Dry Subalpine Fir (30%), Warm Moist/Hydric Subalpine Fir (17%), High Elevation Subalpine Fir (17%), Cool Moist Grand Fir (9%), and Dry Grand Fir (14%).

Parts of the Cool Moist Grand Fir and Dry Grand Fir groups have been harvested, which has changed composition, structure, and function in these areas. More grand fir and lodgepole pine exist now than historically, with less Douglas-fir and ponderosa pine. Large ponderosa pine and Douglas-fir are particularly lacking. Snags and large woody debris are low in managed areas. Fire exclusion has resulted in higher tree densities and fuel loadings in unmanaged areas. This group is therefore functioning at risk.

The Warm Dry Subalpine Fir, Warm Moist/Hydric Subalpine Fir, and High Elevation Subalpine Fir groups are functioning properly, but are moving toward the upper end of their successional cycle throughout much of the management area. Thus, the risk of insect and disease infestation and stand-replacing wildfire is increasing. Alpine Meadows are functioning properly, with only minor impacts from livestock grazing.

Riparian vegetation is functioning at risk in localized areas where vegetation has been replaced by roads or removed by timber management, livestock grazing, or recreation sites.

**Botanical Resources** - Currently, no known populations of Region 4 current or proposed Sensitive species occur within this management area. Additionally, no federally listed or proposed plant species are known to occur in the area, but potential habitat for Ute ladies'-tresses and slender moonwort may exist. Ute ladies'-tresses, a Threatened species, may have moderate

potential habitat in riparian/wetland areas up to 7,000 feet. Slender moonwort, a Candidate species, may occur in moderate to higher elevation grasslands, meadows, and small openings in spruce and lodgepole pine.

**Non-native Plants** - A number of noxious weeds and exotic plants have been found within the area, particularly along the main road corridors. An estimated 12 percent of the area has high susceptibility to invasion by noxious weeds and exotic plants. The main weeds of concern are Canada thistle and spotted knapweed, which currently occur in small, scattered populations.

**Wildlife Resources** - Most of the area is too high in elevation to provide winter range for elk and deer, but many winter in nearby Long Valley. Lower-elevation forests provides habitat for a number of Region 4 sensitive species, including northern goshawk, great gray owl, flammulated owl, and white-headed woodpecker. Upper-elevation forests provide habitat for boreal owl, three-toed woodpecker, wolverine, lynx, fisher, and many migratory land birds, as well as summer range for mammals such as elk, deer, black bear, and mountain lion. Lynx habitat has been mapped with Lynx Analysis Units. This area is adjacent to the Central Idaho Wolf Recovery Area, and gray wolves have been observed here. Overall, terrestrial wildlife habitat is at properly functioning condition in the roadless portions of the area, but functioning at risk in the roaded portions due to habitat fragmentation from roads and harvest units, and the diminishing large tree, snag, and down log components in managed areas.

**Recreation Resources** - The proximity to McCall, picturesque mountains and lakes, and a good network of access roads and trails have made this a heavily used recreation area. Recreation use includes hunting, fishing, hiking, motorcycling, mountain biking, snowmobiling, ATV use, sightseeing, backcountry skiing, and camping. There are many dispersed campsites and one developed campground, Kennally Creek. A number of private summer recreation residences are located within or adjacent to the management area in the Paddy Flat Subdivision. The area is in Idaho Fish and Game Management Unit 24. Because this area and nearby McCall are popular recreation destinations, users come from both local and regional population centers. The roadless portion of the area has a network of trails, most of which are open to some form of motorized vehicle use. The recreation emphasis is on providing dispersed camping and quality motorized and non-motorized trail opportunities.

**Scenic Environment** – Visually sensitive routes and use areas represent locations from which the scenic environment is considered especially important. These routes or areas generally have a more restrictive VQO assigned to them than areas not seen from such locations. The following is a list of visually sensitive routes or use areas with this management area. There may also be sensitive routes or use areas in adjacent management areas that could be affected by actions taken in this area.

| Route or Area Type | Sensitivity Level | Name of Route or Area                                                               |
|--------------------|-------------------|-------------------------------------------------------------------------------------|
| Roads              | 1                 | Paddy Flat #388                                                                     |
| Roads              | 2                 | Rapid Creek #390, Loomis Ranch #389                                                 |
| Trails             | 1                 | Kennally Creek #102                                                                 |
| Trails             | 2                 | Paddy Flat-Lake Fork Creek #103, Needles Summit #101, East Fork Kennally Creek #099 |

|           |   |                           |
|-----------|---|---------------------------|
| Use Areas | 1 | Kennally Creek Campground |
| Use Areas | 2 | Boulder Lake, Louie Lake  |

**Cultural Resources** – Cultural themes in this area include Prehistoric, CCC, and Transportation. This area was likely used for centuries by ancestors of the Nez Perce, Shoshone-Bannock and Shoshone-Piute for hunting, fishing, gathering, and as a travel way to and from the South Fork Salmon River drainage. The CCC improved some of the ancient Indian trails in the 1930s, and they have since been used extensively by recreationists, ranchers, and others from Long Valley.

**Timberland Resources** - Of the estimated 26,400 tentatively suited acres in this management area, 7,500 acres have been identified as being suited timberlands, or appropriate for timber production. This represents about 2 percent of the Forest's suited timberland acres. The suited timberland acres are found in MPC 5.2 (see MPC map for this management area). Lands in MPCs 1.2, 3.1, 3.2, and 4.1c have been identified as not suited for timber production. The level of past management has been high in roaded areas and low to nonexistent elsewhere. This area has the Paddy Flat Provenance Test Site, which has been developed to test and evaluate the growth and development of trees from different genetic sources. Forest products such as fuelwood, posts and poles, and Christmas trees are collected in designated areas.

**Rangeland Resources** - The management area contains a portion of one sheep allotment. Management Area 8 provides an estimated 7,100 acres of capable rangeland, which represents about 3 percent of the capable rangeland on the Forest.

**Mineral Resources** - Although a number of lode and placer mining claims exist in this area, the area has little or no active mining activity, and the potential for development of locatable or leasable minerals is low. With continuing development in the nearby McCall area, the demand for common variety minerals has increased. Thus, the probability for development of this resource is moderate to high in this management area because of its close proximity.

**Fire Management** - Prescribed fire has been used to treat activity-generated fuels. Notable wildfires that burned in the last 15 years include Jughandle (1987, 400 acres), Green Mountain (1989, 100 acres), and Foolhen (1989, 100 acres). There are no National Fire Plan communities in this area, but Rapid Creek and Upper Boulder Creek subwatersheds are considered to be wildland-urban interface areas due to subdivision development in Paddy Flat and adjacent to the Forest. These subwatersheds are also considered to pose risks to life and property from potential post-fire floods and debris flows. Area fire regimes are estimated to be: 23 percent lethal, 62 percent mixed<sup>1</sup> or 2, and 15 percent non-lethal. An estimated 11 percent of the area regimes have vegetation conditions that are highly departed from their historical range. Most of this change is in the historically non-lethal fire regimes, resulting in conditions where wildfire would likely be much larger and more intense and severe than historically. In addition, 27 percent of the area regimes have vegetation conditions that are moderately departed from their historical range. Wildfire in these areas may result in larger patch sizes of high intensity or severity, but not to the same extent as in the highly departed areas in non-lethal fire regimes.

**Lands and Special Uses** - Special use authorizations include USDI easements for Boulder Lake and Louie Lake, which are used for irrigation and domestic water.

**Facilities and Roads** – The Paddy Flat Guard Station is currently used for crew quarters and stock support.

## MANAGEMENT DIRECTION

In addition to Forest-wide Goals, Objectives, Standards, and Guidelines that provide direction for all management areas, the following direction has been developed specifically for this area.

| MPC/Resource Area                                                                                                        | Direction           | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------|---------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 1.2<br/>Recommended<br/>Wilderness</b>                                                                            | General Standard    | 0801   | Management actions, including wildland fire use and prescribed fire, must be designed and implemented in a manner that maintains wilderness values, as defined in the Wilderness Act.                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                          | Vegetation Standard | 0802   | Mechanical vegetation treatments, including salvage harvest, are prohibited.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                          | Recreation Standard | 0803   | No new motorized or mechanical uses will be allowed, except where these uses must be allowed in response to reserved or outstanding rights, statute or treaty.                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                          | Recreation Standard | 0804   | Existing motorized or mechanical uses are allowed only if they do not lead to long-term adverse changes in wilderness values.                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                          | Road Standard       | 0805   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                          | Fire Guideline      | 0806   | The full range of fire suppression strategies may be used to suppress wildfires. Fire suppression tactics should minimize impacts to wilderness values.                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | General Standard    | 0807   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years).                                                                                                                                                                                                                                                       |
|                                                                                                                          | Vegetation Standard | 0808   | Mechanical vegetation treatments, excluding salvage harvest, may only occur where:<br>a) The responsible official determines that wildland fire use or prescribed fire would result in unreasonable risk to public safety and structures, investments, or undesirable resource affects; and<br>b) They maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>c) They maintain or restore habitat for native and desired non-native wildlife and plant species. |
|                                                                                                                          | Fire Standard       | 0809   | Wildland fire use and prescribed fire may only be used where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species, or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species.                                                                                                                                                                                                                                    |

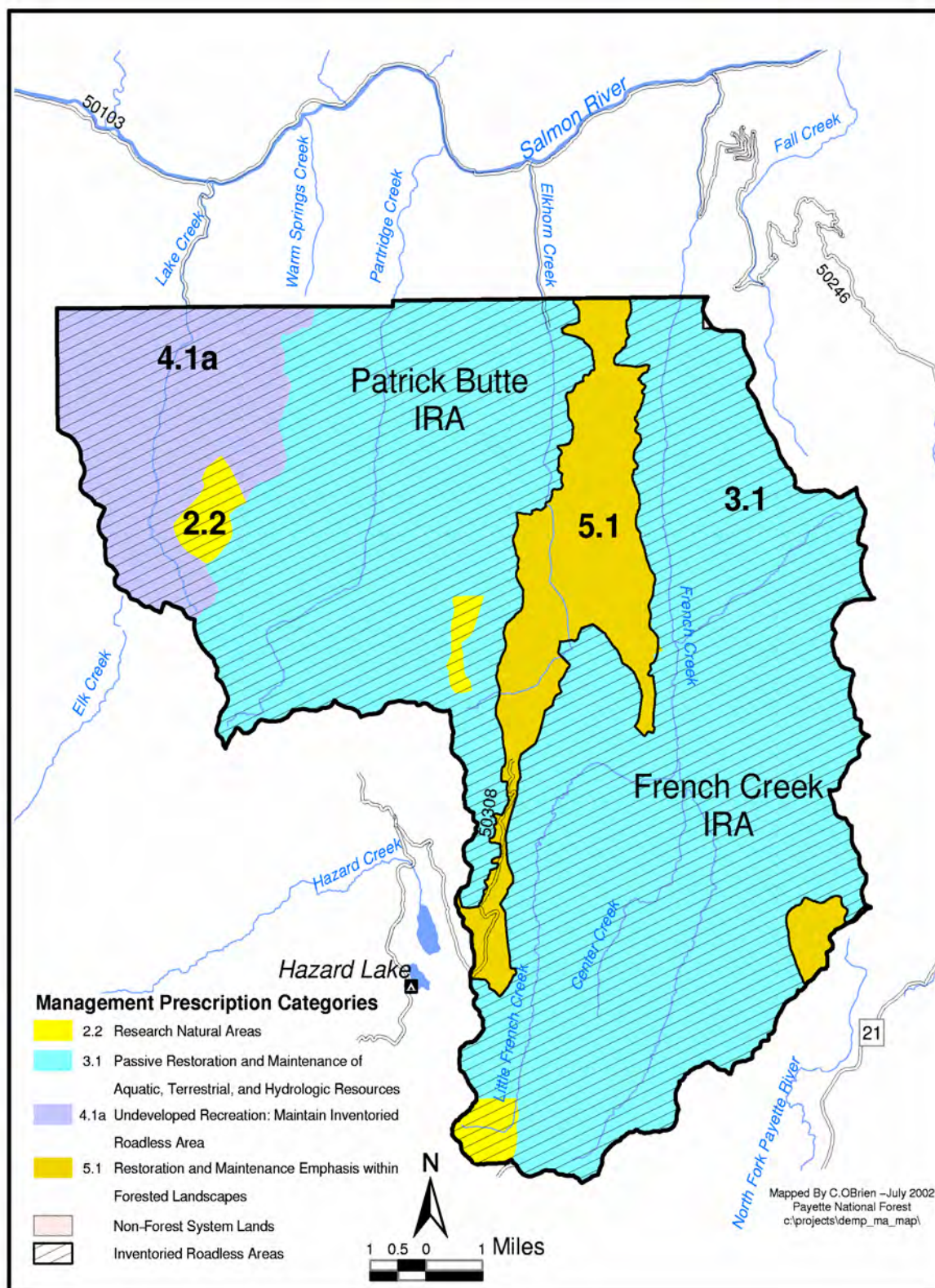
| MPC/Resource Area                                                                                                                         | Direction              | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b>                  | Road<br>Standard       | 0810   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To address immediate response situations where, if action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                                                                                                      |
|                                                                                                                                           | Fire<br>Guideline      | 0811   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                    |
| <b>MPC 3.2<br/>Active Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b>                   | General<br>Standard    | 0812   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary (up to 3 years) or short-term (3-15 years) time periods, and must be designed to avoid degradation of existing conditions in the long-term (greater than 15 years).                                                                                                                                                                            |
|                                                                                                                                           | Vegetation<br>Standard | 0813   | Vegetation restoration or maintenance treatments—including wildland fire use, mechanical, and prescribed fire, may only occur where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species; or<br>c) Reduce risk of impacts from wildland fire to human life, structures, and investments. |
|                                                                                                                                           | Road<br>Standard       | 0814   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To support aquatic, terrestrial, and watershed restoration activities, or<br>d) To address immediate response situations where, if action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                      |
|                                                                                                                                           | Fire<br>Guideline      | 0815   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                    |
| <b>MPC 4.1c<br/>Undeveloped<br/>Recreation:<br/>Maintain Unroaded<br/>Character with<br/>Allowance for<br/>Restoration<br/>Activities</b> | General<br>Standard    | 0816   | Management actions—including mechanical vegetation treatments, salvage harvest, wildland fire use, prescribed fire, special use authorizations, and road maintenance—must be designed and implemented in a manner that would be consistent with the unroaded landscape in the temporary, short term, and long term. Exceptions to this standard are actions in the 4.1c roads standard, below.                                                                                          |
|                                                                                                                                           | Road<br>Standard       | 0817   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                           | Fire<br>Guideline      | 0818   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the unroaded landscape.                                                                                                                                                                                                                                                                                                           |
| <b>MPC 5.2</b>                                                                                                                            | Fire<br>Standard       | 0819   | Wildland fire use is prohibited.                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| MPC/Resource Area                                                                           | Direction         | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------|-------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 5.2<br/>Commodity<br/>Production<br/>Emphasis within<br/>Forested<br/>Landscapes</b> | Fire<br>Guideline | 0820   | Prescribed fire may be used to:<br>a) Maintain or restore desired vegetative conditions on unsuited timberlands; or<br>b) Maintain or restore desired fuel conditions for all vegetation types; or<br>c) Maintain desired vegetative conditions on suited timberlands within PVGs 2 through 10.                                                                                                                                                                                                                                          |
|                                                                                             | Fire<br>Guideline | 0821   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to developments and investments.                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Soil, Water,<br/>Riparian, and<br/>Aquatic Resources</b>                                 | Objective         | 0822   | Work with the State of Idaho to de-list Cascade Reservoir drainages from their impaired water bodies list by having a qualified resource specialist participate as a member of the Technical Advisory Committee, who will help identify appropriate watershed restoration projects to reduce sediment and phosphorus inputs to the reservoir.                                                                                                                                                                                            |
|                                                                                             | Objective         | 0823   | Reduce impacts to Kennally Creek, Powelson Creek, and Rapid Creek riparian areas from recreation sites or uses. Identify campsites or parking areas that are contributing unacceptable levels of accelerated sediment, compaction, or vegetation loss to the creek riparian areas. Rehabilitate, relocate, or harden sites where needed to reduce impacts.                                                                                                                                                                               |
|                                                                                             | Objective         | 0824   | Increase riparian vegetation and hydrologic function by decommissioning roads within riparian areas and returning road surfaces, cuts, and fills to productivity.                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                             | Standard          | 0825   | Management activities will result in a net reduction in accelerated sediment and phosphorus levels to comply with the Total Maximum Daily Load objective for Cascade Reservoir.                                                                                                                                                                                                                                                                                                                                                          |
| <b>Vegetation</b>                                                                           | Objective         | 0826   | Use a mix of prescribed fire and mechanical treatments to restore or maintain vegetative composition and structure, and to reduce fuel loadings outside of the Needles Recommended Wilderness Area.                                                                                                                                                                                                                                                                                                                                      |
| <b>Non-native<br/>Plants</b>                                                                | Objective         | 0827   | Manage designated non-native, invasive weeds in an integrated approach to comply with the Strategic and Annual Operating Plans established by the Upper Payette River Cooperative Weed Management Area Participants.                                                                                                                                                                                                                                                                                                                     |
|                                                                                             | Objective         | 0828   | To reduce impacts on native plants and other resources, eradicate new and small infestations of spotted knapweed and Canada thistle. Control density and size of larger infestations of Canada thistle.                                                                                                                                                                                                                                                                                                                                  |
| <b>Wildlife<br/>Resources</b>                                                               | Objective         | 0829   | Increase flammulated owl habitat and potential white-headed woodpecker habitat by managing ponderosa pine stands in the Dry Grand Fir vegetation group toward the desired ranges of size classes, canopy closures, species composition, snags, and coarse woody debris, as described in Appendix A.                                                                                                                                                                                                                                      |
|                                                                                             | Guideline         | 0830   | An increase in the flammulated owl and potential white-headed woodpecker habitat may be achieved by the following methods:<br>a) Reducing tree densities and ladder fuels under and around existing large ponderosa trees and snags to reduce the risk of tree-replacing fire and to restore more open canopy conditions.<br>b) Managing the firewood program to retain large-diameter ponderosa pine and large snags of other species through signing, public education, size restriction, area closures, or other appropriate methods. |

| MPC/Resource Area                                                                                                               | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                              |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
|---------------------------------------------------------------------------------------------------------------------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------|--|--------|--------|-------------------------------|-----|----|---------------------------|-----|------|----------------|-----|----|-----------------|-----|----|
| Recreation Resources                                                                                                            | Objective | 0831   | Provide for camping and parking, and improve the trailhead facility at the end of Boulder Creek Road in cooperation with Idaho Dept. of Lands to enhance the area’s recreation opportunities and experiences.                                                                                                                                                                                                                                                  |           |                              |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
|                                                                                                                                 | Objective | 0832   | Install a state-of-the-art toilet at the Rapid Creek Trailhead to improve recreationists’ experience and reduce impacts to other resources.                                                                                                                                                                                                                                                                                                                    |           |                              |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
|                                                                                                                                 | Objective | 0833   | Achieve or maintain the following ROS strategy (± 5%): <table><tr><th rowspan="2">ROS Class</th><th colspan="2">Percent of Mgt. Area (± 5 %)</th></tr><tr><th>Summer</th><th>Winter</th></tr><tr><td>Semi -Primitive Non-Motorized</td><td>23%</td><td>0%</td></tr><tr><td>Semi -Primitive Motorized</td><td>37%</td><td>100%</td></tr><tr><td>Roaded Natural</td><td>10%</td><td>0%</td></tr><tr><td>Roaded Modified</td><td>30%</td><td>0%</td></tr></table> | ROS Class | Percent of Mgt. Area (± 5 %) |  | Summer | Winter | Semi -Primitive Non-Motorized | 23% | 0% | Semi -Primitive Motorized | 37% | 100% | Roaded Natural | 10% | 0% | Roaded Modified | 30% | 0% |
|                                                                                                                                 |           |        | ROS Class                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           | Percent of Mgt. Area (± 5 %) |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
|                                                                                                                                 |           |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Summer    | Winter                       |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
|                                                                                                                                 |           |        | Semi -Primitive Non-Motorized                                                                                                                                                                                                                                                                                                                                                                                                                                  | 23%       | 0%                           |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
|                                                                                                                                 |           |        | Semi -Primitive Motorized                                                                                                                                                                                                                                                                                                                                                                                                                                      | 37%       | 100%                         |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
|                                                                                                                                 |           |        | Roaded Natural                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 10%       | 0%                           |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
| Roaded Modified                                                                                                                 | 30%       | 0%     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |                              |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
| The above numbers reflect current travel regulations. These numbers may change as a result of future travel regulation planning |           |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |                              |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
| Rangeland Resources                                                                                                             | Objective | 0834   | In recommended wilderness areas, and areas with a semi-primitive recreation management prescription, mitigate conflicts between recreation and livestock grazing.                                                                                                                                                                                                                                                                                              |           |                              |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
|                                                                                                                                 | Objective | 0835   | Improve upland vegetation composition on Jughandle Mountain to reduce erosion and increase plant species diversity.                                                                                                                                                                                                                                                                                                                                            |           |                              |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
| Fire Management                                                                                                                 | Objective | 0836   | Identify areas appropriate for Wildland Fire Use, emphasizing the Needles Inventoried Roadless Area. Use wildland fire to restore or maintain vegetative desired conditions and to reduce fuel loadings.                                                                                                                                                                                                                                                       |           |                              |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
|                                                                                                                                 | Objective | 0837   | Use prescribed fire and mechanical treatments within and adjacent to wildland-urban interface areas and Forest Service administrative sites to manage fuels to reduce wildfire hazards. Develop and prioritize vegetation treatment plans for interface in coordination with local and tribal governments, agencies, and landowners.                                                                                                                           |           |                              |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
|                                                                                                                                 | Objective | 0838   | Coordinate and emphasize fire education and prevention programs with private landowners to help reduce wildfire hazards and risks. Work with landowners to increase defensible space around structures.                                                                                                                                                                                                                                                        |           |                              |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
|                                                                                                                                 | Guideline | 0839   | Coordinate with the Boise NF to develop compatible wildland fire suppression and wildland fire use strategies.                                                                                                                                                                                                                                                                                                                                                 |           |                              |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
| Lands and Special Uses                                                                                                          | Objective | 0840   | Acquire and grant rights-of-way and permits to meet resource access needs of both the public and cost-share cooperators. Cooperators in this management area are Boise Corporation and the State of Idaho.                                                                                                                                                                                                                                                     |           |                              |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
| Facilities and Roads                                                                                                            | Objective | 0841   | Maintain existing facilities at Paddy Flat Guard Station for crew quarters and stock support.                                                                                                                                                                                                                                                                                                                                                                  |           |                              |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |
|                                                                                                                                 | Guideline | 0842   | Coordinate transportation system development, management, and decommissioning with Boise Corporation and State of Idaho cost-share cooperators to develop a shared transportation system serving the lands of all parties to the extent possible.                                                                                                                                                                                                              |           |                              |  |        |        |                               |     |    |                           |     |      |                |     |    |                 |     |    |



Management Area 09 –Lake Creek/French Creek –Location Map



## Management Area 9 Lake Creek/French Creek

### MANAGEMENT AREA DESCRIPTION

**Management Prescriptions** - Management Area 9 has the following management prescriptions (see map on preceding page for distribution of prescriptions).

| Management Prescription Category (MPC)                                                   | Percent of Mgt. Area |
|------------------------------------------------------------------------------------------|----------------------|
| 2.2 – Research Natural Areas                                                             | 2                    |
| 3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources | 75                   |
| 4.1a - Undeveloped Recreation: Maintain Inventoried Roadless Areas                       | 12                   |
| 5.1 – Restoration and Maintenance Emphasis within Forested Landscapes                    | 11                   |

**General Location and Description** - Management Area 9 is comprised of National Forest System lands on the north side of the Payette National Forest from Lake Creek to French Creek (see map, preceding page). The area lies southeast of Riggins, Idaho, in Idaho County, and is part of the New Meadows and McCall Ranger Districts. The management area is an estimated 83,800 acres, almost all of which are administered by the Forest. The area is bordered by the Payette National Forest to the east, south, and southwest, and by a mix of BLM, private, and state lands to the north and west. The primary uses or activities in this management area have been dispersed recreation, livestock grazing, and timber management.

**Access** - The main access to the area is via Forest Roads 257 and 308 north from U.S. Highway 55 to Elkhorn Creek. Private landowners restrict access to the Forest from the Salmon and Little Salmon River canyons, except for Lake Creek Road to Forest Trail 155. The density of classified roads for the entire area is an estimated 0.2 miles per square mile, as most of the area is inventoried as roadless. Total road density for area subwatersheds ranges between 0 and 2.0 miles per square mile. A network of trails provides access to portions of the roadless area.

The Forest has a cost-share agreement with the State of Idaho for building and maintaining a cooperative road system in which all costs and responsibilities are shared. State lands in this area are in the Lake Creek drainage.

**Special Features** - The Lava Ridge National Recreation Trail bisects the management area. Hershey Point Lookout provides an excellent overview of the area. An estimated 89 percent of the area is inventoried as roadless, including substantial portions of the French Creek (39,648 of 88,816 acres) and Patrick Butte (35,015 of 74,096 acres) Roadless Areas. The Lava Butte Research Natural Area (370 acres) includes basalt and granitic cirque basins with diverse subalpine habitats. The Bruin Mountain Research Natural Area (680 acres) preserves an outstanding hanging valley, rare plant and insect species, and subalpine fir plant communities. The proposed Patrick Butte Research Natural Area (1,110 acres) encompasses a diverse range of subalpine plant communities, as well as several aquatic features.

**Air Quality** - This management area lies within Montana/Idaho Airshed ID-15 and Idaho County. Particulate matter is the primary pollutant of concern related to Forest management activities. There is an ambient air monitor located in McCall within the airshed to evaluate current background levels, trends, and seasonal patterns of particulate matter. There are three Class I areas within 100 kilometers of the Management Area: the Hells Canyon, Eagle Cap, and Selway-Bitterroot Wildernesses. Visibility monitoring has been expanded for these areas.

Between 1995 and 1999, emissions trends in Idaho County improved for PM 10, while PM 2.5 emissions remained constant. The most common sources of particulate matter within the county were wildfire, prescribed fire, and fugitive dust from unpaved roads. In addition to Forest management activities, crop residue and ditch burning may contribute to particulate matter emissions. The amount of agricultural-related burning was moderate within Idaho County (an estimated 13,500 acres). There were no point sources within the county.

**Soil, Water, Riparian, and Aquatic Resources** - Elevations range from 2,900 feet on Lake Creek to 8,841 feet atop Patrick Butte. Management Area 9 falls within the Granite Mountain Uplands and Salmon River Canyonlands Subsections. The main geomorphic landforms found in the area are glaciated mountains and uplands, periglacial uplands and mountain slopes, fluvial mountains and steep canyonlands, and depositional lands. Dominant slope gradients are 10 to 80 percent in the glaciated mountains and uplands, 15 to 40 percent on the periglacial uplands and mountain slopes, 30 to 50 percent on the fluvial mountains, 50 to 80 percent on steep canyonlands, and 0 to 20 percent on the depositional lands. The surface geology is primarily granitic rock from the Idaho Batholith, with localized volcanic rock in the Lava Ridge area. Soils generally have moderate to high surface erosion potential, and low to moderate productivity. Subwatershed vulnerability ratings range from low to high, with the majority being moderate (see table below). Geomorphic Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately), again the majority are moderate (see table below). Localized sedimentation occurs from roads, timber harvest, livestock grazing, and dispersed recreation. Lake Creek has been affected by recent flood events.

The management area comprises portions of the Allison-Lake, Partridge-Kelly, and French Creek Watersheds that drain directly into the Salmon River in the Lower Salmon River Subbasin. The main streams in the area are Lake Creek, Partridge Creek, Elkhorn Creek, French Creek, and Little French Creek. Most of the high mountain lakes are in the area around Hard and Patrick Buttes. Water Quality Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) (see table below). There is localized accelerated sediment from roads, timber harvest, livestock grazing, and dispersed recreation. There are no 303(d) listed water bodies or TMDLs associated with this management area.

| Subwatershed Vulnerability |      |     | Geomorphic Integrity |      |     | Water Quality Integrity |      |     | No. 303(d) Subs | No. Subs With TMDLs | No. Public Water System Subs |
|----------------------------|------|-----|----------------------|------|-----|-------------------------|------|-----|-----------------|---------------------|------------------------------|
| High                       | Mod. | Low | High                 | Mod. | Low | High                    | Mod. | Low |                 |                     |                              |
| 1                          | 7    | 1   | 2                    | 5    | 2   | 4                       | 5    | 0   | 0               | 0                   | 0                            |

The management area has designated critical habitat for chinook salmon. Chinook salmon, steelhead, bull trout, and brook trout have been found in Lake, Partridge, and French Creeks, and cutthroat trout have been found in French and Partridge Creeks. Native rainbow redband trout are found throughout the area. Chinook salmon and steelhead have been found in the lower two miles of Elkhorn Creek, downstream of natural falls. Sockeye salmon use the main Salmon River as a migration route to access lakes in the headwaters of the Salmon River. Shade-producing vegetation along Lake Creek was removed by channel scouring from flooding in 1997. Within the Lake Creek Watershed, episodic flooding has been common, with recent events occurring in 1964, 1974, and 1997. Otherwise, habitat conditions are generally at or near properly functioning condition in the management area. Impacts from roads and timber harvest are relatively minor, as this area is largely (89 percent) roadless. Risks to native fish populations include the presence of non-native species, and isolated natural habitat disturbances. The Lower French, Middle French, and Upper French Creek subwatersheds have been identified as important to the recovery of listed fish species, and as high-priority areas for restoration.

**Vegetation** - Vegetation at lower elevations is typically grasslands, shrublands, ponderosa pine and Douglas-fir on south and west aspects, and Douglas-fir and grand fir forests on north and east aspects. Mid and upper elevations are dominated by forest communities of Douglas-fir, grand fir, and subalpine fir, with pockets of lodgepole pine and aspen.

About 7 percent of Management Area 9 is comprised of rock, water, or shrublands and grasslands, including the Alpine Meadows and Perennial Grass Montane vegetation groups. The main forested vegetation groups are Warm Moist/Hydric Subalpine Fir (20 percent), Warm Dry Subalpine Fir (17 percent), Cool Moist Grand Fir (14 percent), High Elevation Subalpine Fir (13 percent), and Dry Grand Fir (9 percent).

The subalpine fir groups are functioning properly. A large percentage of the groups are at the beginning of their successional cycles following large, moderate-to-high intensity wildfires over the last 15 years. The Cool Moist Grand Fir group is also functioning properly. Much of this group is near the end of its successional cycle and at increasing risk of fire. The Dry Grand Fir group is at risk for fire that would not be within historical norms. Fire exclusion has led to high stand densities and fuel loadings, a high percentage of grand fir species, and a shift from a mixed severity fire regime to a lethal fire regime.

Alpine Meadows are functioning properly. The Perennial Grass Montane group is functioning at risk due to dominant older structural stages and the loss of Idaho fescue, which was reduced by historical livestock grazing.

Riparian area vegetation is generally considered to be functioning properly. Recent wildfires have greatly reduced overstory shade in some areas, especially in the upper reaches of the French and Elkhorn Creek drainages, but these effects are within historic norms for these vegetation groups, and effects to stream temperatures are minimal at these higher elevations.

**Botanical Resources** – Puzzling halimolobos, a current Region 4 Sensitive species, is known to occur within this management area. Additionally, short-styled tofieldia, a proposed Region 4 Sensitive species, occur within this area. Although no federally listed or proposed plant species

are currently known to occur in the area, potential habitat for Ute ladies'-tresses, Spalding's silene, and slender moonwort may exist within the area. Spalding's silene, a Threatened species, may occur in fescue grassland habitat types up to 5,500 feet. Ute Ladies'-tresses, a Threatened species, may have moderate to high potential habitat in riparian/wetland areas up to 7,000 feet. Slender moonwort, a Candidate species, may occur in moderate to higher elevation grasslands, meadows, and small openings in spruce and lodgepole pine.

**Non-native Plants** – Few exotic species or noxious weeds have been introduced to the area due to low road densities and low levels of past management. An estimated 14 percent of the area has high susceptibility to invasion by noxious weeds and exotic plants. The main weed of concern is Canada thistle, which currently occurs in scattered populations.

**Wildlife Resources** - The wide range of elevations and vegetation types in the management area provide a variety of wildlife habitats. The lower-elevation grasslands, shrublands, and forests are important winter/spring range for elk and deer. Forests provide habitat for a number of Region 4 sensitive species, including northern goshawk, flammulated owl, white-headed woodpecker, great gray owl, boreal owl, and three-toed woodpecker. The entire area provides nesting and forage habitat for migratory land birds, and general habitat for wide-ranging mammals like elk, bear, and mountain lion. Lynx habitat has been mapped in Lynx Analysis Units within the area. Terrestrial habitat is generally at properly functioning condition. Wildfires have created a mosaic of habitats, and disturbance and vulnerability are low due primarily to low road densities. In the roaded portion of the area, old and mature trees exist, but block sizes are small and have been fragmented by past harvest and wildfire.

**Recreation Resources** - Dispersed recreation such as hunting, fishing, hiking, sight-seeing, snowmobiling, ATV use, motorcycling, and camping occurs within Management Area 9. The area has no developed recreation sites. The area is in Idaho Fish and Game Management Unit 23. Most users come from McCall, Riggins, or New Meadows, or the Treasure Valley (Boise, Nampa, Caldwell), about 100 miles to the south. A network of trails provides a variety of motorized and non-motorized opportunities. Illegal ATV use is occurring in the Rainbow Lakes/Upper Twin Lakes area. ATV users are pioneering unauthorized trails throughout the Patrick Butte Roadless area. ATV users are riding on trails designed for 2-wheel motorized vehicles, causing erosion, rutting, and flow channels. Non-permitted outfitter and guide operations are causing conflicts with permitted outfitter and guides.

The primary recreation emphasis for this management area is providing quality motorized and non-motorized trail opportunities, with the emphasis in the Patrick Butte Roadless area on non-motorized trail opportunities.

**Scenic Environment** – Visually sensitive routes and use areas represent locations from which the scenic environment is considered especially important. These routes or areas generally have a more restrictive VQO assigned to them than areas not seen from such locations. The following is a list of visually sensitive routes or use areas with this management area. There may also be sensitive routes or use areas in adjacent management areas that could be affected by actions taken in this management area.

| Route or Area Type | Sensitivity Level | Name of Route or Area                                                                                                                                                                                                            |
|--------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Roads              | 1                 | None                                                                                                                                                                                                                             |
| Roads              | 2                 | Goose Lake 257, Elk Meadows 308                                                                                                                                                                                                  |
| Trails             | 1                 | Mary Lake 368, Link 371, Elk Lake 347, Partridge Creek 152, Lava Ridge 149, Cirque Basin 506, Clayburn Creek 505, Little French Creek 348                                                                                        |
| Trails             | 2                 | Bear Grass Saddle 151, Patrick Butte 153, Lake Creek 155, Sheep Mountain 157, Lava Butte Ridge 373, Elk Meadow 500, Elkhorn Creek 115, French Creek 116, Center Ridge 504, Little French Creek Meadow 503, French Creek Spur 308 |
| Use Areas          | 1                 | Hershey Point Lookout, Lava Butte Lakes, Scribner Lake                                                                                                                                                                           |
| Use Areas          | 2                 | None                                                                                                                                                                                                                             |

**Cultural Resources** – The main cultural theme in this area is Prehistoric. This area received prehistoric use from ancestors of American Indian tribes, and was likely used for hunting, fishing, gathering, and as a travel way to and from the Salmon River to upland forests.

**Timberland Resources** - Of the estimated 65,500 tentatively suited acres in this management area, 7,700 acres have been identified as being suited timberlands, or appropriate for timber production. This represents about 2 percent of the Forest's suited timberland acres. The suited timberland acres are found in MPC 5.1 (see MPC map for this management area). Lands in MPCs 2.2, 3.1, and 4.1a have been identified as not suited for timber production. The level of past management has been fairly high in roaded areas and low or nonexistent elsewhere. Forest products such as fuelwood, posts, and poles are also collected.

**Rangeland Resources** - The management area contains all or portions of seven sheep allotments. Management Area 9 provides an estimated 15,800 acres of capable rangeland, which represents about 7 percent of the capable rangeland on the Forest.

**Mineral Resources** - Some past lode and placer gold mining has occurred in this area. There are several active claims; however, none of them have approved plans of operation. The potential for mineral development is considered low to moderate.

**Fire Management** - Prescribed fire has been used to reduce activity-generated fuels. Over half of this management area has burned in wildfires in the last 15 years. The largest fires were Partridge Creek in 1989 (3,200 acres), Warm Springs in 1992 (3,100 acres), and Corral in 1994 (47,300 acres). There are no identified wildland-urban interface subwatersheds or National Fire Plan communities in this area. Area fire regimes are estimated to be: 30 percent lethal, 49 percent mixed1 or 2, and 21 percent non-lethal. An estimated 20 percent of the area regimes have vegetation conditions that are highly departed from their historical range. Most of this change has occurred in the historically non-lethal fire regimes, resulting in conditions where wildfire would likely be much larger and more intense and severe than historically. In addition, 21 percent of the area regimes have vegetation conditions that are moderately departed from their historical range. Wildfire in these areas may result in larger patch sizes of high intensity or severity, but not to the same extent as in the highly departed areas in non-lethal fire regimes.

**Lands and Special Uses** – A private landowner has submitted an application requesting that a permanent conditional easement be issued for his existing water diversion according to Public Law 99-545, commonly known as the “Colorado Ditch Bill”. The water is diverted from the West Fork of Lake Creek and used for agricultural purposes. A designated communication site is located at Hershey Point for non-commercial, government use only.

## MANAGEMENT DIRECTION

In addition to Forest-wide Goals, Objectives, Standards, and Guidelines that provide direction for all management areas, the following direction has been developed specifically for this area.

| MPC/Resource Area                                                                                                        | Direction           | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------|---------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 2.2<br/>Research Natural<br/>Areas</b>                                                                            | General Objective   | 0901   | Establish the proposed Patrick Butte Research Natural Area to preserve the identified representative features of the area for future scientific study.                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                          | General Standard    | 0902   | Mechanical vegetation treatments, salvage harvest, prescribed fire, and wildland fire use may only be used to maintain values for which the areas were established, or to achieve other objectives that are consistent with the RNA establishment record or management plan.                                                                                                                                                                                                                                                                         |
|                                                                                                                          | Road Standard       | 0903   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To maintain the values for which the RNA was established.                                                                                                                                                                                                                                                                                                     |
|                                                                                                                          | Fire Guideline      | 0904   | The full range of fire suppression strategies may be used to suppress wildfires. Fire suppression strategies and tactics should minimize impacts to the values for which the RNA was established.                                                                                                                                                                                                                                                                                                                                                    |
| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | General Standard    | 0905   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years).                                                                                                                                                                                                                                                       |
|                                                                                                                          | Vegetation Standard | 0906   | Mechanical vegetative treatments, excluding salvage harvest, may only occur where:<br>a) The responsible official determines that wildland fire use or prescribed fire would result in unreasonable risk to public safety and structures, investments, or undesirable resource affects; and<br>b) They maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>c) They maintain or restore habitat for native and desired non-native wildlife and plant species. |
|                                                                                                                          | Fire Standard       | 0907   | Wildland fire use and prescribed fire may only be used where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species, or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species.                                                                                                                                                                                                                                    |

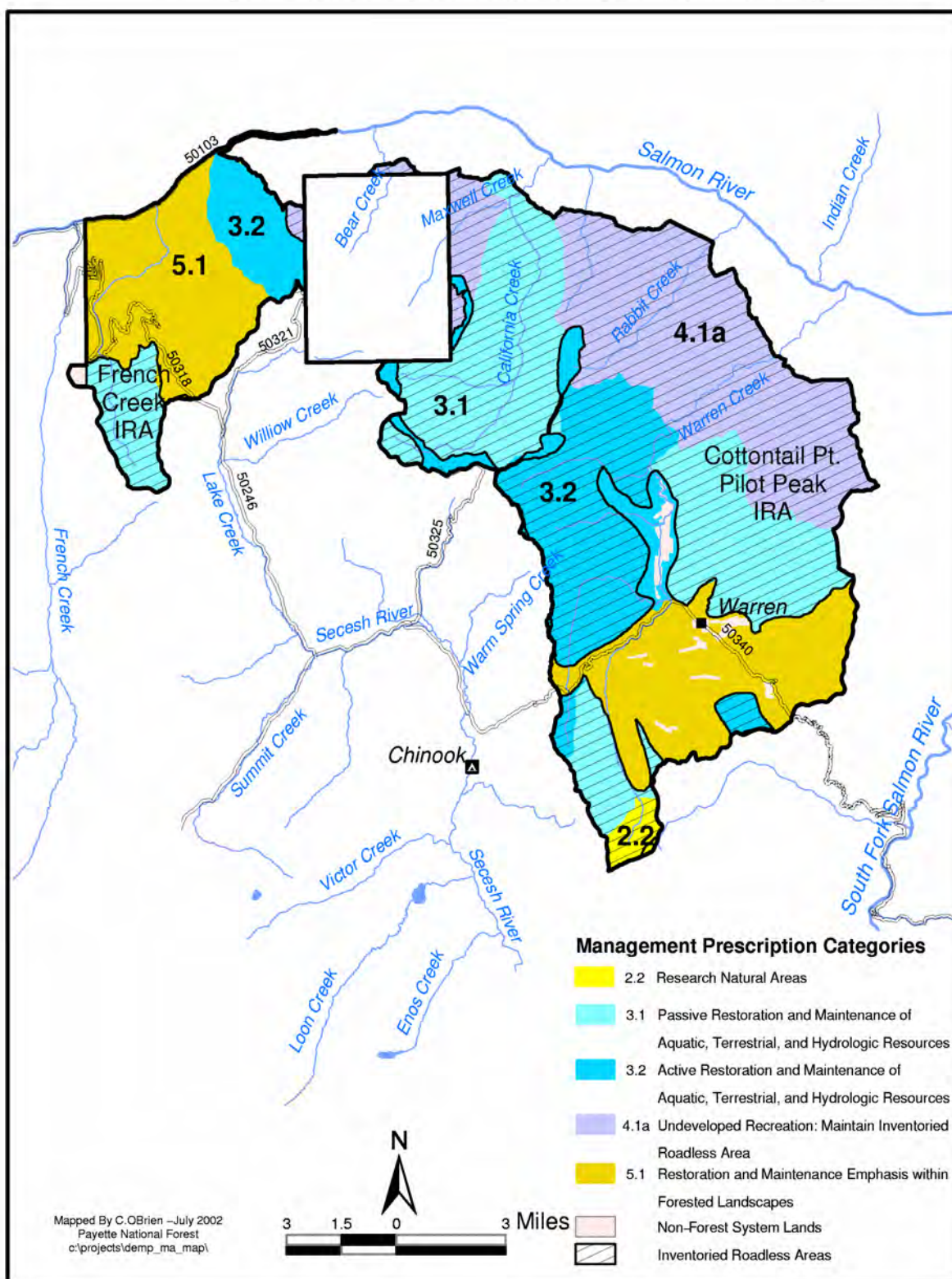
| MPC/Resource Area                                                                                                        | Direction               | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | Road<br>Standard        | 0908   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To address immediate response situations where, if action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                                                                                                  |
|                                                                                                                          | Fire<br>Guideline       | 0909   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                |
| <b>MPC 4.1a<br/>Undeveloped<br/>Recreation:<br/>Maintain<br/>Inventoried<br/>Roadless Areas</b>                          | General<br>Standard     | 0910   | Management actions—including wildland fire use, prescribed fire, and special use authorizations—must be designed and implemented in a manner that does not adversely compromise the area’s roadless and undeveloped character in the temporary, short term, and long term. “Adversely compromise” means an action that results in the reduction of roadless or undeveloped acres within any specific IRA. Exceptions to this standard are actions in the 4.1a Road standard, below. |
|                                                                                                                          | Road<br>Standard        | 0911   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                                                                                       |
|                                                                                                                          | Fire<br>Guideline       | 0912   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the roadless or undeveloped character of the area.                                                                                                                                                                                                                                                                            |
| <b>MPC 5.1<br/>Restoration and<br/>Maintenance<br/>Emphasis within<br/>Forested<br/>Landscapes</b>                       | Vegetation<br>Guideline | 0913   | The full range of vegetation treatment activities may be used to restore or maintain desired vegetation and fuel conditions. The available vegetation treatment activities include wildland fire use. Salvage harvest may also occur.                                                                                                                                                                                                                                               |
|                                                                                                                          | Fire<br>Guideline       | 0914   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to habitats, developments, and investments.                                                                                                                                                                                                                                                                                                 |
|                                                                                                                          | Road<br>Guideline       | 0915   | Road construction or reconstruction may occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To achieve restoration and maintenance objectives for vegetation, water quality, aquatic habitat, or terrestrial habitat; or<br>d) To support management actions taken to reduce wildfire risks in wildland-urban interface areas; or<br>e) To meet access and travel management objectives.      |
| <b>Soil, Water,<br/>Riparian, and<br/>Aquatic Resources</b>                                                              | Objective               | 0916   | Restore streambank stability and reduce erosion in Little French Creek Meadows by allowing vegetation composition and structure to recover from historic livestock grazing impacts.                                                                                                                                                                                                                                                                                                 |
|                                                                                                                          | Objective               | 0917   | Initiate restoration of watershed conditions and fish habitat through improved livestock grazing management in the Middle French Creek subwatershed to help strengthen the local bull trout population.                                                                                                                                                                                                                                                                             |
| <b>Vegetation</b>                                                                                                        | Objective               | 0918   | Use a mix of prescribed and wildland fire, and mechanical treatments to restore or maintain vegetative composition and structure, and to reduce fuel loadings.                                                                                                                                                                                                                                                                                                                      |
| <b>Botanical<br/>Resources</b>                                                                                           | Objective               | 0919   | Maintain or restore known populations and occupied habitats of TEPCS plant species, including puzzling halimolobos and short-styled tofieldia to contribute to the long-term viability of these species.                                                                                                                                                                                                                                                                            |



| MPC/Resource Area           | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Non-native Plants</b>    | Objective | 0920   | To reduce impacts on native plants and other resources, eradicate new and small infestations of Canada thistle, and control density and size of larger infestations. Emphasize prevention or eradication of new noxious weed infestations.                                                                                                                                                                                                                                                                                    |
| <b>Wildlife Resources</b>   | Objective | 0921   | Increase white-headed woodpecker and flammulated owl habitat by managing ponderosa pine stands within the Dry Grand Fir vegetation group toward the desired ranges of size classes, canopy closures, species composition, snags, and coarse woody debris, as described in Appendix A.                                                                                                                                                                                                                                         |
|                             | Guideline | 0922   | An increase in the white-headed woodpecker or flammulated owl habitat may be achieved by the following methods:<br>a) Reducing tree densities and ladder fuels under and around existing large ponderosa trees and snags to reduce the risk of tree-replacing fire and to restore more open canopy conditions.<br>b) Managing the firewood program to retain large-diameter ponderosa pine and large snags of other species through signing, public education, size restriction, area closures, or other appropriate methods. |
| <b>Recreation Resources</b> | Objective | 0923   | Establish a permanent trailhead facility for the Jackson Creek/French Creek Trail to improve recreation experiences. Include a toilet facility.                                                                                                                                                                                                                                                                                                                                                                               |
|                             | Objective | 0924   | Install a trail bridge at Forest Trail 503 and Little French Creek to reduce impacts to water quality and fish habitat, and to increase user safety.                                                                                                                                                                                                                                                                                                                                                                          |
|                             | Objective | 0925   | Provide trailhead parking and toilet facilities at Lava Butte Trail 505 off of Forest Road 308 to improve recreation experiences.                                                                                                                                                                                                                                                                                                                                                                                             |
|                             | Objective | 0926   | Improve public parking for new Forest Trail 155 trailhead in the Lake Creek area to accommodate increasing recreation use.                                                                                                                                                                                                                                                                                                                                                                                                    |
|                             | Objective | 0927   | Explore opportunities to connect the existing French Creek Trail (116) to the Fall Fingers Road, and Elkhorn Creek Trail (115) to the Elk Creek Road to improve trail access.                                                                                                                                                                                                                                                                                                                                                 |
|                             | Objective | 0928   | Help prevent illegal outfitting by identifying and reporting unauthorized outfitter and guide operations to the Idaho Outfitter and Guide Licensing Board and Idaho Department of Fish and Game.                                                                                                                                                                                                                                                                                                                              |
|                             | Objective | 0929   | Resolve user conflicts arising from unauthorized motorized use by enforcing motorized trail designations and restrictions.                                                                                                                                                                                                                                                                                                                                                                                                    |
|                             | Objective | 0930   | Manage recreation use to address erosion, flow channeling, soil compaction, and loss of vegetation.                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                             | Objective | 0931   | As funding becomes available, redesign and reconstruct existing trails to mitigate the effects of flow channeling.                                                                                                                                                                                                                                                                                                                                                                                                            |
|                             | Objective | 0932   | Rehabilitate pioneered, non-system trails to mitigate erosion, flow channeling, soil compaction and loss of vegetation.                                                                                                                                                                                                                                                                                                                                                                                                       |
|                             | Objective | 0933   | Where alternatives exist, relocate trails that are currently within riparian areas to mitigate erosion and sedimentation.                                                                                                                                                                                                                                                                                                                                                                                                     |
|                             | Objective | 0934   | Where motorized use is consistent with the recreation emphasis and will not cause unacceptable resource damage, reconstruct existing 2-wheel motorized trails to accommodate 4-wheel ATVs.                                                                                                                                                                                                                                                                                                                                    |

| MPC/Resource Area                                                                                                               | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                           |           |                      |  |        |        |                              |     |    |                          |     |     |                |    |    |                 |    |    |
|---------------------------------------------------------------------------------------------------------------------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------|--|--------|--------|------------------------------|-----|----|--------------------------|-----|-----|----------------|----|----|-----------------|----|----|
| Recreation Resources                                                                                                            | Objective | 0935   | Achieve or maintain the following ROS strategy: <table><tr><th rowspan="2">ROS Class</th><th colspan="2">Percent of Mgt. Area</th></tr><tr><th>Summer</th><th>Winter</th></tr><tr><td>Semi-Primitive Non-Motorized</td><td>40%</td><td>0%</td></tr><tr><td>Semi-Primitive Motorized</td><td>55%</td><td>99%</td></tr><tr><td>Roaded Natural</td><td>5%</td><td>0%</td></tr><tr><td>Roaded Modified</td><td>0%</td><td>1%</td></tr></table> | ROS Class | Percent of Mgt. Area |  | Summer | Winter | Semi-Primitive Non-Motorized | 40% | 0% | Semi-Primitive Motorized | 55% | 99% | Roaded Natural | 5% | 0% | Roaded Modified | 0% | 1% |
|                                                                                                                                 |           |        | ROS Class                                                                                                                                                                                                                                                                                                                                                                                                                                  |           | Percent of Mgt. Area |  |        |        |                              |     |    |                          |     |     |                |    |    |                 |    |    |
|                                                                                                                                 |           |        |                                                                                                                                                                                                                                                                                                                                                                                                                                            | Summer    | Winter               |  |        |        |                              |     |    |                          |     |     |                |    |    |                 |    |    |
|                                                                                                                                 |           |        | Semi-Primitive Non-Motorized                                                                                                                                                                                                                                                                                                                                                                                                               | 40%       | 0%                   |  |        |        |                              |     |    |                          |     |     |                |    |    |                 |    |    |
|                                                                                                                                 |           |        | Semi-Primitive Motorized                                                                                                                                                                                                                                                                                                                                                                                                                   | 55%       | 99%                  |  |        |        |                              |     |    |                          |     |     |                |    |    |                 |    |    |
|                                                                                                                                 |           |        | Roaded Natural                                                                                                                                                                                                                                                                                                                                                                                                                             | 5%        | 0%                   |  |        |        |                              |     |    |                          |     |     |                |    |    |                 |    |    |
|                                                                                                                                 |           |        | Roaded Modified                                                                                                                                                                                                                                                                                                                                                                                                                            | 0%        | 1%                   |  |        |        |                              |     |    |                          |     |     |                |    |    |                 |    |    |
| The above numbers reflect current travel regulations. These numbers may change as a result of future travel regulation planning |           |        |                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |                      |  |        |        |                              |     |    |                          |     |     |                |    |    |                 |    |    |
| Fire Management                                                                                                                 | Objective | 0936   | Identify areas appropriate for Wildland Fire Use, emphasizing Inventoried Roadless Areas. Use wildland fire to restore or maintain vegetative desired conditions and to reduce fuel loadings.                                                                                                                                                                                                                                              |           |                      |  |        |        |                              |     |    |                          |     |     |                |    |    |                 |    |    |
|                                                                                                                                 | Guideline | 0937   | Coordinate with adjacent land managers (e.g., BLM and State of Idaho) to develop compatible wildland fire suppression and wildland fire use strategies.                                                                                                                                                                                                                                                                                    |           |                      |  |        |        |                              |     |    |                          |     |     |                |    |    |                 |    |    |
| Lands and Special Uses                                                                                                          | Objective | 0938   | Acquire and provide public access to National Forest System lands in the French, Partridge, Elkhorn, and Shorts Creek areas to improve recreational opportunities.                                                                                                                                                                                                                                                                         |           |                      |  |        |        |                              |     |    |                          |     |     |                |    |    |                 |    |    |
|                                                                                                                                 | Objective | 0939   | Improve public access to the Forest from the Little Salmon River corridor through right-of-way easement acquisition.                                                                                                                                                                                                                                                                                                                       |           |                      |  |        |        |                              |     |    |                          |     |     |                |    |    |                 |    |    |
|                                                                                                                                 | Objective | 0940   | Complete a site plan for the Hershey Point communications site. Designate the Hershey Point Lookout as a communications site for government use only to meet agency policy and eliminate potential use conflicts.                                                                                                                                                                                                                          |           |                      |  |        |        |                              |     |    |                          |     |     |                |    |    |                 |    |    |

Management Area 10 –Fall Creek/Warren Creek –Location Map



## Management Area 10 Fall Creek/Warren Creek

### MANAGEMENT AREA DESCRIPTION

**Management Prescriptions** - Management Area 10 has the following management prescriptions (see map on preceding page for distribution of prescriptions).

| Management Prescription Category (MPC)                                                   | Percent of Mgt. Area |
|------------------------------------------------------------------------------------------|----------------------|
| 2.2 – Research Natural Areas                                                             | 1                    |
| 3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources | 29                   |
| 3.2 – Active Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources  | 21                   |
| 4.1a - Undeveloped Recreation: Maintain Inventoried Roadless Areas                       | 24                   |
| 5.1 – Restoration and Maintenance Emphasis within Forested Landscapes                    | 25                   |

**General Location and Description** - Management Area 10 is comprised of lands administered by the Payette National Forest along the Salmon River from Fall Creek to Mann Creek (see map, preceding page). The area lies almost entirely in Idaho County, and is part of the McCall Ranger District. The management area is an estimated 107,000 acres, including several private land inholdings concentrated around the community of Warren, which make up about 1 percent of the area. The area is bordered by Payette National Forest to the south and southeast, by the Frank Church--River of No Return Wilderness Area to the north and northeast, and by a mix of private, state, and federal lands to the west. The primary uses or activities in this area have been mining, dispersed recreation, timber management, and livestock grazing.

The management area does not include the strip of Frank Church--River of No Return Wilderness Area along the Salmon River from Huntz Gulch to Mann Creek, nor the 12,800-acre Marshall Mountain Mining District, which is primarily administered by the Bureau of Land Management.

**Access** - The main access to the area is by paved and gravel-surfaced Forest Highway 021 from McCall to Warren (this road becomes Forest Road 340 from Warren to Warren Summit) and the Burgdorf/French Creek Road (246). Most of the other roads in the area are narrow, native-surfaced roads that were originally built to provide access to mining claims or timber sales. The density of classified roads for the entire area is an estimated 0.9 mile per square mile, and about two thirds of the area is inventoried as roadless. Total road density for area subwatersheds ranges between 0 and 3.2 miles per square mile. Only a few trails provide access to the roadless portions of the area.

**Special Features** - The northern and northeastern parts of the management area lies adjacent to the Frank Church--River on No Return Wilderness. An estimated 67 percent of the management area is inventoried as roadless, including small portions of the French Creek (3,628 of 88,818 acres), Crystal Mountain (535 of 13,005 acres), Chimney Rock (4 of 8,535 acres), and Secesh

(5,406 of 248,256 acres) Roadless Areas, and a large portion of the Cottontail Point/Pilot Peak (61,752 of 98,835 acres) Roadless Area. Management Area 10 area includes about 1,100 acres of the 1,460-acre Pony Meadows Research Natural Area, with the remainder in Management Area 12. Pony Meadows contains unaltered examples of a wet meadow, a shallow lake, ponds, and bogs.

**Air Quality** - This management area lies within Montana/Idaho Airshed ID-15 and portions of Valley and Idaho Counties. Particulate matter is the primary pollutant of concern related to Forest management. There is an ambient air monitor located in McCall within the airshed to evaluate current background levels, trends, and seasonal patterns of particulate matter. Three Class I areas are within 100 kilometers of this management area: the Hells Canyon, Eagle Cap, and Selway-Bitterroot Wildernesses. Visibility monitoring has been expanded for these areas.

Between 1995 and 1999, emissions trends in both counties improved for PM 10, while PM 2.5 emissions remained constant. The most common sources of particulate matter within the counties were wildfire, prescribed fire, and fugitive dust from unpaved roads. In addition to Forest management activities, crop residue and ditch burning may contribute annually to particulate matter emissions. The amount of agricultural-related burning was very low within Valley County (less than 600 acres) and moderate within Idaho County (an estimated 13,500 acres). There were no point sources within either county.

**Soil, Water, Riparian, and Aquatic Resources** - Elevations range from 1,950 feet on the Salmon River to 8,533 feet atop Steamboat Mountain. Landforms vary considerably in Management Area 10. In the north, toward the Salmon River breaks, the area consists primarily of steep canyonlands, with slope gradients averaging from 50 to 80 percent. Toward the south, the land changes to frost-churned uplands, glaciated and fluvial mountains, and depositional landforms. Slopes here generally average from 10 to 50 percent. The surface geology is mostly metamorphic, with granites of the Idaho batholith occurring mostly at higher elevations. Soils generally have moderate to high surface erosion potential, and low to moderate productivity. Subwatershed vulnerability ratings range from low to high, with the majority being moderate (see table below). Geomorphic Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately) (see table below). Some areas of the Warren Creek and California-Bull Watersheds have localized and intensive impacts to stream channels and riparian areas from historic dredge mining, as well as accelerated sediment from roads and placer and hard rock mining. Some areas of the Fall Creek Watershed have accelerated sediment levels associated with roads and past timber harvest.

The management area comprises portions of the Fall-Carey, California-Bull, and Warren Creek Watersheds. The major tributary streams to the Salmon River in the area are Fall Creek, Carey Creek, California Creek, Rabbit Creek, and Warren Creek. There are a few small lakes at higher elevations, including Marshall, California, and Cooks Lakes. In much of the California-Bull Watershed, water quality is near properly functioning condition (PFC); however, several watershed restoration projects related to roads and past mining have been identified. In the Fall-

Carey Watershed, water quality is functioning properly in the main Fall Creek and Carey Creek, except for localized impacts associated with the Carey Creek Road. Water Quality Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately) (see table below).

The East Fork Fall Creek has accelerated sediment levels associated with roads. Some areas of the Warren Creek Watershed have localized, intensive impacts to stream channels and riparian areas from historic dredge mining, as well as accelerated sediment from roads, dispersed recreation, and placer and hard rock mining. Five of the 17 subwatersheds in this area were listed in 1998 as having impaired water bodies under Section 303(d) of the Clean Water Act. These subwatersheds are Lower Warren Creek, Middle Warren Creek, Upper Warren Creek, Steamboat Creek, and Schissler Creek. The pollutant of concern is habitat alteration. The State has recently completed a subbasin assessment that recommends de-listing these water bodies. There are currently no TMDLs associated with this area.

| Subwatershed Vulnerability |      |     | Geomorphic Integrity |      |     | Water Quality Integrity |      |     | No. 303(d) Subs | No. Subs With TMDLs | No. Public Water System Subs |
|----------------------------|------|-----|----------------------|------|-----|-------------------------|------|-----|-----------------|---------------------|------------------------------|
| High                       | Mod. | Low | High                 | Mod. | Low | High                    | Mod. | Low |                 |                     |                              |
| 4                          | 10   | 3   | 8                    | 5    | 4   | 8                       | 6    | 3   | 5               | 0                   | 0                            |

Part of the management area is designated critical habitat for chinook salmon, which are found in the lower portion of Warren Creek and at the mouth of Fall Creek. Steelhead/redband trout occur in lower Warren Creek, and the mouths of Fall and Carey Creeks. Steelhead use of upper Warren Creek is likely limited due to past habitat alteration from mining activity. Sockeye salmon use the main Salmon River to access lakes in the headwaters of the Salmon River. Resident populations of bull trout are known in East Fork Fall Creek, California Creek, and Warren Creek, and in many of the Warren Creek tributaries. The populations in Warren Creek are currently at risk due to high densities of introduced brook trout and severely altered habitat conditions in stream segments where historic dredge mining has occurred. Aquatic habitat is functioning at risk in parts of the Warren Creek Watershed due primarily to habitat alteration from past dredge mining, and high accelerated sediment levels from dispersed motorized recreation use and roads. Aquatic habitat is functioning at risk in the East Fork Fall Creek drainage due to accelerated sediment levels, primarily from roads. The remainder of the management area is at or near properly functioning condition. Native fish populations are at risk from non-native introduced species competition, and from habitat impacts described above. The Schissler Creek, Upper Warren Creek, Middle Warren Creek, and Steamboat Creek subwatersheds have been identified as important to the recovery of listed fish species, and as high-priority areas for restoration.

**Vegetation** - Vegetation at lower elevations is typically grasslands, shrublands, ponderosa pine and Douglas-fir on south and west aspects, and Douglas-fir and grand fir forests on north and east aspects. Ponderosa pine also occurs on north aspects along the lower Salmon River breaks. Mid and upper elevations are dominated by forest communities of lodgepole pine, Douglas-fir, grand fir, and subalpine fir, with pockets of aspen.

The main potential vegetation groups in this area are Warm Moist/Hydric Subalpine Fir (20 percent), Persistent Lodgepole Pine (19 percent), Warm Dry Subalpine Fir (17 percent), Cool Moist Grand Fir (13 percent), Warm Dry Douglas-fir/Moist Ponderosa Pine (10 percent), and Dry Grand Fir (5 percent).

The Warm Dry Douglas-fir/Moist Ponderosa Pine and Dry Grand Fir groups occupy the lower-elevation areas near the Salmon River, from the western edge of the management area to Carey Creek. Recent large wildfires and timber harvest in the Fall-Carey Watershed have substantially altered the structure and composition of these groups. In the California-Bull and Warren Creek Watersheds, recent wildfires have created a mosaic of structure in some areas.

Due to timber harvest and wildfire, the Cool Moist Grand Fir in the Fall Creek Watershed has changed from a largely unbroken forest of old dense trees to a mosaic of old and young age classes. Snags and large woody debris are low in harvest openings and plantations. In the rest of the management area, the Cool Moist Grand Fir has been largely unmanaged and is properly functioning, but it is also at the upper end of its successional cycle. Recent wildfires have created a mosaic structure in some areas, but some stands have tree densities and fuel loadings conducive to uncharacteristic wildfire.

The Warm Dry Subalpine Fir, Warm Moist/Hydric Subalpine Fir, and Persistent Lodgepole Pine groups are generally at properly functioning condition and were moving toward the upper end of their successional cycle throughout much of the management area. The Burgdorf Fire (2000) burned primarily through this group and moved large portions of it back to early seral conditions.

Riparian vegetation is functioning properly for the most part, although localized areas in the Warren Creek Watershed have received intensive impacts from historic dredge mining, and additional impacts from roads, dispersed recreation, and recent wildfires. These areas are functioning at risk.

**Botanical Resources** - Current Region 4 Sensitive species that occur in this management area include Cascade reedgrass and puzzling halimolobos. Although no federally listed or proposed plant species are currently known to occur in the area, potential habitat for Ute ladies'-tresses, Spalding's silene, and slender moonwort may exist. Spalding's silene, a Threatened species, may occur in fescue grassland habitat types from 1,500 to 5,500 feet. Ute Ladies'-tresses, a Threatened species, may have low to moderate potential habitat in riparian/wetland areas up to 7,000 feet. Slender moonwort, a Candidate species, may occur in moderate to higher elevation grasslands, meadows, and small openings in spruce and lodgepole pine.

**Non-native Plants** - A number of noxious weeds and exotic plants have been introduced into the management area, particularly along main travel ways. An estimated 21 percent of the area is highly susceptible to noxious weed invasion and spread. The main weeds of concern are spotted knapweed and rush skeletonweed, two highly invasive species that are currently found in small, scattered populations. Canada thistle is also found in the area.

Subwatersheds in the table below have an inherently high risk of weed establishment risk and spread from activities identified with a “yes” in the various activity columns. This risk is due to the amount of drainage area that is highly susceptible to noxious weed invasion and the relatively high level of exposure from those identified vectors or carriers of weed seed.

| Subwatershed       | Road-related Activities | Livestock Use | Timber Harvest | Recreation & Trail Use | ATV Off-Road Use |
|--------------------|-------------------------|---------------|----------------|------------------------|------------------|
| Fall Creek         | Yes                     | No            | No             | No                     | No               |
| Lower French Creek | Yes                     | No            | No             | No                     | No               |
| Lower Warren Creek | No                      | No            | No             | Yes                    | No               |

**Wildlife Resources** - The wide range of elevations and vegetation types in the management area provide a variety of wildlife habitats. The entire area offers habitat for migratory land birds. The Salmon River breaks have winter/spring range for elk and deer, as well as foraging habitat for mountain quail and introduced chukar. The rocky bluffs extending up the steep canyonlands offer potential habitat for bighorn sheep, golden eagles, peregrine falcons, and bats. Ponderosa pine and dry Douglas-fir forests provide habitat for northern goshawk and flammulated owl. Grand fir and subalpine fir forests have habitat for boreal owl, fisher, three-toed woodpecker, and lynx, as well as summer range for mammals such as moose, elk, black bear, and mountain lion. This area is adjacent to the Central Idaho Wolf Recovery Area, and gray wolves have been observed here. The large lodgepole pine stands provide some of the best potential snowshoe hare and lynx habitat on the Forest. Lynx habitat has been mapped within Lynx Analysis Units. Overall, terrestrial wildlife habitat is generally at or near properly functioning condition. Portions of the area have recently changed from late to early successional stages due to wildfire.

**Recreation Resources** - Dispersed recreation—such as hunting, mountain biking, motorcycling, snowmobiling, ATV use, 4-wheel driving, and camping—occurs throughout the area. There are many dispersed campsites, but no developed campgrounds or other recreational sites. The area is mostly in Idaho Fish and Game Management Unit 19A, with a small western portion in Unit 23. Much of the use is local (Warren, Secesh Meadows), although snowmobile and mountain bike use out of McCall has been increasing in recent years. There are relatively few maintained trails in the area, and much of the use centers around Warren. Most maintained trails are open to some form of motorized use. Portions of the Idaho Centennial Trail lie within this Management Area. There is one recreation special use permit for an outfitter and guide operation in the area.

The primary recreation emphasis in this area is on providing dispersed recreation opportunities, including quality ATV and non-motorized trails.

**Scenic Environment** – Visually sensitive routes and use areas represent locations from which the scenic environment is considered especially important. These routes or areas generally have a more restrictive VQO assigned to them than areas not seen from such locations. The following is a list of visually sensitive routes or use areas with this management area. There may also be sensitive routes or use areas in adjacent management areas that could be affected by actions taken in this management area.



| Route or Area Type | Sensitivity Level | Name of Route or Area                                                                                  |
|--------------------|-------------------|--------------------------------------------------------------------------------------------------------|
| Roads              | 1                 | Burgdorf-French Creek 246, Warren-Profile Gap 340, Viewshed from Warren Wagon Road (Forest Highway 21) |
| Roads              | 2                 | Grouse Creek-Marshall Mountain 325, Pony Meadows                                                       |
| Trails             | 1                 | None                                                                                                   |
| Trails             | 2                 | Warren Creek 139, Bear Pete Ridge 142, Steamboat Ridge 128, 4-wheel drive road 335                     |
| Use Areas          | 1                 | Warren                                                                                                 |
| Use Areas          | 2                 | Carey Dome, Cottontail Point                                                                           |

**Cultural Resources** – Cultural themes in this area include Prehistoric, Mining, CCC, Chinese Heritage, and Forest Service Administration. This area received intermittent prehistoric use from ancestors of American Indian tribes. The management area includes the historic Warren Mining District and is adjacent to the Marshall Mountain Mining District. The historic mining community of Warren is a popular attraction, and includes the Warren Guard Station, an early CCC project that is listed on the National Register of Historic Places (NRHP). The Warren Mining District has multiple-resource, 19th century Chinese mining sites that are listed on the NRHP, and the Carey Dome Fire Lookout is also a NRHP site.

**Timberland Resources** - Of the estimated 89,600 tentatively suited acres in this management area, 19,200 acres have been identified as being suited timberlands, or appropriate for timber production. This represents about 6 percent of the Forest's suited timberland acres. The suited timberland acres are found in MPC 5.1 (see MPC map for this management area). Lands in MPCs 2.2, 3.1, 3.2, and 4.1a have been identified as unsuited for timber production. The level of past management has been fairly high in the Fall Creek Watershed, and low to nonexistent in roadless areas. Forest products such as fuelwood, posts and poles, and Christmas trees are collected in designated areas.

**Rangeland Resources** - The management area has portions of two sheep allotments. Sheep access the area via the Fall Fingers and Carey Creek Roads, and graze portions of the California Creek and Union Creek drainages, as well as the Studebaker Saddle, Rye Patch, and Cottontail Point areas. This area has an estimated 3,500 acres of capable rangeland, which represents about 2 percent of the capable rangeland on the Forest.

**Mineral Resources** - The gold rush near Warren in the 1860s brought the first Euro-American settlers to this part of Idaho, and this area has a long history of mining activity. Many historic and abandoned mines still exist in the area. Past dredge mining activity around the town of Warren has substantially altered stream channels and riparian vegetation in the area. Numerous mining claims currently exist in the area, but few have approved plans of operations. The potential for mineral development is considered high in much of the area.

A gravel source was developed in the old tailings area west of Warren in 1996. Material from this pit was used to gravel the Warren Wagon Road, Hettinger Ranch Road and Pony Creek Road as a post-fire project after the 1994 Chicken Wildfire. The pit has limited reserves within the approved development boundary and several stockpiles of crushed aggregate.

**Fire Management** – Nearly 50,000 acres have burned in wildland fires in the last 15 years, the largest amount (30,000 acres) in the Burgdorf Junction Fire of 2000. Other large fires include French Creek (1985, 10,000 acres), Mann Creek (1987, 200 acres), Steamboat (1989, 2,000 acres), Tomato Point (1992, 600 acres), French Creek (1992, 2,000 acres), and Corral (1994, 5,000 acres). Prescribed fire has been used primarily to reduce activity-generated fuels.

Warren is a National Fire Plan community, and the Upper Warren Creek subwatershed is considered a wildland-urban interface area due to development in and around Warren. Area fire regimes are estimated to be: 40 percent lethal, 43 percent mixed<sup>1</sup> or 2, and 17 percent non-lethal. An estimated 19 percent of the area regimes have vegetation conditions that are highly departed from their historical range. Ten percent of this change has occurred in the historically non-lethal fire regimes, resulting in conditions where wildfire would likely be much larger and more intense and severe than historically. In addition, 28 percent of the area regimes have vegetation conditions that are moderately departed from their historical range. Wildfire in these areas may result in larger patch sizes of high intensity or severity, but not to the same extent as in the highly departed areas in non-lethal fire regimes.

**Lands and Special Uses** - There are two permits authorizing water uses to private landowners in the Warren Meadows area.

Midvale telephone maintains a buried phone line from the McCall area along Warren Wagon Road through the communities of Secesh and Warren, and then along Forest Road 340 over Warren Summit to the Sandy Cove subdivision near the South Fork Salmon River.

Idaho County Commissioners hold a permit for the operation and maintenance of a solid waste transfer site serving the community of Warren. The site is located off of Forest Highway 21.

The War Eagle designated communication site is in this area. The site is designated for non-commercial, government use only.

**Facilities and Roads** – The Warren Guard Station serves as a center for fire support during the summer months. It houses an engine crew and serves as a contact point for Forest visitors. It also houses an interpretative site for cultural resources in the Warren area. Carey Dome and War Eagle Lookouts are used as fixed-base, fire-detection facilities.

## MANAGEMENT DIRECTION

In addition to Forest-wide Goals, Objectives, Standards, and Guidelines that provide direction for all management areas, the following direction has been developed specifically for this area.

| MPC/Resource Area                    | Direction           | Number | Management Direction Description                                                                                                                                                                                                                                             |
|--------------------------------------|---------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MPC 2.2<br>Research Natural<br>Areas | General<br>Standard | 1001   | Mechanical vegetation treatments, salvage harvest, prescribed fire, and wildland fire use may only be used to maintain values for which the areas were established, or to achieve other objectives that are consistent with the RNA establishment record or management plan. |

| MPC/Resource Area                                                                                                        | Direction              | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------|------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 2.2<br/>Research Natural<br/>Areas</b>                                                                            | Road<br>Standard       | 1002   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To maintain the values for which the RNA was established.                                                                                                                                                                                                                                                                                                     |
|                                                                                                                          | Fire<br>Guideline      | 1003   | The full range of fire suppression strategies may be used to suppress wildfires. Fire suppression strategies and tactics should minimize impacts to the values for which the RNA was established.                                                                                                                                                                                                                                                                                                                                                    |
| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | General<br>Standard    | 1004   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years).                                                                                                                                                                                                                                                       |
|                                                                                                                          | Vegetation<br>Standard | 1005   | Mechanical vegetation treatments, excluding salvage harvest, may only occur where:<br>a) The responsible official determines that wildland fire use or prescribed fire would result in unreasonable risk to public safety and structures, investments, or undesirable resource affects; and<br>b) They maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>c) They maintain or restore habitat for native and desired non-native wildlife and plant species. |
|                                                                                                                          | Fire<br>Standard       | 1006   | Wildland fire use and prescribed fire may only be used where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species, or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species.                                                                                                                                                                                                                                    |
|                                                                                                                          | Road<br>Standard       | 1007   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To address immediate response situations where, if action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                                                                                                                                                                   |
|                                                                                                                          | Fire<br>Guideline      | 1008   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                                                                                 |
| <b>MPC 3.2<br/>Active Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b>  | General<br>Standard    | 1009   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary (up to 3 years) or short-term (3-15 years) time periods, and must be designed to avoid degradation of existing conditions in the long-term (greater than 15 years).                                                                                                                                                                                                                                         |
|                                                                                                                          | Vegetation<br>Standard | 1010   | Vegetation restoration or maintenance treatments—including wildland fire use, mechanical, and prescribed fire—may only occur where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species; or<br>c) Reduce risk of impacts from wildland fire to human life, structures, and investments.                                                               |

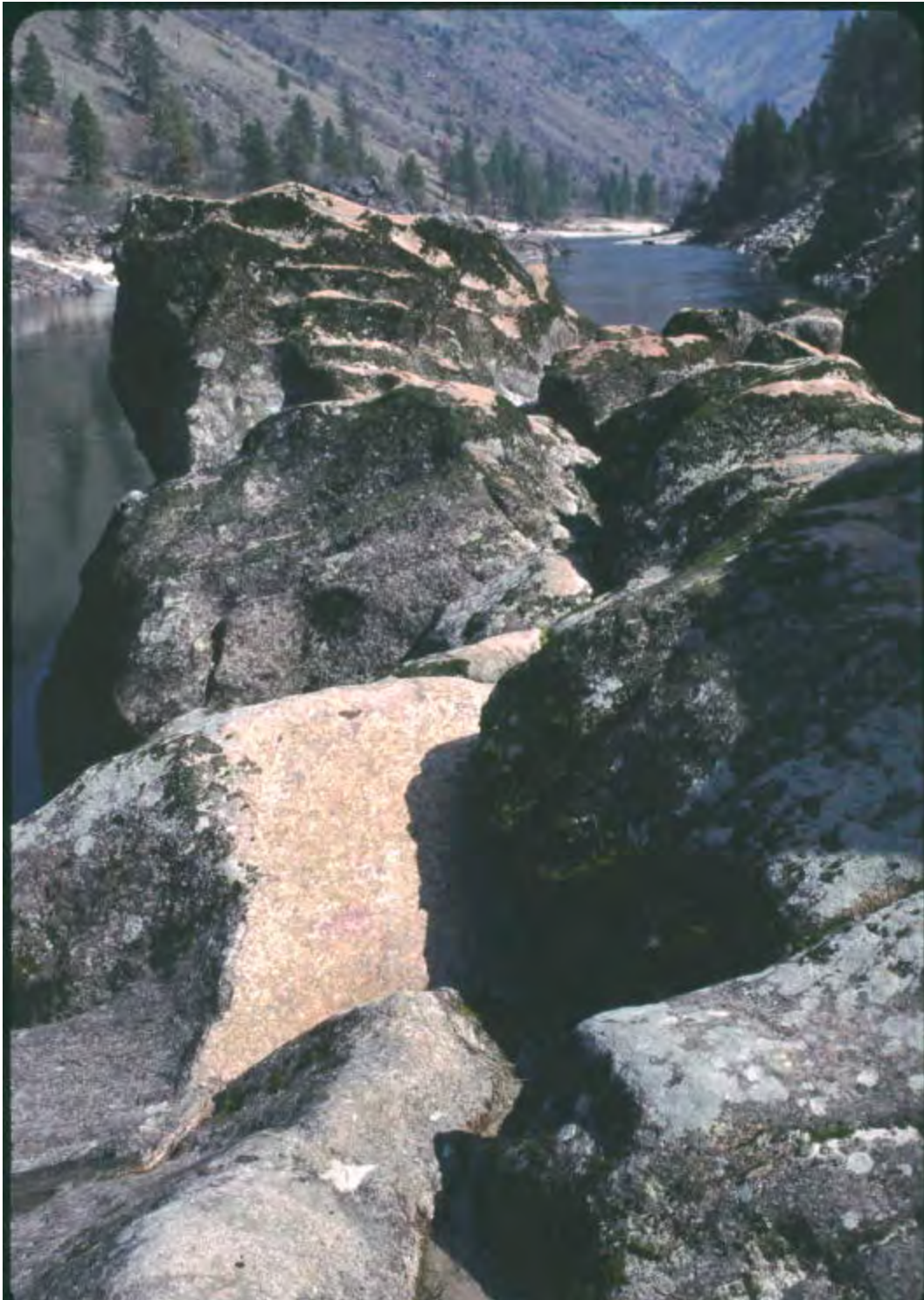
| MPC/Resource Area                                                                                                       | Direction               | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 3.2<br/>Active Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | Road<br>Standard        | 1011   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To support aquatic, terrestrial, and watershed restoration activities, or<br>d) To address immediate response situations where, if action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                         | Fire<br>Guideline       | 1012   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>MPC 4.1a<br/>Undeveloped<br/>Recreation:<br/>Maintain<br/>Inventoried<br/>Roadless Areas</b>                         | General<br>Standard     | 1013   | Management actions—including wildland fire use, prescribed fire, and special use authorizations—must be designed and implemented in a manner that does not adversely compromise the area’s roadless and undeveloped character in the temporary, short term, and long term. “Adversely compromise” means an action that results in the reduction of roadless or undeveloped acres within any specific IRA. Exceptions to this standard are actions in the 4.1a Roads standard, below.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                         | Road<br>Standard        | 1014   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                         | Fire<br>Guideline       | 1015   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the roadless or undeveloped character of the area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>MPC 5.1<br/>Restoration and<br/>Maintenance<br/>Emphasis within<br/>Forested<br/>Landscapes</b>                      | Vegetation<br>Guideline | 1016   | The full range of vegetation treatment activities may be used to restore or maintain desired vegetation and fuel conditions. The available vegetation treatment activities include wildland fire use. Salvage harvest may also occur.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                         | Road<br>Standard        | 1017   | There shall be no net increase in road densities in the MPC 5.1 portions of the Upper Warren Creek and East Fork Fall Creek subwatersheds unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that:<br>a) For resources that are within their range of desired conditions, the increase in road densities shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>b) For resources that are already in a degraded condition, the increase in road densities shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and<br>c) Adverse effects to TEPC species or their habitat are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitat.<br>An exception to this standard is where additional roads are required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations). |
|                                                                                                                         | Fire<br>Guideline       | 1018   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize impacts to habitats, developments, and investments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| MPC/Resource Area                                                                                  | Direction         | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------|-------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 5.1<br/>Restoration and<br/>Maintenance<br/>Emphasis within<br/>Forested<br/>Landscapes</b> | Road<br>Guideline | 1019   | Road construction or reconstruction may occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To meet restoration and maintenance objectives for vegetation, water quality, aquatic habitat, or terrestrial habitat; or<br>d) To support management actions taken to reduce wildfire risks in wildland-urban interface areas; or<br>e) To meet access and travel management objectives. |
| <b>Soil, Water,<br/>Riparian, and<br/>Aquatic Resources</b>                                        | Objective         | 1020   | Work with the State of Idaho to address problems in Warren Creek that have caused it to be listed as a Water Quality Limited water body.                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                    | Objective         | 1021   | Improve water quality and geomorphic integrity by reducing accelerated sediment from roads in the Fall Creek Watershed, and from roads and mining in the Warren Creek and California-Bull Watersheds.                                                                                                                                                                                                                                                                       |
|                                                                                                    | Objective         | 1022   | Reclaim the old diversion on Fall Creek that diverts a stream into French Creek to restore historic instream flows to these drainages.                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                    | Objective         | 1023   | Reduce impacts to Warren Creek and tributary riparian areas from recreation sites or uses. Identify recreational camping sites or parking areas that are contributing unacceptable levels of accelerated sediment, compaction, or vegetation loss. Rehabilitate, relocate, or harden sites where needed to reduce impacts.                                                                                                                                                  |
|                                                                                                    | Objective         | 1024   | Increase riparian vegetation and hydrologic function by decommissioning roads within riparian areas, returning road surfaces, ruts, and fills to productivity, and restoring abandoned mine sites.                                                                                                                                                                                                                                                                          |
|                                                                                                    | Objective         | 1025   | Maintain or restore bull trout habitat in the Warren Creek Watershed, and maintain bull trout habitat in the Fall Creek and California-Bull Watersheds.                                                                                                                                                                                                                                                                                                                     |
|                                                                                                    | Objective         | 1026   | Address sediment concerns caused by motorized use at the Warren and Steamboat Creek fords.                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                    | Objective         | 1027   | Evaluate strategies to reduce accelerated sediment and riparian impacts associated with the Carey Creek Road (Forest Road 318).                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                    | Objective         | 1028   | Initiate restoration of fish habitat in the Schissler, Middle Warren Creek, and Upper Warren Creek subwatersheds to help strengthen local bull trout populations. Restoration in Schissler Creek is the highest priority.                                                                                                                                                                                                                                                   |
|                                                                                                    | Objective         | 1029   | Restore fish habitat degradation in Upper Warren Creek due to road impacts from past mining activities.                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                                                    | Objective         | 1030   | Maintain fish habitat in the Steamboat Creek subwatershed through passive restoration strategies to help promote the recovery of bull trout and native salmonids.                                                                                                                                                                                                                                                                                                           |
| <b>Vegetation</b>                                                                                  | Objective         | 1031   | Use prescribed and wildland fire, and mechanical treatments to restore or maintain vegetative composition and structure, and to reduce fuel loadings.                                                                                                                                                                                                                                                                                                                       |
|                                                                                                    | Objective         | 1032   | Restore riparian vegetation in localized areas of the Warren Creek Watershed to improve composition, structure, and function.                                                                                                                                                                                                                                                                                                                                               |
| <b>Botanical<br/>Resources</b>                                                                     | Objective         | 1033   | Maintain or restore known populations and occupied habitats of TEPCS plant species, including Cascade reedgrass and puzzling halimolobos to contribute to the long-term viability of these species.                                                                                                                                                                                                                                                                         |

| MPC/Resource Area             | Direction            | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |                      |  |        |        |                               |     |     |                           |     |     |                |     |
|-------------------------------|----------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------|--|--------|--------|-------------------------------|-----|-----|---------------------------|-----|-----|----------------|-----|
| Non-native Plants             | Objective            | 1034   | To reduce impacts on native plants and other resources , eradicate spotted knapweed and rush skeletonweed. Control the spread of Canada thistle. Emphasize preventing the establishment and spread of new noxious weed infestations.                                                                                                                                                                                                                                                                                                         |           |                      |  |        |        |                               |     |     |                           |     |     |                |     |
| Wildlife Resources            | Objective            | 1035   | Improve shrub communities to restore big game winter/spring range in the Dry Douglas-fir/Moist Ponderosa Pine vegetation group along the Salmon River breaks.                                                                                                                                                                                                                                                                                                                                                                                |           |                      |  |        |        |                               |     |     |                           |     |     |                |     |
|                               | Objective            | 1036   | Increase flammulated owl habitat and potential white-headed woodpecker habitat by managing ponderosa pine stands within the Warm Dry Douglas-fir/Moist Ponderosa Pine and Dry Grand Fir vegetation groups toward the desired ranges of size classes, canopy closures, species composition, snags, and coarse woody debris, as described in Appendix A.                                                                                                                                                                                       |           |                      |  |        |        |                               |     |     |                           |     |     |                |     |
|                               | Guideline            | 1037   | An increase in the white-headed woodpecker or flammulated owl habitat may be achieved by the following methods:<br>a) Reducing tree densities and ladder fuels under and around existing large ponderosa trees and snags to reduce the risk of tree-replacing fire and to restore more open canopy conditions.<br>b) Managing the firewood program to retain large-diameter ponderosa pine and large snags of other species through signing, public education, size restriction, area closures, or other appropriate methods.                |           |                      |  |        |        |                               |     |     |                           |     |     |                |     |
| Recreation Resources          | Objective            | 1038   | Maintain the Idaho Centennial Trail commensurate with its intended use to provide quality recreation opportunities and experiences.                                                                                                                                                                                                                                                                                                                                                                                                          |           |                      |  |        |        |                               |     |     |                           |     |     |                |     |
|                               | Objective            | 1039   | Establish a new trailhead near Freight Landing and construct a new trail segment to connect with existing Bear Pete Trail 142 to enhance recreation access. Obliterate and rehabilitate trail and trailhead at Tollar Ditch to reduce impacts to other resources.                                                                                                                                                                                                                                                                            |           |                      |  |        |        |                               |     |     |                           |     |     |                |     |
|                               | Objective            | 1040   | Evaluate and incorporate methods to help prevent weed establishment and spread from recreation and trail use in the Lower Warren Creek subwatershed. Methods to be considered include annual weed inspection and treatment of trailheads and other high-use areas; and posting educational notices in these areas to inform the public of areas that are susceptible to weed invasion and measures they can take to help prevent weed establishment and spread.                                                                              |           |                      |  |        |        |                               |     |     |                           |     |     |                |     |
|                               | Objective            | 1041   | <div>Achieve or maintain the following ROS strategy:<table><tr><th rowspan="2">ROS Class</th><th colspan="2">Percent of Mgt. Area</th></tr><tr><th>Summer</th><th>Winter</th></tr><tr><td>Semi -Primitive Non-Motorized</td><td>26%</td><td>35%</td></tr><tr><td>Semi -Primitive Motorized</td><td>52%</td><td>47%</td></tr><tr><td>Roaded Natural</td><td>22%</td><td>18%</td></tr></table><div>The above numbers reflect current travel regulations. These numbers may change as a result of future travel regulation planning</div></div> | ROS Class | Percent of Mgt. Area |  | Summer | Winter | Semi -Primitive Non-Motorized | 26% | 35% | Semi -Primitive Motorized | 52% | 47% | Roaded Natural | 22% |
| ROS Class                     | Percent of Mgt. Area |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |                      |  |        |        |                               |     |     |                           |     |     |                |     |
|                               | Summer               | Winter |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |                      |  |        |        |                               |     |     |                           |     |     |                |     |
| Semi -Primitive Non-Motorized | 26%                  | 35%    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |                      |  |        |        |                               |     |     |                           |     |     |                |     |
| Semi -Primitive Motorized     | 52%                  | 47%    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |                      |  |        |        |                               |     |     |                           |     |     |                |     |
| Roaded Natural                | 22%                  | 18%    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |                      |  |        |        |                               |     |     |                           |     |     |                |     |
| Cultural Resources            | Objective            | 1042   | Provide interpretive information on historic sites and activities in and around the town of Warren to enhance visitor education and recreation experiences.                                                                                                                                                                                                                                                                                                                                                                                  |           |                      |  |        |        |                               |     |     |                           |     |     |                |     |

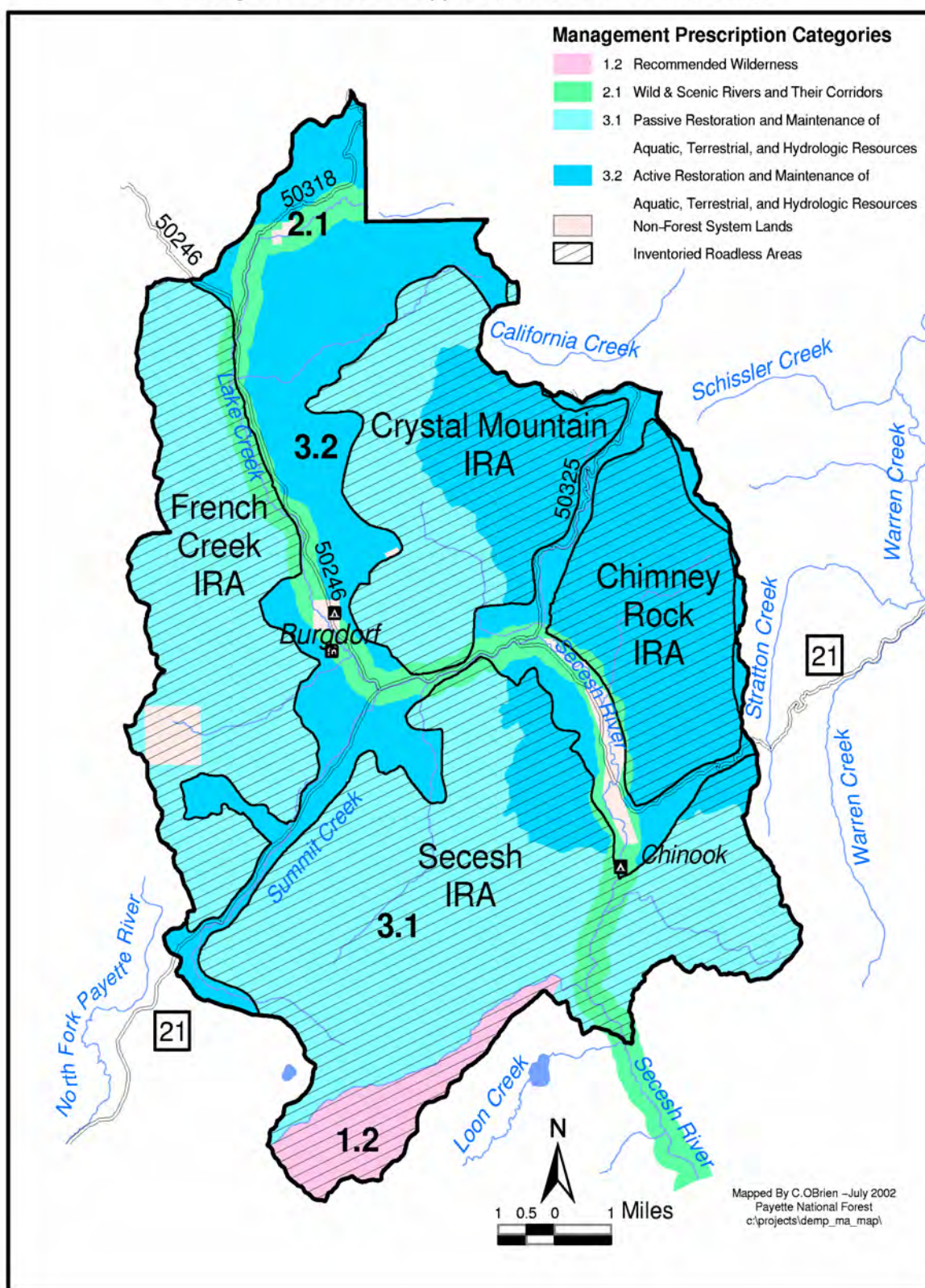
| MPC/Resource Area             | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mineral Resources</b>      | Objective | 1043   | Complete a pit development and reclamation plan for the Warren gravel pit, and provide for timely reclamation of the pit to reduce impacts to other resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Fire Management</b>        | Objective | 1044   | Identify areas appropriate for Wildland Fire Use, emphasizing Inventoried Roadless Areas. Use wildland fire to restore or maintain vegetative desired conditions and to reduce fuel loadings.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                               | Objective | 1045   | Use prescribed fire and mechanical treatments within and adjacent to wildland-urban interface areas, including the town of Warren, and Forest Service administrative sites to manage fuels to reduce wildfire hazards. Develop and prioritize vegetation treatment plans for wildland-urban interface in coordination with local and tribal governments, agencies, and landowners.                                                                                                                                                                                                                                                                                                                                                                                                                |
|                               | Objective | 1046   | Coordinate and emphasize fire education and prevention programs with private landowners to help reduce wildfire hazards and risks. Work with landowners to increase defensible space around structures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                               | Guideline | 1047   | Coordinate with the BLM and Nez Perce National Forest to develop compatible wildland fire suppression and wildland fire use strategies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Lands and Special Uses</b> | Objective | 1048   | Complete the site plan for War Eagle communications site to meet agency policy requirement and eliminate potential use conflicts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Facilities and Roads</b>   | Objective | 1049   | Maintain existing facilities at Warren Guard Station, War Eagle Lookout, and Carey Dome Lookout for crew quarters and fire support.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                               | Objective | 1050   | Evaluate and incorporate methods to help prevent weed establishment and spread from road management activities in the Fall Creek and Lower French Creek subwatersheds. Methods to be considered include:<br>a) When decommissioning roads, treat weeds before roads are made impassable.<br>b) Schedule blading or maintenance activities when weed seeds or propagules are least likely to be viable or spread. Blade from least to most infested sites.<br>c) Consult or coordinate with the district noxious weed coordinator when scheduling road maintenance activities.<br>d) Periodically inspect road systems and rights of way.<br>e) When acquiring water for dust abatement, avoid accessing water through weed-infested sites, or utilize mitigation to minimize weed seed transport. |

**Salmon River East of French Creek**





Management Area 11 –Upper Secesh River –Location Map



## Management Area 11 Upper Secesh River

### MANAGEMENT AREA DESCRIPTION

**Management Prescriptions** - Management Area 11 has the following management prescriptions (see map on preceding page for distribution of prescriptions).

| Management Prescription Category (MPC)                                                   | Percent of Mgt. Area |
|------------------------------------------------------------------------------------------|----------------------|
| 1.2 – Recommended Wilderness                                                             | 3                    |
| 3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources | 52                   |
| 3.2 – Active Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources  | 45                   |

**General Location and Description** - Management Area 11 is comprised of lands administered by the Payette National Forest within the upper Secesh River drainage, from upper Lake Creek to the confluence with Loon Creek (see map, preceding page). The area lies in Idaho and Valley Counties, and is part of the McCall Ranger District. The management area is an estimated 85,100 acres, which includes state land and private inholdings at Secesh Meadows, Burgdorf, and upper Lake Creek that make up less than 2 percent of the area. The area is surrounded by lands administered by the Payette National Forest, except for a small portion of BLM land along the northern boundary. The primary uses or activities in this management area have been dispersed recreation, livestock grazing, timber management, and mining.

**Access** - The main access to the area is Forest Highway 21, the Warren Wagon Road, out of McCall. This road is paved to the Burgdorf junction and gravel after that. Forest Road 246 also provides access from Forest Highway 21 up the Lake Creek drainage. The density of classified roads for the entire area is an estimated at 0.6 miles per square mile, as much of the area inventoried as roadless. Total road density for area subwatersheds ranges between 0.2 and 2.0 miles per square mile. Trails provide access to many of the main drainages in the roadless areas.

**Special Features** –The Secesh River aquatic system has a rare and significant fish species mix of wild chinook salmon, steelhead, bull trout, and westslope cutthroat trout, the first three of which are listed as Threatened species under the Endangered Species Act. and the latter is an Region 4 Sensitive species. The Secesh River Drainage is an aquatic stronghold and recovery area for these species. Some streams or portions of streams within the management area are designated critical habitat and Essential Fish Habitat for chinook salmon.

An estimated 74 percent of the area is inventoried as roadless, including portions of the Crystal Mountain (12,469 of 13,005 acres), Chimney Rock (8,530 of 8,535 acres), Cottontail Point/Pilot Peak (51 of 98,835 acres), Secesh (28,308 of 248,256 acres), and French Creek (13,435 of 88,818 acres) Roadless Areas. Burgdorf Hot Springs and the Burgdorf Guard Station are also located here.

The Secesh River has been found suitable for National Wild and Scenic River designation. The river is considered suitable because of its outstandingly remarkable fisheries values. A portion of Segment 2 and all of Segment 1 lie within this management area. The recommended classifications are Wild for Segment 2 and Recreational for Segment 1. The Wild segment is an estimated 3.0 miles, with an associated river corridor of 1,242 acres. The Recreational segment is an estimated 22.8 miles, with an associated river corridor of 7,283 acres.

**Air Quality** - This management area lies within Montana/Idaho Airshed ID-15 and in Valley and Idaho Counties. Particulate matter is the primary pollutant of concern related to Forest management. There is an ambient air monitor located in McCall within the airshed to evaluate current background levels, trends, and seasonal patterns of particulate matter. Three Class I areas are within 100 kilometers of the management area: Hells Canyon, Eagle Cap, and Selway-Bitterroot Wildernesses. Visibility monitoring has been expanded for these areas.

Between 1995 and 1999, emissions trends in both counties improved for PM 10, while PM 2.5 emissions remained constant. The most common sources of particulate matter in the counties were wildfire, prescribed fire, and fugitive dust from unpaved roads. In addition to Forest management activities, crop residue and ditch burning may contribute to particulate matter emissions. The amount of agricultural-related burning was very low within Valley County (less than 600 acres) and moderate within Idaho County (an estimated 13,500 acres). There were no point sources within either county.

**Soil, Water, Riparian, and Aquatic Resources** - Elevations in Management Area 11 range from 5,500 feet on the Secesh River to 8,751 feet atop Bear Pete Mountain. This area falls mainly within the Burgdorf Basin Subsection. The main geomorphic landforms in this area are frost-churned uplands, glaciated mountains, fluvial uplands and basins, and depositional lands. Slope gradients range from 15 to 40 percent on the frost-churned uplands, 10 to 80 percent on the glaciated mountains, 30 to 50 percent on the fluvial uplands and basins, and 0 to 20 percent on the depositional lands. The surface geology is dominated by granitic rock from the Idaho batholith, with scattered inclusions of metamorphic rock. Soils generally have moderate surface erosion potential on the depositional lands and moderately high to high potential on the glaciated mountain and fluvial landforms. Subwatershed vulnerability ratings range from low to moderate, with the majority being moderate (see table below). Geomorphic Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately) (see table below). Localized accelerated sediment and stream channel modification occurs, primarily from roads.

The management area comprises portions of the Upper Secesh and Lake Creek Watersheds of the South Fork Salmon River Subbasin. The major streams in the area are the Secesh River and its main tributaries: Lake Creek, Summit Creek, Grouse Creek, and Victor Creek. There are several small, high-elevation lakes, including Josephine, Bear Pete, Nethker, and Lake Rock. The primary concern with water quality is sedimentation associated with the roaded portion of this management area. Water Quality Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) (see table below), with all but one rating high. Localized accelerated sediment occurs, primarily from roads, grazing, and timber

harvest. Currently, there are no impaired water bodies listed under Section 303(d) of the Clean Water Act, and no TMDL-assigned subwatersheds associated with this management area.

| Subwatershed Vulnerability |      |     | Geomorphic Integrity |      |     | Water Quality Integrity |      |     | No. 303(d) Subs | No. Subs With TMDLs | No. Public Water System Subs |
|----------------------------|------|-----|----------------------|------|-----|-------------------------|------|-----|-----------------|---------------------|------------------------------|
| High                       | Mod. | Low | High                 | Mod. | Low | High                    | Mod. | Low |                 |                     |                              |
| 0                          | 6    | 3   | 4                    | 4    | 1   | 8                       | 1    | 0   | 0               | 0                   | 0                            |

The management area has spawning, rearing, and migratory habitat for chinook salmon, steelhead, bull trout, and westslope cutthroat trout. Native redband trout and introduced brook trout are also present. This area is a traditional salmon and steelhead fishing ground for the Nez Perce Tribe. A portion of the area's spawning and rearing habitat occurs on private lands that are being developed as a subdivision in Secesh Meadows. Other impacts to fish habitat include accelerated sediment and stream channel modification from roads, livestock grazing, dispersed camping sites, recreational motorized use, and past timber harvest on lands administered by the Payette National Forest. For these reasons, aquatic habitat is considered functioning at risk in portions of this area. The Grouse Creek subwatershed has been identified as important to the recovery of listed fish species, and as a high-priority area for active restoration.

**Vegetation** - The dominant potential vegetation groups in this area are Warm Dry Subalpine Fir (33 percent), Warm Moist/Hydric Subalpine Fir (25 percent), Persistent Lodgepole Pine (22 percent), and High Elevation Subalpine Fir (15 percent). Current vegetation is comprised mainly of lodgepole pine, subalpine fir, and Douglas-fir in the overstory. Whitebark pine also occurs at higher elevations. Many of the large spruce trees in the area died from a spruce bark beetle outbreak in the late 1980s and early 1990s. Large areas of spruce-fir and intermingled lodgepole subsequently burned in the Blackwell and Corral Fires of 1994 and Burgdorf Junction Fire of 2000. Although the vegetation is currently at properly functioning condition, fire hazard is still considered high in the older, overstocked stands that did not burn in 1994 or 2000.

Riparian vegetation is generally functioning properly; however, localized impacts are occurring from roads, livestock grazing, and recreation use.

**Botanical Resources** - Puzzling halimolobos is a current Region 4 Sensitive species that occurs in this management area. Also, least moonwort and Yellowstone draba are proposed Region 4 Sensitive species that occur within this area. Currently, no federally listed or proposed plant species are known to occur in the area, but potential habitat for Ute ladies'-tresses and slender moonwort may exist. Ute ladies'-tresses, a Threatened species, may have low to moderate potential habitat in riparian/wetland areas up to 7,000 feet. Slender moonwort, a Candidate species, may occur in moderate to higher elevation grasslands, meadows, and small openings in spruce and lodgepole pine.

**Non-native Plants** - A number of noxious weeds and exotic plants have been introduced into the management area, particularly along main travel ways. An estimated 6 percent of the management area is highly susceptible to non-native plant establishment and spread. The main weed of concern is Canada thistle, which currently occurs in small, scattered populations.

**Wildlife Resources** – Area forests provide habitat for a number of Region 4 sensitive species, including northern goshawk, fisher, wolverine, boreal owl, and three-toed woodpecker. The area also has habitat for many migratory landbirds, as well as summer range for mammals such as elk, black bear, and mountain lion. Although lynx have not been observed in this area, suitable habitat and travel corridors exist for this listed species, and habitat has been mapped for Lynx Analysis Units. The management area is also within the Central Idaho Wolf Recovery Area, and gray wolves occur here. Overall, terrestrial wildlife habitat is at properly functioning condition over most of the area. In localized areas of past timber management, however, roads and harvest have created habitat fragmentation and reduced the large tree, snag, and down log components.

**Recreation Resources** - This area has dispersed recreation such as hunting, fishing, ATV use, motorcycling, snowmobiling, hiking, skiing, sightseeing, mountain biking, and camping. Snowmobile use is increasing rapidly in the area. There are many dispersed campsites and three developed campgrounds (Chinook, Burgdorf, and Burgdorf Administrative Site) in the management area. An additional campground is in the planning stages. The area is in Idaho Fish and Game Management Units 19A and 23. Recreation users come from McCall, Secesh Meadows, Riggins, Grangeville, and the Treasure Valley (Boise, Nampa, Caldwell). Portions of the Idaho Centennial Trail lie within this management Area.

Area trails provide a variety of motorized and non-motorized opportunities. Recreation managers are working on balancing dispersed recreation opportunities with fish habitat and riparian area concerns.

**Scenic Environment** – Visually sensitive routes and use areas represent locations from which the scenic environment is considered especially important. These routes or areas generally have a more restrictive VQO assigned to them than areas not seen from such locations. The following is a list of visually sensitive routes or use areas with this management area. There may also be sensitive routes or use areas in adjacent management areas that could be affected by actions taken in this management area.

| Route or Area Type | Sensitivity Level | Name or Route or Area                                                                                 |
|--------------------|-------------------|-------------------------------------------------------------------------------------------------------|
| Roads              | 1                 | Burgdorf-French Creek 246, Warren Wagon Road (Forest Highway 21)                                      |
| Roads              | 2                 | Carey Dome-Corduoy Creek 318, Grouse Creek-Marshall Mountain 325, Josephine Creek 316, Carey Dome 321 |
| Trails             | 1                 | Secesh River 080, Split Creek-Look Lake 081, Victor Creek 117                                         |
| Trails             | 2                 | Willow Basket Creek 141, Jeanette Creek 140, Nethker Creek 143, Pete Creek 144                        |
| Use Areas          | 1                 | Burgdorf Resort                                                                                       |
| Use Areas          | 2                 | Josephine Lake, War Eagle Lookout, Chinook Campground                                                 |

**Cultural Resources** – Cultural themes in this area include Prehistoric and Recreation. This area received intermittent prehistoric use from ancestors of American Indian tribes. This area is a traditional salmon and steelhead fishing ground for the Nez Perce Indians. The tribe maintains fish traps in the Secesh River and Lake Creek, and is conducting research on chinook salmon and

steelhead. Burgdorf Hot Springs is a privately owned and operated resort first developed in the late 1800s. It is listed on the National Register of Historic Places, and may be the only patented hot springs in the United States.

**Timberland Resources** - Of the estimated 67,900 tentatively suited acres in this management area, there are no identified suited timberlands. Lands in MPCs 1.2, 3.1, and 3.2 have been identified as not suited for timber production. Forest vegetation management actions may be undertaken to support the achievement of vegetative desired conditions and other resource objectives in areas allocated to MPCs 3.1 and 3.2. Any timber production that may result from forest vegetation management actions will not count toward the allowable sale quantity but will contribute toward the Forest's Total Sale Program Quantity. Except for portions of the upper Lake Creek drainage, the overall level of past management activity has been low to nonexistent. Activity in the Lake Creek drainage has included road building and timber harvest. Fuelwood, posts, and poles, are also collected in designated areas.

**Rangeland Resources** - Sheep grazing occurs on portions of four allotments in the Lake Creek, Grouse Creek, and Josephine Creek areas. The management area provides an estimated 8,300 acres of capable rangeland, which represents less than 4 percent of the capable rangeland on the Forest.

**Mineral Resources** - Large-scale dredging of Lake Creek occurred in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries. Significant hydraulic mining also took place, and numerous small underground mines once operated in the area. Although there is little mining activity at present, the potential for mineral development is considered moderate to high in portions of the area.

The Summit Creek gravel source was developed a number of years ago, and was most recently used as a source for chip sealing a section of the Warren Wagon Road. There is a limited reserve of material within the current pit area.

**Fire Management** - Prescribed fire has been used to reduce activity-generated fuels. Approximately 40,000 acres of this management area has burned in the last 15 years due to wildfire. This acreage includes an estimated 9,000 acres in the Burgdorf Junction Fire of 2000, 30,000 acres in the Blackwell and Corral Fires of 1994, and 1,000 acres in the Whangdoodle Fire of 1989. Secesh Meadows is a National Fire Plan community, and the Lower Lake Creek and Fernan-Piah subwatersheds are considered wildland-urban interface due to development in the Burgdorf and Secesh Meadows areas. Area fire regimes are estimated to be 49 percent lethal, 51 percent mixed1 or 2, and 0 percent non-lethal. Only 1 percent of the area regimes have vegetation conditions that are highly departed from their historical range. However, 28 percent of the area regimes have vegetation conditions that are moderately departed from their historical range. Wildfire in these areas may result in larger patch sizes of high intensity or severity.

**Lands and Special Uses** - Special-use authorizations are issued to landowners for access to their private property. In the Secesh Meadows area there are several authorized domestic water systems. A recreation residence is authorized under a term permit in the Burgdorf area.

Midvale Telephone has been issued a special use authorization for maintenance of a buried telephone line providing service to the Burgdorf and Secesh Meadows areas. Idaho County has a Highway Easement for a right-of-way on Warren Wagon Road, Forest Highway 21, from Secesh Summit to the Burgdorf Junction.

The Nez Perce Tribe maintains a weir and fish trap in Lake Creek at the lower end of Burgdorf Meadows and in the Secesh River near Chinook Campground.

A boundary survey was completed in the Secesh Meadows and Crystal Mountain areas during the summer of 2001. A number of encroachments and unauthorized uses were discovered on National Forest System lands. These uses include roads, water systems and a few structures. The Forest will begin to address each case relative to the laws and regulations that apply.

**Facilities and Roads** – The Burgdorf Guard Station and associated facilities provide housing for summer field crews, and are used as housing in support of District activities.

## MANAGEMENT DIRECTION

In addition to Forest-wide Goals, Objectives, Standards, and Guidelines that provide direction for all management areas, the following direction has been developed specifically for this area.

| MPC/Resource Area                             | Direction           | Number | Management Direction Description                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------|---------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 1.2<br/>Recommended<br/>Wilderness</b> | General Standard    | 1101   | Management actions, including wildland fire use and prescribed fire, must be designed and implemented in a manner that maintains wilderness values, as defined in the Wilderness Act.                                                                                                                                          |
|                                               | Vegetation Standard | 1102   | Mechanical vegetation treatments, including salvage harvest, are prohibited.                                                                                                                                                                                                                                                   |
|                                               | Recreation Standard | 1103   | No new motorized or mechanical uses will be allowed, except where these uses must be allowed in response to reserved or outstanding rights, statute or treaty.                                                                                                                                                                 |
|                                               | Recreation Standard | 1104   | Existing motorized or mechanical uses are allowed only if they do not lead to long-term adverse changes in wilderness values.                                                                                                                                                                                                  |
|                                               | Road Standard       | 1105   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                  |
|                                               | Fire Guideline      | 1106   | The full range of fire suppression strategies may be used to suppress wildfires. Fire suppression strategies and tactics should minimize impacts to wilderness values.                                                                                                                                                         |
| <b>MPC 2.1<br/>Wild and Scenic<br/>Rivers</b> | General Objective   | 1107   | Work with the Regional Office to recommend Secesh River for designation under the Wild and Scenic Rivers Act.                                                                                                                                                                                                                  |
|                                               | General Standard    | 1108   | Manage the Secesh River (which includes Lake Creek) suitable river corridor to its assigned classification standards, and preserve its outstandingly remarkable values and free-flowing status until the river is formally designated by Congress or released from further consideration as a Wild and Scenic River candidate. |

| MPC/Resource Area                                                                                                        | Direction               | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 2.1<br/>Wild and Scenic<br/>Rivers</b>                                                                            | Vegetation<br>Guideline | 1109   | In Recreational corridors, mechanical vegetation treatments, including salvage harvest, may be used as long as ORVs are maintained within the river corridor.                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                          | Fire<br>Guideline       | 1110   | Prescribed fire and wildland fire use may be used in any river corridor as long as ORVs are maintained within the corridor.                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                                                                          | Fire<br>Guideline       | 1111   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize the impacts of suppression activities on river classifications and ORVs.                                                                                                                                                                                                                                                                                                                                             |
| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | General<br>Standard     | 1112   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years).                                                                                                                                                                                                                                                       |
|                                                                                                                          | Vegetation<br>Standard  | 1113   | Mechanical vegetation treatments, excluding salvage harvest, may only occur where:<br>a) The responsible official determines that wildland fire use or prescribed fire would result in unreasonable risk to public safety and structures, investments, or undesirable resource affects; and<br>b) They maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>c) They maintain or restore habitat for native and desired non-native wildlife and plant species. |
|                                                                                                                          | Fire<br>Standard        | 1114   | Wildland fire use and prescribed fire may only be used where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species, or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species.                                                                                                                                                                                                                                    |
|                                                                                                                          | Road<br>Standard        | 1115   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To address immediate response situations where, if action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                                                                                                                                                                   |
|                                                                                                                          | Fire<br>Guideline       | 1116   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                                                                                 |
| <b>MPC 3.2</b>                                                                                                           | General<br>Standard     | 1117   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary (up to 3 years) or short-term (3-15 years) time periods, and must be designed to avoid degradation of existing conditions in the long-term (greater than 15 years).                                                                                                                                                                                                                                         |



| MPC/Resource Area                                                                                                       | Direction              | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------|------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 3.2<br/>Active Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | Vegetation<br>Standard | 1118   | Vegetation restoration or maintenance treatments—including wildland fire use, mechanical, and prescribed fire, may only occur where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species; or<br>c) Reduce risk of impacts from wildland fire to human life, structures, and investments. |
|                                                                                                                         | Road<br>Standard       | 1119   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To support aquatic, terrestrial, and watershed restoration activities, or<br>d) To address immediate response situations where, if action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                      |
|                                                                                                                         | Fire<br>Guideline      | 1120   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                    |
| <b>Soil, Water,<br/>Riparian, and<br/>Aquatic Resources</b>                                                             | Goal                   | 1121   | To contribute to the viability of listed species, maintain, or improve where degraded, spawning and rearing habitat for Threatened chinook salmon, steelhead trout, and bull trout in the watershed, which has unique genetic wild stocks of chinook salmon and steelhead.                                                                                                                                                                                                              |
|                                                                                                                         | Objective              | 1122   | Improve water quality and geomorphic integrity by reducing road-related accelerated sediment in the Upper Secesh Watershed. Specific examples include the Marshall Meadows (325) Josephine Lake (315), Grouse Creek (325), and Chimney Rock (335) Roads.                                                                                                                                                                                                                                |
|                                                                                                                         | Objective              | 1123   | Work with Idaho County to reduce sediment and riparian impacts associated with the Burgdorf –French Creek Road and the Warren Wagon Road.                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                         | Objective              | 1124   | Relocate or decommission portions of the Grouse Creek Road to improve water quality and fish habitat for bull trout, chinook salmon, and steelhead in the Grouse Creek subwatershed.                                                                                                                                                                                                                                                                                                    |
|                                                                                                                         | Objective              | 1125   | Restore or maintain riparian area composition, structure, and function in localized areas of the Upper Lake Creek, Bear Pete-Threemile, Grouse Creek, and Lower Lake Creek subwatersheds by improving riparian vegetation and hydrologic function through decommissioning or obliterating roads within riparian areas and returning road surfaces, cuts, and fills to productivity.                                                                                                     |
|                                                                                                                         | Objective              | 1126   | Reclaim or rehabilitate abandoned mine sites to reduce impacts to water quality and fish habitat.                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                         | Guideline              | 1127   | Coordinate closely with the interested tribes on all activities that could potentially affect fish habitat in the management area.                                                                                                                                                                                                                                                                                                                                                      |
| <b>Vegetation</b>                                                                                                       | Objective              | 1128   | Use prescribed and wildland fire in conjunction with mechanical treatments to restore or maintain vegetative composition and structure, and to reduce fuel loadings.                                                                                                                                                                                                                                                                                                                    |

| MPC/Resource Area             | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                         |                      |
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| Botanical Resources           | Objective | 1129   | Maintain or restore known populations and occupied habitats of TEPCS plant species, including puzzling halimolobos, Yellowstone draba, and least moonwort to contribute to the long-term viability of these species.                                                                                                     |                      |
| Non-native Plants             | Objective | 1130   | To reduce impacts on native plants and other resources, control the spread of Canada thistle, and prevent the establishment and spread of new noxious weed infestations.                                                                                                                                                 |                      |
| Recreation Resources          | Objective | 1131   | Enlarge existing day use parking at Chinook Campground to accommodate increasing recreation use and to help reduce unregulated parking impacts to other resources.                                                                                                                                                       |                      |
|                               | Objective | 1132   | Replace existing toilet at Chinook Campground with a barrier-free design toilet to make this facility more accessible to all potential users.                                                                                                                                                                            |                      |
|                               | Objective | 1133   | Reduce impacts to Lake Creek and tributary riparian areas from recreation sites or uses. Identify recreational camping sites or parking areas that are contributing unacceptable levels of accelerated sediment, compaction, or vegetation loss. Rehabilitate, relocate, or harden sites where needed to reduce impacts. |                      |
|                               | Objective | 1134   | Maintain the Idaho Centennial Trail commensurate with its intended use to provide quality recreation opportunities and experiences.                                                                                                                                                                                      |                      |
|                               | Objective | 1135   | Install potable water at Chinook Campground to enhance recreation experiences.                                                                                                                                                                                                                                           |                      |
|                               | Objective | 1136   | Achieve or maintain the following ROS strategy:                                                                                                                                                                                                                                                                          |                      |
|                               |           |        | ROS Class                                                                                                                                                                                                                                                                                                                | Percent of Mgt. Area |
|                               |           |        | Summer                                                                                                                                                                                                                                                                                                                   | Winter               |
| Semi -Primitive Non-Motorized |           |        | 31%                                                                                                                                                                                                                                                                                                                      | 12%                  |
| Semi -Primitive Motorized     |           |        | 40%                                                                                                                                                                                                                                                                                                                      | 87%                  |
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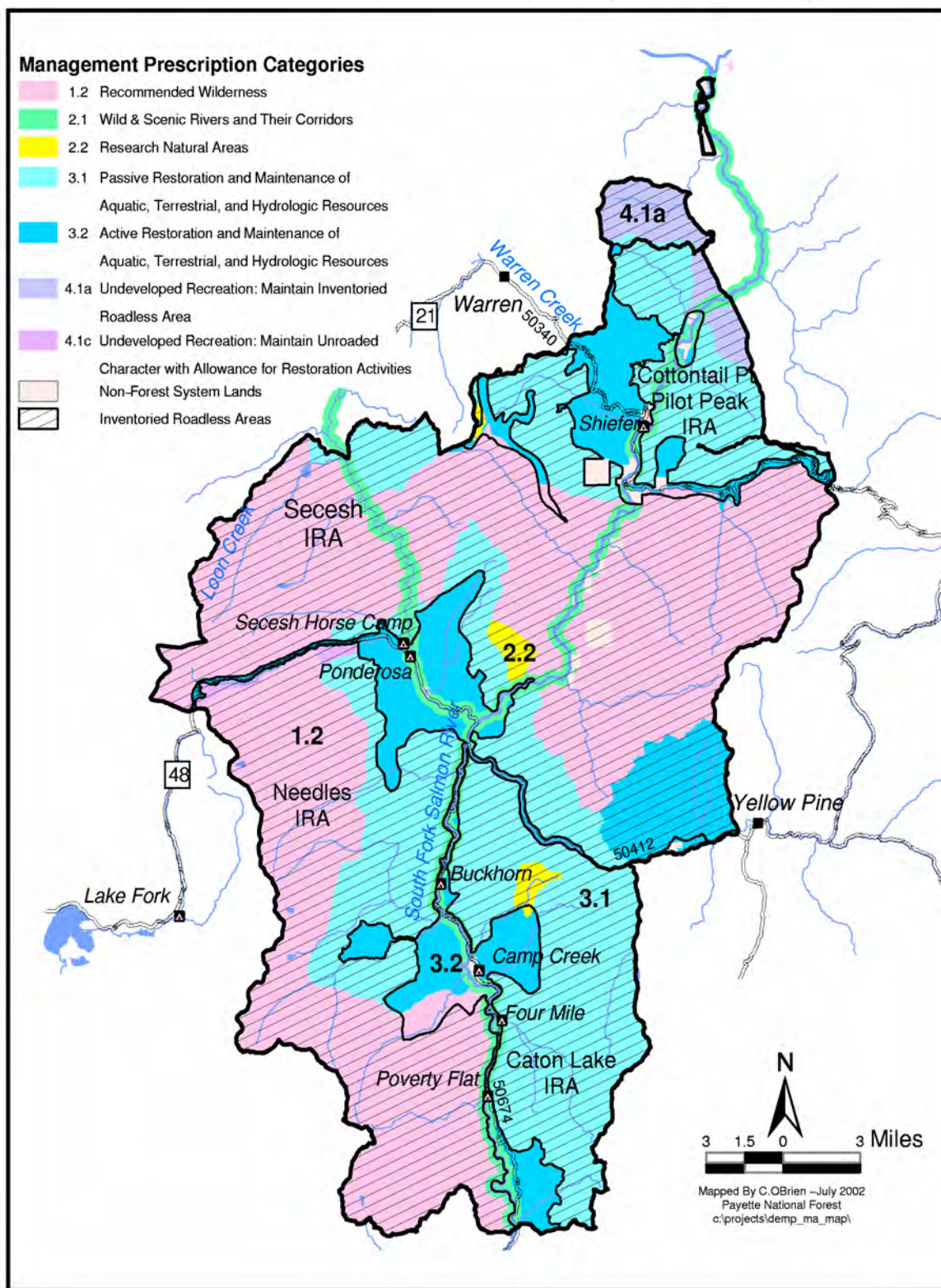
| MPC/Resource Area             | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <b>Fire Management</b>        | Objective | 1142   | Coordinate and emphasize fire education and prevention programs with private landowners to help reduce wildfire hazards and risks. Work with landowners to increase defensible space around structures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Lands and Special Uses</b> | Objective | 1143   | Complete a property sale to transfer Secesh Cemetery, which is on National Forest System lands, to another entity that can appropriately maintain and manage this property.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                               | Objective | 1144   | Work with Idaho County to resolve the solid waste disposal needs for the homeowners in the Secesh Meadows area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Facilities and Roads</b>   | Objective | 1145   | Maintain existing facilities at Burgdorf Guard Station for crew quarters and recreation support.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                               | Standard  | 1146   | <p>Do not reopen classified roads in Level 1 maintenance status or Level 2 roads that have become impassable unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that:</p> <ul style="list-style-type: none"> <li>a) For resources that are within their range of desired conditions, reopening these roads for use shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and</li> <li>b) For resources that are already in a degraded condition, reopening these roads shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and</li> <li>c) Adverse effects to TEPC species or their habitats are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitats.</li> </ul> <p>Where reopening these roads cannot meet these constraints, consider decommissioning. An exception to this standard is where reopening Level 1 or 2 classified roads is required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations).</p> |
|                               | Standard  | 1147   | New roads shall not be built except to replace existing roads in RCAs or directly repair human-caused damage to TEPC fish habitat in streams unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that adverse effects to TEPC species or their habitats are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitats.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**Josephine Lake**





## Management Area 12 –South Fork Salmon River –Location Map



## Management Area 12 South Fork Salmon River

### MANAGEMENT AREA DESCRIPTION

**Management Prescriptions** - Management Area 12 has the following management prescriptions (see map on preceding page for distribution of prescriptions).

| Management Prescription Category (MPC)                                                   | Percent of Mgt. Area |
|------------------------------------------------------------------------------------------|----------------------|
| 1.2 – Recommended Wilderness                                                             | 48                   |
| 2.2 – Research Natural Areas                                                             | 1                    |
| 3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources | 32                   |
| 3.2 – Active Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources  | 16                   |
| 4.1a - Undeveloped Recreation: Maintain Inventoried Roadless Areas                       | 2                    |
| 4.1c – Undeveloped Rec.: Maintain Unroaded Character with Allowance for Restoration      | 1                    |

**General Location and Description** - Management Area 12 is comprised of lands administered by the Payette National Forest within the South Fork Salmon River drainage, excluding Wilderness lands, the Upper Secesh River, and the upper East Fork South Fork (see map, preceding page). Management Area 12 includes the area near the confluence of the South Fork Salmon River and the Main Salmon River known as Mackay Bar. The management area lies in Idaho and Valley Counties, and is part of the McCall and Krassel Ranger Districts. The management area is an estimated 362,800 acres, which includes several small private inholdings (about 1 percent of the area, total), most of which are along the river corridor. Management Area 12 does not include portions of the Frank Church-River of No Return Wilderness, and the Upper Secesh River and Upper East Fork South Fork Watersheds that are also in the South Fork Salmon River drainage. The area is bordered by Payette National Forest to the north and west, Boise National Forest to the south, and Payette National Forest to the east, including the Frank Church-River of No Return Wilderness Area. The primary uses or activities in this management area have been watershed restoration, fish and wildlife habitat restoration, and recreation. Some timber harvest has also occurred, and extensive livestock grazing occurred historically.

**Access** - The main access to the southern portion of this area is by paved Forest Road 674, the South Fork Road. This road is reached most easily from Cascade via paved Boise National Forest Roads 022 (Warm Lake Road) and 474 (South Fork Road). Access to the middle portion of the management area is by Forest Highway 048, from Lick Creek Summit to the South Fork, and from the South Fork to Yellow Pine along the East Fork South Fork Salmon River. Access to the northern portion of the area is primarily by Forest Road 340 from Warren Summit to Trails End subdivision and Elk Summit. Access to the Mackay Bar area is by primitive road from Dixie, Idaho, through the Nez Perce National Forest, or by the Salmon River via jet boat or raft, or by airplane to the Mackay Bar private airfield, or by trail from the Payette National Forest. The density of classified roads for the entire area is an estimated 1.1 miles per square mile. Total road density for area subwatersheds ranges between 0 and 5.3 miles per square mile. An

estimated 10 miles of existing road have been decommissioned, or obliterated and removed from the Forest Road System in the past decade. A network of trails provides access to portions of the roadless areas. Several private airstrips along the main river corridor also provide access to small planes.

**Special Features** - The South Fork Salmon River aquatic system has a rare and significant assemblage of wild chinook salmon, steelhead trout, bull trout, and westslope cutthroat trout, the first three of which are listed as threatened species under the Endangered Species Act. This is an aquatic stronghold and recovery area for these species. Some streams or portions of streams within the area are designated critical habitat and Essential Fish Habitat for chinook salmon.

An estimated 84 percent of the management area is inventoried as roadless, including portions of the Caton Lake, Cottontail Point/Pilot Peak, Secesh, and Needles Roadless Areas. The Forest has recommended portions of the Secesh and Needles areas for Wilderness designation. Part of the management area lies adjacent to the Frank Church-River of No Return Wilderness. Lick Creek Block Stream and Rainbow Rock Arch are proposed National Natural Landmarks within the area.

The area also includes the Circle End Creek and Phoebe Meadows Research Natural Areas, and a portion of the Pony Meadows Research Natural Area. About 360 acres of the 1,460-acre Pony Meadows RNA are in Management Area 12, with the remainder in Management Area 10. Pony Meadows contains unaltered examples of a wet meadow, a shallow lake, ponds, and bogs. Circle End Creek (1,464 acres) has at least nine forest habitat types, and has been used as a control area for research. Phoebe Meadows (1,500 acres) was established for its large variety of subalpine fir and Douglas-fir forest types, and for its diverse mountain meadow system and aquatic features.

The South Fork Salmon River has been found suitable for National Wild and Scenic River designation. The river is considered suitable because of its outstandingly remarkable scenic, recreational, geologic, fisheries, ecological/botanical, and cultural resource values. Portions of Segments 1 and 2 lie within this management area. The Segment 1 portion is 50.5 miles, with a river corridor of 14,700 acres, and a recommended classification of Recreational. The segment 2 portion is 5 miles, with a corridor of 1,400 acres, and a recommended classification of Wild.

The Secesh River has also been found suitable for National Wild and Scenic River designation. The river is considered suitable because of its outstandingly remarkable fisheries values. A portion a Segment 2 and all of Segment 3 lie within this management area. The Segment 2 portion is 12 miles, with a river corridor of 3,300 acres, and a recommended classification of Wild. Segment 3 is 5 miles long, with a river corridor of 1,300 acres, and a recommended classification of Recreational.

**Air Quality** - This management area lies primarily within Montana/Idaho Airshed ID-15 and in Valley and Idaho Counties. Particulate matter is the primary pollutant of concern related to Forest management. An ambient air monitor is located in McCall within the airshed to evaluate current background levels, trends, and seasonal patterns of particulate matter. Four Class I areas are within 100 kilometers of the management area: the Hells Canyon, Eagle Cap, Sawtooth, and Selway-Bitterroot Wildernesses. Visibility monitoring has been expanded for these areas.

Between 1995 and 1999, emissions trends in both counties improved for PM 10, while PM 2.5 emissions remained constant. The most common sources of particulate matter in the counties were wildfire, prescribed fire, and fugitive dust from unpaved roads. In addition to Forest management activities, crop residue and ditch burning may contribute to particulate matter emissions. The amount of agricultural-related burning was very low within Valley County (less than 600 acres) and moderate within Idaho County (an estimated 13,500 acres). There were no point sources within either county.

**Soil, Water, Riparian, and Aquatic Resources** - Elevations range from 2,180 feet on the South Fork Salmon River to 9,322 feet atop North Loon Mountain. This large management area has a number of different landforms. The areas closest to the South Fork Salmon River and its main tributaries are dominated by deeply entrenched, steep canyonlands, with dominant slope gradients of 40 to 80 percent. Most of these canyonlands extend up to glaciated mountain ridge systems, with high-elevation peaks and cirque basins that also have 40 to 80 percent slopes. The surface geology is dominated by granitic rocks of the Idaho batholith and scattered Paleozoic metamorphic rocks. Soils generally have moderately high to high surface erosion potential, and low to moderate productivity. Subwatershed vulnerability ratings range from moderate to high, with the majority being high (see table below). Geomorphic Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately) (see table below). Localized impacts from roads include accelerated sediment and stream channel modification.

The management area comprises portions of six 5th field hydrologic units in the South Fork Salmon River Subbasin. The units are: Lower Secesh, Lower South Fork Salmon River, Middle South Fork Salmon River, Lower East Fork South Fork Salmon River, Buckhorn-Fitsum, and Blackmare-Fourmile. The major streams in the area are the South Fork Salmon River, Secesh River, East Fork South Fork Salmon River, Lick Creek, Pony Creek, Elk Creek, Fitsum Creek, Buckhorn Creek, Fourmile Creek, and Blackmare Creek. There are dozens of high-elevation lakes in the area, most of them along the eastern side of the Lick Creek Mountains. These include Loon, Duck, Hum, Thirtythree, Nick, Buckhorn, Buckhorn Mountain, and Blackmare Lakes.

Water Quality Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately) (see table below). Localized impacts from roads, mining, and recreation are primarily related to sedimentation for sections of the South Fork Salmon River and East Fork South Fork. Fifteen of the 35 subwatersheds in this area were listed in 1998 as having impaired water bodies under Section 303(d) of the Clean Water Act. These subwatersheds are Mill-Station, Chicken-Box, Grouse-Big Flat, Jeanot-Rock, Fritzer-Hall, Tailholt-Moss, Lower East Fork South Fork Salmon River, Loosum-Reegan, Caton Creek, Krassel-Indian, Buckhorn Creek, Fitsum Creek, Phoebe, Nasty-Jakie, and Cliff-Goat. The pollutants of concern are sediment and metals. There is a TMDL associated with the subbasin that contains these segments, and that subbasin includes about a third of the subwatersheds in the management area.

Chinook salmon, steelhead trout, bull trout, westslope cutthroat trout, and redband rainbow trout have been found throughout the South Fork Salmon River Subbasin. During the 1950s, the South Fork Salmon River, including all of its tributaries, was the largest producer of wild



summer chinook salmon in the Columbia River Basin. Numbers of spawning salmon have declined precipitously since the construction of the Lower Snake River dams in the 1960s and 70s. The South Fork Salmon River is one of three drainages in Idaho supporting wild native steelhead. Bull trout have been found in all reaches of the South Fork Salmon River and in 18 tributaries that have been surveyed. Spawning, rearing, and migration habitat exists for fluvial and resident populations of bull trout and westslope cutthroat. Introduced brook trout occur, but are still limited in distribution. Aquatic habitat is functioning properly throughout much of the area, but is functioning at risk in localized areas due primarily to accelerated sediment impacts from roads and recreation. The Jeanot-Rock subwatershed has been identified as important to the recovery of listed fish species, and as a high-priority area for restoration.

| Subwatershed Vulnerability |      |     | Geomorphic Integrity |      |     | Water Quality Integrity |      |     | No. 303(d) Subs | No. Subs With TMDLs | No. Public Water System Subs |
|----------------------------|------|-----|----------------------|------|-----|-------------------------|------|-----|-----------------|---------------------|------------------------------|
| High                       | Mod. | Low | High                 | Mod. | Low | High                    | Mod. | Low |                 |                     |                              |
| 25                         | 10   | 0   | 13                   | 8    | 14  | 8                       | 15   | 12  | 15              | 12                  | 0                            |

The integrity of fish habitat in Area 12 is dependent on management of other upstream management areas, including Management Areas 11 and 13 on the Payette National Forest, and 19, 20, and 21 on the Boise NF. Management actions in Area 12 cannot be considered independently of actions in these areas.

**Vegetation** - Vegetation at lower elevations is typically grasslands, shrublands, ponderosa pine and Douglas-fir on south and west aspects, and Douglas-fir and grand fir forests on north and east aspects. Mid elevations are dominated by forest communities of Douglas-fir, grand fir, and subalpine fir, with pockets of lodgepole pine and aspen. Upper elevations feature subalpine fir communities that include a large component of whitebark pine.

The main potential vegetation groups in this area are High Elevation Subalpine Fir (17 percent), Warm Dry Douglas-fir/Moist Ponderosa Pine (16 percent), Warm Dry Subalpine Fir (14 percent), Cool Moist Grand Fir (13 percent), Warm Moist/Hydric Subalpine Fir (12 percent), and Dry Grand Fir (8 percent). Rock, water, shrublands, and grasslands comprise about 6 percent of the area.

Warm Dry Subalpine Fir, Warm Moist/Hydric Subalpine Fir, and High Elevation Subalpine Fir are at properly functioning condition. The Cool Moist Grand Fir group is functioning at risk due primarily to fire exclusion that has led to old, dense stands with high levels of shade-tolerant grand fir and Douglas-fir and low levels of ponderosa pine, western larch, and aspen. The Warm Dry Douglas-fir/Moist Ponderosa Pine and Dry Grand Fir groups are functioning at risk for the same reasons, although an aggressive prescribed fire program in some areas has thinned out many stands and reduced fuels over thousands of acres. Large areas within this management area (e.g., Savage, Chicken, Indian, Nick, and Elk Creeks) have burned in wildfires in the last 20 years. In unmanaged areas, the hazard for stand-replacing fire in this group is high. Seeding of non-native grasses and forbs, introduction of noxious weeds, and past overgrazing have altered Perennial Grass Slopes and Perennial Grass Montane groups to the point that they are functioning at risk.

Riparian vegetation is functioning properly in much of the management area, except in localized areas that have primarily road-related impacts. These areas are functioning at risk.

**Botanical Resources** - Cascade reedgrass and giant helleborine orchid, current Region 4 Sensitive species, occur in this area. Region 4 proposed Sensitive species include short-styled tofieldia, wolf's current, and Kellogg's bitterroot. Although no federally listed or proposed plant species are currently known to occur in the area, potential habitat for Ute ladies'-tresses, Spalding's silene, and slender moonwort may exist. Spalding's silene, a Threatened species, may occur in fescue grassland habitat types up to 5,500 feet. Ute Ladies'-tresses, a Threatened species, may have moderate to high potential habitat in riparian/wetland areas up to 7,000 feet. Slender moonwort, a Candidate species, may occur in moderate to higher elevation grasslands, meadows, and small openings in spruce and lodgepole pine.

**Non-native Plants** - A number of noxious weeds and exotic plants have been introduced into the management area, particularly along main travel ways. An estimated 32 percent of the management area is highly susceptible to non-native plant establishment and spread. The main weeds of concern are spotted knapweed and rush skeletonweed, which currently occur in small, scattered populations within the area. Canada thistle, St. Johnswort, and yellow toadflax are also found within the area. Buckhorn, Camp Creek, Four Mile, Ponderosa, Poverty Flat, and Big Creek Campgrounds are considered highly susceptible to noxious weed invasion and spread.

Subwatersheds in the table below have an inherently high risk of weed establishment and spread from activities identified with a "yes" in the various activity columns. This risk is due to the amount of drainage area that is highly susceptible to noxious weed invasion and the relatively high level of exposure from those identified vectors or carriers of weed seed.

| Subwatershed            | Road-related Activities | Livestock Use | Timber Harvest | Recreation & Trail Use | ATV Off-Road Use |
|-------------------------|-------------------------|---------------|----------------|------------------------|------------------|
| Grouse-Big Flat         | Yes                     | No            | No             | No                     | No               |
| Fritzer-Hall            | Yes                     | No            | No             | No                     | No               |
| Tailholt-Moss           | Yes                     | No            | No             | No                     | No               |
| Lower EFSFSR            | Yes                     | No            | No             | No                     | No               |
| Loosum-Reegan           | Yes                     | No            | No             | No                     | No               |
| Krassel-Indian          | Yes                     | No            | No             | Yes                    | No               |
| Fitsum Creek            | Yes                     | No            | No             | No                     | No               |
| North Fork Fitsum Creek | Yes                     | No            | No             | No                     | No               |
| Phoebe Creek            | Yes                     | No            | No             | No                     | No               |
| Camp Creek              | Yes                     | No            | No             | No                     | No               |
| Nasty-Jakie             | Yes                     | No            | No             | No                     | No               |
| Four Mile Creek         | Yes                     | No            | No             | No                     | No               |
| Cliff-Goat              | Yes                     | No            | No             | No                     | No               |
| Blackmare Creek         | Yes                     | No            | No             | No                     | No               |
| Zena Creek              | Yes                     | No            | No             | No                     | No               |
| Jeanot-Rock             | No                      | No            | No             | Yes                    | No               |
| West Fork Buckhorn Ck.  | No                      | No            | No             | Yes                    | No               |

**Wildlife Resources** - The wide range of elevations and vegetation types in the management area provide a variety of wildlife habitats. The South Fork Salmon River corridor historically attracted migratory bald eagles, but numbers have declined with declining salmon runs. Much of the lower-elevation grasslands and shrublands is important winter/spring range for elk, deer, and bighorn sheep. Mid-elevation Douglas-fir forests provide habitat for a number of Region 4 sensitive species, including northern goshawk, and fisher. Flammulated owl and potential white-headed woodpecker habitat is found in lower elevation ponderosa pine. Ponderosa pine has been identified as an ecosystem at risk (UCRB). Bighorn sheep, golden eagles, and bats use the rocky bluffs that extend up steep canyonlands. High-elevation subalpine fir forests provide habitat for wolverine, great gray and boreal owls, three-toed woodpecker, as well as summer range for mammals such as elk, black bear, and mountain lion. Lynx have not been observed in the area, but suitable habitat and corridors exist, and habitat has been mapped in Lynx Analysis Units. The entire area provides habitat for migratory landbirds. The management area is within the Central Idaho Wolf Recovery Area, and wolves are known to occur here. Overall, terrestrial habitat is properly functioning in most areas; however, there are localized fragmentation impacts from roads, harvest units, and wildfires.

**Recreation Resources** - This area attracts a variety of dispersed recreation uses such as hunting, fishing, hiking, ATV use, motorcycling, mountain biking, sightseeing white water boating, and camping. There are many dispersed campsites and six developed campgrounds in the management area. In addition to local users and tribal interests, many recreationists come from the Treasure Valley (Boise, Nampa, Caldwell), about 100 miles to the south. The area is in Idaho Fish and Game Management Units 19A, 20A, and 25. In years of surplus hatchery chinook salmon returns, a sport-fishing season is permitted by Idaho Department of Fish and Game. A network of trails provides access to portions of the roadless areas, offering a variety of motorized and non-motorized opportunities. Portions of the Idaho Centennial Trail lie within this management area. Special uses include three outfitter and guide operations.

Mackay Bar has a developed resort, including a lodge and private transfer camp for outfitting into the Frank Church--River of No Return Wilderness. Badley Ranch occupies a portion of the management area. One time a working ranch, it now serves mainly as a seasonal residence. Its northernmost segment, the Copenhagen property, has been subdivided into 24 recreational residence lots. Further subdivision and subsequent development is anticipated.

A spectrum of trail opportunities and experiences are provided for ATV, 2-wheel motorized use, and non-motorized use, with loop opportunities emphasized. Outfitter guide opportunities are provided to the public. Recreational boating opportunities are balanced with protection of sensitive riparian corridors and fish habitat.

**Scenic Environment** – Visually sensitive routes and use areas represent locations from which the scenic environment is considered especially important. These routes or areas generally have a more restrictive VQO assigned to them than areas not seen from such locations. The following is a list of visually sensitive routes or use areas with this management area. Some roads or trails may have segments that are listed at different sensitivity levels. There may also be sensitive routes or use areas in adjacent management areas that could be affected by actions taken in this management area.

| Route or Area Type | Sensitivity Level | Name of Route or Area                                                                                                                                                                                                                                                                                                        |
|--------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Roads              | 1                 | McCall-Stibnite 412, Warren-Profile Gap 340, South Fork Salmon River 674                                                                                                                                                                                                                                                     |
| Roads              | 2                 | Smith Knob Lookout 355, Hays Station 337, Pilot Peak 341, Pony Meadows 359, 1211, South Fork Salmon River 674, Buckhorn 404                                                                                                                                                                                                  |
| Trails             | 1                 | Split Creek Lookout 084                                                                                                                                                                                                                                                                                                      |
| Trails             | 2                 | South Fork Blackmare Cutoff 094, South Fork Blackmare Creek 305, Blackmare Creek 100, West Fork Buckhorn Creek 094, Fitsum Creek 087, Split Creek 081, Secesh River 080, Grimmett Creek 129, Tailholt 079, South Fork Salmon 4WD 076, Rattlesnake Peak 123, Williams Peak 073, South Fork Sheep Creek 071, Rainbow Ridge 070 |
| Use Areas          | 1                 | Blackmare Lake, Square Top Lake, Nick Lake, Buckhorn Lake, Buckhorn Mountain Lake, City Lakes, Thirty Three Lake, Duck Lake, Hum Lake, Enos Lake, Jungle Lake, Blue Lake, Loon Lake, Ponderosa Campground                                                                                                                    |
| Use Areas          | 2                 | Pilot Peak Lookout, Burgdorf Summit, Smith Saddle Lookout, Hays Station, Cow Lake, Water Stop Use Site, Williams Lookout, Poverty Flat Campground, Fourmile Campground, Camp Creek Campground, Buckhorn Campground                                                                                                           |

**Cultural Resources** – Cultural themes in this area include Prehistoric, Settlement, Chinese Heritage, and Forest Service Administration. This area has a high concentration of historic and prehistoric cultural resources. Historically, the benches along the South Fork Salmon River corridor had many early homesteads, and several private inholdings exist today, including ranches, seasonal residences, and the Trails End subdivision. Krassel and Hays Station Guard Stations are both listed on the National Register of Historic Places. The Chinese terraced gardens at Hays Station are also on the National Register. Prehistoric sites include house pits, rock art, and other artifacts. The South Fork Salmon River corridor remains a significant area for Native American treaty rights. The Nez Perce, Shoshone-Bannock, and Shoshone-Paiute Tribes traditionally used the area for fishing, hunting, gathering, trading, camping at hot springs, drying fish and animal hides, and conducting sacred ceremonies.

**Timberland Resources** - Of the estimated 258,000 tentatively suited acres in this management area, there are no identified suited timberlands. Forest vegetation management actions may be undertaken to support the achievement of vegetation desired conditions and other resource objectives in areas allocated to MPCs 3.1, 3.2, and 4.1c. Any timber production that may result from forest vegetation management actions will not count toward the allowable sale quantity but will contribute toward the Forest's Total Sale Program Quantity.

Scattered pockets of timber harvest have occurred in the past. Three salvage sales occurred in parts of this management area in 1996, but these actions did not construct any new permanent roads. House logs, fuelwood, posts, and poles can be harvested or collected in designated areas.

**Rangeland Resources** - Although this area was heavily grazed in the earlier part of this century (predominantly by sheep), it is currently managed primarily for pack and saddle stock in specified areas. Management Area 12 has an estimated 3,600 acres of capable rangeland, which represents less than 2 percent of the capable rangeland on the Forest.

**Mineral Resources** – There are many mining claims in Management Area 12; but few have approved plans of operation. Mineral development was, and is, mainly for placer gold deposits in and along the South Fork Salmon River. The potential for mineral development is considered moderate.

**Fire Management** – During the last 20 years, over 100,000 acres of this area has experienced wildfire. Large wild fires include Savage Creek (1985, 12,000 acres) Whangdoodle (1989, 7,600 acres), Hartgraves (1989, 1,280 acres), Camp Creek (1992, 1,600 acres), Thunderbolt (1994, 9,000 acres), Chicken (1994, 79,000 acres), and Nick Peak (2000, 4,200 acres).

Prescribed fire has been used primarily to improve big-game winter/spring range conditions. Over the last 15 years, prescribed fires have improved over 23,000 acres of big-game winter/spring range, primarily along the South Fork Salmon River and East Fork South Fork Salmon River corridors. Fire has also been used to treat natural and activity-generated fuels.

There are no National Fire Plan communities in this area, but the Pony Creek, Grouse-Big Flat, Cow-Oompaul, Mill-Station, and Loosum-Reegan subwatersheds are considered to be wildland-urban interface areas due to private property development. Area fire regimes are estimated to be: 16 percent lethal, 54 percent mixed<sup>1</sup> or 2, and 30 percent non-lethal. An estimated 23 percent of the area regimes have vegetation conditions that are highly departed from their historical range. Most of this change has occurred in the historically non-lethal fire regimes, resulting in conditions where wildfire would likely be much larger and more intense and severe than historically. In addition, 25 percent of the area regimes have vegetation conditions that are moderately departed from their historical range. Wildfire in these areas may result in larger patch sizes of high intensity or severity, but not to the same extent as in the highly departed areas in non-lethal fire regimes.

**Lands and Special Uses** - There are numerous isolated parcels of private lands scattered throughout the area. These private landowners often depend on access across the Forest using system roads, and in some situations may require authorization to use and occupy the Forest for road access. The Forest Service may consider purchase of these properties on a willing seller basis. There are also situations where existing trails cross private property and no public use easement exists.

Private landowners and adjacent populations utilize resources on National Forest System lands within the area. These occupancies are both permitted and trespass. Most permitted uses revolve around water systems for domestic and agricultural use.

There are two permitted hydropower projects within the area. One is an exempted Federal Regulatory Energy Commission (FERC) project at Zena Creek Ranch along the Secesh River. Another is a FERC licensed project at Smith Creek, near Hettinger Ranch, along the lower portion of the South Fork Salmon River. Both of these projects produce electric power for on-site consumption on the private property.

Several private water systems are authorized by special-use permits. Authorized systems include a water development serving summer home sites in the Trails End subdivision, irrigation water

uses at Hettinger Ranch, a water system for both domestic and irrigation uses serving the Eiguren Ranch, and a water system for culinary use on the private property adjacent to the Eiguren Ranch. The Hettinger Ranch, Eiguren Ranch, and Davis Ranch have submitted applications for their water systems, requesting a permanent conditional easement is issued per Public Law 99-545 commonly known as the “Colorado Ditch Bill”.

Fish traps used by the Nez Perce Tribe and Idaho Department of Fish and Game for research are operated under a Memorandum of Understanding between the agencies.

A special use authorization is issued to Midvale Telephone for buried telephone line providing service in the areas of Burgdorf, Secesh Meadows, Warren and the Lower South Fork of the Salmon River. There is also a permitted telephone line buried along the road from Yellow Pine to the Eiguren Ranch.

There are three designated communication sites (Elk Summit, Nick Peak, Miners Peak) for Forest Service or other government agency communication uses only.

**Facilities and Roads** – The Forest maintains several administrative sites in the area to facilitate management activities. There are four lookouts currently being maintained for fire detection purposes: Pilot Peak, Williams Peak, Miners Peak, and Smith Knob. The South Fork Guard Station and the Krassel Work Center are located in the management area and provide a seasonal base for fire and other work crews.

## MANAGEMENT DIRECTION

In addition to Forest-wide Goals, Objectives, Standards, and Guidelines that provide direction for all management areas, the following direction has been developed specifically for this area.

| MPC/Resource Area                             | Direction           | Number | Management Direction Description                                                                                                                                                      |
|-----------------------------------------------|---------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 1.2<br/>Recommended<br/>Wilderness</b> | General Standard    | 1201   | Management actions, including wildland fire use and prescribed fire, must be designed and implemented in a manner that maintains wilderness values, as defined in the Wilderness Act. |
|                                               | Vegetation Standard | 1202   | Mechanical vegetation treatments, including salvage harvest, are prohibited.                                                                                                          |
|                                               | Recreation Standard | 1203   | No new motorized or mechanical uses will be allowed, except where these uses must be allowed in response to reserved or outstanding rights, statute or treaty.                        |
|                                               | Recreation Standard | 1204   | Existing motorized or mechanical uses are allowed only if they do not lead to long-term adverse changes in wilderness values.                                                         |
|                                               | Road Standard       | 1205   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.         |
|                                               | Fire Guideline      | 1206   | The full range of fire suppression strategies may be used to suppress wildfires. Fire suppression tactics should minimize impacts to wilderness values.                               |

| MPC/Resource Area                                                                                                        | Direction            | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------|----------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 2.1<br/>Wild and Scenic<br/>Rivers</b>                                                                            | General Objective    | 1207   | Work with the Regional Office to recommend the South Fork Salmon River and the Secesh River for designation under the Wild and Scenic Rivers Act.                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                          | General Standard     | 1208   | Manage the South Fork Salmon River and Secesh River suitable corridors to their assigned classification standards, and preserve their outstandingly remarkable values and free-flowing status, until the rivers are formally designated by Congress or released from further consideration as Wild and Scenic River candidates.                                                                                                                                                                                                                      |
|                                                                                                                          | Vegetation Guideline | 1209   | In Recreational corridors, mechanical vegetation treatments, including salvage harvest, may be used as long as Outstandingly Remarkable Values (ORVs) are maintained within the river corridor.                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                          | Fire Guideline       | 1210   | Prescribed fire and wildland fire use may be used in any river corridor as long as ORVs are maintained within the corridor.                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                                                                          | Fire Guideline       | 1211   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize strategies and tactics that minimize the impacts of suppression activities on river classifications and ORVs.                                                                                                                                                                                                                                                                                                                                             |
| <b>MPC 2.2<br/>Research Natural<br/>Areas</b>                                                                            | General Standard     | 1212   | Mechanical vegetation treatments, salvage harvest, prescribed fire, and wildland fire use may only be used to maintain values for which the areas were established, or to achieve other objectives that are consistent with the RNA establishment record or management plan.                                                                                                                                                                                                                                                                         |
|                                                                                                                          | Road Standard        | 1213   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To maintain the values for which the RNA was established.                                                                                                                                                                                                                                                                                                     |
|                                                                                                                          | Fire Guideline       | 1214   | The full range of fire suppression strategies may be used to suppress wildfires. Fire suppression strategies and tactics should minimize impacts to the values for which the RNA was established.                                                                                                                                                                                                                                                                                                                                                    |
| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | General Standard     | 1215   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years).                                                                                                                                                                                                                                                       |
|                                                                                                                          | Vegetation Standard  | 1216   | Mechanical vegetation treatments, excluding salvage harvest, may only occur where:<br>a) The responsible official determines that wildland fire use or prescribed fire would result in unreasonable risk to public safety and structures, investments, or undesirable resource affects; and<br>b) They maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>c) They maintain or restore habitat for native and desired non-native wildlife and plant species. |
|                                                                                                                          | Fire Standard        | 1217   | Wildland fire use and prescribed fire may only be used where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species, or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species.                                                                                                                                                                                                                                    |

| MPC/Resource Area                                                                                                        | Direction              | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------|------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | Road<br>Standard       | 1218   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To address immediate response situations where, if action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                                                                                                     |
|                                                                                                                          | Fire<br>Guideline      | 1219   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                   |
| <b>MPC 3.2<br/>Active Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b>  | General<br>Standard    | 1220   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary (up to 3 years) or short-term (3-15 years) time periods, and must be designed to avoid degradation of existing conditions in the long-term (greater than 15 years).                                                                                                                                                                           |
|                                                                                                                          | Vegetation<br>Standard | 1221   | Vegetation restoration or maintenance treatments—including wildland fire use, mechanical, and prescribed fire—may only occur where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species; or<br>c) Reduce risk of impacts from wildland fire to human life, structures, and investments. |
|                                                                                                                          | Road<br>Standard       | 1222   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To support aquatic, terrestrial, and watershed restoration activities, or<br>d) To address immediate response situations where, if action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                     |
|                                                                                                                          | Fire<br>Guideline      | 1223   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                   |
| <b>MPC 4.1a<br/>Undeveloped<br/>Recreation:<br/>Maintain<br/>Inventoried<br/>Roadless Areas</b>                          | General<br>Standard    | 1224   | Management actions—including wildland fire use, prescribed fire, and special use authorizations—must be designed and implemented in a manner that does not adversely compromise the area’s roadless and undeveloped character in the temporary, short term, and long term. “Adversely compromise” means an action that results in the reduction of roadless or undeveloped acres within any specific IRA. Exceptions to this standard are actions in the 4.1a Road standard, below.    |
|                                                                                                                          | Road<br>Standard       | 1225   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                                                                                          |
|                                                                                                                          | Fire<br>Guideline      | 1226   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the roadless or undeveloped character of the area.                                                                                                                                                                                                                                                                               |



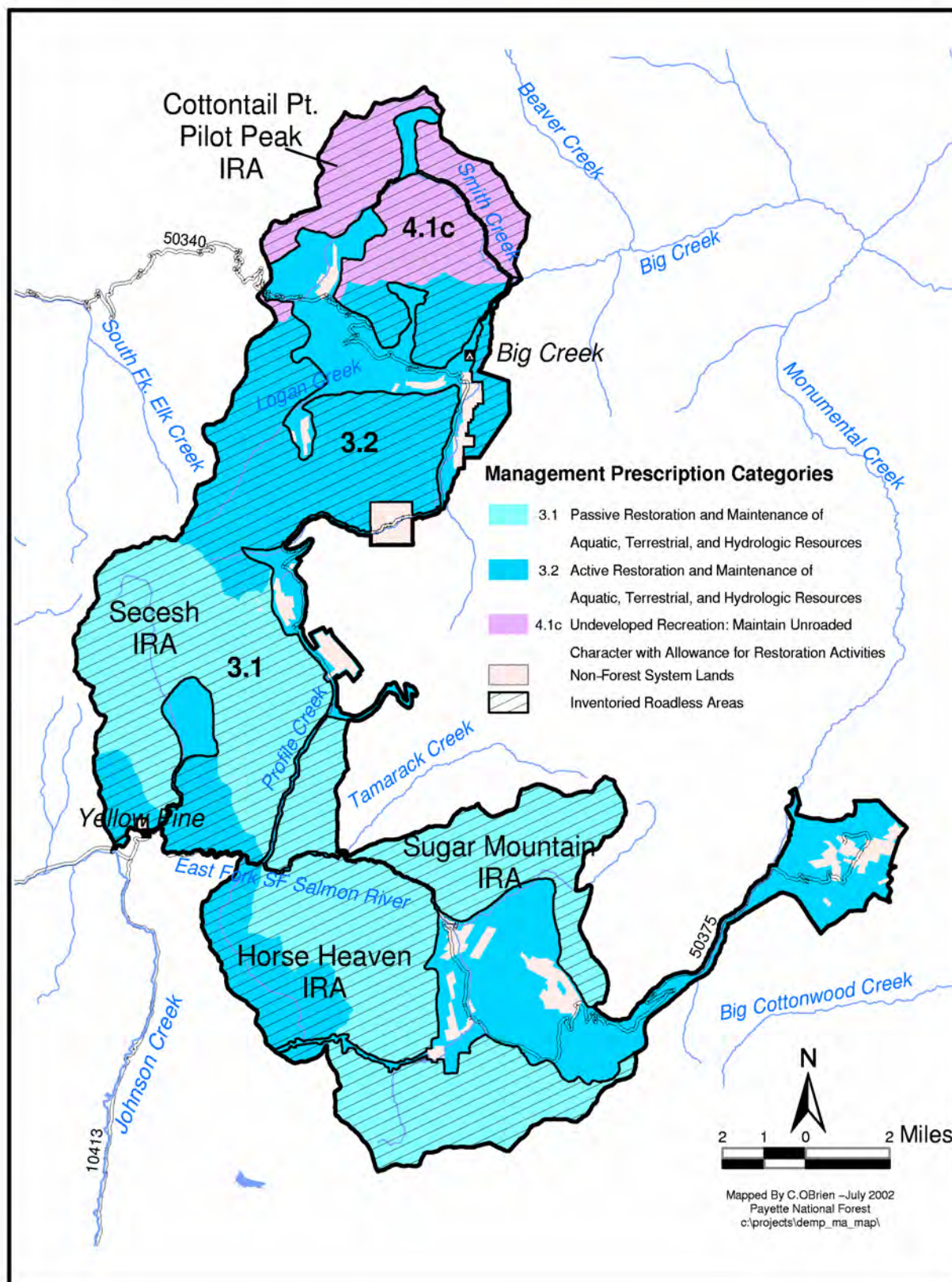
| MPC/Resource Area                                                                                                                         | Direction        | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 4.1a<br/>Undeveloped<br/>Recreation:<br/>Maintain<br/>Inventoried<br/>Roadless Areas</b>                                           | General Standard | 1227   | Management actions—including mechanical vegetation treatments, salvage harvest, wildland fire use, prescribed fire, special use authorizations, and road maintenance—must be designed and implemented in a manner that would be consistent with the identified Management Area ROS objectives in the temporary, short term, and long term. Exceptions to this standard are actions in the 4.1c Roads standards, below. |
|                                                                                                                                           | Road Standard    | 1228   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                          |
|                                                                                                                                           | Fire Guideline   | 1229   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the ROS settings in the area.                                                                                                                                                                                                                                    |
| <b>MPC 4.1c<br/>Undeveloped<br/>Recreation:<br/>Maintain Unroaded<br/>Character with<br/>Allowance for<br/>Restoration<br/>Activities</b> | General Standard | 1230   | Management actions—including mechanical vegetation treatments, salvage harvest, wildland fire use, prescribed fire, special use authorizations, and road maintenance—must be designed and implemented in a manner that would be consistent with the unroaded landscape in the temporary, short term, and long term. Exceptions to this standard are actions in the 4.1c road standard, below.                          |
|                                                                                                                                           | Road Standard    | 1231   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                          |
|                                                                                                                                           | Fire Guideline   | 1232   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the unroaded landscape.                                                                                                                                                                                                                                          |
| <b>Soil, Water,<br/>Riparian, and<br/>Aquatic Resources</b>                                                                               | Goal             | 1233   | Maintain, or improve where degraded, spawning and rearing habitat for Threatened chinook salmon, steelhead trout, and bull trout in the South Fork drainage, which has unique genetic wild stocks of chinook salmon and steelhead.                                                                                                                                                                                     |
|                                                                                                                                           | Objective        | 1234   | Improve water quality and geomorphic integrity by implementing watershed restoration and reducing accelerated sediment impacts in localized areas of the management area.                                                                                                                                                                                                                                              |
|                                                                                                                                           | Objective        | 1235   | Assist in de-listing South Fork Salmon River from the State of Idaho's impaired water bodies list by applying appropriate and active watershed restoration to reduce sediment, which is the identified pollutant of concern.                                                                                                                                                                                           |
|                                                                                                                                           | Objective        | 1236   | Rehabilitate, decommission, or stabilize Forest Trail 076 (Davis Ranch Road) in the Jeanot-Rock subwatershed to reduce accelerated erosion and sedimentation.                                                                                                                                                                                                                                                          |
|                                                                                                                                           | Objective        | 1237   | Restore or maintain riparian area composition, structure, and function in localized areas of the South Fork Salmon River drainage by improving riparian vegetation and hydrologic function through decommissioning or obliterating roads within riparian areas and returning road surfaces, cuts, and fills to productivity.                                                                                           |
|                                                                                                                                           | Objective        | 1238   | Reduce impacts to riparian areas from recreation sites or uses. Identify recreational campsites or parking areas that are contributing unacceptable levels of accelerated sediment, compaction, or vegetation loss. Rehabilitate, relocate, or harden sites where needed to reduce impacts.                                                                                                                            |

| MPC/Resource Area                                   | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Soil, Water, Riparian, and Aquatic Resources</b> | Objective | 1239   | Cooperate with Valley County and other entities to reduce sedimentation to fish habitat along the McCall-to-Yellow Pine Road.                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                     | Objective | 1240   | Inventory existing unclassified roads within the management area to identify watershed improvement opportunities.                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                     | Guideline | 1241   | Collaborate closely with the interested Tribes on all activities that could potentially affect fish habitat in the South Fork drainage.                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Vegetation</b>                                   | Objective | 1242   | Use a combination of prescribed and wildland fire and mechanical treatments to restore or maintain vegetative composition and structure, and to reduce fuel loadings.                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Botanical Resources</b>                          | Objective | 1243   | Maintain or restore known populations and occupied habitats of TEPCS plant species, including Cascade reedgrass, giant helleborine orchid, short-styled tofieldia, wolf's current, and Kellogg's bitterroot to contribute to the long-term viability of these species.                                                                                                                                                                                                                                                                   |
|                                                     | Objective | 1244   | Emphasize reducing spotted knapweed, rush skeletonweed, and other non-native species within rare plant known and potential habitat.                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Non-native Plants</b>                            | Objective | 1245   | To reduce impacts on native plants and other resources, eradicate or control infestations of spotted knapweed and rush skeletonweed. Control density and size of Canada thistle, St. Johnswort, and yellow toadflax populations.                                                                                                                                                                                                                                                                                                         |
| <b>Wildlife Resources</b>                           | Objective | 1246   | Increase flammulated owl habitat and potential white-headed woodpecker habitat by managing ponderosa pine stands within the Warm Dry Douglas-fir/Moist Ponderosa Pine and Dry Grand Fir vegetation groups toward the desired ranges of size classes, canopy closures, species composition, snags, and coarse woody debris, as described in Appendix A.                                                                                                                                                                                   |
|                                                     | Guideline | 1247   | An increase in the flammulated owl and potential white-headed woodpecker habitat may be achieved by the following methods:<br>a) Reducing tree densities and ladder fuels under and around existing large ponderosa trees and snags to reduce the risk of tree-replacing fire and to restore more open canopy conditions.<br>b) Managing the firewood program to retain large-diameter ponderosa pine and large snags of other species through signing, public education, size restriction, area closures, or other appropriate methods. |
| <b>Recreation Resources</b>                         | Objective | 1248   | To improve recreation access and opportunities, resolve issues with easements where trails cross private lands that limit, or could limit, public use                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                     | Objective | 1249   | Establish and enforce a camping buffer/closure to maintain or restore sensitive backcountry areas, particularly around lakeshores.                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                     | Objective | 1250   | Provide designated routes for motorized (ATV and motorcycle) use and emphasize loop opportunities. Provide for non-motorized uses as well, and consider separation of uses where user experience could be enhanced. Focus trail management and maintenance on improving the user's experience and correcting resource damage.                                                                                                                                                                                                            |
|                                                     | Objective | 1251   | Establish a trailhead and install Kiosk for Forest Trails 121, 120, and 284; and provide information appropriate to the level of trail use to enhance trail access and visitor information opportunities.                                                                                                                                                                                                                                                                                                                                |
|                                                     | Objective | 1252   | Replace existing toilet with a barrier-free design toilet at Shiefer Campground to make this facility more accessible to all potential users.                                                                                                                                                                                                                                                                                                                                                                                            |

| MPC/Resource Area            | Direction | Number                                                                                                                                                                                                                                                                                                    | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |
|------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-----------|----------------------|--|--------|--------|------------------------------|-----|-----|--------------------------|-----|-----|----------------|-----|----|
| Recreation Resources         | Objective | 1253                                                                                                                                                                                                                                                                                                      | Establish trailhead and install kiosk for Forest Trail 129 to enhance trail access and visitor information opportunities.                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |
|                              | Objective | 1254                                                                                                                                                                                                                                                                                                      | Install potable water at Shiefer Campground to improve recreation experiences.                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |
|                              | Objective | 1255                                                                                                                                                                                                                                                                                                      | Evaluate and incorporate methods to help prevent weed establishment and spread from recreation and trail use in the Jeanot-Rock, Krassel-Indian, and West Fork Buckhorn Creek subwatersheds. Methods to be considered include annual weed inspection and treatment of trailheads and other high-use areas; and posting educational notices in these areas to inform the public of areas that are susceptible to weed invasion and measures they can take to help prevent weed establishment and spread.                                     |  |  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |
|                              | Objective | 1256                                                                                                                                                                                                                                                                                                      | <div>Achieve or maintain the following ROS strategy:</div> <table><tr><th rowspan="2">ROS Class</th><th colspan="2">Percent of Mgt. Area</th></tr><tr><th>Summer</th><th>Winter</th></tr><tr><td>Semi-Primitive Non-Motorized</td><td>55%</td><td>59%</td></tr><tr><td>Semi-Primitive Motorized</td><td>29%</td><td>37%</td></tr><tr><td>Roaded Natural</td><td>16%</td><td>4%</td></tr></table> <div>The above numbers reflect current travel regulations. These numbers may change as a result of future travel regulation planning</div> |  |  | ROS Class | Percent of Mgt. Area |  | Summer | Winter | Semi-Primitive Non-Motorized | 55% | 59% | Semi-Primitive Motorized | 29% | 37% | Roaded Natural | 16% | 4% |
|                              | ROS Class | Percent of Mgt. Area                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |
|                              |           | Summer                                                                                                                                                                                                                                                                                                    | Winter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |
| Semi-Primitive Non-Motorized | 55%       | 59%                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |
| Semi-Primitive Motorized     | 29%       | 37%                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |
| Roaded Natural               | 16%       | 4%                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |
| Guideline                    | 1257      | Consider Buckhorn, Camp Creek, Four Mile, Ponderosa, Poverty Flat, and Big Creek Campgrounds as high priority areas for noxious weed inspection, eradication, and prevention. Noxious weed detection, management, and prevention should be practiced and promoted at these facilities on an annual basis. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |
| Scenic Environment           | Objective | 1258                                                                                                                                                                                                                                                                                                      | Maintain the large, open ponderosa pine stands along the South Fork Salmon River Road to maintain a natural-appearing and scenic setting for visitors traveling through the Forest.                                                                                                                                                                                                                                                                                                                                                         |  |  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |
| Cultural Resources           | Objective | 1259                                                                                                                                                                                                                                                                                                      | Prepare management plans for properties listed on the National Register of Historic Places—including Hays Station Historic Administrative Site and China Mountain Celedon Terraced Gardens (PY-578), Chi Sandra Terraced Gardens (PY-776), Ah Toy’s Terraced Gardens (PY-620), and Chinese Trail (PY-794)—to meet federal requirements for management of historic properties.                                                                                                                                                               |  |  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |
|                              | Objective | 1260                                                                                                                                                                                                                                                                                                      | Maintain fences and markers at burial sites—including Hamilton Burial (PY-246), Reed Burials (PY-336), Deadman Bar (PY-381), Bill Darling (PY-459), Carrey Twins (PY-1164), Man and Girl Burial (PY-1161), Jack Shiefer (PY-1160), Hackett Cemetery (PY-632), Smith Ranch (PY-612), and Elk Creek Cemetery (PY-630)—to meet state and federal legal requirements for protection of historic properties.                                                                                                                                     |  |  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |
|                              | Objective | 1261                                                                                                                                                                                                                                                                                                      | Conduct cultural resource inventories of selected unsurveyed areas within the South Fork Salmon River to meet federal requirements for identification of historic properties.                                                                                                                                                                                                                                                                                                                                                               |  |  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |
| Timberland Resources         | Objective | 1262                                                                                                                                                                                                                                                                                                      | Manage existing plantations to meet desired vegetation conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |           |                      |  |        |        |                              |     |     |                          |     |     |                |     |    |

| MPC/Resource Area             | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire Management</b>        | Objective | 1263   | Identify areas appropriate for Wildland Fire Use, emphasizing Inventoried Roadless Areas. Use wildland fire to restore or maintain vegetative desired conditions and to reduce fuel loadings.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                               | Objective | 1264   | Use prescribed fire and mechanical treatments within and adjacent to wildland-urban interface areas and Forest Service administrative sites to reduce wildfire hazards. Develop and prioritize vegetation treatment plans for wildland-urban interface in coordination with local and tribal governments, agencies, and landowners.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                               | Objective | 1265   | Coordinate and emphasize fire education and prevention programs with private landowners to help reduce wildfire hazards and risks within wildland-urban interface areas. Work with landowners to increase defensible space around structures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                               | Guideline | 1266   | Coordinate with the Boise NF to develop compatible wildland fire suppression and wildland fire use strategies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Lands and Special Uses</b> | Objective | 1267   | Complete site plans for Nick Peak, Miners Peak, and Elk Summit communications sites to meet agency policy requirements and avoid potential use conflicts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                               | Objective | 1268   | Pursue opportunities to acquire Reed Ranch and Davis Ranch so that Forest management actions can reduce current impacts to water quality and fish habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Facilities and Roads</b>   | Objective | 1269   | Maintain existing facilities at Pilot Peak Lookout and at South Fork Guard Station for crew quarters.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                               | Standard  | 1270   | <p>Do not reopen classified roads in Level 1 maintenance status or Level 2 roads that have become impassable unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that:</p> <ul style="list-style-type: none"> <li>a) For resources that are within their range of desired conditions, reopening these roads for use shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and</li> <li>b) For resources that are already in a degraded condition, reopening these roads shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and</li> <li>c) Adverse effects to TEPC species or their habitats are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitats.</li> </ul> <p>Where reopening these roads cannot meet these constraints, consider decommissioning. An exception to this standard is where reopening Level 1 or 2 classified roads is required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations).</p> |
|                               | Standard  | 1271   | New roads shall not be built except to replace existing roads in RCAs or directly repair human-caused damage to TEPC fish habitat in streams unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that adverse effects to TEPC species or their habitats are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitats.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

Management Area 13 –Big Creek/Stibnite –Location Map



## Management Area 13 Big Creek/Stibnite

### MANAGEMENT AREA DESCRIPTION

**Management Prescriptions** - Management Area 13 has the following management prescriptions (see map on preceding page for distribution of prescriptions).

| Management Prescription Category (MPC)                                                   | Percent of Mgt. Area |
|------------------------------------------------------------------------------------------|----------------------|
| 3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources | 43                   |
| 3.2 – Active Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources  | 47                   |
| 4.1c – Undeveloped Rec.: Maintain Unroaded Character with Allowance for Restoration      | 10                   |

**General Location and Description** - Management Area 13 is comprised of lands administered by the Payette National Forest within the upper Big Creek, East Fork South Fork Salmon River, Monumental Creek, and Marble Creek drainages (see map, preceding page). The area lies in Valley and Idaho Counties, and is part of the Krassel Ranger District. The management area is an estimated 104,500 acres, which includes numerous mining-related private inholdings that, together, make up about 4 percent of the area. This area is adjacent to but has been excluded from the Frank Church-River of No Return Wilderness because of past mining activity and current mining potential. About 17 percent (24,000 acres) of this management area is comprised of Boise National Forest lands that are administered by the Payette. The Boise National Forest borders the area to the west, the Payette National Forest lies to the north, and the Frank Church-River of No Return Wilderness Area borders to the east and south. The primary uses or activities in this management area have been mining, dispersed recreation, and watershed restoration.

**Access** - The main access to the Stibnite and Thunder Mountain area is by Forest Road 412 from Yellow Pine to Stibnite, and Forest Road 375 from Stibnite to Thunder Mountain. The main access route to the Big Creek area is the native-surfaced, Forest Road 340, the Warren-Profile Gap Road. This road is usually open from July through early November. Roads were originally constructed to access mining areas, and are narrow, winding, and native-surfaced. A public airstrip at Big Creek also serves local landowners and recreationists. The density of classified roads for the area is an estimated 0.7 mile per square mile. Total road density for management area subwatersheds ranges between 0 and 2.2 miles per square mile. Several trails provide access to the roadless portions of the area.

**Special Features** - The management area lies adjacent to the Frank Church-River on No Return Wilderness, and trailheads in the area access trails that lead to Big Creek, Chamberlain Basin, Cougar Basin, Monumental Creek, and Missouri Ridge. Prominent landmarks in this area include the Stibnite and Thunder Mountain mining districts, and the Yellow Pine Pit (Glory Hole) on the East Fork South Fork Salmon River, and numerous mine ruins in the Big Creek area. The unincorporated community of Edwardsburg-Big Creek has residents during the summer recreation season. Big Creek Guard Station and Airstrip are also in this area.

An estimated 75 percent of the management area is inventoried as roadless, including all of the Sugar Mountain, Smith Creek, Placer Creek, and Big Creek Fringe Roadless Areas, and portions of the Secesh, Meadow Creek, Horse Heaven, Cottontail Point/Pilot Peak Roadless Areas.

This management area has a rare and significant fish species mix of chinook salmon, steelhead, bull trout, and westslope cutthroat trout, the first three of which are listed as Threatened species under the Endangered Species Act, and the latter is a Region 4 Sensitive species. Some streams or portions of streams within the management area are designated critical habitat and Essential Fish Habitat for chinook salmon.

**Air Quality** - Portions of this management area lie within Montana/Idaho Airsheds ID-15 and ID-16 and Valley County. Particulate matter is the primary pollutant of concern related to Forest management. There are two ambient air monitors located within Airshed ID-15 to evaluate current background levels, trends, and seasonal patterns of particulate matter. These are in McCall and Garden Valley. Airshed ID-16 contains no monitors. Three Class I areas are within 100 kilometers of this management area: the Hells Canyon, Selway-Bitterroot, and Sawtooth Wildernesses. Visibility monitoring has been expanded for these areas.

Between 1995 and 1999, emissions trends in Valley County improved for PM 10, while PM 2.5 emissions remained constant. The most common sources of particulate matter within the county were wildfire, prescribed fire, and fugitive dust from unpaved roads. In addition to Forest management activities, crop residue and ditch burning may contribute to particulate matter emissions, although the amount of agricultural-related burning was very low in Valley County (less than 600 acres). There were no point sources within the county.

**Soil, Water, Riparian, and Aquatic Resources** - Elevations range from 5,250 feet on the East Fork South Fork River to 9,233 feet atop Greeley Mountain. The dominant landforms in this area are glaciated mountains and uplands, frost-churned uplands, fluvial mountains, and depositional lands. Slope gradients average 10 to 80 percent in the glaciated mountains, 15 to 40 percent in the frost-churned uplands, 30 to 80 percent in the fluvial mountains, and 0 to 20 percent in the depositional lands. The area is predominantly underlain by granites of the Idaho batholith and associated metamorphic roof pendants, mostly quartzite, marble and calc-silicates. Soils generally have moderate to high surface erosion potential, and low to moderate productivity. Subwatershed vulnerability ratings range from low to high, with the majority being moderate (see table below). Geomorphic Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately) (see table below). The Upper East Fork South Fork Watershed has impacts from past mining operations and roads. Impacts include accelerated sediment, chemical contamination, and channel modification. Big Creek and Upper Monumental Creek Watersheds also have impacts from past mining operations and roads. Impacts are accelerated sediment and channel modification.

The management area comprises portions of four watersheds that extend across three subbasins. Part of the management area is in the Upper East Fork South Fork Watershed of the South Fork Salmon River Subbasin. However, the area also includes a long cherry stem into the Upper Monumental Creek Watershed of the Lower Middle Fork Salmon Subbasin, with a small portion



in the Upper Marble Creek Watershed of the Upper Middle Fork Salmon Subbasin. The Big Creek area comprises a portion of the Upper Big Creek Watershed in the Lower Middle Fork Salmon Subbasin. The major streams in the area are the East Fork South Fork Salmon River, Big Creek, Profile Creek, and Monumental Creek. Several high mountain lakes occur in the upper reaches of area streams, but none has road or trail access. No Mans-Boulder subwatershed is considered part of the state-regulated public water system for the community of Yellow Pine.

Water Quality Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately) (see table below). The Upper East Fork South Fork Watershed has localized impacts from past mining operations and roads. Impacts include accelerated sediment, chemical contamination, and channel modification. Big Creek and Upper Monumental Creek Watersheds also have localized impacts from past mining operations and roads. Impacts are accelerated sediment and channel modification. Five of the 14 subwatersheds in this area were listed in 1998 as having impaired water bodies under Section 303(d) of the Clean Water Act. These subwatersheds are Upper Monumental Creek, No Mans-Boulder, Sugar Creek, and Upper East Fork South Fork Salmon River. The pollutants of concern are sediment and metals. There are currently no TMDL-assigned subbasins associated with this management area.

| Subwatershed Vulnerability |      |     | Geomorphic Integrity |      |     | Water Quality Integrity |      |     | No. 303(d) Subs | No. Subs With TMDLs | No. Public Water System Subs |
|----------------------------|------|-----|----------------------|------|-----|-------------------------|------|-----|-----------------|---------------------|------------------------------|
| High                       | Mod. | Low | High                 | Mod. | Low | High                    | Mod. | Low |                 |                     |                              |
| 4                          | 8    | 2   | 8                    | 3    | 3   | 4                       | 6    | 4   | 4               | 0                   | 1                            |

Native cutthroat trout are found in nearly every subwatershed, and redband trout and steelhead are found throughout this management area. The upper East Fork South Fork Salmon River is occupied by chinook salmon, steelhead, bull trout, and westslope cutthroat trout. Introductions of brook trout, mining activities and roads have reduced habitat quality for native fishes. Brook trout, sedimentation, chemical contamination, passage barriers, and large wood depletion all cause habitats to be functioning at risk.

In the Upper Big Creek, Upper Monumental Creek, and Upper Marble Creek Watersheds, localized accelerated sediment impacts have occurred primarily from mining, roads, and recreation, but the area still provides spawning and rearing habitat for chinook salmon, steelhead trout, bull trout, and westslope cutthroat trout. The incidence of introduced brook trout is low, with a corresponding low risk for genetic contamination of bull trout populations.

The Sugar Creek, Upper East Fork of the South Fork Salmon River, Upper Marble Creek, Upper Big Creek, and Smith Creek subwatersheds are identified as important to the recovery of listed fish species, and as high-priority areas for restoration.

**Vegetation** - Vegetation at lower elevations is typically Douglas-fir on south and west aspects, and Douglas-fir, lodgepole pine, and grand fir forests on north and east aspects. Mid elevations are dominated forest communities of lodgepole pine, grand fir, and subalpine fir, with pockets of aspen. Subalpine fir and whitebark pine are found at upper elevations.



The dominant potential vegetation groups in this area are Warm Dry Subalpine Fir (40 percent), Persistent Lodgepole Pine (17 percent), High Elevation Subalpine Fir (17 percent), Cool Moist Douglas-Fir (5 percent) and Warm Douglas-fir/Moist Ponderosa Pine (5 percent). Grasslands, shrublands, rock, and water comprise an estimated 10 percent of the area.

The High Elevation Subalpine Fir and Persistent Lodgepole Pine groups are generally at or near properly functioning condition, but they are moving toward the upper end of their successional cycle throughout much of the management area. Whitebark pine is starting to experience mortality from blister rust. In the Warm Dry Subalpine Fir group, stand densities and fuel loadings have reached the point where stands are at low but increasing risk to insect or disease outbreaks or stand-replacing fire. The Cool Moist Douglas-fir and Warm Douglas-fir/Moist Ponderosa Pine groups are in a similar condition. Some aspen occurs, but stands are generally declining and being replaced by mixed conifer.

Although riparian vegetation is at or near properly functioning condition for much of the area, localized areas have received impacts from mining, roads, and recreation. These localized areas are functioning at risk (moved from aquatic section).

**Botanical Resources** – Bent-flowered milkvetch and Borsch's stonecrop, proposed Region 4 Sensitive species, occur within this management area. Currently, no federally listed or proposed plant species are known to occur in the area, but potential habitat for Ute ladies'-tresses and slender moonwort may exist. Ute ladies'-tresses, a Threatened orchid species, may have moderate to high potential habitat in riparian/wetland areas up to 7,000 feet. Slender moonwort, a Candidate species, may occur in moderate to higher elevation grasslands, meadows, and small openings in spruce and lodgepole pine.

**Non-native Plants** - A number of noxious weeds and exotic plants have been introduced into the management area, particularly along main travel ways. An estimated 7 percent of the area is highly susceptible to weed invasion and spread. The main weed of concern is spotted knapweed, a highly invasive species that currently occurs in small, scattered populations.

**Wildlife Resources** - Because most of this management area lies above 5,500 feet, the terrestrial and avian wildlife to be found are generally high-elevation species. The shrublands and forests provide big game summer range but are generally too high for winter range. Douglas-fir and grand fir forests at lower elevations provide habitat for Region 4 sensitive species, goshawk, and great gray owl. Peregrine falcon and mountain goats can be found in isolated areas with rocky bluffs. High-elevation subalpine fir forests provide habitat for boreal owl, three-toed woodpecker, wolverine, lynx, as well as summer range for mammals such as deer, elk, black bear, and mountain lion. Habitat for threatened lynx has been mapped in Lynx Analysis Units. Management Area 13 is in the Central Idaho Wolf Recovery Area, and wolves are known to occur here. The entire area provides habitat for migratory land birds. Overall, terrestrial wildlife habitat is near properly functioning condition in the high-elevation vegetation groups, but at low but increasing risk in the lower-elevation groups due to insect or disease outbreaks or stand-replacing fire.

**Recreation Resources** - Recreation is a major use in the Big Creek area. Activities include hunting, fishing, sightseeing, and pack trips from several trailheads into the adjacent Wilderness. Two resorts operate out of Big Creek during the summer and fall seasons, and there is a small campground next to the airstrip. The remainder of the management area receives low to moderate dispersed use associated mainly with the Big Creek/Edwardsburg area, Missouri Ridge and Monumental Creek Trails into the Wilderness, and with high mountain lakes in the upper Profile Creek drainage. Most use in this area is local, though users come through the area from all over the country to use the adjacent Wilderness, especially during big-game hunting seasons. The area is in Idaho Fish and Game Management Unit 25 and 26.

The recreation emphasis is on providing dispersed opportunities.

**Scenic Environment** – Visually sensitive routes and use areas represent locations from which the scenic environment is considered especially important. These routes or areas generally have a more restrictive VQO assigned to them than areas not seen from such locations. The following is a list of visually sensitive routes or use areas with this management area. There may also be sensitive routes or use areas in adjacent management areas that could be affected by actions taken in this management area.

| Route or Area Type | Sensitivity Level | Name of Route or Area                                                  |
|--------------------|-------------------|------------------------------------------------------------------------|
| Roads              | 1                 | Warren-Profile Gap 340, Big Creek-Smith Creek 371, McCall-Stibnite 412 |
| Roads              | 2                 | Logan Creek 343                                                        |
| Trails             | 1                 | Mosquito Ridge 003, Big Creek 196, Cougar Basin 004                    |
| Trails             | 2                 | None                                                                   |
| Use Areas          | 1                 | Fish Lake, Yellow Pine, Middle Lake, Crater Lake, Logan Lake           |
| Use Areas          | 2                 | Edwardsburg                                                            |

**Cultural Resources** – Cultural themes in this area include Prehistoric, Mining, and Settlement. This area received intermittent prehistoric use from ancestors of American Indian tribes. Historically, the dominant use in the area has been mining, represented by numerous mining sites and communities in the Stibnite, Yellow Pine, Big Creek, and Thunder Mountain Mining Districts.

**Timberland Resources** - Of the estimated 71,900 tentatively suited acres in this management area, there are no identified suited timberlands. Lands in MPCs 3.1, 3.2, and 4.1c have been identified as not suited for timber production. Forest vegetation management actions may be undertaken to support the achievement of vegetation desired conditions or other resource objectives in areas allocated to MPCs 3.1, 3.2 and 4.1c. Any timber production that may result from forest vegetation management actions will not count toward the allowable sale quantity but will contribute toward the Forest's Total Sale Program Quantity (TSPQ).

Past timber management has been relatively low and localized, consisting mainly of harvest related to mining or town construction, small salvage sales, and collection of Forest products such as fuelwood, posts, and poles.

**Rangeland Resources** - This area is managed for pack and saddle stock, and has no sheep or cattle allotments. There are only 9 acres that are considered capable rangeland.

**Mineral Resources** - Several hundred mining claims exist in Management Area 13. This area has a long history of mineral development, and the potential for small-scale and large-scale mineral development is high. This is the most active mining development area on the Forest. Due to anadromous fisheries and proximity to wilderness, management sensitivity is very high. Mining at Stibnite ended in 1997, and operations ceased in 1998. Reclamation began in 1998 and continued through 2000.

**Fire Management** – There has been little use of prescribed fire in this area. Recent large wildland fires include the Bishop Creek Fire (1990, 100 acres) and the Indian Point Fire (2000, 9,370 acres).

Yellow Pine and Edwardsburg-Big Creek are National Fire Plan communities, and Upper Big Creek and No Mans-Boulder are considered wildland-urban interface subwatersheds due to residential development adjacent to the Forest. No Mans-Boulder and Quartz Creek are also considered to pose risks to life and property from potential post-fire floods and debris flows. Historical fire regimes for the area are estimated to be: 17 percent lethal, 69 percent mixed1 or 2, and 8 percent non-lethal. Only 7 percent of the area regimes have vegetation conditions that are highly departed from their historical range, although most of this change is in the historically non-lethal fire regimes, where wildfire would likely be much larger and more intense and severe than historically. In addition, 35 percent of the area regimes have vegetation conditions that are moderately departed from their historical range. Wildfire in these areas may result in larger patch sizes of high intensity or severity, but not to the same extent as in the highly departed areas in non-lethal fire regimes.

**Lands and Special Uses** - Special-use authorizations include a designated utility corridor containing the Emmett-Stibnite power transmission line, Big Creek Airstrip, several access roads to private property, four domestic water diversions, two irrigation ditches, three FERC hydropower permits, and a power line right-of-way to Stibnite.

## MANAGEMENT DIRECTION

In addition to Forest-wide Goals, Objectives, Standards, and Guidelines that provide direction for all management areas, the following direction has been developed specifically for this area.

| MPC/Resource Area | Direction        | Number | Management Direction Description                                                                                                                                                                                                                                                               |
|-------------------|------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MPC 3.1           | General Standard | 1301   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years). |

| MPC/Resource Area                                                                                                        | Direction              | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------|------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 3.1<br/>Passive Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b> | Vegetation<br>Standard | 1302   | Mechanical vegetation treatments, excluding salvage harvest, may only occur where:<br>a) The responsible official determines that wildland fire use or prescribed fire would result in unreasonable risk to public safety and structures, investments, or undesirable resource affects; and<br>b) They maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>c) They maintain or restore habitat for native and desired non-native wildlife and plant species. |
|                                                                                                                          | Fire<br>Standard       | 1303   | Wildland fire use and prescribed fire may only be used where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species, or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species.                                                                                                                                                                                                                                    |
|                                                                                                                          | Road<br>Standard       | 1304   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To address immediate response situations where, if action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result.                                                                                                                                                                   |
|                                                                                                                          | Fire<br>Guideline      | 1305   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                                                                                                                 |
| <b>MPC 3.2<br/>Active Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b>  | General<br>Standard    | 1306   | Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary (up to 3 years) or short-term (3-15 years) time periods, and must be designed to avoid degradation of existing conditions in the long-term (greater than 15 years).                                                                                                                                                                                                                                         |
|                                                                                                                          | Vegetation<br>Standard | 1307   | Vegetation restoration or maintenance treatments—including wildland fire use, mechanical, and prescribed fire—may only occur where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species; or<br>c) Reduce risk of impacts from wildland fire to human life, structures, and investments.                                                               |
|                                                                                                                          | Fire<br>Standard       | 1308   | Wildland fire use and prescribed fire may only be used where they:<br>a) Maintain or restore water quality needed to fully support beneficial uses and habitat for native and desired non-native fish species; or<br>b) Maintain or restore habitat for native and desired non-native wildlife and plant species; or<br>c) Reduce risk of impacts from wildland fire to human life, structures, and investments.                                                                                                                                     |

| MPC/Resource Area                                                                                                                         | Direction           | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MPC 3.2<br/>Active Restoration<br/>and Maintenance of<br/>Aquatic, Terrestrial,<br/>and Hydrologic<br/>Resources</b>                   | Road<br>Standard    | 1309   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty, or<br>c) To support aquatic, terrestrial, and watershed restoration activities, or<br>d) To address immediate response situations where, if action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result. |
|                                                                                                                                           | Fire<br>Guideline   | 1310   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize suppression strategies and tactics that minimize impacts on aquatic, terrestrial, or watershed resources.                                                                                                                                                                                                                                                               |
| <b>MPC 4.1c<br/>Undeveloped<br/>Recreation:<br/>Maintain Unroaded<br/>Character with<br/>Allowance for<br/>Restoration<br/>Activities</b> | General<br>Standard | 1311   | Management actions—including mechanical vegetation treatments, salvage harvest, wildland fire use, prescribed fire, special use authorizations, and road maintenance—must be designed and implemented in a manner that would be consistent with the unroaded landscape in the temporary, short term, and long term. Exceptions to this standard are actions in the 4.1c road standard, below.                                                                      |
|                                                                                                                                           | Road<br>Standard    | 1312   | Road construction or reconstruction may only occur where needed:<br>a) To provide access related to reserved or outstanding rights, or<br>b) To respond to statute or treaty.                                                                                                                                                                                                                                                                                      |
|                                                                                                                                           | Fire<br>Guideline   | 1313   | The full range of fire suppression strategies may be used to suppress wildfires. Emphasize tactics that minimize impacts of suppression activities on the unroaded landscape.                                                                                                                                                                                                                                                                                      |
| <b>Soil, Water,<br/>Riparian, and<br/>Aquatic Resources</b>                                                                               | Goal                | 1314   | Maintain or restore habitat for threatened species in the Sugar Creek and Upper East Fork South Fork Watershed, and to maintain habitat for listed fish species in the Upper Big Creek, Upper Monumental Creek, Smith Creek, and Upper Marble Creek subwatersheds.                                                                                                                                                                                                 |
|                                                                                                                                           | Objective           | 1315   | Restore or maintain riparian area composition, structure, and function in localized areas of the Upper East Fork South Fork Salmon River drainage by improving riparian vegetation and hydrologic function through decommissioning or obliterating roads within riparian areas and returning road surfaces, cuts, and fills to productivity.                                                                                                                       |
|                                                                                                                                           | Objective           | 1316   | Improve water quality by reducing impacts from accelerated sediment and chemical contamination in the Upper East Fork South Fork Salmon River drainage, including the Sugar Creek and Upper East Fork South Fork Salmon River subwatersheds.                                                                                                                                                                                                                       |
|                                                                                                                                           | Objective           | 1317   | Reduce impacts to riparian areas from recreation sites or uses. Identify recreational campsites, parking areas, or trails that are contributing unacceptable levels of accelerated sediment, compaction, or vegetation loss. Rehabilitate, relocate, or harden sites where needed to reduce impacts.                                                                                                                                                               |
|                                                                                                                                           | Objective           | 1318   | Restore fish habitat degraded from past mining activities in the Upper East Fork South Fork Salmon River drainage, including the Sugar Creek and Upper East Fork South Fork Salmon River subwatersheds.                                                                                                                                                                                                                                                            |
|                                                                                                                                           | Objective           | 1319   | Assist in de-listing the East Fork South Fork of Salmon River from the State of Idaho's impaired water bodies list by applying appropriate and active watershed restoration to reduce sediment and metals contamination, which are the identified pollutants of concern.                                                                                                                                                                                           |
|                                                                                                                                           | Objective           | 1320   | Eliminate the effects to fish habitat from the Big Creek ford in the Upper Big Creek subwatershed.                                                                                                                                                                                                                                                                                                                                                                 |

| MPC/Resource Area                                                                                                               | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                      |                      |        |
|---------------------------------------------------------------------------------------------------------------------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------|
| Vegetation                                                                                                                      | Objective | 1321   | Use a combination of prescribed and wildland fire and mechanical treatments to restore or maintain vegetative composition and structure, and to reduce fuel loadings.                                                                                                                                                 |                      |        |
| Botanical Resources                                                                                                             | Objective | 1322   | Maintain or restore known populations and occupied habitats of TEPCS plant species, including bent-flowered milkvetch and Borsch’s stonecrop to contribute to the long-term viability of these species.                                                                                                               |                      |        |
| Non-native Plants                                                                                                               | Objective | 1323   | To reduce impacts on native plants and other resources, eradicate or control infestations of spotted knapweed. Prevent the establishment and spread of new noxious weed infestations.                                                                                                                                 |                      |        |
| Recreation Resources                                                                                                            | Objective | 1324   | Continue to provide access to popular Wilderness Area recreation destinations to maintain recreation opportunities and experiences.                                                                                                                                                                                   |                      |        |
|                                                                                                                                 | Objective | 1325   | Maintain or improve trailheads for Big Creek, Mosquito Ridge, Cougar Basin, Missouri Ridge, and Monumental Creek during the planning period to promote trail access opportunities.                                                                                                                                    |                      |        |
|                                                                                                                                 | Objective | 1326   | Achieve or maintain the following ROS strategy:                                                                                                                                                                                                                                                                       |                      |        |
|                                                                                                                                 |           |        | ROS Class                                                                                                                                                                                                                                                                                                             | Percent of Mgt. Area |        |
|                                                                                                                                 |           |        |                                                                                                                                                                                                                                                                                                                       | Summer               | Winter |
|                                                                                                                                 |           |        | Semi -Primitive Non-Motorized                                                                                                                                                                                                                                                                                         | 58%                  | 17%    |
|                                                                                                                                 |           |        | Semi-Primitive Motorized                                                                                                                                                                                                                                                                                              | 1%                   | 71%    |
|                                                                                                                                 |           |        | Roaded Natural                                                                                                                                                                                                                                                                                                        | 34%                  | 1%     |
| Roaded Modified                                                                                                                 |           |        | 7%                                                                                                                                                                                                                                                                                                                    | 11%                  |        |
| The above numbers reflect current travel regulations. These numbers may change as a result of future travel regulation planning |           |        |                                                                                                                                                                                                                                                                                                                       |                      |        |
| Cultural Resources                                                                                                              | Objective | 1327   | Prepare management plans for properties listed on the National Register of Historic Places, including Big Creek Commissary (PY-797) to meet federal requirements for management of historic properties.                                                                                                               |                      |        |
|                                                                                                                                 | Objective | 1328   | Maintain fences and markers at burial sites, including Logan Creek Burial (PY-1131), Napier A. Edwards (PY-1449), Varnes Memorial Marker (PY-1513), Roosevelt Cemetery (PY-51), Grant U. Smith (PY-1132), and MacDonald (PY-1320) to meet state and federal legal requirements for protection of historic properties. |                      |        |
|                                                                                                                                 | Objective | 1329   | Conduct a cultural resource inventory of the Smith Creek Mining District to identify and document important cultural resources.                                                                                                                                                                                       |                      |        |
|                                                                                                                                 | Objective | 1330   | Continue inventory and documentation of Thunder Mountain Mining District to identify and document important cultural resources.                                                                                                                                                                                       |                      |        |
| Mineral Resources                                                                                                               | Objective | 1331   | Provide interpretive information about historic mining sites and activities in the Stibnite, Thunder Mountain, and Edwardsburg areas to provide education opportunities for Forest visitors.                                                                                                                          |                      |        |
|                                                                                                                                 | Objective | 1332   | Reduce toxic hazards from the Cinnabar Mine site by completing HAZMAT cleanup of mine site.                                                                                                                                                                                                                           |                      |        |
|                                                                                                                                 | Objective | 1333   | Identify and rehabilitate abandoned mined lands within this management area to reduce impacts to water quality and fish habitat for listed and native fish species.                                                                                                                                                   |                      |        |
| Fire Management                                                                                                                 | Objective | 1334   | Identify areas appropriate for Wildland Fire Use, emphasizing Inventoried Roadless Areas. Use wildland fire to restore or maintain vegetative desired conditions and to reduce fuel loadings.                                                                                                                         |                      |        |

| MPC/Resource Area             | Direction | Number | Management Direction Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire Management</b>        | Objective | 1335   | Use prescribed fire and mechanical treatments within and adjacent to wildland-urban interface areas and Forest Service administrative sites to manage fuels to reduce wildfire hazards. Develop and prioritize vegetation treatment plans for wildland-urban interface in coordination with local and tribal governments, agencies, and landowners.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                               | Objective | 1336   | Coordinate and emphasize fire education and prevention programs with private landowners to help reduce wildfire hazards and risks. Work with landowners to increase defensible space around structures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                               | Guideline | 1337   | Coordinate with the Boise NF to develop compatible wildland fire suppression and wildland fire use strategies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Lands and Special Uses</b> | Objective | 1338   | Work with landowners in the Lick Creek Trailhead area to find an alternative crossing site of Big Creek to avoid impacts to threatened fish and their habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Facilities and Roads</b>   | Standard  | 1339   | <p>Do not reopen classified roads in Level 1 maintenance status or Level 2 roads that have become impassable unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that:</p> <ul style="list-style-type: none"> <li>a) For resources that are within their range of desired conditions, reopening these roads for use shall not result in degradation to those resources unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and</li> <li>b) For resources that are already in a degraded condition, reopening these roads shall not further degrade nor retard attainment of desired resource conditions unless outweighed by demonstrable short- or long-term benefits to those resource conditions; and</li> <li>c) Adverse effects to TEPC species or their habitats are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitats.</li> </ul> <p>Where reopening these roads cannot meet these constraints, consider decommissioning. An exception to this standard is where reopening Level 1 or 2 classified roads is required to respond to reserved or outstanding rights, statute or treaty, or respond to emergency situations (e.g., wildfires threatening life or property, or search and rescue operations).</p> |

**View from Lightning Peak**





**Management Prescription Categories**

- 1.1 Existing Wilderness
- 2.1 Wild & Scenic Rivers and Their Corridors
- 2.2 Research Natural Areas
- Non-Forest System Lands
- Inventoried Roadless Areas

Map of the Payette National Forest showing Management Prescription Categories. The map includes a legend, a north arrow, a scale bar (0 to 6 miles), and various geographical features like rivers, creeks, and towns. Management areas are color-coded: 1.1 Existing Wilderness (pink), 2.1 Wild & Scenic Rivers and Their Corridors (green), 2.2 Research Natural Areas (yellow), Non-Forest System Lands (light pink), and Inventoried Roadless Areas (hatched). Key locations include Burgdorf, Chinook, Warren, Shiefer, Secesh Horse Camp, Ponderosa, Lake Fork, Buckhorn, Camp Creek, Four Mile, Poverty Flat, Yellow Pine, Chamberlain, Cold Meadows, and Frank Chrch River of No Return Wilderness.

## Management Area 14

### Frank Church--River of No Return Wilderness

#### MANAGEMENT AREA DESCRIPTION

**Management Prescriptions** - Management Area 4 has been assigned the following management prescriptions (see map on preceding page for distribution of prescriptions).

| Management Prescription Category (MPC) | Percent of Management Area |
|----------------------------------------|----------------------------|
| 1.1 – Designated Wilderness            | 99.6                       |
| 2.2 – Research Natural Areas           | 0.4                        |

**General Location and Description** - Management Area 14 is comprised of lands administered by the Payette National Forest within the Frank Church--River of No Return Wilderness (see map, preceding page), hereafter referred to as the FC--RONR Wilderness. The area lies in Idaho and Valley Counties, and is part of the McCall and Krassel Ranger Districts. This management area is an estimated 774,100 acres, which includes several private land inholdings that, together, make up less than 1 percent of the entire area. Most of the inholdings are ranches and airstrips along the Salmon River or in Chamberlain Basin. This management area does not include the Salmon River Wild and Scenic River corridor (roughly 7,500 acres), which is managed by the Nez Perce National Forest. Management Area 14 is bordered by the Salmon River Wild and Scenic River corridor to the north, more FC- RONR Wilderness to the east and south, and the Payette National Forest to the west. Past uses in this area have included hunting, mining, grazing, and homesteading. The primary current use is primitive, wilderness-oriented recreation.

Established by Congress in 1980, the entire FC-RONR Wilderness (2,417,932 acres) is located on portions of six National Forests, and administered by four Forests, including the Payette. Management direction for the entire area is included in the FC-RONR Wilderness Management Plan, approved in March 1985, and currently being revised. Each National Forest has incorporated that Management Plan into its own respective Forest Plan. Management Area 14, therefore, only covers the portion administered by the Payette.

**Access** - The main access to this portion of the Wilderness is by Forest Road 340 to Big Creek, by Forest Road 375 to Thunder Mountain, by jet boat or raft on the Salmon River, and by small aircraft to one of several public landing strips that are maintained by the Forest Service, including Chamberlain Basin, Cold Meadows, Cabin Creek, and Soldier Bar.

**Special Features** - The FC-RONR is the largest Forest Service wilderness area within the continental United States. The area is bordered on the north and east by the Salmon and Middle Fork Salmon Rivers, which are both designated Wild and Scenic Rivers. In addition, the South Fork Salmon River has been found suitable for inclusion in the Wild and Scenic River system. Segment 2 lies within the management area. Segment 2 is 10 miles, 2,700 acres, and classified as "Wild". The Belvidere Creek Research Natural Area (2,920 acres) was established for its

good representation of high-elevation subalpine fir types, outstanding aquatic features with associated wetland plant communities, and spectacular geomorphic setting.

**Air Quality** - Portions of this management area lie within Montana/Idaho Airsheds ID-15 and ID-16 and in Valley and Idaho Counties. Particulate matter is the primary pollutant of concern related to Forest management. There are two ambient air monitors located within Airshed ID-15 to evaluate current background levels, trends, and seasonal patterns of particulate matter. These are in McCall and Garden Valley. Airshed ID-16 contains no monitors. Four Class I areas are within 100 kilometers of this management area: Hells Canyon, Sawtooth, Selway-Bitterroot, and Anaconda-Pintlar Wildernesses. Visibility monitoring has been expanded for these areas.

Between 1995 and 1999, emissions trends in both counties improved for PM 10, while PM 2.5 emissions remained constant. The most common sources of particulate matter in the counties were wildfire, prescribed fire, and fugitive dust from unpaved roads. In addition to Forest management activities, crop residue and ditch burning also contribute to particulate emissions. Agricultural-related burning was very low in Valley County (less than 600 acres) and moderate in Idaho County (about 13,500 acres). There were no point sources in either county.

**Soil, Water, Riparian, and Aquatic Resources** - Elevations range from about 2,000 feet on the Salmon River to 9,545 feet atop Mormon Mountain. Management Area 14 falls primarily within three subsections: Salmon River Canyonlands, Red River-Chamberlain Basin, and Profile Peak-Monumental Summit Mountains. Much of the area features steep canyonlands that drain into the Salmon, Middle Fork Salmon, or South Fork Salmon Rivers, although Chamberlain Basin contains a large area of frost-churned uplands. Slope gradient is dominantly 40 to 80 percent in the canyonlands, and 10 to 40 percent in the uplands. The surface geology is dominated by granites of the Idaho batholith, with scattered inclusions of volcanic and quartzitic soils. Soils generally have moderate to high surface erosion potential, and moderate productivity. Subwatershed vulnerability ratings range from low to high (see table below). Geomorphic Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately), with the majority being high (see table below).

This large management area spreads across portions of the Middle Salmon-Chamberlain, Lower Middle Fork Salmon, Upper Middle Fork Salmon, and South Fork Salmon River Subbasins. The major drainages within the area are Chamberlain Creek, and portions of Big Creek, Marble Creek, Monumental Creek, and the South Fork Salmon River. Small alpine lakes occur in glacial cirque basin, and the largest concentrations can be found in the Sheepeater Mountain and Pinnacles/Cougar Basin areas. Water Quality Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately), with the majority being high (see table below). Currently, there are no impaired water bodies listed under Section 303(d) of the Clean Water Act, and no TMDL-assigned subwatersheds associated with this management area.

The management area has designated critical habitat for chinook salmon. Spawning, rearing, and migratory habitat occurs for chinook salmon, steelhead, and bull trout in many area streams, including Chamberlain, Big, Marble, Monumental, Cabin, and Belvidere Creeks. Aquatic integrity is considered high, and habitat conditions are generally good, although non-native species (brook and rainbow trout) have been introduced in some areas. This management area is one of the most important aquatic strongholds for threatened salmonids in the entire Columbia River Basin. Aquatic habitat is considered at low risk due to the increasing risk of uncharacteristic fire in some of the potential vegetation groups that historically have non-lethal or mixed severity fire regimes. The Upper Big Creek, Cabin Creek, and Lower Crooked Creek subwatersheds have been identified as important to the recovery of listed fish species, and as high-priority areas for restoration.

| Subwatershed Vulnerability |      |     | Geomorphic Integrity |      |     | Water Quality Integrity |      |     | No 303(d) Subs | No. Subs With TMDLs | No. Public Water System Subs |
|----------------------------|------|-----|----------------------|------|-----|-------------------------|------|-----|----------------|---------------------|------------------------------|
| High                       | Mod. | Low | High                 | Mod. | Low | High                    | Mod. | Low |                |                     |                              |
| 29                         | 31   | 14  | 67                   | 5    | 2   | 45                      | 25   | 4   | 0              | 0                   | 0                            |

**Vegetation** - Vegetation at lower elevations is typically grasslands, shrublands, ponderosa pine and Douglas-fir on south and west aspects, and Douglas-fir and grand fir forests on north and east aspects. Mid elevations are dominated by forest communities of Douglas-fir, grand fir, and subalpine fir, with pockets of lodgepole pine and aspen. Subalpine fir and whitebark pine are found at upper elevations.

The main potential vegetation groups in this area are Warm Dry Subalpine Fir (26 percent), High Elevation Subalpine Fir (17 percent), Warm Dry Douglas-fir/Moist Ponderosa Pine (15 percent), Warm Moist/Hydric Subalpine Fir (11 percent), and Cool Moist Grand Fir (6 percent). Grasslands, shrublands, rock, and water comprise an estimated 13 percent of the area.

The Warm Moist/Hydric Subalpine Fir and Warm Dry Subalpine Fir groups are at properly functioning condition, although they are at increasing risk to uncharacteristic fire due to decades of fire exclusion. However, these groups historically have a lethal fire regime. The Cool Moist Grand Fir group is at risk because fire exclusion has allowed grand fir to dominate stands and increase the risk of uncharacteristic fire. This group historically had a mixed severity fire regime and is now moving toward a lethal regime. The Warm Dry Douglas-fir/Moist Ponderosa Pine group is also functioning at risk also due to fire exclusion, which is increasing stand densities and fuel loadings, and moving this group from a non-lethal fire regime to a mixed severity or lethal regime.

Seeding of non-native grasses and forbs and introduction of noxious weeds have altered Perennial Grass Slopes and Perennial Grass Montane groups to the point that they are functioning at risk in some areas. Riparian vegetation is properly functioning.

**Botanical Resources** – Cascade reedgrass is the only current Region 4 Sensitive species known to occur in this area. Proposed Region 4 Sensitive species in this area include bent-flowered milkvetch, Payson’s Milkvetch, Pored lungwort, Davis’ stickseed, Borsch’s stonecrop, and Blandow’s helodium. Although no federally listed or proposed plant species are currently known to occur in the area, potential habitat for Ute ladies’-tresses, Spalding’s silene, and slender moonwort may exist. Spalding’s silene, a Threatened species, may occur in fescue grassland habitat types up to 5,500 feet. Ute Ladies’-tresses, a Threatened species, may have moderate to high potential habitat in riparian/wetland areas up to 7,000 feet. Slender moonwort, a Candidate species, may occur in moderate to higher elevation grasslands, meadows, and small openings in spruce and lodgepole pine.

**Non-native Plants** - A number of noxious weeds and exotic plants have been introduced into the management area, particularly along main travel ways. An estimated 23 percent of the area is highly susceptible to knapweed invasion and spread. The main weeds of concern are spotted knapweed and rush skeletonweed, which currently found in small, scattered populations within the area. A number of subwatersheds have an inherently high risk of weed establishment and spread, including Lower Big Creek, Canyon, Coxy-Buck, Lower Monumental, Little-Ramey-Gold, Hogback-McFadden, Disappointment Creek, Middle Chamberlain, McCalla, Lower Whimstick, and Lower Warren Creek. This risk is due to the amount of drainage area that is highly susceptible to noxious weed invasion and the exposure from recreation and trail use in this area.

**Wildlife Resources** - A wide range of elevations and vegetation types in the management area provide a variety of wildlife habitats. The Salmon and South Fork Salmon Rivers historically provided foraging habitat for migrating bald eagles. Bighorn sheep, mountain goats, golden eagles, and bats use the rocky bluffs that extend up steep canyonlands. Much of the lower elevation grasslands and shrublands is important winter range for elk, deer, and bighorn sheep. Area forests provide habitat for a number of Region 4 sensitive species, including northern goshawk, flammulated owl, white-headed woodpecker, great gray and boreal owls, three-toed woodpeckers, wolverine, lynx, migratory landbirds, as well as summer range for mammals such as elk, black bear, and mountain lion. Gray wolves were re-introduced near here in 1995 and 1996, and populations are increasing in the area, which is part of the Central Idaho Wolf Recovery Area. Extensive lodgepole pine stands, recent fires, and low levels of human disturbance in the Chamberlain Basin/Cold Meadows area combine to provide good potential lynx habitat. Overall, terrestrial habitat is functioning properly in high elevation areas, though recent fires have converted thousands of acres of old forest to an early successional stage. Forests at lower elevations are functioning at low risk due to the increasing risk of stand-replacing fire in some of the potential vegetation groups that historically have non-lethal or mixed severity fire regimes.

**Recreation Resources** - Dispersed recreation such as hunting, fishing, hiking, sightseeing, and camping occurs throughout Management Area 14. The area is in Idaho Fish and Game Management Units 19A, 20A, 25, 26, and 27. The area is a national attraction, and much of the use is limited to the summer and fall seasons due to the remoteness and high elevations. Over 660 miles of trail are maintained in the area, and all are closed to vehicle use. Portions of the Idaho Centennial Trail lie within this management area.

Recreation emphasis is to maintain and protect wilderness values, while still allowing for the recreational enjoyment of the area. Outfitter and guide opportunities are supported. Trails with the highest use receive priority maintenance.

Currently, most of the Payette portion of the Wilderness provides opportunities for a Primitive recreation (ROS) experience, with the exception of several motorized corridors or airstrips that provide Semi-Primitive Non-Motorized, Semi-Primitive Motorized, or Roaded Natural experiences. Adjustments to these corridors are currently being addressed in the revised Wilderness Management Plan. The ROS classes are not likely to change in the future because this is a designated Wilderness, and the Wilderness Act would not permit the type or extent of development that could cause a change in ROS.

**Scenic Environment** – Because this is a designated wilderness, all lands currently have a visual quality objective of Preservation, which provides the highest possible protection of scenic quality. This level of protection is not likely to change for this area in the future due to its wilderness status.

**Cultural Resources** – Cultural themes in this area include Prehistoric, Settlement, and Forest Service Administration. Numerous prehistoric and historic heritage resources exist in the area. Indian rock art, rock shelters, and activity areas can be found, as well as the ruins of old mines, homesteads, and town sites. Arctic Point Fire Lookout and Cold Meadows Guard Station are listed on the National Register of Historic Places, and the Chamberlain Basin Guard Station is eligible for listing.

**Timberland Resources** - There are no tentatively suited acres in this management area because wilderness designation prohibits the management of forest vegetation for timber production.

**Rangeland Resources** - This area is closed to cattle and sheep grazing and open to limited pack and saddle stock grazing.

**Mineral Resources** - Two areas have had past mining activities, and these activities could continue. Most of the Thunder Mountain mineralized zone was excluded from the Wilderness, but the zone does extend into the area. The Big Creek mining activity zone also extends into the Wilderness. The Wilderness was withdrawn from further mineral entry, effective December 31, 1983. Validity examinations are completed as mining proposals are received.

**Fire Management** – Although there are areas where wildfire has been actively suppressed, there are also areas where wildfire has been allowed to burn and play its natural role in the ecosystem. From 1988 to 2000, an estimated 108,900 acres of wildland fire were recorded, the largest amounts in the Sliver Creek Fire of 1988 and the Chicken Fire of 1994. In 2000, over 275,000 acres of wildfire were recorded. The largest fires were Diamond (149,770 acres), Flossie (75,000 acres), Three Bears (15,040 acres), and a portion of the Burgdorf Fire (20,000 acres).

Mackay Bar is a National Fire Plan community, and Mill Station is considered a wildland-urban interface subwatershed due to residential development adjacent to the Forest. Historical fire regimes for the area are estimated to be: 15 percent lethal, 61 percent mixed1 or 2, and 24 percent non-lethal. An estimated 19 percent of the area regimes have vegetation conditions that are highly departed from their historical range. Most of this change is in the historically non-lethal fire regimes, resulting in conditions where wildfire would likely be much larger and more intense and severe than historically. In addition, 36 percent of the area regimes have vegetation conditions that are moderately departed from their historical range. Wildfire in these areas may result in larger patch sizes of high intensity or severity, but not to the same extent as in the highly departed areas in non-lethal fire regimes.

**Lands and Special Uses** - The University of Idaho has a water diversion system off of Pioneer Creek serving the Taylor Ranch field station. The University has submitted an application for this water system, requesting a permanent conditional easement is issued per Public Law 99-545 commonly known as the “Colorado Ditch Act”. The Sheepeater designated communications site is located in this area, and is designated for Forest Service or other government agency use only.

## MANAGEMENT DIRECTION

Follow management direction in the Frank Church--River of No Return Wilderness Management Plan and the Wilderness Fire Management Plan.



**The Pinnacles**





# **Chapter IV**

## **Implementation of the Forest Plan**

## **Changes to Chapter IV between Draft and Final Plans**

The Monitoring and Evaluation section in the Draft Plan has been expanded to a Monitoring and Evaluation Direction section in the Final Plan, with additional information on adaptive management, LRMP monitoring reports, and evaluation expectations.

The LUCID criteria and indicators presented in the Draft Plan have been modified to address specific monitoring requirements from CFR 36 219.12 for the Forest. This has also led to changes in the Monitoring Element table.

A Monitoring and Evaluation Sorting Key and Flow Chart have been added to help Forest managers implement the Monitoring and Evaluation Plan.

# **CHAPTER IV**

## **Implementation of the Forest Plan**

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## **IMPLEMENTATION DIRECTION**

### **General Direction**

The Payette National Forest Land and Resource Management Plan provides direction for managing the Forest over the next 10 to 15 years. This chapter explains how management direction from Chapter III of the Plan will be implemented, how implementation activities will be monitored and evaluated, and how the Plan can be kept current in light of changing conditions or other findings.

Implementation of the Plan is guided by existing and future laws, regulations, policies, and guidelines. The Plan is designed to supplement, not replace, direction from these sources, except in specific instances. This Plan replaces all previous management plans except for the Frank Church–River of No Return Wilderness Management Plan, Allotment Management Plans, and approved Fire Management Plans.

All permits, contracts, and instruments for use or occupancy of the Forest must conform to the revised Plan's direction. However, because some existing permits and leases are already committed, they will remain in effect until they can be adjusted to accommodate direction in the revised Forest Plan. The Record of Decision for the revised Forest Plan provides the Responsible Official's direction concerning transition of the permits, contracts, and other uses to reflect direction of the revised Plan.

### **Budget Proposals**

The National Forest System appropriation provides the funds for stewardship and management of 192 million acres of federal lands and the natural ecosystems that exist on those lands. These appropriated funds are key for translating the goals, objectives, and management requirements stated in the Forest Plan to on-the-ground results.

Upon receipt of the final budget every year, the Forest prepares an annual implementation budget. This budget is a result of program development, annual work planning, and monitoring processes. These processes supplement the Forest Plan and make the annual adjustments and changes needed to reflect current priorities within the overall management direction contained in the Plan. Therefore, the funding distribution between program components, and the intensity or level of activities in those programs, is a reflection of the Plan as well as the will of Congress. The final determining factor in carrying out the intent of the Forest Plan is the adequacy of funding, which dictates the rate of implementation of the Plan.

### **NFMA and NEPA Compliance**

Forest Planning is a two-tiered process. The initial planning process established Forest-wide and management area goals, objectives, standards, and guidelines. This level of planning was programmatic in nature, and evaluated possible management activities across the entire Forest. The initial analysis tested the feasibility of activities in arriving at a Forest Plan, but did not evaluate the site-specific effects of individual projects.

The second phase of the planning process is implementing site-specific activities designed to aid in achieving the goals, objectives, management direction, and desired future conditions established in the Plan.

Implementation of the Plan occurs at the project level, using site-specific analysis guided by the National Forest Management Act (NFMA) and the National Environmental Policy Act (NEPA), and other laws and regulations that may be involved in a specific proposal. Project-level compliance with NFMA is primarily concerned with consistency with the Forest Plan and NFMA regulations. NEPA compliance involves an environmental analysis of a specific proposal, and proper documentation and public disclosure of effects in an Environmental Assessment (EA), Environmental Impact Statement (EIS), or a Categorical Exclusion (CE).

Most proposed activities will be consistent with direction in the Plan. When specific proposals are found to be inconsistent with Plan direction, or site-specific analysis shows an error in the Plan, the Plan or the proposal must be adjusted according to the analysis. Most adjustments to the Plan can be accomplished through a non-significant amendment signed by the Forest Supervisor and documented in a CE/Decision Memo, EA/Decision Notice, or EIS/Record of Decision. Significant amendments require documentation through an EIS/Record of Decision and must be signed by the Regional Forester.

## **Project Implementation In Inventoried Roadless Areas**

Inventoried Roadless Areas (IRAs) contain natural landscapes where human activities have not had a significant impact, and the areas meet criteria for potential wilderness designation under the Wilderness Act of 1964. Recent court cases and appeal decisions on such areas require that actions that would irretrievably foreclose the wilderness option, or have a significant adverse environmental impact on the undeveloped character of an IRA, be evaluated through an EIS.

The Forest Plan EIS, Appendix C, contains the location and description of each IRA on the Forest. When an activity is proposed within the boundary of an IRA, it will be evaluated to determine the significance of the activity on irretrievably altering the natural condition and foreclosing on a future wilderness option for the entire area.

Forest Plan management prescriptions allow for development in some IRAs (refer to the Forest Plan EIS, Appendix C or the Management Area descriptions in Chapter III of this Plan). For these areas, the option to develop is discretionary, not a mandate for development, because the site-specific effects of implementation have not been evaluated through the appropriate NEPA procedure. Development has been determined to be tentatively feasible in the Forest planning process, but must be further evaluated on a site-specific level of analysis.

Site-specific analysis of environmental effects for projects in IRAs will include an evaluation of the effects on the wilderness attributes. Appendix C of the Forest Plan EIS contains a description of wilderness attributes for each IRA. The project-level environmental analysis will include a discussion on how the wilderness attributes would be affected by each alternative,

along with the cumulative and irretrievable effects. The site-specific analysis will not include a reevaluation for a wilderness recommendation unless the analysis reveals a significant wilderness attribute not previously identified. The significance of any change in individual wilderness attributes should be disclosed in the evaluation.

Determining significance of the project's effect on an IRA forms the basis for whether a CE, EA, or EIS is the appropriate NEPA process. Some indicators to determine significance are:

- Location and size of proposed projects within the IRA boundary during the planning period. A large development project in the core of a IRA would likely have more significant effects on its wilderness attributes than a small project on the periphery.
- Interconnected actions. The Plan may allow for a series of timber sales during the planning period. Individually, a given sale may not have a significant effect on the IRA. The aggregate or cumulative effects of all sales, however, could be significant.

## MONITORING AND EVALUATION DIRECTION

### Overview

Evaluation and monitoring provide knowledge and information to keep the Land and Resource Management Plan viable. Appropriate selection of indicators, and monitoring and evaluation of key results helps us determine if we are meeting the desired conditions identified in the Plan. Evaluation and monitoring also help us determine if we should change goals and objectives, or monitoring methods.

Adaptive management is the foundation for planning and management. Forest planning regulation requires that plans be revised every 10-15 years after plan approval (36 CFR 219.10(g)). One of the lessons learned from experience implementing current Forest Plans is that plans need to be dynamic to account for changed resource conditions such as large scale wildfire or listing of additional species under the Endangered Species Act, new information and science such as taking a systems approach, and changed regulation and policies such as the roads analysis policy.

Evaluation and monitoring are critical to adaptive management. Other component parts include inventory, assessment, planning, and implementation. No single component can be isolated from the whole of adaptive management.

Consider the learning-loop schematic illustrated in Figure 1: No matter where we jump into the loop, all phases are needed to learn. This learning-loop is applicable for site-specific problems, forest plans, or on processes, policy, or any other aspect of an organization. In most of our Forest Plan evaluation and monitoring, however, we will focus our learning on how effective we are at implementing the plan and realizing desired futures from the plan, as well as how to improve plans in the future.

## **Monitoring and Evaluation Strategy**

Our monitoring and evaluation strategy is straightforward. We will tightly focus project implementation, monitoring, and evaluation on decisions made in the Record of Decision (ROD). Elements in our monitoring will include requirements from NFMA regulations, as well as other pertinent law and regulation.

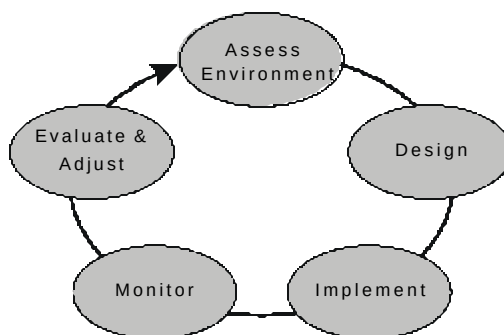
We begin monitoring and evaluation processes by thinking about what questions we need to answer about Forest Plan implementation. By understanding the questions, we can begin to identify information needs, data collection designs, and tools needed to turn data into information and knowledge. We used a variety of existing monitoring strategies to help determine which questions to ask, including The Monitoring and Evaluation Strategy - Southwest Idaho Ecogroup Version 1.2 (USDA Forest Service 1997) and others such as Criteria and Indicators from the Local Unit Criteria and Indicator Development (LUCID) process and monitoring strategies from National Marine Fisheries Service and USDI Fish and Wildlife Service Matrices and Pathways.

We must also have a clear understanding of baseline conditions (current resource condition at the time of signing the ROD) versus desired conditions and the evaluation strategies that will help us to determine if movement towards desired conditions is occurring. As previously stated, appropriate selection of resource indicators that help us measure where we want to be versus where we are, and monitoring and evaluation of key results are critical to determining if we are meeting the desired conditions identified in our Plan.

## **Forest Land and Resource Management Plan Evaluation and Reports**

Evaluation is more than reporting facts and figures. Forest plan evaluation tells how forest plan decisions have been implemented, how effective the implementation has proven to be in accomplishing desired outcomes, what we learned along the way, and how valid the assumptions are that led us to those plan decisions.

The Forest Supervisor will maintain monitoring information for public reviews, including internet-based reports, and will evaluate such on a periodic basis to determine, among other things, need for amendment or revision of the Forest Plan. Formal evaluation and reporting will occur every 5 years, unless the Forest Supervisor deems it necessary that a shorter timeframe is warranted for some evaluations. The 5-year review will provide a comprehensive evaluation of information in response to monitoring questions and regulatory review requirements as depicted in Table IV-1.

**Figure IV-1. An Adaptive Management Learning Loop****Table IV-1. Forest Plan Evaluation Expectations**

| Focus of Evaluation                                                                                                                                                                                                                                                                                                                                                                                                                         | Annual Posting of Results? | Five-Year Evaluation Report? |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------|
| A program of monitoring and evaluation shall be conducted that includes consideration of the effects of National Forest Management on land, resources, and communities adjacent to or near the National Forest being planned and the effects upon National Forest management from activities on nearby lands managed by other Federal or other government agencies or under the jurisdiction of local governments [36 CFR 219.7(f)]         | No                         | Yes                          |
| The Forest Supervisor shall review the conditions on the land covered by the plan at least every 5 years to determine whether conditions or demands of the public have changed significantly [36 CFR 219.10(g)]                                                                                                                                                                                                                             | No                         | Yes                          |
| At intervals established in the plan, implementation shall be evaluated on a sample basis to determine how well objectives have been met and how closely management standards and guidelines have been applied. Based upon this evaluation, the interdisciplinary team shall recommend to the Forest Supervisor such changes in management direction, revision, or amendments to the forest plan as are deemed necessary [36 CFR 219.12(k)] | No                         | Yes                          |
| Monitoring requirements identified in the forest plan shall provide for—[36 CFR 219.12(k)]<br>[1] A quantitative estimate of performance comparing outputs and services with those projected by the forest plan;                                                                                                                                                                                                                            | Yes                        | No                           |
| [2] Documentation of the measured prescriptions and effects, including significant changes in productivity of the land; and                                                                                                                                                                                                                                                                                                                 | No                         | Yes                          |
| [3] Documentation of costs associated with carrying out the planned management prescriptions as compared with costs estimated in the forest plan.                                                                                                                                                                                                                                                                                           | Yes                        | No                           |
| [5] A determination of compliance with the following standards:<br>[i] Lands are adequately restocked as specified in the forest plan;                                                                                                                                                                                                                                                                                                      | No                         | Yes                          |



| Focus of Evaluation                                                                                                                                                                                                                                                                                                                                               | Annual Posting of Results? | Five-Year Evaluation Report? |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------|
| [ii] Lands identified as not suited for timber production are examined at least every 10 years to determine if they have become suited; and that, if determined suited, such lands are returned to timber production; {Note: See also 219.14(d): ...Designation in the plan of lands not suited for timber production shall be reviewed at least every 10 years.} | No                         | Yes                          |
| [iii] Maximum size limits for harvest areas are evaluated to determine whether such size limits should be continued; and                                                                                                                                                                                                                                          | No                         | Yes                          |
| [iv] Destructive insects and disease organisms do not increase to potentially damaging levels following management activities.                                                                                                                                                                                                                                    | No                         | Yes                          |
| (a)(6) Population trends of the management indicator species will be monitored and relationships to habitat changes determined. This monitoring will be done in cooperation with state fish and wildlife agencies, to the extent practicable (36 CFR 219.19 Fish and wildlife resource).                                                                          | Yes                        | Yes                          |
| Accomplishment of ACS priority subwatershed restoration objectives.                                                                                                                                                                                                                                                                                               | Yes                        | Yes                          |
| Terms and conditions or reasonable and prudent measures that result from consultation under Section (a) of the Endangered Species Act                                                                                                                                                                                                                             | Yes                        | Yes                          |
| Effectiveness of mitigation measures and monitoring of risk factors described in the Record of Decision for the Forest Land and Resource Management Plan                                                                                                                                                                                                          | No                         | Yes                          |

## Monitoring Elements

Table IV-2 contains monitoring elements organized around monitoring questions. The table addresses requirements from 36 CFR 219.12(k)[4], and includes a description of:

- [i] The actions, effects, or resources to be measured, and the frequency of measurements;
- [ii] Expected precision and reliability of the monitoring process; and
- [iii] The time when evaluation will be reported.

Because data precision and reliability are tied to specific procedures and methods that change as we learn, we expect to update the Forest Monitoring Section to allow for such changes.

**Table IV-2. Monitoring Elements**

| Activity, Practice, Or Effect To Be Measured      | Monitoring Question                                                   | Indicator                                                                                                                                                  | Data Reliability | Measuring Frequency and Recommended Method                                             | Report Period |
|---------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------------------------------------------------------------------------------|---------------|
| Perception of management activities on the Forest | Are interested citizens raising concerns about management activities? | Comment cards, personal contacts, level of National Environmental Policy Act (NEPA)/National Forest Management Act (NFMA) involvement, appeals, litigation | Low              | Annually, via leadership team review of substantive comments and NEPA decision appeals | 5 years       |

| Activity, Practice, Or Effect To Be Measured                                                | Monitoring Question                                                                                                    | Indicator                                                                                            | Data Reliability | Measuring Frequency and Recommended Method                                                                                               | Report Period |
|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------|
|                                                                                             | Are consulting agencies part of the process, and are concerns being raised about implementation of the Forest Plan?    | Level 1 meeting notes, level of NEPA or NFMA involvement                                             | Moderate         | Annually, via Level 1, State 303(d) and permitting reviews and NEPA decisions                                                            | 5 years       |
| Management actions                                                                          | Are proposed actions and associated effects being adequately disclosed in NEPA documents?                              | Review of actions on the Quarterly Schedule of Proposed Actions                                      | Moderate         | Annual review of selected projects                                                                                                       | 3 years       |
| Tribal participation with the Forest                                                        | Are current processes meeting the needs for consultation?                                                              | Program reviews and personal contacts                                                                | Moderate         | Annually, using personal contacts, and formal feedback                                                                                   | 3 years       |
| Coordination with Tribes                                                                    | Are traditional cultural resources and special interest areas being considered and maintained?                         | Projects within known special interest areas or potentially affecting traditional cultural resources | Moderate         | Annually review up to 10 percent of projects within known special interest areas or potentially affecting traditional cultural resources | 3 years       |
| State and local government participation with the Forest                                    | Are current processes such as commission appearances, field reviews, etc. meeting coordination needs?                  | Program reviews and personal contacts                                                                | Moderate         | Annually, using personal contacts, and formal feedback (surveys)                                                                         | 3 years       |
| Accessibility improvement efforts in developed recreation and administrative use facilities | Is disabled access improving in relation to the American Disability Act and other related agency policy and direction? | Condition survey of Forest administrative and developed recreation facilities                        | Moderate         | Annually, conduct condition surveys of up to 20 percent of the Forest's administrative and developed recreation facilities               | 5 years       |
| Safety of administrative facilities                                                         | Are administrative sites safe and accessible for visitors and employees including drinking water sources?              | On-site inspection of facilities and drinking water testing                                          | High             | As needed, but at least annually using inspection form that keys to INFRA database, drinking water testing program                       | Annually      |

| Activity, Practice, Or Effect To Be Measured      | Monitoring Question                                                                                                             | Indicator                                                                                             | Data Reliability | Measuring Frequency and Recommended Method                                                                                                     | Report Period                                 |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Safety of developed recreation sites              | Are developed recreation sites free of high-risk conditions? Do water systems meet Federal, State, and local requirements?      | On-site inspection of facilities and drinking water testing                                           | High             | As directed by State and/or agency requirements                                                                                                | Annually for water systems; 5 years for other |
| Condition, level of use, and maintenance of roads | Are road conditions improving related to safety or user comfort?                                                                | Miles maintained by maintenance class, and condition surveys                                          | Moderate         | Annually track miles of roads maintained via INFRA, Conduct condition surveys in accordance with National Condition Survey policy and protocol | 5 years                                       |
| Recreation demand                                 | Are the amount and types of recreation opportunities provided meeting customer needs and expectations?                          | National recreation use monitoring survey results, Comment forms and user correspondence              | Low              | Every 4 years for the National Rec. Use Survey; Annually during Forest recreation meetings for other sources                                   | 5 years                                       |
| Recreation use trends, distribution and levels    | Are recreation activity levels changing, and are shifts occurring between types of activities, and locations of recreation use? | Field observations by recreation staff, comments, letters, and National Recreation Use Survey results | Low              | Every 4 years for the National Rec. Use Survey; Annually during Forest recreation meetings                                                     | 5 years                                       |
| Recreation use conflicts                          | Are conflicts rising between recreational uses?                                                                                 | Comments or complaints from users; number of citations related to closure orders                      | Moderate         | Annually                                                                                                                                       | 3 years                                       |
| Total Recreation Visitor Days (RVDs)              | Are recreation activities levels changing, or are shifts occurring between types of activities?                                 | Tracking RVDs by various types of recreation activities                                               | Moderate         | INFRA, Meaningful Measures, or other sampling techniques                                                                                       | 5 years                                       |
| Dispersed recreation use and distribution         | What level of use is occurring in dispersed sites and what impacts are occurring to other resource values                       | Site inventory and use survey                                                                         | Moderate         | Annually, survey up to 10 percent of dispersed sites                                                                                           | 3 years                                       |

| Activity, Practice, Or Effect To Be Measured                       | Monitoring Question                                                                                         | Indicator                                                                                                                                                                                              | Data Reliability | Measuring Frequency and Recommended Method                                            | Report Period |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------------------------------------------------------------------|---------------|
| Recreation Opportunity Spectrum (ROS) Inventory                    | Are management activities changing the ROS settings?                                                        | Review of project implementation and updating the ROS inventory to reflect any changes in settings                                                                                                     | Moderate         | Annually via review of selected projects                                              | 5 years       |
| Track actual daily and seasonal use versus use capacity            | What level of use is occurring in special use areas, including recreation sites (e.g., downhill ski areas)? | Ski area attendance reports, annual reports from special uses                                                                                                                                          | High             | Annually                                                                              | 3 years       |
| Developed site use and distribution, and resource impacts to sites | What level of use is occurring in developed sites and what impacts are occurring to other resource values?  | Use INFRA-Database to track site specific use data                                                                                                                                                     | Moderate         | Annually via INFRA, survey, public comment cards                                      | 3 years       |
| Level of trail maintenance relative to trail use                   | Are trails being maintained for anticipated levels of use?                                                  | Trail counters and MARS for trail construction/reconstruction or maintenance                                                                                                                           | Moderate         | Annually, up to 10 percent of trail system                                            | 3 years       |
| Potential impacts to visual resources                              | Are Forest management actions being designed and implemented to meet Visual Quality Objectives (VQOs)?      | Monitoring project areas from sensitive viewpoints                                                                                                                                                     | Moderate         | Annually review up to 10 percent of projects on-the-ground from identified viewpoints | 3 years       |
| Modification of established VQOs                                   | Are the VQOs appropriate given resource management needs?                                                   | Number of Forest Plan amendments that modify established VQOs                                                                                                                                          | High             | Annually review management areas where amendments for VQOs were completed             | 5 years       |
| Protection of historic properties during project implementation    | Are historic properties being affected by project activities?                                               | Assess the effects of project implementation on selected projects for at least 5 percent of the projects for which Cultural Resource Management approval had been recommended during the previous year | Low              | Annually using field inspection                                                       | Annually      |

| Activity, Practice, Or Effect To Be Measured       | Monitoring Question                                                                                                                                                                                               | Indicator                                                                                                                                                                       | Data Reliability    | Measuring Frequency and Recommended Method                                                                                                                                          | Report Period |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Stewardship of historic properties                 | Are historic properties being managed to standard?                                                                                                                                                                | Condition of historic properties                                                                                                                                                | Low                 | Annually survey up to 5 percent of the historic properties based on heritage assets using condition assessments                                                                     | 3 years       |
| Gathering activities on the Forest                 | Are Forest gathering activities resulting in resource depletion (i.e., mushrooms, bear grass, huckleberries)?                                                                                                     | Estimated amount of miscellaneous products collected<br><br>Reproduction and age class distribution of live plants being collected                                              | Low<br><br>Moderate | Annually, via review of miscellaneous product permits issued for any given area                                                                                                     | 3 years       |
| Vegetation treatments                              | Are planned treatments being implemented?                                                                                                                                                                         | Acres treated annually                                                                                                                                                          | High                | Annually via NEPA document decisions                                                                                                                                                | 5 years       |
| Effectiveness of vegetation treatments             | Is live vegetation at, or moving towards, desired conditions as described in Appendix A of the Forest Plan?                                                                                                       | Mix of size classes, canopy closures, species composition and their spatial patterns by forested PVG and non-forested cover types within 5 <sup>th</sup> field hydrologic units | Moderate            | 5 years or sooner using LANDSAT, FIA inventories, and other local Forest-wide and project-level field inventories                                                                   | 5 years       |
| Riparian condition                                 | Are Forest management activities adequately designed (including delineation of RCAs) to maintain or improve riparian functions and ecological processes important to furthering Forest Plan goals and objectives? | Effects on the riparian functions and ecological processes as identified in Appendix B: Guidance for Delineation and Management of RCAs.                                        | High                | 3 years via review of selected projects and surveys (e.g., Proper Functioning Condition; IIT Effectiveness Monitoring; remote sensing within 5 <sup>th</sup> field hydrologic units | 5 years       |
| Maintenance and restoration of forested conditions | Has establishment of off-site native tree species affected the maintenance or restoration of desired forested conditions?                                                                                         | Number of regeneration acres dominated by off-site native tree species                                                                                                          | Moderate            | Survey of regeneration acres                                                                                                                                                        | 5 years       |

| Activity, Practice, Or Effect To Be Measured                                                                                                    | Monitoring Question                                                                                                                             | Indicator                                                                                         | Data Reliability | Measuring Frequency and Recommended Method                                                                                                                                                                                     | Report Period                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Habitat for terrestrial Management Indicator Species (MIS); Threatened, Endangered, Proposed or Candidate (TEPC) species, both plant and animal | Are management actions providing for, or moving toward the extent of vegetation components necessary to meet the needs of MIS and TEPC species? | Changes in habitat acres                                                                          | Moderate         | Annual field review of up to 25 percent of projects within known habitats                                                                                                                                                      | 2 years for TEPC<br>and<br>5 years for MIS |
| Terrestrial Management Indicator Species                                                                                                        | Are management actions maintaining or restoring distribution and abundance of management indicator species?                                     | Population trends, demographic population data                                                    | Moderate         | Annual coordination of population surveys with other agencies such as Idaho Dept. of Fish and Game, Idaho Dept. of Water Resources, US Fish and Wildlife Service, Idaho Partners In Flight, and Idaho Conservation Data Center | 5 years                                    |
| Botanical species of concern, Watch species or Sensitive species                                                                                | Are Forest management actions affecting known Sensitive species or Watch species habitats at the project level?                                 | Acres of disturbance of known occupied habitat                                                    | Moderate         | Annually, via review of 5 percent of projects within known occupied habitat                                                                                                                                                    | 3 years                                    |
| Soil productivity                                                                                                                               | Are management actions and forest plan direction effectively maintaining or restoring long-term soil productivity?                              | Amount of area in non-detrimentally disturbed condition and Total Soil Resource Commitment (TSRC) | Moderate to High | Annually; review of selected activity areas                                                                                                                                                                                    | 3 years                                    |
| Snags and coarse wood for wildlife habitat and soil productivity                                                                                | Are snags and coarse woody debris at, or moving toward, desired conditions as described in Appendix A of the Forest Plan?                       | Number of snags or tons of coarse woody debris by size class for each PVG within activity areas   | Moderate to High | Annually review of selected assessments, inventories or projects. Aggregate results of annual reviews for reporting                                                                                                            | 5 years                                    |

| Activity, Practice, Or Effect To Be Measured      | Monitoring Question                                                                                                                        | Indicator                                                                                                                                                                                                  | Data Reliability | Measuring Frequency and Recommended Method                                                                                                                                                              | Report Period |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Distribution of aquatic ecosystems                | Are management actions maintaining or restoring the distribution, abundance, and habitat quality of management indicator and TEPC species? | Identification of Watershed Condition Indicators, tracking presence absence data, acres/mile of occupied habitat, number of strongholds, number of isolated populations as identified in the WARS database | Moderate         | 3 years via review of selected mid- and fine-scale assessments and restoration actions, surveys (e.g., IIT Effectiveness monitoring; Forest Service, Tribal and State Populations and Spawning Surveys) | 3 years       |
| Watershed restoration and conservation activities | Have restoration and conservation activities been focused in priority watersheds identified by the WARS process?                           | Program reviews, total dollars spent and amount of restoration activity in high priority vs. other 6 <sup>th</sup> field watersheds                                                                        | High             | Annually review selected projects and programs. Review results of monitoring with NOAA Fisheries and USFWS annually.                                                                                    | Annually      |
| Project implementation                            | Have prescriptions, projects, and activities been implemented as designed and in compliance with the Forest Plan?                          | Project reviews and yearly summaries for Pacfish/Infish IIT team                                                                                                                                           | High             | Annual review of IIT Implementation Monitoring, State (DEQ/DSL) and Forest reviews of selected 6 <sup>th</sup> field hydrologic units                                                                   | 5 years       |
| Landslide prevention                              | Are management actions and forest plan direction effectively preventing management-induced landslides?                                     | Changes in frequency/size of landslides stratified by hazard risk classes (low, moderate, and high)                                                                                                        | Low              | As needed via mid-, fine-, and site-scale analysis; remote sensing, and GIS queries                                                                                                                     | 3 years       |
| Aquatic ecosystems stream flows                   | Are forest management actions maintaining or restoring the processes and functions that regulate stream flows and ground water character?  | Tracking acres in ECA; road density; # federal water rights obtained; stream discharge in selected 6 <sup>th</sup> field hydrologic units                                                                  | Moderate         | Annually via IIT Effectiveness monitoring; USGS water resources data; R1/R4 Habitat Inventory; mid-, fine-, and site-scale analysis                                                                     | 5 years       |

| Activity, Practice, Or Effect To Be Measured | Monitoring Question                                                                                                                                                                                                            | Indicator                                                                                                                                            | Data Reliability | Measuring Frequency and Recommended Method                                                                                                                       | Report Period |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Water quality and beneficial use status      | Are management actions maintaining or restoring water quality to fully support beneficial uses, and native and desired non-native fish species and their habitats over multiple spatial scales?                                | Number of 303(d) streams listed versus de-listed; macro-invertebrate tolerance measures; water quality indicators (e.g., temperature, pH, turbidity) | Moderate to High | Annual review of TMDLs, USGS and DEQ databases, Forest water quality stations and selected NEPA projects                                                         | 2 years       |
| Aquatic ecosystems                           | Are management actions and forest plan direction effectively maintaining WCIs when currently in the range of desired conditions, and restoring WCIs when outside the range of desired conditions over multiple spatial scales? | Changes in watershed, channel and habitat condition and water quality indicators                                                                     | Moderate         | Annually via review of selected mid-, fine-, and site-scale analysis; review of IIT effectiveness, R1/R4 Habitat Inventory and DEQ Burp data                     | 2 years       |
| Noxious weed prevention                      | Are Forest Plan standards and guides effective in preventing establishment of new noxious weed infestations?                                                                                                                   | Acres of new noxious weed infestations                                                                                                               | Moderate         | Annual field inspection of projects for 2 years during and after project implementation for selected high-risk projects.                                         | 3 years       |
| Noxious weed containment                     | Are Forest management strategies effective in preventing further expansion of established noxious weed populations?                                                                                                            | Acres of known infestation                                                                                                                           | High             | Annually; via inventories and surveys of selected known infestation areas in management areas where strategy is containment                                      | 3 to 5 years  |
| Noxious weed control and eradication         | Are Forest management strategies effective in controlling or eradicating targeted populations of noxious weeds?                                                                                                                | Acres of known infestation in management areas identified for eradication or control                                                                 | High             | Annual field inspection of treatment sites that have been identified for eradication or control for 3 years to determine changes in density or total eradication | 3 years       |



| Activity, Practice, Or Effect To Be Measured                               | Monitoring Question                                                                                                                                | Indicator                                                                                                            | Data Reliability | Measuring Frequency and Recommended Method                                                                                               | Report Period |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Changes in the type of vegetation conditions, volume, growth, or mortality | How have conditions changed and what are the levels of volume, growth, or mortality at the Forest level.                                           | Re-measurements of existing fixed points and new measurements to determine conditions                                | High             | 10 year interval or as needed                                                                                                            | 10 years      |
| Total Sale Program Quantity, which includes Allowable Sale Quantity        | Are prescriptions implemented to achieve management objectives meeting the expected outcomes for timber production?                                | Tracking acres treated (e.g., thinned, harvested, planted) and associated volumes.                                   | High             | Annually, via MARS reports, Sale Tracking And Reporting System (STARS), Timber Information Manager (TIM) and Timber Sale Accounts (TSA). | 5 years       |
| Head Months Under Permit                                                   | Are Forest Plan goals, objectives, standards, and guidelines affecting the number of head months associated with term grazing permits?             | Billing and annual operating plans; allotment grazing module from IIT process                                        | High             | Annually, via Management Attainment Reporting System (MARS) reports and INFRA                                                            | 5 years       |
| Range Improvements                                                         | Are range improvements being adequately maintained and serving their intended design?                                                              | Field inspection and documentation of improvements                                                                   | High             | Annually, on selected high and medium priority allotments via INFRA                                                                      | 5 years       |
| Forage Utilization Levels                                                  | Are established utilization levels providing for desired ground cover, soil stability, plant vigor and composition?                                | Field observation/ utilization studies                                                                               | High             | Annually, review up to 10 percent of active allotments                                                                                   | 3 years       |
| Effectiveness of the Allotment Management System                           | Are current allotment management strategies effective in meeting or moving toward desired vegetation conditions for non-forested vegetation types? | Grazing Response Index: Frequency (duration of grazing); intensity (use levels); and opportunities (growing periods) | Moderate         | Annually, review up to 10 percent of allotments                                                                                          | 5 years       |

| Activity, Practice, Or Effect To Be Measured | Monitoring Question                                                                       | Indicator                                    | Data Reliability | Measuring Frequency and Recommended Method | Report Period |
|----------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------|------------------|--------------------------------------------|---------------|
| Research Natural Areas                       | Have management plans been developed for Research Natural Areas that currently lack them? | Number of management plans completed         | High             | Annually                                   | 5 years       |
| Research Natural Areas                       | Have additional RNAs been recommended for establishment?                                  | Number of RNAs recommended for establishment | High             | 5 years                                    | 5 years       |

## FOREST PLAN AMENDMENT AND REVISION

The Forest has adopted a Continuous Assessment and Planning (CAP) approach to its Forest Plan revision. Forest plans are normally revised on a 10-year cycle, with anticipated completion of the revision occurring 10-15 years after plan approval. As previously discussed, one of the lessons learned from implementation of the current Forest Plan is that plans need to be dynamic to account for changed resource conditions and changed regulations and policies. To keep plans current with changing conditions and issues, they often require amendment.

CAP recognizes the need to keep plans current and puts into place both procedures and an organization to conduct assessments to aid in determining the need for forest plan amendment and revisions prior to the scheduled 15-year update. Within an adaptive management framework, the need to amend or revise the Forest Plan may result from:

The need to amend the plan may result from:

- Recommendations of an interdisciplinary team, based on monitoring and evaluation results.
- Determinations by the Forest Supervisor that existing or proposed projects, permits, contracts, cooperative agreements, or other instruments authorizing occupancy and use are appropriate, but not consistent with elements of the Plan's management direction.
- Administrative appeal decisions.
- Planning errors found during forest plan implementation.
- Changes in physical, biological, social, or economic conditions.

The Forest Supervisor will determine whether the proposed changes in the Forest Plan are significant or non-significant. Significance here is defined by the NFMA regulations, and is different than significance as used under NEPA.

The dichotomous key and flow chart below provide a general idea as to how items monitored will be evaluated in the context of the Forest Plan, and a general gauge as to how to determine the relative significance resulting from monitoring.

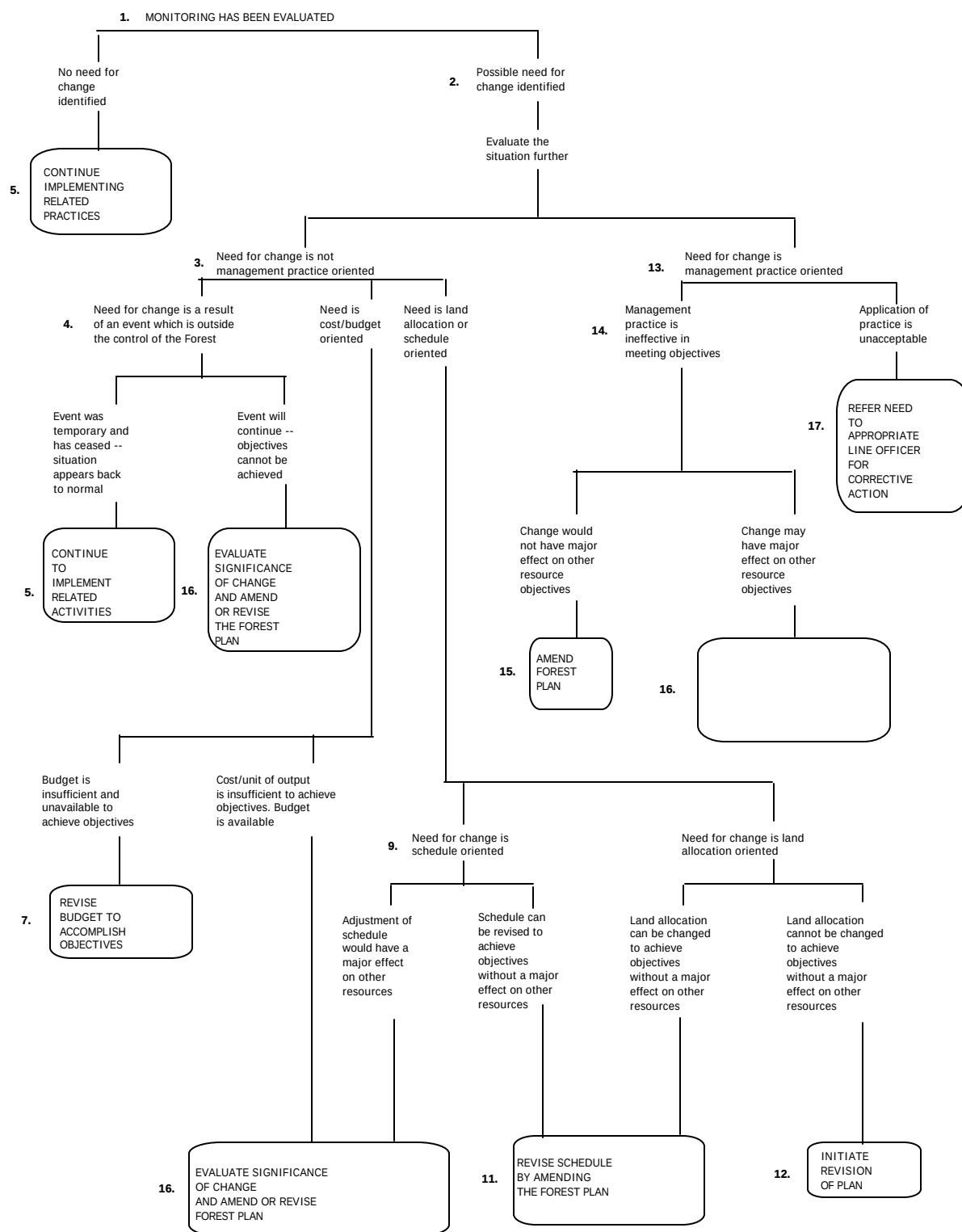
Additional analysis in support of Plan implementation activities conducted at various scales above the project (site) level is also a form of CAP. Completing these analyses can improve our understanding of ecosystems and associated social and economic dimensions, and provide context information for project planning. Ecosystem analyses at the mid- and fine- scale, for example, are designed to help set the stage for project planning and NEPA analysis, focus ID team discussion on key management issues at multiple scales, and provide a basis for integrating project designs. This type of analysis is not a decision-making process in the context of NEPA.

For more information on CAP, see the final section of Chapter II in this document.

Table IV-3. Key To Sorting Results Of Monitoring And Evaluation

| <u>PROCEED TO</u>                                                                                      | <u>NUMBER</u> |
|--------------------------------------------------------------------------------------------------------|---------------|
| 1. Monitoring has been evaluated, and                                                                  |               |
| a. No Need for Change Identified .....                                                                 | 5             |
| b. Possible Need for Change Identified .....                                                           | 2             |
| 2. Evaluate the situation further:                                                                     |               |
| a. Need for Change is <b>not</b> management practice oriented .....                                    | 3             |
| b. Need for Change <b>is</b> management practice oriented .....                                        | 13            |
| 3. Need for change is not management practice oriented                                                 |               |
| a. Need is result of an event, which is outside the control of Forest.....                             | 4             |
| b. Need is cost-budget oriented .....                                                                  | 6             |
| c. Need is land allocation or schedule oriented .....                                                  | 8             |
| 4. Event is outside the control of Forest                                                              |               |
| a. Event was temporary and has ceased - situation appears back to normal.....                          | 5             |
| b. Event will continue - objectives cannot be achieved .....                                           | 16            |
| 5. Continue to implement related activities                                                            |               |
| 6. Need for change is cost-budget oriented                                                             |               |
| a. Cost per unit of output is insufficient to achieve objectives; Budget is available .....            | 7             |
| b. Budget is insufficient and unavailable to achieve objectives.....                                   | 16            |
| 7. Revise budget to accomplish objectives                                                              |               |
| 8. Need for change is land allocation or schedule oriented                                             |               |
| a. Need for change is schedule oriented .....                                                          | 9             |
| b. Need for change is land allocation oriented .....                                                   | 10            |
| 9. Need for change is schedule oriented                                                                |               |
| a. Adjustment of schedule would have a major effect on other resources.....                            | 16            |
| b. Schedule can be revised to achieve objectives without a major effect on other resources.....        | 11            |
| 10. Need for change is land allocation oriented                                                        |               |
| a. Land allocation can be changed to achieve objectives without a major effect on other resources..... | 11            |
| b. Land allocation <b>cannot</b> be changed without a major effect on other resources .....            | 12            |
| 11. Revise schedule or land allocation by amending the Forest Plan                                     |               |
| 12. Initiate revision of the Forest Plan                                                               |               |
| 13. Need for change is management practice oriented                                                    |               |
| a. Management practices ineffective in meeting goals and objectives .....                              | 14            |
| b. Application of practice is unacceptable .....                                                       | 17            |
| 14. Management practice is ineffective                                                                 |               |
| a. Change would not have major effect on other resource objectives .....                               | 15            |
| b. Correction may have major effect on other resource objectives .....                                 | 16            |
| 15. Amend the Forest Plan                                                                              |               |
| 16. Evaluate significance of change and amend or revise the forest plan                                |               |
| 17. Refer need for change to appropriate line office for corrective action                             |               |

Figure IV-2. Monitoring and Evaluation Flow Chart



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|------------------------|-------------|

## INTRODUCTION

Appendix A contains the mapping criteria, classification descriptions, and desired condition tables for vegetation outside of designated wilderness areas. There are separate tables and/or narratives that relate to: (1) desired conditions for separate components of forested vegetation, (2) desired conditions for woodland and shrub types, and (3) desired conditions for riparian vegetation, including vegetation in riparian conservation areas (RCAs). Desired conditions do not represent a static state; they are dynamic because the ecosystems we are working with are dynamic. The desired conditions are not something that every acre of the Forest at every point in time will possess—there will always be spatial and temporal variability. However, achievement of desired conditions, well distributed across the planning unit, is a long-term goal of Forest management. For these reasons, the desired conditions are to be evaluated at either the 5<sup>th</sup> field hydrologic unit (HU) or activity area (for snags and coarse woody debris), depending on the vegetation component of interest. A scale other than watershed may be used where it is determined that a different reference area is more appropriate for identifying opportunities for a specific type of treatment. Further details on the development of desired conditions can be found in Chapter 3 of the Final EIS, Appendix B of the Final EIS (Analysis Process), and in the Technical Reports that are part of the project record for Forested Vegetation, Snags and Coarse Woody Debris, and Non-Forest Vegetation.

In many areas, our current conditions deviate strongly from our desired conditions; this deviation creates opportunities for managing vegetation. Even under careful management, though, it may take several decades for these areas to approach desired conditions, and there are steps along that path where managers will have to choose among several approaches to maintain or trend toward desired conditions. There may be many different paths to a common endpoint that meet different management objectives, each with their own set of trade-offs. This will be the challenge of ecosystem management in managing vegetation and trying to achieve desired vegetative conditions. As we move forward in this process, and we learn more from monitoring and scientific research, our desired conditions may change, or we may alter the paths we choose to achieve them. For these reasons, it is not possible to describe a completely prescriptive approach to desired conditions, but merely offer guidance in how to consider desired conditions.

In some cases, there may be exceptions to the vegetative desired conditions. These exceptions may occur as a result of management direction in other resource areas, or when site-specific conditions are not appropriate for the desired conditions. Oftentimes, Management Area direction may have different, but overriding goals and objectives. Each Management Prescription Category (MPC) may also have a different theme as to how we would achieve desired conditions. All of this information needs to be considered when we design our projects. The desired conditions are general conditions that can be modified at the local or project level based on site-specific biophysical conditions.

## DESIRED VEGETATION CONDITIONS

### Forested Vegetation

Several tables below describe individual components of forested vegetation and their desired conditions. Table A-1 displays the Forested Potential Vegetation Groups. Forested vegetation refers to land that contains at least 10 percent crown cover by forest trees of any size, or land that formerly had tree cover and is presently at an earlier seral stage. Forested vegetation is described using habitat types, which use

potential climax vegetation as an indicator of environmental conditions. At the level of the Forest Plan, forested habitat types have been further grouped into potential vegetation groups (PVGs) that share similar environmental characteristics, site productivity, and disturbance regimes. Additional information on PVGs is available in the section entitled Vegetation Classification and Mapping in this Appendix.

**Table A-1. Forested Potential Vegetation Groups<sup>1</sup>**

| Potential Vegetation Group                        |
|---------------------------------------------------|
| PVG 1 – Dry Ponderosa Pine/Xeric Douglas-fir      |
| PVG 2 – Warm Dry Douglas-fir/Moist Ponderosa Pine |
| PVG 3 – Cool Moist Douglas-fir                    |
| PVG 4 – Cool Dry Douglas-fir                      |
| PVG 5 – Dry Grand Fir                             |
| PVG 6 – Cool Moist Grand Fir                      |
| PVG 7 – Cool Dry Subalpine Fir                    |
| PVG 8 – Cool Moist Subalpine Fir                  |
| PVG 9 – Hydric Subalpine Fir                      |
| PVG 10 – Persistent Lodgepole Pine                |
| PVG 11 – High Elevation Subalpine Fir             |

<sup>1</sup> Forested vegetation refers to land that contains at least 10 percent crown cover by forest trees of any size or type, or land that formerly had tree cover and is presently at an earlier seral stage.

### **Tree Size Class**

Tree size class is determined by the size of the overstory trees. The average diameter of the trees in the overstory or uppermost tree layer determines the stand's tree size class. A canopy layer has a distinct break in height, and must have a non-overlapping canopy closure of at least 10 percent. A few individual trees (such as relic trees) representing a distinctly different tree size are not recognized as defining a distinct canopy layer if the total canopy cover of those trees is less than 10 percent. Tree size class can also be determined from aerial photos by interpreting the average crown diameter of the overstory trees. For example, if the overstory trees average 22 inches diameter at breast height (DBH), then the stand is classified as a large tree size class, regardless of the size of trees that may occur in understory layers. Within any canopy layer diameter may vary considerably between individual trees.

Tree size class is based on the following diameter groupings:

- Grass/Forb/Shrub/Seedling < 4.5 feet tall
- Sapling 0.1" – 4.9" DBH
- Small trees 5.0" – 11.9" DBH
- Medium trees 12.0" – 19.9" DBH
- Large trees >20" DBH.

Table A-2 displays the desired amounts for each tree size class at the Forest-wide and 5<sup>th</sup> field HU scales. This table shows, for each PVG, a range in the percent of an area's forested vegetation desired for each tree size class. The range for each size class reflects the dynamic development of trees, considering growth rates, the type and extent of disturbances, and varying growing conditions.

The range in Table A-2 was developed from estimates of the historical range of variability (HRV). The low end of the large tree size class range is based on half the low end of HRV, provided that the minimum value does not fall below 20 percent. The upper end of the range for large trees is equal to the mean HRV value. The 20 percent value is a threshold that represents the minimum percent of a landscape area retained in the large tree size class because it is deemed necessary for assuring the viability of terrestrial wildlife species. The range for the Grass/Forb/Shrub/Seedling growth stage is based on the range of large trees and the time interval needed for this growth stage to advance to the next tree size class. The information presented in Table A-2 represents the full range of desired conditions for tree size classes encompassed by all Management Prescription Categories.

**Table A-2. Forest-wide Range of Desired Size Classes  
Expressed as Percentage of Forested Vegetation Within Each PVG**  
(Includes forested vegetation in RCAs)

| Tree Size | PVG 1   | PVG 2   | PVG 3   | PVG 4   | PVG 5   | PVG 6   | PVG 7   | PVG 8   | PVG 9   | PVG 10  | PVG 11  |
|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| G/F/S/S   | 1 – 18  | 5 – 7   | 9       | 14 – 15 | 3 – 7   | 7 – 9   | 7 – 16  | 15 – 17 | 13 – 15 | 16 – 23 | 9 – 15  |
| Saplings  | 2 – 12  | 3 – 7   | 9       | 7 – 9   | 3 – 7   | 7 – 9   | 11 – 15 | 11 – 15 | 8 – 15  | 11 – 16 | 14 – 15 |
| Small     | 2 – 18  | 5 – 21  | 18 – 27 | 19 – 22 | 4 – 22  | 11 – 27 | 21 – 22 | 22 – 23 | 17 – 22 | 46 – 48 | 19 – 22 |
| Medium    | 3 – 29  | 7 – 35  | 23 – 36 | 24 – 36 | 7 – 30  | 18 – 36 | 32 – 36 | 28 – 29 | 25 – 29 | 20      | 22 – 38 |
| Large     | 24 – 91 | 30 – 80 | 20 – 41 | 20 – 34 | 33 – 84 | 20 – 56 | 20 – 21 | 20 – 21 | 20 – 37 |         | 20 – 27 |

Similar to Table A-2, Table A-3 displays a portion of the desired ranges for the Grass/Forb/Shrub/Seedling and large tree size classes at the Forest-wide and 5<sup>th</sup> field HU scales. This table shows only that portion of the range that falls within the estimated HRV and thus presents only the HRV portion of desired condition range that is displayed in Table A-2. The low end of the large tree range is based on the low end of HRV, provided that the minimum value does not fall below 20 percent. The upper end of the range for large trees is equal to the mean HRV value. The upper end of the desired condition range is the same in Tables A-2 and A-3. The 20 percent minimum value in Table A-3 is the same as that shown in Table A-2 -- it represents the minimum percent of a forested landscape area that should remain in the large tree size class to ensure the viability of terrestrial wildlife species. The range for the Grass/Forb/Shrub/Seedling growth stage is based on the range of large trees and the time interval needed for this growth stage to advance to the next tree size class. The ranges in tree size classes in Table A-3 displays the desired condition encompassed by all Management Prescription Categories except MPC 5.2.

**Table A-3. Desired Percentage Ranges for Size Classes of Forested Potential Vegetation Groups,  
Outside of MPC 5.2** (Includes forested vegetation in RCAs)

| Tree Size | PVG 1   | PVG 2   | PVG 3   | PVG 4   | PVG 5   | PVG 6   | PVG 7   | PVG 8   | PVG 9   | PVG 10  | PVG 11  |
|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| G/F/S/S   | 1 – 12  | 4 – 5   | 9       | 14 – 15 | 3 – 4   | 7 – 8   | 7 – 16  | 15 – 17 | 13      | 16 – 23 | 9 – 15  |
| Large     | 47 – 91 | 59 – 80 | 23 – 41 | 20 – 34 | 66 – 84 | 28 – 56 | 20 – 21 | 20 – 21 | 31 – 37 | 20      | 20 – 27 |

**Note:** References to PVG 10 in the above table is to be applied to the Medium Tree Size Class (overstory trees average diameter ranges from 12.0 to 19.9 inches diameter breast height). The overstory trees in PVG 10 stands (persistent lodgepole) generally do not attain an average diameter within the large tree size class ( 20.0 inches diameter breast height) even though individual trees may equal or exceed 20 inches in diameter.

Table A-4 displays a portion of the desired ranges for the Grass/Forb/Shrub/Seedling and large tree size classes at the Forest-wide and 5<sup>th</sup> field HU scales. This table shows only that portion of the range that falls outside of the estimated HRV and thus presents only a portion of the desired condition range that is displayed in Table A-2. The part of the desired condition range applies to those areas allocated to Management Prescription Category 5.2 where timber production is an emphasis. The low end of the large tree size class range in Table A-4 is the same as in Table A-2 -- it is based on half the low end of HRV provided that the minimum value does not fall below 20 percent. The upper end of the range for large trees is equal to the low end of HRV for large trees. It should be noted that for several PVGs the requirement that a minimum of 20 percent of the forested landscape be retained in the large tree size class results in conditions that fall within the estimate Historical Range of Variability. This is true for PVGs 4, 7, 8, 10, and 11 where the low end of the range is at or below 20 percent. The reason for requiring the 20 percent minimum value in Table A-4 is the same as in Tables A-2 and A-3 -- it represents the minimum percent of a forested landscape area that should remain in the large tree size class to ensure the viability of terrestrial wildlife species.

**Table A-4. Desired Percentage Ranges for Size Classes of Forested Potential Vegetation Groups, Within MPC 5.2**

| Tree Size | PVG 1   | PVG 2   | PVG 3   | PVG 4 | PVG 5   | PVG 6   | PVG 7 | PVG 8 | PVG 9   | PVG 10 | PVG 11 |
|-----------|---------|---------|---------|-------|---------|---------|-------|-------|---------|--------|--------|
| G/F/S/S   | 13 – 18 | 5 – 7   | 9       | 15    | 4 – 7   | 8 – 9   | 7     | 15    | 13 – 15 | 16     | 9      |
| Large     | 24 – 46 | 30 – 58 | 20 – 22 | 20    | 33 – 65 | 20 – 27 | 20    | 20    | 20 – 30 | 20     | 20     |

**Note:** References to PVG 10 in the above table is to be applied to the Medium Tree Size Class (overstory trees average diameter ranges from 12.0 to 19.9 inches diameter breast height). The overstory trees in PVG 10 stands (persistent lodgepole) generally do not attain an average diameter within the large tree size class ( 20.0 inches diameter breast height) even though individual trees may equal or exceed 20 inches in diameter.

The desired range of the Grass/Forb/Shrub/Seedling tree size class is also displayed and was developed in the same manner as in the two tables above. The desired range of the Grass/Forb/Shrub/Seedling tree size class varies between the three tables (A-2, A-3 and A-4) because of the percent of large tree size class range associated with MPCs and the time interval needed for trees to develop from the Grass/Forb/Shrub/Seedling tree size class to the Sapling tree size class.

For example, PVG 7 has a desired range for large trees that is essentially the same regardless of MPC (20 percent in Table A-4 and 20–21 percent in Table A-3); however, the range of the Grass/Forb/Shrub/Seedling tree size class is limited to 7 percent in MPC 5.2, while in all other MPCs the range varies from 7 to 16 percent. This wider range occurs in the MPCs other than 5.2 because a significant portion of PVG 7 occurs in MPCs (1.2, 3.1, and 4.1). These MPCs emphasize passive management strategies that would generally have the Grass/Forb/Shrub/Seedling tree size class developing into the Sapling tree size class over a longer time period than under active management in MPC 5.2. This time interval is estimated to be three times longer (30 years versus 10 years) under MPCs 1.2, 3.1, and 4.1 than under 5.2. The result is that the range of the Grass/Forb/Shrub/Seedling tree size class is greater in Table A-3 for PVG 7, even though the range of desired large tree size class is essentially the same regardless of MPC. In other PVGs this same relationship may not hold true because either the range of desired conditions for the large tree size class is substantially different, or there is only a small percentage of a PVG in an MPC requiring longer time intervals, or both.

Although current conditions may prevent us from obtaining desired condition for quite some time, over a longer period (perhaps more than 100 years) management actions should result in forested vegetation that is approaching Forest-wide desired conditions for tree size classes, when all of the 5<sup>th</sup> field HUs are averaged together. The 5<sup>th</sup> HU is deemed an appropriate analysis unit for evaluating project-level contributions because mid-scale data and other information is generally available or is feasible to generate. This scale also coincides with other scales of analysis that may be undertaken before or as part of project-level planning. The 5<sup>th</sup> field HU also facilitates a good distribution of desired components across the Forest.

### **Canopy Closure**

As previously mentioned the overstory or uppermost tree layer determines the tree size class, for a stand or other area delineated for management actions. Trees that compose a distinct break in height determine the canopy layer, and these trees must have a non-overlapping canopy closure of at least 10 percent. A few individual trees (such as relic trees) representing a distinctly different tree size are not recognized as defining a distinct canopy layer if the total canopy cover of those trees is less than 10 percent. These trees are instead included with the trees in the size class that are closest to their own size.

Canopy closure classes are based on the following:

- Low = 10-39% canopy closure
- Moderate = 40-69% canopy closure
- High = 70% or more canopy closure

Canopy closure may be determined through ocular estimates from aerial photo interpretation or while conducting stand exams. Canopy cover as expressed here represents total non-overlapping crown closure of all trees in a stand except for trees in the seedling size class. Trees in the seedling size class are used to estimate canopy closure only when they represent the only structural layer present.

For example, if the average diameter of the overstory trees is >20" DBH, then the stand is classified as being in the large tree size class, regardless of what size trees comprise other canopy layers that may be present in the understory. This is to be interpreted such that, in the 5<sup>th</sup> field HU of concern, the area occupied by stands classified as being in the large tree size class, for each potential vegetation group, should fall within the ranges indicated for each canopy closure class, or show that management actions will assist a PVG in moving towards a size class distribution within the ranges over the long-term.

Table A-5 displays the desired condition for canopy closure for the large tree size class associated with the large tree desired ranges displayed in Table A-3 above. This is the desired condition for all MPCs except 5.2.

**Table A-5. Desired Percentage Ranges for Canopy Distribution within the Large Tree Size Class, Represented by Canopy Closure Classes – Outside of MPC 5.2**  
(Includes vegetation in RCAs)

| Canopy Closure | PVG 1  | PVG 2   | PVG 3   | PVG 4  | PVG 5   | PVG 6  | PVG 7  | PVG 8   | PVG 9   | PVG 10 | PVG 11 |
|----------------|--------|---------|---------|--------|---------|--------|--------|---------|---------|--------|--------|
| Low            | 80-100 | 74 - 94 | 5 - 25  | 0 - 14 | 25 - 45 | 0 - 20 | 0 - 14 | 0       | 0       | 0      | 0 - 16 |
| Moderate       | 0 - 20 | 6 - 26  | 75 - 95 | 87-100 | 55 - 75 | 80-100 | 86-100 | 51 - 71 | 51 - 71 | 81-100 | 84-100 |
| High           | 0      | 0       | 0       | 0      | 0       | 0      | 0      | 39 - 49 | 39 - 49 | 0 - 19 | 0      |

**Note:** References to PVG 10 in the above tables are to be applied to the Medium Tree Size Class (overstory trees average diameter ranges from 12.0 to 19.9 inches diameter breast height). The overstory trees in PVG 10 stands (persistent lodgepole) generally do not attain an average diameter within the large tree size class ( $\geq 20.0$  inches diameter breast height) even though individual trees may equal or exceed 20 inches in diameter. Canopy closure classes are as follows: Low is 10-39%; Moderate is 40-69%; and High is  $>70\%$ .

Table A-6 displays the desired condition for canopy closure for the large tree size class associated with the large tree desired ranges in Table A-4 above. This is the desired condition for MPC 5.2.

**Table A-6. Desired Percentage Ranges for Canopy Distribution within the Large Tree Size Class, Represented by Canopy Closure Classes – Within MPC 5.2**

| Canopy Closure | PVG 1  | PVG 2 | PVG 3  | PVG 4  | PVG 5 | PVG 6  | PVG 7 | PVG 8 | PVG 9 | PVG 10 | PVG 11 |
|----------------|--------|-------|--------|--------|-------|--------|-------|-------|-------|--------|--------|
| Low            | 80-100 | 4-24  | 0-20   | 0-20   | 3-23  | 0-20   | 23-43 | 0     | 0     | 0      | 57-77  |
| Moderate       | 0 - 20 | 76-96 | 80-100 | 80-100 | 77-97 | 80-100 | 57-77 | 30-50 | 30-50 | 81-100 | 23-43  |
| High           | 0      | 0     | 0      | 0      | 0     | 0      | 0     | 50-70 | 50-70 | 0 - 19 | 0      |

**Note:** References to PVG 10 in the above tables are to be applied to the Medium Tree Size Class (overstory trees average diameter ranges from 12.0 to 19.9 inches diameter breast height). The overstory trees in PVG 10 stands (persistent lodgepole) generally do not attain an average diameter within the large tree size class ( $\geq 20.0$  inches diameter breast height) even though individual trees may equal or exceed 20 inches in diameter. Canopy closure classes are as follows: Low is 10-39%; Moderate is 40-69%; and High is  $>70\%$ .

Although current conditions may prevent us from obtaining desired condition for quite some time, over a longer period (perhaps more than 100 years) management actions should result in forested vegetation that is approaching Forest-wide desired conditions for canopy closure, when all of the 5<sup>th</sup> field HUs are averaged together.

### **Species Composition**

Table A-7 displays the desired condition ranges for forested vegetation species composition at the Forest-wide scale. Scales below the Forest-wide level are not expected to mirror these values because of the specific mix of habitat types that are present in individual analysis areas. For example, for PVG 1, the desired range of 96-99 percent ponderosa pine would be attained when evaluated at the Forest-wide scale.

The remainder of PVG 1, up to 4 percent of the area, would be any other combination of tree cover. For an individual 5<sup>th</sup> field HU, the proper species “mix” would be determined by the dominant management prescription categories (MPCs) for that watershed, and other concerns such as wildlife or wildland/urban interface.

Table A-7 represents the Forest-wide desired species composition across all size classes, as adapted from the Historical Range of Variability of the Idaho Southern Batholith Ecosystem (Morgan and Parsons 2001). Individual species represented by an asterisk (\*) were not explicitly modeled during the development of the Historical Ranges of Variability. They were not included because they occur in habitat types that represent only a minor part of the PVGs within the Idaho Southern Batholith, or because of little information known about their historical occurrence within a PVG. This latter reason was often the case with quaking aspen.

The appropriate species composition for the 5<sup>th</sup> field HU being analyzed may vary from this table based on the mix of habitat types present. For project application it is necessary to determine the mix of habitat types that comprise the PVGs within the 5<sup>th</sup> field HU analysis area. For this usually more limited set of habitat types, describe the desired species composition that will achieve the goals of having landscapes dominated by early seral species that are better adapted to site conditions, and are usually more resilient to disturbances such as fire. The desired range of species in Table A-7 is evaluated for Forest-wide monitoring.

**Table A-7. Desired Percentage Ranges for Species Composition of Forested Potential Vegetation Groups, For Forest-wide Evaluation**

| Species          | PVG 1 | PVG 2 | PVG 3 | PVG 4 | PVG 5 | PVG 6 | PVG 7 | PVG 8 | PVG 9 | PVG10 | PVG11 |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Aspen            | *     | *     | 1-11  | 4-13  | *     | *     | 6-11  | *     | *     | *     | *     |
| Lodgepole pine   |       | *     | *     | 10-20 | *     | 1-5   | 28-42 | 25-34 | 29-37 | 82-94 | 18-25 |
| Ponderosa pine   | 96-99 | 81-87 | 26-41 | *     | 80-88 | 23-41 | *     |       |       |       |       |
| Western larch    |       |       |       |       | 0-1   | 15-29 | *     | 9-16  | *     |       |       |
| Whitebark pine   |       |       |       |       |       |       |       |       |       | *     | 32-47 |
| Douglas-fir      | 0-2   | 10-16 | 47-69 | 66-81 | 7-17  | 15-25 | 24-34 | 23-37 | *     | *     |       |
| Englemann spruce |       |       |       |       | *     | 0-2   | 3-5   | 10-17 | 28-33 | *     | 8-13  |
| Grand fir        |       |       |       |       | 0-1   | 9-23  | *     |       |       |       |       |
| Subalpine fir    |       |       |       |       |       | 0-3   | 12-21 | 11-17 | 29-33 | *     | 18-29 |

**Note:** Use this table as a reference. For project purposes describe the desired species composition for the 5<sup>th</sup> field HU based on species composition of the habitat types present within the 5<sup>th</sup> field HU analysis area. Refer to the appropriate habitat type guide for the analysis area when determining the correct species mix including those species that may occur as accidentals.

### **Snags and Coarse Woody Debris**

Snags and coarse woody debris are much finer-scale elements than vegetation components such as species composition, size class, and canopy closure. As such, they are to be evaluated during project planning for the activity area, which better reflects the scale at which to consider these elements and to plan projects that provide for maintaining or improving trends in snag and coarse wood amounts. The activity area for snags and coarse woody debris is the specific site affected, whether the effects are positive or negative. Actions affecting activity areas that need to be assessed include timber harvest, reforestation, timber stand improvement, and prescribed fire activities.



Snags and coarse wood are known to fluctuate both spatially and temporally. Snags are often found in clumps, whereas coarse wood recruitment over time may form from clumped snags. Coarse wood may move around on the landscape, often resulting in a more even distribution than snags. These tables are not meant to provide an even distribution of snags and coarse wood across every acre of the forested landscape, but to provide numbers that serve as a guide to approximate an average condition for an activity area.

Management actions should result in both short-term and long-term replacement of snags by retaining sufficient number of live trees, including those with broken tops, cavities, lightning scars, dead portions, etc. as future recruitment. Rely on site specific information, normal mortality rates, and experience with mortality of residual trees following vegetation management activities when determining the number of trees needed to provide for future snag recruitment.

Localized differences may also occur. For example, on certain habitat types, such as PVG 7 being managed for lodgepole pine as the early seral species, it may be difficult to have an abundance of material in the greater 20" DBH classes, primarily due to the smaller size generally attained by lodgepole pine trees. There may also be cases where local site conditions do not represent the conditions described by the Potential Vegetation Group. Such situations include broad ecotones between forest and non-forest communities, very shallow or highly disturbed soils like those that have resulted from some past mining activities, or other localized conditions that have affected the site potential. These differences should be documented during project design. Furthermore, although the best available science was used to determine desired condition values, new scientific information and monitoring studies may display that adjustments are needed in the numbers.

On a landscape or watershed level, certain areas can have very high snag/coarse wood numbers, while others may be much lower. At some point in time, areas that have low numbers may have a drastic increase due to a disturbance event, while a young regenerating forest that previously had high snag numbers may not have many current snags, but could have high tonnages of coarse wood left over from the previous stand and its disturbance event. Ecosystems and landscapes are dynamic; our intent is not to create a static condition on every acre, but to incorporate those dynamics into our implementation, while using management tools to improve conditions when necessary, or maintain those conditions that provide for desired components.

When planning an activity, the intent is to either maintain a desired condition, or to trend toward the desired condition. If an area is already within the range of desired conditions, a management action should either keep the area within the desired ranges, or when the action results in moving outside the range, a mechanism to move you back into the range needs to be provided. An example of this would be a prescribed burn that would burn some of the coarse woody debris, but would also create mortality of trees, which would become snags and future coarse woody debris. If an area is above or below the desired range, it may not be possible to meet the desired ranges over the short term. However, actions can be taken to trend toward the desired ranges. This would include leaving some portion of the snags and coarse woody debris that are available, although perhaps not enough to meet desired ranges. Another example is an action that over the long term produces larger size class trees, which would eventually become large snags and coarse woody debris.

Tables A-8 and A-9 display the desired ranges for snags and coarse woody debris that contribute toward wildlife habitat and long-term soil productivity.

Desired numbers were developed for each PVG so that the numbers would be reflective of productivities and disturbance regimes. Agee (2002) presents several diagrams that depict the spatial and temporal variability found in snag/coarse wood numbers, according to the fire regimes of different forest types.

**Table A-8. Desired Range of Snags Per Acre for Potential Vegetation Groups**

| Diameter Group   | PVG 1   | PVG 2   | PVG 3   | PVG 4   | PVG 5   | PVG 6   | PVG 7   | PVG 8    | PVG 9    | PVG 10  | PVG 11  |
|------------------|---------|---------|---------|---------|---------|---------|---------|----------|----------|---------|---------|
| 10" – 20"        | 0.4-0.5 | 1.8-2.7 | 1.8-4.1 | 1.8-2.7 | 1.8-5.5 | 1.8-5.5 | 1.8-5.5 | 1.8-7.5  | 1.8-7.5  | 1.8-7.7 | 1.4-2.2 |
| Greater than 20" | 0.4-2.3 | 0.4-3.0 | 0.2-2.8 | 0.2-2.1 | 0.4-3.5 | 0.2-3.5 | 0.2-3.5 | 0.2-3.0  | 0.2-3.0  | NA      | 1.4-2.2 |
| Total            | 0.8-2.8 | 2.2-5.7 | 2.0-6.9 | 2.0-4.8 | 2.2-9.0 | 2.0-9.0 | 2.0-9.0 | 2.0-10.5 | 2.0-10.5 | 1.8-7.7 | 2.8-4.4 |
| Minimum Height   | 15'     | 30'     | 30'     | 30'     | 30'     | 30'     | 30'     | 30'      | 30'      | 15'     | 15'     |

**Note:** This table is not meant to provide an even distribution of snags across every acre of the forested landscape, but to provide numbers that serve as a guide to approximate an average condition for an activity area.

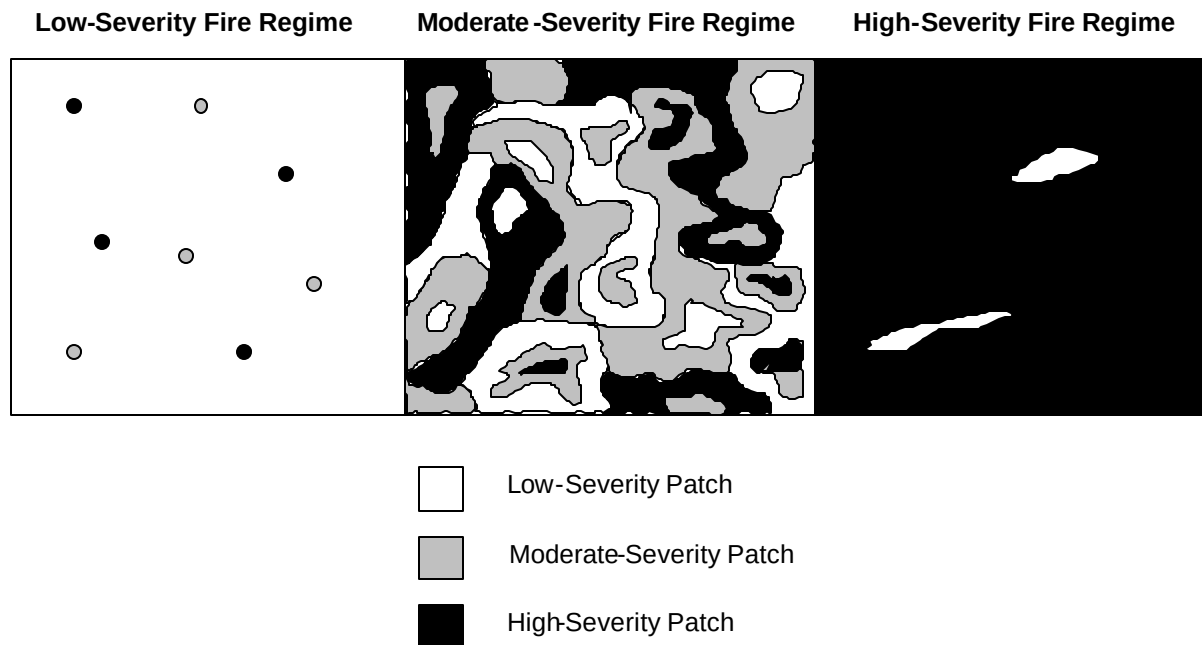
According to Agee, the landscape ecology of historical fire regimes is a function of place. Low-severity fire regimes had small patches and little edge, while high-severity regimes had the largest patch sizes and moderate edge. Moderate- or mixed-severity fire regimes had intermediate patch sizes and maximum amounts of edge. See Figure A-1.

**Table A-9. Desired Range of Coarse Woody Debris, in Tons Per Acre, and Desired Amounts in Large Classes for Potential Vegetation Groups**

| Indicator                                           | PVG 1  | PVG 2  | PVG 3  | PVG 4  | PVG 5  | PVG 6  | PVG 7  | PVG 8  | PVG 9  | PVG10  | PVG11  |
|-----------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Dry weight (Tons per ac.) in Decay Classes I and II | 3 – 10 | 4 – 14 | 4 – 14 | 4 – 14 | 4 – 14 | 4 – 14 | 5 – 19 | 5 – 19 | 5 – 19 | 5 – 19 | 4 – 14 |
| Distribution <sup>1</sup> >15"                      | >75%   | >75%   | >65%   | >65%   | >75%   | >65%   | >50%   | >25%   | >25%   | >25%   | >25%   |

**Note:** The recommended distribution is to try to provide coarse wood in the largest size classes, preferably over 15" in DBH, which provide the most benefit for both wildlife and soil productivity. This table is not meant to provide an even distribution of coarse wood across every acre of the forested landscape, but to provide numbers that serve as a guide to approximate an average condition for an activity area.

Figure A-1. Patch Dynamics of Fire Regimes (Agee 1998)



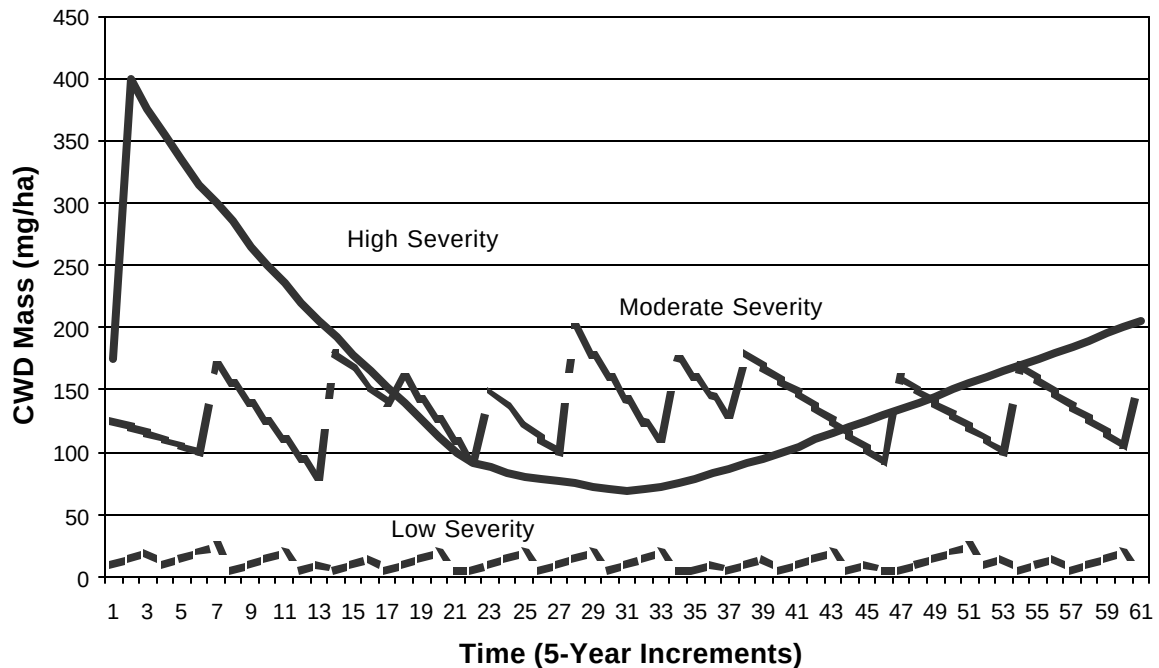
Agee (2002) also discusses how coarse woody debris dynamics (snags plus logs) have historically varied by fire regime (Figure A-2). In low-severity fire regimes, frequent, low-intensity fires limited coarse woody debris. His graph displays the fluctuations found in low-severity fire regimes, where levels will reach a peak, and then cycle downwards. As this graph displays, the peaks may be as high as 30-35 mg/ha (approximately 13-16 tons/acre), and the lows could be less than 1 mg/ha (approximately 0.5 tons/acre). The average on these graphs is probably somewhere around 5 tons (Graham pers. comm. 2001). Although fires were frequent, they rarely affected every acre. In moderate-severity fire regimes, fires both consumed and created coarse woody debris several times a century (Agee 2002). In high-severity fire regimes, a "boom-and-bust" dynamic operated: substantial coarse woody debris creation after a stand replacement fire, followed by a century or more without further substantial input.

These graphics represent well the spatial and temporal cycling of coarse woody debris and the patch dynamics at which they operate. Therefore, it is important to understand the dynamics of the particular PVG that a project is in, to best determine desired levels. In some PVGs, snags and coarse woody debris come as pulses over time (see Figure A-2). There may be little dead material available until a disturbance event, at which time levels may far exceed these desired conditions; over time levels will approach desired conditions, eventually recycling back to the first condition with little dead material.

Although snags and coarse woody debris are managed at the activity area, it is useful to have some knowledge of the larger landscape area to assist in determining the appropriate number and amount that fall within the desired ranges described in Tables A-8 and A-9. For example, in a watershed that has had large recent fires, there are probably an abundance of snags, therefore, project contributions may not be as important. In a heavily managed watershed, project contributions to snag and coarse wood levels may be more important than in a watershed with little active management. Areas with many roads may have higher impacts to snags from firewood gathering activities; therefore, scheduled projects may need to contribute

higher levels within the desired range, to balance out effects that may or may not be directly related to the project.

**Figure A-2. Temporal Cycling of Coarse Woody Debris by Fire Regime (Agee 2002)**



To assist in determining the appropriate amounts of snags and coarse wood to manage for, it is also important to utilize the historical fire regimes that are typically found in each PVG. Table A-10 illustrates the historic fire regime by PVG.

**Table A-10. Historical Fire Regimes For Forested Potential Vegetation Groups**

| Potential Vegetation Group                     | Historical Fire Regime |
|------------------------------------------------|------------------------|
| 1-Dry ponderosa pine – Xeric Douglas-fir       | nonlethal              |
| 2-Warm, dry Douglas-fir – moist ponderosa pine | nonlethal              |
| 3-Cool, moist Douglas-fir                      | mixed1-mixed2          |
| 4-Cool, dry Douglas-fir                        | mixed1-mixed2          |
| 5-Dry grand fir                                | nonlethal-mixed1       |
| 6-Cool, moist grand fir                        | mixed1-mixed2          |
| 7-Warm, dry subalpine fir                      | mixed2                 |
| 8-Warm, moist subalpine fir                    | lethal                 |
| 9-Hydric subalpine fir                         | lethal                 |
| 10-Persistent lodgepole pine                   | lethal                 |
| 11-High elevation subalpine fir                | mixed2                 |

Many of our forest stands will not be able to meet desired conditions for many decades. In many instances, the desired conditions cannot be met at this point in time, or within the 10-15 year planning period. The desired conditions presented in Tables A-8 and A-9 may not occur in young and many intermediate aged stands. This is part of the temporal variability in the numbers of snags and coarse woody debris. As we move toward desired conditions in large tree size, canopy closure, and species composition, so will we also move toward the desired conditions for snags and coarse wood. An area or group of stands may be within desired conditions in this 50-year period, and in the next 50-year period they may fall outside the range of desired conditions, while an adjacent area moves into the desired condition ranges. Vegetation within landscapes is dynamic, and it is anticipated that desired conditions will be achieved in a dynamic fashion.

In seedling, sapling, and small tree size stands, it may be difficult to have large-diameter snags and coarse woody debris. In this case, some of the tonnage and snag numbers can be in smaller size classes. However, it is not expected that the total amounts will be made up in smaller size classes. But there will be opportunities to trend toward the desired ranges. An example would be in a stand dominated by 6"-12" DBH trees. In a thinning operation, we would want to leave some distribution of material that falls within the range of size classes available, with preponderance toward the larger (12" DBH) trees. However, the amount of material retained that is less than 6" diameter should be balanced against the fire hazard that it, and the finer material that often comes with it, may create.

Several different factors determine the potential fire hazard created by surface fuels including kind, depth, continuity, extent, connectivity to overstory vegetation, and adjacent fuels. The risk of creating a potentially hazardous condition should also be considered relative to the management objectives for the area. For example, the willingness to accept risk associated with retaining material in the smaller class may be much different for a wildland/urban interface area than in an isolated site adjacent to wilderness. In addition, juxtaposition of the area within the landscape relative to fuel breaks and vegetative mosaics can help frame risk to the landscape at large. In a stand of primarily 3"-6" DBH trees, it would be difficult to come close to desired ranges based on concerns about that sized material. In these cases, our activities should reflect a trend toward creating larger material, which ties in with the desired conditions for large trees as well. For these reasons, we have included size class distributions for both snags and coarse woody debris.

Another reason to reduce reliance on small size classes for coarse woody debris is that our primary objective is to provide the majority of the wood in the large (>15" diameter) size class, as this material is retained on site longer. As stated above, some small and intermediate stage stands will not have the larger material available, and the expectation is not to compensate with an abundance of material in the small and medium size classes. However, if that is all there is available, some material should be left in those size classes to assist with long-term soil productivity. Brown et al. (2001) indicate that on sites where most of the coarse wood loading is comprised of larger pieces (>15" diameter), there is less of a hindrance to using prescribed fire. Conversely, leaving excessive material in the 3-6" diameter size class could hamper prescribed fire efforts in the future by creating conditions where fire would not achieve desired effects.

Spatial distribution of snags and coarse wood is also important. It would not be desirable for all the dead material in a watershed to be clumped into one corner, and the remainder of the area to have very little or no material. Snags are generally found in clumps, and the watershed would have groups of clumps throughout. This is why the activity area was chosen as the distribution unit. Within an activity area, snags should be provided in patches or more uniformly, depending on what is appropriate for the PVG. Snag patches should be distributed across the activity areas rather than clumped together in a portion of the activity area. Coarse woody debris is generally somewhat more evenly distributed. Within an activity area,

distribution for coarse wood should reflect historical disturbance regimes appropriate for the PVG. When implementing a project, document how the project maintains or trends toward the desired conditions.

Management treatments may not produce all the dead material in the amounts and/or decay classes desired in a single action. However, treatments should be designed to provide structural, compositional, and functional elements that contribute to long-term sustainability of snags and coarse wood. In many cases, actions will consume coarse wood (e.g., prescribed fire). However, if the action results in the development of large trees, this will contribute to providing the desired levels of large snags and coarse woody debris over time.

Historical fire regimes, particularly the non-lethal and mixed1 regimes, continually recycled material. Larger material may take several fire cycles before it is fully consumed. This constant recycling also helps to provide a variety of decay classes, another important component of achieving desired conditions. Some wildlife species prefer hard snags, while others prefer those with more decay. Therefore management actions should result in a variety of snag and coarse wood decay classes. Only decay classes I and II count towards the desired amounts, to provide for continual recruitment into decay class III. The goal is to provide coarse woody debris in decay class III, because this material is eventually incorporated into the soil.

### **Vegetative Hazard and Wildfire**

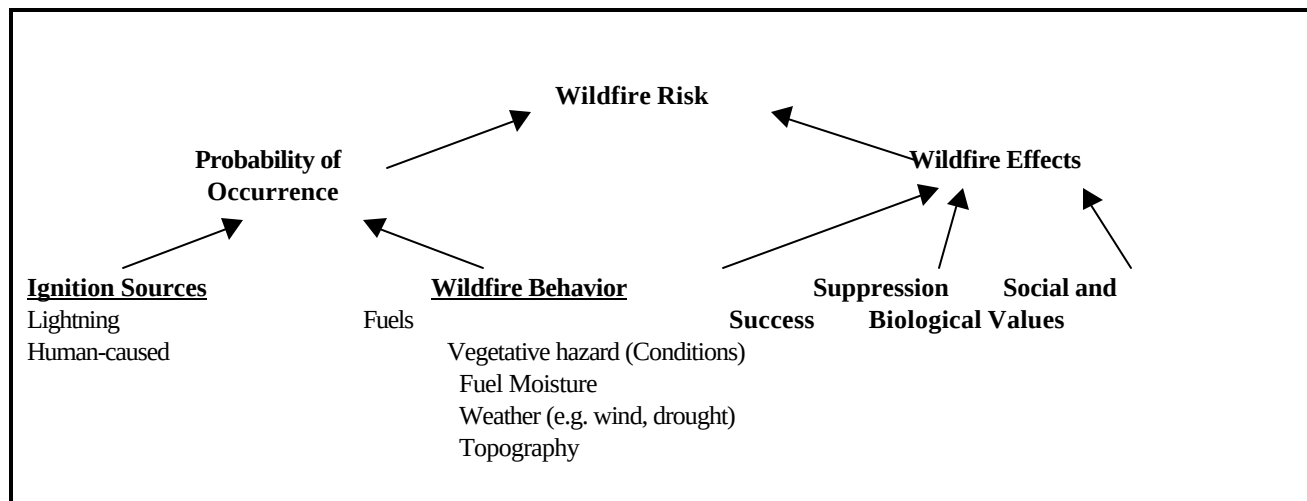
Vegetative desired conditions are directly related to vegetative hazard conditions in that they both define conditions that can occur on the landscape. In non-lethal and mixed1 fire regimes, conditions closest to historical are expected to reduce the risk of lethal wildfires due to the emphasis on larger, widely spaced trees. Ignitions that occur within these conditions are more likely to stay on the ground, increasing the chances of keeping a wildfire small (Omi and Martinson 2002, Wagle and Eakle 1979). This is not the case, however, in the mixed2 and lethal fire regimes. By definition, lethal fires are consistent with the way these regimes operate.

Wildfires, regardless of whether they are characteristic or uncharacteristic, are undesirable in some cases, particularly in wildland/urban interface areas. Although wildfire risks can in part be addressed through the use of defensible space, in many situations watersheds are a more appropriate scale to deal with concerns about firefighter and public safety, as well as the multitude of infrastructures, resources, and values that are often associated with interface. Therefore, the juxtaposition and arrangement of vegetative conditions relative to wildland/urban interface issues were considered at the watershed or 5<sup>th</sup> field HU scale. This is important because in some cases desired vegetative conditions may contribute to hazard. In particular, the desired conditions for forested vegetation in MPC 5.2 are more hazardous than areas outside of this MPC due to the emphasis on vegetative attributes that promote timber production. Here the large tree desired condition is lower than in other MPCs to allow for a greater mix of all size classes over time. In addition, stand densities are greater to provide sufficient volumes for removal of timber products.

Although these conditions increase the hazard associated with lethal wildfires, the risk of these types of events may be reduced using a variety of vegetation management techniques. These techniques can include strategic placement of fuel breaks, surrounding vulnerable areas with vegetative conditions where fires can be more easily suppressed, or arranging treatments in a way that breaks up the continuity of more hazardous conditions (Fulé 2001, Omi and Martinson 2002, Deeming 1990, Finney 2001, Graham et al. 1999). These types of treatments, if strategically located, can be effective without being extensive. Because desired conditions are evaluated at the 5<sup>th</sup> field HU or watershed scale, treatments to mitigate hazardous conditions to adjacent areas should not prevent achievement of desired vegetative conditions.

Although the vegetative management techniques described above can reduce the risk of lethal wildfire, they address only one (vegetative conditions) of several factors and, therefore, cannot eliminate this risk (Figure A-3). The efforts made by property owners on their own behalf are an essential element in protecting homes in the wildland/urban interface.

**Figure A-3. Factors That Contribute To Wildfire Risk**  
(Adopted from Bachman and Allgöwer 1999)



## Shrublands

Desired conditions have been developed for various sagebrush communities (refer to Vegetation Classification portion of this Appendix for descriptions of sagebrush types). Shrublands occur on areas not classified as forestland and where shrub cover is has the potential to be greater than 10 percent shrub cover. Desired conditions are expressed as ranges for the amounts of acres found in the various condition classes (canopy cover classes) for sagebrush. The canopy covers refers only to the canopy cover of sagebrush, and does not include the associated species that may be found co-occurring with sagebrush. To reach the desired ranges, conditions would have to be within these ranges. Forest-wide direction states that we will evaluate the desired conditions at the 5<sup>th</sup> level HU watershed. All of the desired ranges are Forest-wide desired conditions, and each watershed is the analysis unit that will therefore, contribute to the Forest-wide condition. Although current conditions may prevent us from obtaining desired condition for quite some time, over a longer period management actions should result in non-forested vegetation that is approaching Forest-wide desired conditions, when all of the 5<sup>th</sup> field HUs are averaged together. The 5<sup>th</sup> HU is deemed an appropriate analysis unit for evaluating project level contributions, and also ensures a distribution of desired components across the Forest.

Tables A-12 presents the desired condition values for the mountain big sagebrush and basin big sagebrush communities. As an example, in a watershed with 12,000 acres of mountain big sagebrush, 3600-4800 acres would be in the 0-10 percent canopy cover class, 3,600-4,800 acres would be in the 11-20 percent canopy cover class, and 2,400-3,600 acres with a greater than 21 percent canopy cover, but with no more than 600

acres with a canopy cover greater than 31 percent. This would average upward with other watersheds to meet Forest-wide desired conditions.

Often, other shrub species will co-occur with sagebrush species or subspecies. Refer to the Vegetation Classification portion of this Appendix for description of the types. The presence of these other species also has ecological importance in terms of their function and contribution to processes. However, sagebrush species and subspecies in this case are being used as indicators of conditions. If we manage to desired conditions, the other associated shrub species will also respond as we represent of range of conditions on the landscape for sagebrush community types.

**Table A-11. Desired Condition Ranges for Mountain Big Sagebrush and/or Basin Big Sagebrush**

| <b>Mt. Big Sagebrush Canopy Cover Classes</b> | <b>Desired Amounts Of Canopy Cover Classes By Percent Of Area</b> |
|-----------------------------------------------|-------------------------------------------------------------------|
| 0-10% canopy cover                            | 30-40% of area                                                    |
| 11-20% canopy cover                           | 30-40% of area                                                    |
| 21-30%, >31% canopy cover                     | 20-30% of total area, with ≤ 5% in the >31% canopy cover class    |

As was recognized for the forested vegetation types, in some cases it may take many years to develop conditions that meet the desired conditions. If a watershed has recently experienced a large extent wildfire, it can be many years before the necessary structural complexity can develop at a landscape level. Conversely, a watershed with little disturbance over many years may all be in a dense canopy cover. Management actions that reduce the canopy covers would be an example of “trending toward” desired conditions, even if only applied on a small scale. When at desired conditions, maintenance would entail management actions that keep the balance of canopy cover classes within the range of desired conditions, or can provide for moving back into desired conditions. As some acres become denser through succession, other acres may be treated to limit overall canopy cover density. Another example is a watershed at desired conditions, but with the canopy cover over 21 percent at the high end of range (30 percent of acres). Although at desired, it may be necessary for management activities to reduce some of the higher canopy covers, to prevent conditions from exceeding those desired ranges and not having enough in the other canopy cover classes. Natural disturbances will certainly play a role also in the movement of acres in and out of canopy cover classes.

## **Riparian Vegetation**

For riverine riparian vegetation, which includes coniferous potential vegetation, refer to Tables A-1 through A-9 (size class (outside MPC 5.2), canopy closure (outside of MPC 5.2), species composition, snags, and coarse woody debris) for the desired conditions. This includes the upland portions of coniferous vegetation found in the RCAs. This information is also related to information presented in Appendix B, Table 1.

Riparian vegetation is dominated by a variety of species, age classes, and structures including deciduous trees, willows, alders, sedges and hydric grasses, depending on stream substrate, gradient, elevation, soil-hydrologic, and disturbance processes. Riparian areas have their own disturbance processes that influence vegetative dynamics, with an almost continual readjustment in successional stages in many areas. Riparian vegetation is also influenced by processes in the uplands, as well as by those upstream in the watershed.



There is a high variability in site conditions relative to the factors discussed above, which will influence riparian vegetation desired conditions in any site-specific location. Therefore, site-specific desired condition determinations are needed.

### **Grasslands, Montane Shrubs, Wetlands/Marshes, And Other Vegetation Types**

Other vegetation types not described in the above sections do exist on the Forest. Desired conditions need to be determined on a project basis based on local and available information. Most of these other types are described in the Vegetation Classification section. Other Forest-wide and Management Area Direction may apply to these types, such as limiting potential establishment and spread of noxious weeds. Some of these communities may also be important as habitats for rare plants.

### **Spatial Patterns**

Recent advances in theory and empirical studies of vegetation and landscape ecology indicate that if goals of maintaining biological diversity across landscapes are to be achieved in the long term, then management needs to consider issues such as variability, scale, pattern, disturbance, and biotic processes. This is a daunting task that requires both a conceptual framework to organize and simplify ecosystem complexity and knowledge of the details of particular systems (Spies and Turner 1999). Elements of spatial pattern—including items such as the amount, proportion, size, interpatch distance, variation in patch size, and landscape connectivity—occur within vegetation types and between vegetation types. Landscape spatial patterns affect ecological processes and can be illustrated through differences in plants species composition and structure, as well as habitat utilization by wildlife. Despite recent interest and progress, it remains challenging to determine for various processes or organisms the conditions under which spatial heterogeneity is and is not important (Spies and Turner 1999). Forested ecosystems often include recognizable patchiness, usually corresponding to physical changes in topography, hydrology, substrate, or as a reflection of large disturbances (Bormann and Likens 1979, Whittaker 1956). Patchiness in the landscape itself can create changes in microclimate at patch edges, displaying demographic fluxes of a large number of individual plant species. This can result in varied plant species distribution and edge-oriented patterns (Matlack and Litvaitis 1999). These effects can subsequently result in changes to ecological processes and habitat utilization.

Within a subwatershed or watershed, there may be several forested vegetation types interspersed with several non-forested vegetation types. Additionally, there may be several MPC designations superimposed upon these vegetation types. It is important to consider the composition of the landscape that contains a project area. At the project level, opportunities exist to consider spatial patterns and how a project can affect the spatial patterns, and what those effects (positive or negative) will be to plant and animal species. During project design, considerations of spatial patterns are dependent upon what conditions are currently present and the overriding management concerns for the area. Generally, these conditions and concerns are site-specific, depending on the appropriate scale at which the project is operating. Repeating patterns of change emerge at landscape scales, and some order can be found through descriptions of successional pathways, patch mosaics, and seral stages that facilitate the understanding and management of vegetation at landscape scales. The challenge and art is to simplify without losing important attributes and to work with simplifications without losing sight of the underlying complexity (Spies and Turner 1999). Another useful way of understanding vegetation dynamics is to characterize it as a shifting mosaic of patches of different ages and developmental stages (Bormann and Likens 1979). The proportion of different age classes or seral stages across a landscape and over time is one of the fundamental characteristics of the vegetation mosaic.

Quantitative methods are available (McGarigal and Marks 1995, Baker and Cai 1992, Turner and Gardner 1991, Turner 1990, Turner 1989, O'Neill et al. 1988) to describe spatial patterns that relate patterns to ecological processes in order to monitor changes through time, to compare different vegetation types, and to evaluate the effects of alternative management options within a spatial context (Spies and Turner 1999). Diaz and Apostol (1992) provide a process for developing and implementing land management objectives for landscape patterns, written specifically to help shape the landscapes created through National Forest land management activities. There is considerable variability in patterns among landscapes; the most productive approach is to make considerations on a case-by-case basis (Matlack and Litvaitis 1999). Subwatersheds may also possess very small amounts of a vegetation type. The majority of the vegetation type may be in an adjoining subwatershed, with only a small portion overlapping into the subwatershed of concern, or only small patches of a vegetation type may be found interspersed throughout. Consideration of whether or not meeting and sustaining a desired condition for such small amounts of vegetation will also depend upon the juxtaposition of these fragments to adjoining vegetation types or subwatersheds and the overriding management concerns of the area.

In some cases, the prevailing landscape pattern has been altered so strongly that determining appropriate landscape patterns may need to be based more on historical information. Historically, fire was an important disturbance that maintained the dynamics between native grass and big sagebrush dominance. Frequent small fires opened the shrub canopy and aided establishment of native perennial grasses at small scales, creating a mosaic of grass and shrub communities in different stages of development at large scales (Knick 1999). The dynamics of the system changed when cheatgrass invaded the sagebrush ecosystem, providing continuous fuels, compared to more patchily distributed native bunchgrasses. This facilitated fire spread and loss of shrubs, resulting in shrublands fragmented into smaller patches, thus increasing the boundaries and the spaces between patches. Ultimately, many patches did not persist (Knick and Rotenberry 1997). This is an example where patch and pattern have changed and so may no longer provide for the processes and habitat associated with these systems (Knick and Rotenberry 2000, Connelly et al. 2000, Paige and Ritter 1999, Knick and Rotenberry 1995, Rotenberry and Wiens 1980). Consideration of spatial patterns and subsequent management will be particularly difficult in these highly disrupted ecosystems and vegetation types.

Recommended management considerations to positively influence spatial patterns include:

- Maintaining or restoring the full range of age class and patch size distributions,
- Developing future goals for spatial patterns,
- Utilizing management strategies that can create different levels of edge or interior patches,
- Considering spatial patterns within the prevailing physical template, and
- Considering important locations such as special soils, riparian areas, wetlands, cliffs, talus, caves, and others (Spies and Turner 1999).

## **VEGETATION MAPPING**

### **Forested Vegetation Mapping**

Forested vegetation is described using habitat types, which use potential climax vegetation as an indicator of environmental conditions. Individual habitat types are named according to the dominant climax overstory species in conjunction with the dominant understory species. At the level of the Forest Plan, forested habitat types have been further grouped into potential vegetation groups (PVGs) that share similar

environmental characteristics, site productivity, and disturbance regimes. The purpose of these groupings is to simplify the description of vegetative conditions for use at the broad scale. For additional details on the specific habitat types and groupings into PVGs, see Mehl et al. (1998) and Steele et al. (1981).

Forested PVGs were mapped using a modeling process. The Forest was divided into groupings of 5<sup>th</sup> field HUs that shared similar larger scale environmental characteristics, such as climate and geology. Each one of these 5<sup>th</sup> field HU groups was modeled separately. Models were based primarily on slope, aspect, elevation and land type association groups. Other information was brought into developing modeling rules within a 5<sup>th</sup> field HU group depending upon vegetation present in these groups and the availability of information. This additional information included forest inventory information, forest timber strata, cover type information, existing habitat type mapping, cold air drainage models and any other information that may have assisted with the development of modeling rules. Where necessary, some field verification did take place. Modeling rules were developed and processed in Arc Grid. Draft maps were sent to District personnel knowledgeable with the area for review, and refinements made as necessary.

### **Non-Forested Vegetation Mapping**

Existing vegetation or cover type is a seral stage to a climax plant community, and generally results from some form of disturbance. The dominant overstory can vary with this successional change. Cover type classifications typically describe the current dominant vegetative cover or species occupying a site. Cover types can be used to describe seral stage species composition in relation to climax species composition or historical conditions. Existing non-forested vegetation groups or cover types may approximate the dominant climax vegetation, or in other situations, display variations from past use, management, and/or disturbance. This form of classification recognizes ecological influences that contribute to broad-scale cover type extent and future development. Unlike forested vegetation, shrubland and woodland successional change is not likely to be fully detected at the broad scale using only cover types. This is because the same overstory species may occur as part of several successional stages for the vegetative community. However, a cover type's density or canopy cover can be used as a complimentary indicator to define, in part, successional change, ecological condition, and disturbance regime influence. Similar to forest canopies, shrub or woodland overstories exert a competitive influence on herbaceous understory composition and productivity.

Cover types representing shrublands, grasslands, meadows, etc. were mapped as existing vegetation cover types using a remote sensing classification of LANDSAT developed at the University of Montana (Redmond et al. 1998) or in areas not covered by this project, with the Idaho/Western Wyoming Land Cover Classification developed by Utah State University (Edwards and Homer 1996). Riparian life forms were also determined from the Utah State University data. A more detailed classification of riparian types is not available at the broad-scale.

## **VEGETATION CLASSIFICATION**

### **Forest Vegetation - Potential Vegetation Groups**

#### **PVG 1 - Dry Ponderosa Pine/Xeric Douglas-fir**

This group represents the warm, dry extreme of the forested zone. Typically this group occurs at lower timberline down to 3,000 feet and up to 6,500 feet on steep, dry, south-facing slopes. Ponderosa pine is a dominant cover type that historically persisted due to frequent nonlethal fire. Under such conditions, open park-like stands of large, old ponderosa pine dominated the area, with occasional Douglas-fir, particularly at

higher elevations. Understories are sparse and consist of low to moderately dense perennial grasses such as bluebunch wheatgrass and Idaho fescue. In some areas, shrubs such as mountain snowberry and bitterbrush dominate. This group is found scattered throughout the Payette National Forest. .

### **PVG 2 - Warm, Dry Douglas-fir/Moist Ponderosa Pine**

This group represents warm, mild environments at low-to-middle elevations, but may extend upward to 6,500 feet on dry, southerly slopes. Ponderosa pine, particularly at lower elevations, or large ponderosa pine mixed with smaller size classes of Douglas-fir, are the dominant cover types in this group. Historically, frequent nonlethal fire maintained stands of large, park-like ponderosa pine. Douglas-fir would occur on moister aspects, particularly at higher elevations. Understories are mostly graminoids such as pinegrass and elk sedge, with a cover of shrubs such as common snowberry, white spirea, and mallow ninebark. This group is found in many places on the Payette National Forest.

### **PVG 3 - Cool, Moist Douglas-fir**

This group represents the cooler extremes in the Douglas-fir zone. The group can extend from 6,800 feet down to 4,800 feet following cold air. Adjacent sites are often subalpine fir. Some areas support grand fir. Ponderosa pine occurs as a major seral species only in the warmest extremes of the group. In cold air areas, particularly where cold air accumulates to form frost pockets, lodgepole pine may dominate. In some areas, Douglas-fir is the only species capable of occupying the site. The conifer cover types that historically dominated are a combination of several factors including fire frequency and intensity, elevation, and topography. Understories in this group are primarily shrub species including mountain maple, mountain ash, and blue huckleberry. Several other species, including scouler willow, thimbleberry, and chokecherry, may occur from disturbance, depending on its severity. Historical fire regimes were mixed (generally mixed1 where ponderosa pine occurs and mixed2 where other species dominate), creating a diversity of vegetative combinations. Very little of this PVG occurs on the Payette National Forest; what does occur is found in isolated cool-air drainages.

### **PVG 4 - Cool, Dry Douglas-fir**

Douglas-fir is the only species that occurs throughout the entire range of the group. Lodgepole pine may be found in areas with cold air. Quaking aspen is also a common early seral species. Understories are sparse due to the cool, dry environment, and often support pinegrass and elk sedge. Understories of low shrubs, such as white spirea, common snowberry, Oregon grape, and mallow ninebark, occur in some areas that represent slightly different environments across the group. The historical fire regime was primarily mixed1-mixed2, depending on the fuels present at the time of ignition. Organic matter accumulates slowly in this group; so fire effects depend on the interval between fires, stand density and mortality, and other factors. This group may be found in minor amounts at higher elevations in the Douglas-fir zone in other parts of the Forest. In these cases, it is usually found above 6,000 feet on sites that are too cool to support ponderosa pine. Where it is common, it occurs at lower elevations in areas that are beyond the extent of ponderosa pine.

### **PVG 5 - Dry Grand Fir**

The Dry Grand Fir Group is found throughout the distribution of grand fir. It ranges from 4,300 to 6,400 feet in elevation, often on drier upper slopes and ridges. Ponderosa pine and Douglas-fir are common cover types that appear to have been maintained by fire regimes that were historically nonlethal to mixed1. In many areas this group may have resembled PVG 1 and PVG 2, with open park-like stands of large ponderosa pine. Mixed species stands were likely restricted to small micro-sites that burned less frequently. Understories are similar to PVG 2 in that pinegrass, elk sedge, and white spirea are common.

**PVG 6 - Moist Grand Fir**

This group ranges in elevation from 3,400 to 6,500 feet and represents more moist environments in the grand fir zone. It often occurs adjacent to dry grand fir, and the two may intermix with each other, depending on topography. Ponderosa pine is common at the drier extremes of the group, and lodgepole pine occurs in colder areas. Western larch may also be present as an early seral species. Cover types of Douglas-fir and Engelmann spruce also occur in this group. Understories in this group are shrubby and include blue huckleberry, mountain maple, mountain ash, mallow ninebark, and occasionally pachistima. A conspicuous herb layer is also common, particularly following disturbance. Historical fire regimes were mixed, ranging from mixed1 to mixed2, in part due to the wide environment represented by this group. Where ponderosa pine was maintained as a common seral species, it appears that fires were more often mixed1 because ponderosa pine produces a heavy seed that generally disperses only short distances. In other areas where western larch or Douglas-fir were maintained as common seral species, mixed2 fire may have been more common. Douglas-fir and larch produce lighter seed that can disperse much farther than ponderosa pine.

**PVG 7 - Warm, Dry Subalpine Fir**

This group is common on the Forest. It represents warmer, drier environments in the subalpine fir zone. Elevations range from 4,800 to 7,500 feet. At lower elevations, this group is found on steep, north-to-east aspects, but shifts to south-to-west aspects as elevation increases. Adjacent sites at lower elevations are Douglas-fir or grand fir, and these commonly intermix where topography controls cold air flow. Douglas-fir is the most common cover type throughout the group. Ponderosa pine may be found at the warmest extremes, particularly where this group grades into the Douglas-fir or grand fir zone. Lodgepole pine or Engelmann spruce may occur at cool, moist extremes, but these cover types rarely dominate. Understories are commonly shrubby and include mountain maple, mountain ash, serviceberry, and scouler willow. Historical fire regimes were generally mixed2, though mixed1 fires may have occurred where ponderosa pine was maintained.

**PVG 8 - Warm, Moist Subalpine Fir**

This group occurs mainly north of Cascade, primarily on the Payette National Forest and as a relatively minor PVG on the Boise National Forest. It becomes better represented on the Nez Perce National Forest. Elevations range from 5,000 to 7,200 feet but may follow cooler air down to 4,500 feet. This group occurs on moist, protected areas such as stream terraces, toe slopes, and steep, northerly aspects. Cover types include lodgepole pine, western larch, Douglas-fir, and Engelmann spruce. The presence of these and combinations depend on site conditions and past disturbances. Dense shrubs are common in the understory and include Sitka alder, menziesia, blue huckleberry, Utah honeysuckle, mountain maple, mountain ash, and serviceberry. Historical fire in this group was more commonly lethal, though underburns may have occurred occasionally. Ignitions likely occurred in adjacent areas due to the location of this group. Whether these areas burned or not may have depended on weather prior to and at the time of the ignition.

**PVG 9 - Hydric Subalpine Fir**

Seasonally high water tables control this group, and the extent may be small in some areas depending on the presence of these conditions. Elevations range from 9,000 to as low as 4,500 feet in frost pockets and along cold air drainages. This group most commonly occurs on wet toe slopes, stream terraces, seep areas, and old bogs. Cover types are lodgepole pine, followed by Engelmann spruce and subalpine fir. Early seral conditions usually support lodgepole pine because this species can tolerate intermittent high water tables and cold air that often accumulates. In severe frost-prone areas, lodgepole pine can persist for long periods. In other areas with better cold air drainage, Engelmann spruce and subalpine fir rapidly establish under the lodgepole pine. Understories in this group are primarily dominated by herbs and grasses that require the

seasonal influence of a high water table. Shrubs are sparse, though Labrador tea can dominate some sites. Historically, fire was lethal in this group. Like PVG 8, ignitions more likely occurred on adjacent drier slopes, and burning in this group likely depended on weather conditions before and at the time of the ignition.

#### **PVG 10 - Persistent Lodgepole Pine**

This group is common throughout the subalpine fir zone. It represents cold, dry subalpine fir sites that range in elevation from over 9,200 down to 5,200 feet in frost-pockets. Lodgepole pine is the dominant cover type, though small amounts of other species may occasionally occur. Understories can be sparse. Generally, grasses and scattered forbs are the most common understory components. Shrubs are sparse and consist mainly of low-growing huckleberries, including dwarf huckleberry and grouse whortleberry. Historically, this group experienced lethal fire, though nonlethal fires may have occurred during stand development. Lodgepole pine is more often non-serotinous in western portions of the Forest and appears to become more serotinous moving easterly. Within the Forest, lodgepole pine may reproduce in areas that experience nonlethal fires. The result is more vertical stand diversity in some areas than is often found where lodgepole pine is mostly serotinous. Over time, the combinations of these low-intensity events, subsequent reproduction, and mountain pine beetle mortality would have created fuel conditions that allowed lethal fires to occur under the right weather conditions.

#### **PVG 11 - High Elevation Subalpine Fir (with whitebark pine)**

This group occurs at the highest elevations of the subalpine fir zone and generally represents the upper timberline conditions. It often grades into krummholz or alpine communities. Whitebark pine is a major seral species in this group. Engelmann spruce and subalpine fir are the climax co-dominates. In some areas, whitebark pine serves as a cover for Engelmann spruce-subalpine fir establishment. Understories are primarily forbs and grasses tolerant of freezing temperatures that can occur any time during the growing season. Shrubs are sparse due to the cold, harsh conditions. Historically, the fire regime in this group is characterized as mixed2, though the effects of fires were highly variable. Ignitions are common due to the high elevation, however fuel conditions were historically sparse due to the cold growing conditions and shallow soils. Therefore, fire effects were patchy. Fire regimes are mixed2 with whitebark pine being a major seral component.

### **Old Forest**

“Old forest” is a component of the large tree size class, whereas “old growth” is typically described as a set of characteristics associated with the late successional stage of forested vegetation groups or types. Based on recent research encompassing the central Idaho batholith, old growth late successional stage characteristics were important, but not extensive on the historic landscape (Morgan and Parsons, 2001). However, the large tree component was common (Morgan and Parsons, 2001; Wisdom et al. 2000). Table A-12 (Morgan and Parsons 2001) shows the estimated percent of forested landscapes in the central Idaho batholith that were historically occupied by stands in the large tree size class (medium tree size class for PVG 10, persistent lodgepole pine), and by stands with late successional old growth characteristics. Estimates were developed for each of the 11 potential vegetation groups on the Ecogroup.

The main reason for the large differences between Large Tree percent and Old Growth percent is that vegetation structural conditions in central Idaho developed in conjunction with disturbance processes (fire, insect, disease, wind, etc.) and climate variations. Conversely, late successional old growth characteristics develop in the absence of frequent disturbances (Hamilton et al. 1993). In central Idaho, disturbance is a common occurrence. Historically, forested stands in lower-elevations vegetation groups likely developed large trees and relatively open canopies during mid-successional stages, and these conditions were

maintained over time by frequent low-intensity fire disturbance. Dense stands and decadence typically associated with late successional stage conditions (old growth) rarely, if ever, occurred. Thus, historical stands dominated by large and old seral trees like ponderosa pine could be considered old forest, but not as “old growth” under any definition that incorporates a full set of late successional conditions.

**Table A-12. Historic Levels Of Central Idaho Stands Occupied By Large Tree Size Classes And Stands With Late Successional Old Growth Characteristics**  
(From Morgan and Parsons, 2001)

|                                                                          | PVG 1 | PVG 2 | PVG 3 | PVG 4 | PVG 5 | PVG 6 | PVG 7 | PVG 8 | PVG 9 | PVG 10 | PVG 11 |
|--------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Percentage of PVG historically in the large tree size class (mean value) | 91    | 80    | 41    | 34    | 84    | 56    | 21    | 21    | 37    | 19     | 27     |
| Percentage of PVG estimated to represent old-growth                      | 0     | 0     | 8.5   | 8.4   | 0.4   | 2.5   | 4     | 5.5   | 26    | 0      | 1.2    |

**Note:** Large tree size class refers to stands where the overstory trees average 20 inches diameter or greater. Medium tree size class refers to stands where the overstory trees average between 12 and 19.9 inches diameter.

The threshold to meet viability for large-tree-dependent terrestrial species has been determined to be 20 percent of the forest stands classified as being in the large tree size class. The 20 percent threshold has been adopted based on several references concerning viability and biodiversity needs for goshawk and other forest-dependent wildlife species that require one or more components of the large tree size class (Fahrig 1997, Graham et al. 1997, Graham et al. 1999, Graham and Jain 1998, Reynolds et al. 1992, Wisdom et al. 2000). This threshold has been incorporated into the desired conditions for forested vegetation PVGs found in this appendix, and into Forest Plan management direction (Wildlife Resources) through the following standard:

Maintain at least 20 percent of the acres within each forested PVG found in a watershed (5<sup>th</sup> field HU) in large tree size class (medium tree size class for PVG 10, persistent lodgepole pine). Where analysis of available datasets indicates that the large tree size class (medium tree size class in PVG 10) for a potential vegetation group in a watershed (5<sup>th</sup> field HU), is less than 20 percent of the total PVG acres, management actions shall not decrease the current area occupied by the large tree size class, except when:

- a) Fine or site/project scale analysis indicates the quality or quantity of large tree size class for a PVG within the 5<sup>th</sup> field HU would not contribute to habitat distribution or connective corridors for TEPCS and MIS species in short or long-term, and

b) Management actions that cause a reduction in the area occupied by the large tree size class would not degrade or retard attainment of desired vegetation conditions in the short or long-term as described in Appendix A, including snags and coarse woody debris.

## Other Forested/Woodland Vegetation Types

### Aspen

Aspen covers a broad environmental range across the Intermountain Region (Mueggler and Campbell 1982). It grows at elevations as low as 5,000 and as high as 11,000 feet. Aspen occurs both as a seral and climax tree species within its range (Mueggler 1985). Where it is seral, it is an early seral stage of forested PVGs. Throughout these areas, individual stands are relatively small, seldom exceeding 5 acres (Mueggler 1985). Where aspen is seral, it is maintained on the landscape by disturbance. Historically, fire is considered a primary disturbance agent (Jones and DeByle 1985). Fires result in single-aged stands that develop from root suckering. Fire frequencies vary greatly and severities range from low to high. Aspen does not burn readily. However, all but the lowest severity fires kill aspen because of its thin, uninsulated bark. Therefore, most fire effects in aspen are lethal.

## Grassland And Shrubland Vegetation

### Grassland Cover Types

*Perennial Grass Slopes* - This cover type connects with the dry forested cover types, mountain big sagebrush, and bitterbrush groups, and is more prevalent in the north and northwestern foothills and canyonlands of the Ecogroup. It usually occurs between the 10-to-18 inch precipitation zone, on southern and western aspects. The group is predominantly made up of bluebunch wheatgrass. Perennial grasses are dominant on the sites, composing 80 to 90 percent of production. Sandberg bluegrass is a lesser but constant associate. The forb component contains a large number of species, few of which are common throughout. The most common forbs are Indian wheat, shining chickweed, salsify, yarrow, lupine, balsamroot, biscuit root, hawksbeard, fleabane, milkvetch, and phlox. Ground cover is typically greater than 65 percent. This vegetation group can be susceptible to damage under very hot and dry conditions. Stand recovery is very difficult and slow in the Idaho Batholith. Historic fire intervals are frequent (20 years), with typically a mixed1 to mixed2 fire regime, depending upon the amount of Idaho fescue present. This group is highly susceptible to several invaders including annual bromes, rush skeletonweed, yellow starthistle, several knapweeds, dyer's woad, and Dalmatian toadflax.

*Perennial Grass Montane* - This cover type connects with numerous forested cover types, mountain big sagebrush and bitterbrush groups, and bluebunch communities. It is very highly rated, in terms of ecotone diversity. It usually occurs between the 18-to-30 inch precipitation zone on southern aspects, and 14 to 30 inches on northern aspects. Ground cover is usually greater than 80 percent. Idaho fescue is the predominant grass in this group. Other grass species that occur are slender wheatgrass, sedges, intermediate oatgrass, western needlegrass, and Richardson needlegrass. Forbs compose 40 to 65 percent of overall production. Common forbs are yarrow, bessaya, geum, Indian paintbrush, lupines, phlox, and balsamroot. Historic fire intervals are frequent (20 years) in typically nonlethal to mixed1 regimes. Certain species within the community are susceptible to fire damage under very hot and dry conditions, but recovery occurs in a few years. Trampling damage is minimal to nonexistent and primarily occurs at the higher elevations. Bluegrass is a common invader. This group is highly susceptible to several invaders including annual bromes, rush skeletonweed, yellow starthistle, several knapweeds, dyer's woad, and Dalmatian toadflax.



**Shrubland Cover Types**

*Mountain Big Sagebrush* - This cover type connects with the greatest number of other forest, non-forest, and riparian cover types. This type consists of large blocks with a wide range of distribution. This group occurs in the 14-to-18+ inch precipitation zone, on well-drained sites and on soils with a high content of rock or gravel. Structural stage ranges are typically balanced, with high ground cover and few cryptogams. Fire intervals can be frequent, ranging from 20-60 years, with a mixed2 fire regime. Historic vegetation disturbances were related to ungulate grazing of southern exposures, due to less snow and early green-up. Understory forb and grass species can be variable and diverse. Bitterbrush, grey horsebrush, and green rabbitbrush are frequently present. Snowberry is present on moister sites.

*Montane Shrub* - This cover type is usually interspersed as stringers and patches within the mountain big sagebrush, aspen, and conifer cover types. Its patchiness is strongly related to mesic soils with high water-holding capacity and/or northerly exposures. Typically this group has multiple vegetation layers that are dominated by sprouting species. Species include chokecherry, snowberry, serviceberry, and wild rose. Several other browse species may occur. This group usually has a rich and diverse herbaceous component. These conditions provide extremely diverse wildlife habitats and an important watershed group. Fire intervals are typically 20 to 40 years, with a mixed2 fire regime. Ungulate and grazing disturbance are not uncommon components. Insect and disease may be common, with occasional outbreaks.

*Bitterbrush* - This type is usually associated with southern to western exposures. Soils tend to be shallow (10 to 20 inches), with stony or rocky loams tending towards sandy textures. Typically bitterbrush occurs in small patches interspersed with the lower ecological thresholds of ponderosa pine and with all the sagebrush types except Wyoming Big Sagebrush. Older stands have a variety of age classes, while younger stands are typically homogeneous in age. In some sites sagebrush may appear as a co-dominant. Fire intervals are seldom, usually greater than 40 years, with a mixed1 fire regime. This group is highly susceptible to cheatgrass and diffuse knapweed invasion. Common understory species are bluebunch wheatgrass, Sandberg bluegrass, junegrass, needle and thread, and Idaho fescue. Perennial grasses make up the largest portion of the composition. Common forbs include yarrow, lomatium, lupine, arrowleaf balsamroot, and milkvetch.

**Riparian Vegetation**

There are no comprehensive riparian classifications or vegetative community descriptions for the Ecogroup. Hall and Hansen (1997) have developed a riparian habitat type classification for Bureau of Land Management Districts in Southern and Eastern Idaho that includes portions of the South Hills on the Sawtooth. Riparian community type classifications have been developed by Youngblood et al. (1985) for eastern Idaho-western Wyoming, and by Padgett et al. (1989) for Utah and Southeastern Idaho. Due to the lack of comprehensive classification information for our area, the Forest Plan Revision Team chose to use the Utah LANDSAT cover types to describe these communities.

**Riverine Riparian**

This cover type consists of vegetative communities dominated by conifer species and shrubs. The primary conifers are subalpine fir, Engelmann spruce, limber pine, and Douglas-fir, with some aspen. Other trees and shrubs include Rocky Mountain maple, serviceberry, chokecherry, thinleaf alder, currants, and willows. These communities generally occur on steep slopes and occupy edges of riparian zones with A and B stream channel types. Padgett et al. (1989) and Youngblood et al. (1985) stated that these community types in their areas likely represent successional stages within described forested communities. For this reason, Padgett et al. recommended consulting available forest habitat type classifications for additional information.

**Deciduous Tree**

This cover type consists of a dominant overstory of black or narrowleaf cottonwood. Associated tree species include thinleaf alder, Rocky Mountain maple, water birch, and aspen. Primary shrub species include chokecherry and willows. Location is generally below 5,500 feet along stream channels in lower canyons. This cover type usually requires a moist and coarse substrate.

**Shrub Riparian**

This cover type is dominated by willow species. Primary associated tree and shrub species include cottonwoods, swamp birch, thinleaf alder, Rocky Mountain maple, shrubby cinquefoil, and chokecherry. Grasses and forbs include sedges, tufted hairgrass, Geranium, louseworts, and American bistort. This type is found in mid to upper elevations in broad wet meadows and alluvial terraces on relatively low gradients (1 to 3 percent).

**Herbaceous Riparian**

This cover type is typically found in mountain meadows where soil moisture is abundant throughout the growing season. Principle species include sedges, woodrush, reedgrass, pinegrass, timothy, bluegrass, tufted hairgrass, saxifrage, and fireweed. This type has a wide range of occurrence, typically found in broad flat meadows.

**Other Vegetation****Wetlands**

Wetlands are those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, wet meadows, seeps, and similar areas. These lands are transitional between terrestrial and aquatic systems. Vegetative species found in wetlands are heavily influenced by local site conditions.

*Marshes* - This cover type is permanently or semi-permanently flooded and dominated by hydric species located adjacent to small streams, beaver ponds, lakes, and meadows. Sedges are the most common species. This type usually occurs around the 7,000-foot elevation level. Sites are dominated or co-dominated by bulrushes, cattails, woodrushes, or sedges.

*Bogs, Fens, and Peatlands* – These are wetlands that typically have sub-irrigated cold waters sources. Peatlands are generally defined as wetlands with waterlogged substrates and at least 30 centimeters of peat accumulation (Moseley et al. 1994). The vegetation is often dense and dominated with low-growing perennial herbs (Skinner and Pavlick 1994).

*Wet Meadows and Seeps* – These are wet openings that contain grasses, sedges, rushes and herbaceous forbs that thrive under saturated moist conditions. These habitats can occur on a variety of substrates and may be surrounded by grasslands, forests, woodlands, or shrublands (Skinner and Pavlick 1994).

**Alpine**

Alpine habitats are defined as the area above treeline in high mountains. Rocky or gravelly terrain is generally prevalent. Grasses and sedges often form thick sod-like mats in meadows. Most alpine plant species have unique adaptations to survive the harsh conditions of this habitat (Billings 1974). Many plants

grow in mats or cushions. Perennials predominate in the alpine floras, as the growing season is often too short for annuals to complete their life cycles (Strickler 1990).

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# **Appendix B**

## **Soil, Water, Riparian, and Aquatic Resources**

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**SOUTHWEST IDAHO ECOGROUP MATRIX OF PATHWAYS AND WATERSHED  
CONDITION INDICATORS - “THE MATRIX”****Overview Of The Matrix**

The revised Forest Plan management direction (goals, objectives, standards, and guidelines) found in Chapter III of this document replaces direction in the Forest’s Land and Resource Management Plan, as amended by Pacfish/Infish, and the 1995 and 1998 Biological Opinions (BOs) for listed fish species. Appendix B was created and tied to direction in Chapter III of this Plan, and it incorporates components of Pacfish/Infish, the 1995 and 1998 Opinions, the Endangered Species Act (ESA), and the Clean Water Act (CWA) important to the Forests long-term Aquatic Conservation Strategy (ACS).

Specifically, Appendix B combines the separate matrices [NMFS (NOAA Fisheries), 8/96; FWS 2/98] identified for use in the 1995 and 1998 BOs. In order to combine the two original matrices, modifications were made to provide consistency and efficiency in application. Within Forest Plan documents, Appendix B may be referred to as Appendix B, the Southwest Idaho Ecogroup Matrix of Pathways and Watershed Condition Indicators, or the “Matrix”. The Matrix is the second component of the ACS.

Information and process guidance provided in this Appendix comprise a decision support tool that has been developed to assist land managers in assessing how well management actions designed to implement the Forest Plan move toward related resource goals. Specifically, the Matrix and related Watershed Condition Indicators (WCIs) discussed in this appendix will assist in:

1. Identifying how management actions may potentially influence the condition and trend of soil, water, riparian, and aquatic resources, including native and desired non-native fish.
2. Making ESA Determinations of Effects to Listed Fish Species important to assessing ESA compliance.
3. Identifying how management actions may potentially influence beneficial uses associated with native and desired non-native fish habitat and the importance of that influence to assessing CWA compliance.

The Matrix has been designed for application during project-specific NEPA assessments to assist in project design and analysis. A hierarchal sequence is followed to ascertain which fish species and/or beneficial uses the Matrix is focused on, ensuring the most imperiled fish species or most limiting designated beneficial use is considered first. Project-level analyses are generally conducted at the watershed or subwatershed scale (5<sup>th</sup> or 6<sup>th</sup> field hydrologic units or HUs), which are the typical scales at which aquatic and water resource cumulative effects analyses are completed in a project NEPA analysis. Analyses may also be conducted at the subbasin scale (4<sup>th</sup> field HU) depending on the geographic extent and scope of the proposed action(s), and the scale at which cumulative effects need to be addressed in any project-specific NEPA analysis. The ID team and the appropriate line officer (District Ranger or Forest Supervisor) for each project (i.e., management action) determine the analysis scale(s). Where the action may influence listed fish species directly, indirectly or cumulatively, the line officer should determine the appropriate scale of analysis in conference with the Level 1 streamlining team.

As stated above, Appendix B is referenced within specific Forest-wide objectives, standards, and guidelines related to Forest Plan goals found in two resource sections: (1) Threatened, Endangered, Proposed and Candidate (TEPC) Species, and (2) Soil, Water, Riparian and Aquatic (SWRA) Resources.

Additional objectives, standards, and guideline are included in specific Management Area direction, but are not referenced here.

The direction statements for TEPC Species and SWRA Resources directly or indirectly relate to multiple goals, objectives, standards and guidelines under many resource sections in Chapter III. For example, an action that proposes to revise an allotment management plan would need to comply with all applicable Forest-wide standards and guidelines in Chapter III. For instance, standards such as Rangeland Resources #1 (“Livestock trailing, driving, bedding, watering, and other handling efforts shall be limited to those acres and times that maintain or allow for restoration of beneficial uses and native and desired non-native fish habitat”) and SWRA Resources #1 (“Management actions shall be designed in a manner that maintains or restores water quality to fully support beneficial uses and native and desired non-native fish species and their habitat”) would need to be met before the action could proceed. To assist in determining whether this action will maintain or allow for restoration of beneficial uses and native and desired non-native fish habitat, and meet both standards, the land manager would use the Matrix at the appropriate scale in Appendix B.

Forest-wide Standards SWRA #1 and SWRA #4, along with other protections, are intended to improve aquatic and riparian functions and processes over the life of the Plan. The Matrix can be an important tool in tracking how management actions, over time, are trending “functioning at unacceptable risk” (FUR) and “functioning at risk” (FR) indicators toward a “functioning appropriately” (FA) condition, or are maintaining already FA indicators at multiple scales. How quickly WCIs obtain a FA condition depends on the baseline, the kinds of management actions that are implemented and their effects over time, and the types of natural disturbances that occur.

Not every project, even in a degraded baseline, will be restorative. Some management actions will be proposed in a watershed with a FUR baseline that will result in a temporary or possibly short-term “degrade” in the Matrix. These management actions are appropriate as long as they do not retard the attainment of riparian processes and functions, have measurable long-term ecological benefits, and do not have substantially measurable short-term effects to important subwatersheds or to the overall watershed (5<sup>th</sup> field HU) scale. If riparian and watershed processes are to be restored over time within watersheds that have a FR or FUR baseline, it is critical that management actions individually and collectively do not further degrade or retard attainment of WCIs. It is also critical that management actions in ACS priority subwatersheds provide some degree of restoration to WCIs at the appropriate temporal and spatial scales if desired conditions are to be achieved. For example, if after ten years management actions in an ACS priority subwatershed have only maintained FUR or FR WCIs, then restoration would not be realized and the intent of the long-term ACS would not be realized.

The Matrix is designed to be applied over a range of analysis scales and account for a variety of environmental conditions. It provides flexibility and allowances for addressing localized information and/or project-specific variability. A certain degree of professional judgment is required and is an essential element for effectively interpreting and applying evaluation results.

It is expected that improvements to the Matrix will occur in the future and periodically result in refinement and updates to the WCI range of values and processes found in this appendix. Improvements may include, but are not limited to, changes to the parameters or indicator values within the various WCIs, additions or deletions of WCIs, or replacement of this Matrix with a different process that meets the same intent through more efficient and effective means.

## Description Of The Matrix

### Introduction

There are four components/tables in the Matrix (see Figure B-1). Tables B-1, B-2, and B-3 should be used when evaluating actions that would affect soil, water, riparian, or aquatic resources, regardless of whether listed fish species would also be affected. Table B-4 should only be used when ESA-listed fish species may be affected.

- Table B-1: Pathways for WCIs, “Reference Conditions”
- Table B-2: Environmental Baseline, “Current Conditions”
- Table B-3: Effects of Management Actions
- Table B-4: Dichotomous Key for Making ESA Determinations of Effect and Documentation of Expected Incidental Take for Listed Fish Species.

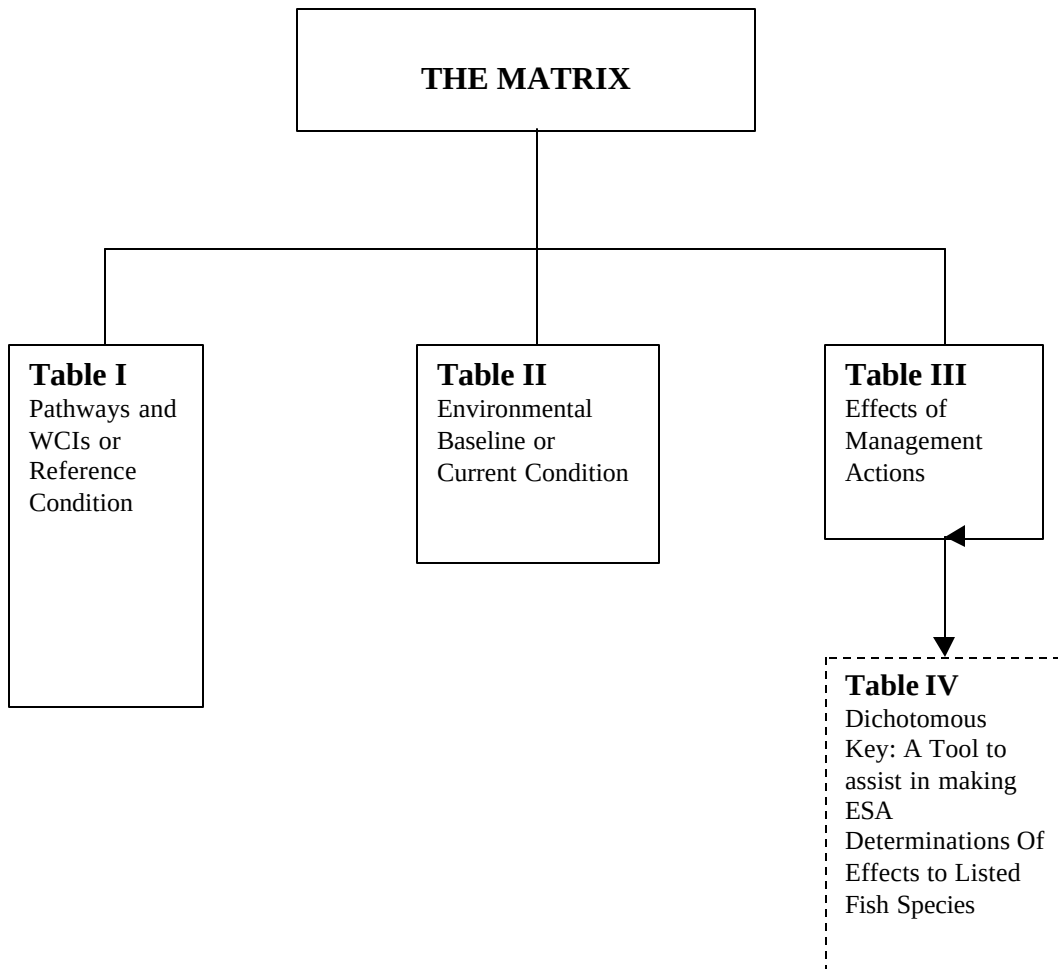
Tables B-1, B-2, and B-3 are divided into 8 overall pathways (major rows). Each of these rows represents a significant pathway by which actions can have potential effects on native and desired non-native fish species, their habitats, and associated beneficial uses. Pathways are further broken down into watershed condition indicators (WCIs). WCIs are described in terms of functionality (Appropriate, At Risk, At Unacceptable Risk). The Functioning Appropriately column represents the desired condition to strive toward for each particular WCI. These WCIs improve upon and update the Riparian Management Objectives identified in Pacfish and Infish. The process outlined later in this Appendix will help land managers determine what the relevant WCIs are that should be considered where proposed management actions are expected to affect beneficial uses, and anadromous, inland native, or desired non-native fish or their habitat.

The evaluation of WCIs provides a consistent and logical line of reasoning to recognize when, where and why adverse, beneficial or no effects may occur to related resources. WCIs are not independent from other components of the aquatic conservation strategy but provide a starting point to describe the current and desired condition for upland watershed condition, water quality, and aquatic habitat. Evaluation procedures consider the suite of WCIs that are likely to be affected by proposed management actions, not just effects to any individual WCI. WCIs are not always sensitive to immediate effects and may instead exhibit response to cumulative effects within subwatersheds over time. In some cases, adverse effects to one WCI in the temporary or short term may be acceptable in order to improve another WCI in the short and/or long term. The duration of an adverse impact that may be allowed in the temporary or short term in order to improve another WCI and provide for long-term benefits will depend on site-specific conditions and resources of concern. Results from the evaluation of WCIs affected by a proposed action can be used to help modify the design of the actions, including mitigating adverse impacts, and developing strategies for restoration of degraded conditions.

The Dichotomous Key included as Table B-4 of this Matrix is used to assist in making ESA effects determinations where effects to listed fish species are likely to occur. It is important to note that use of Table B-4 of this Matrix will not, in itself, result in effects determinations for listed fish species from management actions. The purpose of the Key is to provide indicators as to what the effect is likely to be relative to results from evaluations in Tables B-1, B-2, and B-3. Information obtained from this Matrix should be used in biological assessments to support ESA determinations relative to the potential site-specific effects of the proposed activities evaluated.

**Figure B-1. Southwest Idaho Ecogroup Matrix of Pathways and Watershed Condition Indicators**

**Pathways For Watershed Condition Indicators (WCIs), Environmental Baseline, Effects Of Management Actions, and Dichotomous Key: A Tool To Assist In Making ESA Determinations Of Effects To Listed Fish Species**



**Appropriate Matrix Scale**

The Matrix can be used at several (multi) scales. Riparian functions and ecological processes represented by the Matrix operate at multiple scales, including site, subwatershed, watershed, and subbasin. Similarly, the effects of land management activities on these functions and processes can occur at multiple scales, depending on the scope and magnitude of the action, and the baseline, sensitivity, and watershed recovery trajectory of the affected resources. Assessment of management action effects should address the spatial and temporal scales that are relevant to the proposed action and to the WCIs that would be affected.

The project (i.e., management action) scale will generally be the smallest scale that the Matrix is used. Typically the project scale is equivalent to the 7<sup>th</sup> or 6<sup>th</sup> field HU. However, smaller scales (e.g., site) may be appropriate in some cases. If a site is determined to be the appropriate scale to assess, the user should be aware that some indicators (e.g., refugia, disturbance history, road density, etc.) may not be appropriate or relevant and should not be evaluated. If little information is available at the site scale, it may be acceptable to use, and note appropriately, information collected at the 7<sup>th</sup> or 6<sup>th</sup> field HU scale as a surrogate for the baseline condition portion of the Matrix. Impacts of the action should be assessed at the actual site scale. Ultimately, the ID team and appropriate line officer for each project should determine the analysis scale(s). Where the action may influence listed fish species directly, indirectly or cumulatively, the line officer should determine the appropriate scale of analysis in conference with the Level 1 streamlining team.

The Matrix may often be prepared at two or more spatial and temporal scales. When an indicator is likely to be degraded (temporary, short term or long term) by the impacts of an action or actions, a second Matrix at the next larger scale should be prepared to evaluate the impacts of the actions to the larger watershed condition indicators. Typically this analysis would be completed at the watershed (5<sup>th</sup> field HU) scale. The larger-scale matrix may also be relevant when assessing the aggregate effects of several actions with “degrade” checkmarks within a watershed during batched and programmatic consultations. Not all indicators or their values may be appropriate at a 4<sup>th</sup> field scale. For example, pool frequency is a good indicator at the project or subwatershed scale. But at the subbasin scale it may be more appropriate to stratify pool frequency by geomorphic landtypes, or aggregate the total number by local populations to look for landscape patterns. Completion of a 4<sup>th</sup> field HU (subbasin) Matrix will be uncommon, but, when needed, the user should work with either the Level 1 team or the Continuous Assessment Planning Team (CAP) to develop appropriate indicators and values.

**Table B-1: Pathways and WCIs “Reference Conditions”**

Table B-1 of the Matrix is similar to “Step 4: Description of Reference Conditions” section for soil, water, riparian and aquatic resources described in *Version 2.2 of the Federal Guide for Ecosystem Analysis at the Watershed Scale* (Regional Interagency Executive Committee 1995). The eight pathways described in this table represent a suite of ecological indicators identified as WCIs. The reference condition values of ecological indicators, or WCIs, found in Table B-1 are diagnostic tools to assist in comparing and evaluating current soil, water, riparian, and aquatic watershed conditions to be described in Table B-1I. The WCI values provided in Table B-1 were largely taken from the original matrices tied to the 1998 BOs for steelhead and bull trout. These values are considered the default values that should be used, unless better subwatershed or project-specific information is available to update these values (refer to the “How to Modify this Matrix” section in this appendix).

The WCIs are generally arranged from a finer to a broader scale. For example, under the pathway “Habitat Elements,” the WCIs refer to information from the channel unit level (substrate); to the stream reach level (large woody debris, pool frequency and quality/large pools), to the valley segment (off-channel habitat), and finally the complete watershed (refugia). Definitions for the WCIs are found at the end of this appendix.

Units of measure specific to each WCI are provided, followed by functionality definitions for each WCI that are represented as ranges within their respective units of measurement. There are three functional condition levels identified for each WCI: (1) “functioning appropriately, or FA,” (2) “functioning at risk, or FR,” and (3) “functioning at unacceptable risk, or FUR.”

The quantitative and qualitative default WCI values provided are not intended to be absolute values that precisely define desired conditions or to define data standards. The values and descriptions are a diagnostic tool to promote discussions and evaluations of the environmental functional relationships specific to the watershed being considered for management actions. WCIs are criteria to assist in evaluating progress towards an attainment of soil, water, riparian, and aquatic goals. They do not replace state and federal water quality standards under the Clean Water Act or state laws, nor do they make determination of effects for proposed management actions under ESA. However, WCIs do address several important objectives of the Clean Water Act by determining whether designated beneficial uses are attainable and to what degree these uses are supported (Bauer and Ralph 1999). WCIs complement existing laws and standards by providing measurable criteria for water quality and aquatic habitat.

If local data relating to a specific WCI are not available for comparison and verification, then proposed management actions should be designed to minimize adverse impacts to the WCI based on the default value provided in Table B-1. If local data are available to help define a more site- or watershed-specific WCI value, follow procedures in the “How to Modify the Matrix” section to document the basis for the change. Likewise, if a default WCI value is not functionally attainable given the inherent characteristics of the watershed being considered, follow procedures outlined in the “How to Modify the Matrix” section to document the basis for varying from the default WCI value provided.

#### **Table B-2: Environmental Baseline “Current Conditions”**

Table B-2 of the Matrix is similar to “Step 3: Description of Current Conditions” section for soil, water, riparian and aquatic resources described in *Version 2.2 of the Federal Guide for Ecosystem Analysis at the Watershed Scale* (Regional Interagency Executive Committee 1995). Completion of Table B-2 also provides the supporting documentation and rationale for the evaluations and determinations of the environmental baseline condition included in a watershed or project- specific NEPA analysis. The environmental baseline, or current condition, can be assessed at multiple spatial scales; typically at the project scale representing a 7<sup>th</sup> or 6<sup>th</sup> field HU. The baseline can be recorded at larger scales (e.g., 5<sup>th</sup> or 4<sup>th</sup> field HUs) to address cumulative effects of a proposed management action or actions. When evaluating the baseline condition, all land ownerships should be included at the relevant spatial scale for which the Matrix is completed.

The current condition of each WCI is represented as falling within its respective functionality class as described in Table I, including any refinements to the default values for that class. Thus, this evaluation documents whether a WCI is “functioning appropriately”, “functioning at risk” or “functioning at unacceptable risk”. The units of measure for WCIs are generally reported in one of two ways: (1) quantitative metrics that have associated numeric values (for example, “large woody debris: > 20 pieces per mile”); or (2) qualitative descriptions based on field reviews, professional judgment, etc. (e.g., “physical barriers: man-made barriers present”). Different approaches are needed because numeric data are not always readily available for every WCI, or there are no reliable numeric values. In such cases, a qualitative description of overall functionality may be the only appropriate method to describe the value. Ideally, the baseline condition determination is based on site measurements, but if data are not available another form of measurement and/or professional judgment must be applied. It is not anticipated that new field surveys would be required for every project. The level of information collected should be commensurate with the scope and scale of project being proposed. Those projects that have a greater

chance of causing negative effects in subwatersheds with no to little baseline information should conduct the appropriate level of field surveys to support the decision.

When documenting the baseline condition in the Matrix the rationale for that condition must be supported with a quantitative and/or narrative description. Biologists are encouraged to reference this rationale by citing existing documentation, such as NEPA analyses, whenever possible. When professional judgment is required to document the existing condition, a “PJ” for professional judgment should be included next to the indicator in the baseline column in Table B-2. For example, if pool frequency is believed to be “functioning at risk”, a FR – PJ should be noted. Other data sources should also be noted according to the following criteria: WA - Watershed Analysis; NEPA – CE, EA or EIS; SR – Surveys; M – Monitoring; FR – Field Reviews; O – Other.

The suite of relevant WCIs, considered together, encompasses the environmental baseline or current condition for the subwatershed and associated aquatic resources. The user must realize not every indicator may be relevant to every area assessed. For example, indicators specific only to bull trout (e.g., life history, genetic characteristics, etc.) would not be completed if bull trout were currently or historically absent in the assessment area. In these situations a “not applicable” should be recorded under the desired and existing condition columns.

In most cases the “Functioning Appropriately” values in Table B-1 will be displayed in the desired condition column in Table B-2. However, as described in the “*How to Modify the Matrix*” section, WCIs can be refined to better reflect conditions that are functionally attainable in a specific subwatershed or stream reach based on local geology, land and channel form, climate, and potential vegetation. If WCI values are modified, then the referenced value or its range should be included in the desired condition column with a footnote listing what process was used.

### **Table B-3: Effects of Management Actions**

Table B-3 of the Matrix is the assessment of potential impacts of the action. The Matrix provides a synthesis of the collective effects of a proposed or ongoing action(s) on WCIs. This information and evaluation will assist the land manager in determining if native and desired non-native fish habitat important to fish populations will be sustained, and if water and aquatic resource beneficial uses identified by the State will continue to be supported.

The effects of management actions described in Table B-3 are represented as a change in the functionality of the WCI(s) that would likely result from proposed or ongoing management actions. Effects are identified on the basis of the amount of restoration or degradation for each WCI. Table B-3: Effects of Management Actions is designed to be used in conjunction with both Table I: Pathways and WCIs, and Table II: Environmental Baseline. Together they document the effects on a WCI in terms of being “restored”, “maintained”, “degraded”, or “not applicable”. A positive, negative, or “no” trend is then noted for three time periods (temporary, short term, and long term) for that particular WCI. A brief narrative or reference to an existing NEPA document is included in the Matrix. As with baseline conditions, each action impact in the Matrix must be supported with a quantitative and/or narrative description. Users must remember that the Matrix is merely a tool to summarize the NEPA analysis. A thorough description of how an action affects WCIs, at different spatial and temporal scales, in NEPA analysis is critical. All terms are defined in the Glossary of this appendix.

The suite of WCIs must be considered together, both those affected by a proposal and those not affected, in order to fully describe the condition and trend of the subwatershed and associated aquatic resources and designated beneficial uses that would result from implementation of a proposed management action or continuation of ongoing actions. Completion of Table B-3 provides supporting documentation and rationale for the evaluations and determinations of effects included in biological assessments and/or



project-specific NEPA analyses. When Table B-3 is completed to support findings in a biological assessment or project-specific NEPA analysis, it should be appropriately referenced within the body of the document.

In some cases it may be appropriate to note both short-term impacts and long-term benefits in the Matrix at the project or subwatershed scales. When this is needed, a “degrade” and “restore” would be recorded in the Effects column, and the appropriate temporal scale would be indicated.

**Table B-4: Description of Dichotomous Key for Making ESA Determinations of Effect and Documentation of Expected Incidental Take for Listed Fish Species**

The Dichotomous Key for Making Determinations of Effect is the fourth component of the Matrix. It is specifically designed to aid in the determination of effects relative to proposed management actions that **require** a Section 7 consultation or conference, or a permit under Section 10 of the Endangered Species Act. Evaluations that use the Dichotomous Key draw from information generated in Tables B-1, B-2, and B-3, including any modifications to WCIs completed through procedures that incorporate better subwatershed or site-specific data that are available. The findings from evaluations using the Dichotomous Key are used to help make related ESA determinations of effect.

Table B-4 was not designed to be used to aid in the determination of effects for proposed management actions that **do not require** a Section 7 consultation or conference of the Endangered Species Act.

**How And When To Use The Matrix**

The Matrix has been developed to help design, and estimate the effects of, management actions to WCIs used as indicators of soil, hydrologic, water quality, riparian and aquatic resource conditions within the subwatershed, as well as to ESA-listed fish species where applicable. A Matrix can be completed for one action or a set of actions specific to a particular spatial and temporal scale. To determine when the Matrix should be used and which tables should be completed, use the following criteria:

1. Management actions **WILL NOT** result in quantifiably measurable, or clearly defined qualitative, negative effects (temporary, short term, or long term) on WCIs and ESA-listed species are not present. **USE OF MATRIX NOT NEEDED.**
2. Management actions **WILL** result in quantifiably measurable, or clearly defined qualitative, negative effects (temporary, short term, or long term) on WCIs, and the proposed management action **does not require** a Section 7 consultation or conference of the Endangered Species Act. **COMPLETE MATRIX TABLES B-1, B-2, and B-3 only.**
3. Management actions **WILL** result in small effects, beneficial effects, or quantifiably measurable, or clearly defined qualitative, negative effects (temporary, short term, or long term) on WCIs and the proposed management actions **require** a Section 7 consultation or conference of the Endangered Species Act. **COMPLETE ALL MATRIX TABLES.**

If it is determined that all or some of the tables in the Matrix should be completed, use the following criteria to determine which aquatic species or water quality beneficial use evaluations the Matrix user should focus on:

1. If the watershed has ESA-listed fish species, sensitive fish species, and non-listed fish species, the Matrix for the ESA-listed species should be completed.

2. If the watershed has sensitive fish species and non-listed fish species, but no ESA-listed species, use the Matrix for sensitive species, with modified parameters (or criteria) for the WCIs appropriate for those species.
3. If there are only non-listed and non-sensitive fish species in the watershed, use the Matrix for native, or desired non-native fish species, with modified parameters (or criteria) for the WCIs appropriate for those species and associated beneficial uses.
4. If there is a TMDL or 303(d) listed water quality limited water body, and the management action may have impacts on the WCI value(s) for which it was listed, and only non-listed and non-sensitive aquatic species are present, use the Matrix for native or desired non-native fish species, with modified parameters (or criteria) for the WCIs appropriate for those species and associated beneficial uses.

**Table B-2 linkage to Table B-1**

For each project area, determine the environmental baseline by describing the conditions for the WCIs listed under the pathways that may be affected by the management action against the reference condition for the WCI described in Table I. This will result in each WCI in Table II being classified as either: “Functioning Appropriately” (FA), “Functioning at Risk” (FR), or “Functioning at Unacceptable Risk” (FUR). It is preferred that the WCI values used to determine FA, FR and FUR be based on local data collected over time that either validates the default value or refines the value to better reflect local conditions following procedures in described in the “*How to Modify the Matrix*” section, below. If local data are lacking, consider the biophysical characteristics of the subwatershed when determining functionality categories, and use local databases and/or related literature to discern the most appropriate WCI values for the Matrix.

**Table B-3 linkage to Table B-2**

Use Table B-3 to evaluate the expected effects of management actions (or groups of actions) on the WCIs by comparing the expected effects on the WCIs against the environmental baseline in Table B-2. Where conditions are FR or FUR, actions that affect WCIs that are not fully functioning will not retard attainment of WCIs unless to meet the exceptions in SWRA Standard #4. For example, management actions that have temporary or short-term effects can still be consistent with Forest-wide TEPC and SWRA objectives, standards, and guidelines if they do not retard the attainment of riparian processes and functions, have significant long-term benefits, and do not have significant short-term effects to important subwatersheds or to the overall watershed scale. Actions that have long-term impacts to important subwatershed and/or watershed-scale processes would likely prevent the attainment of WCIs and be inconsistent with Forest Plan direction. Where conditions are FA, the action(s) should be designed to maintain those conditions in the short and long term.

It is important to understand that all effects are not the same just because they may occur within the same temporary, short-term, or long-term time period. The duration or repetition of an effect within that time period can vary greatly, as can the intensity, location, or type of effect. The Matrix allows Forest personnel the flexibility to determine these differences during project-level analysis and provides a means to display if the temporary, short-term, or long-term effect has a positive, negative, or no trend. If WCIs within a pathway are not evaluated in Table B-2 or B-3, documentation describing why they were not evaluated should be included in the project record.

**Table B-4 linkage to Tables B-2 and B-3**

Use evaluations in Tables B-2 and B-3 to answer the questions in the dichotomous key contained in Table B-4. Written documentation of rationale and logic substantiating answers to questions generated through interdisciplinary and Section 7 consultation or conference discussions should be included in the project record and used to support determinations reached in biological assessments and NEPA documents.

**Examples Describing the Use of the Matrix**

The following are some brief examples to assist in describing the intended use of the Matrix.

**Example 1** - Thinning and prescribed fire are proposed as vegetation treatments over a large portion of a 6<sup>th</sup> field HU. Current large woody debris frequency is 10 pieces per mile, below the Functioning Appropriately value of >20. Assuming the values for a FA call are appropriate for the geoclimatic setting, the proposed activity should be designed in such a way that desired conditions would be reached and lead to attainment of Functioning Appropriately conditions over the long term. At the stream reach level, site-specific project design features to promote FA conditions might include increased RCA widths, adjustment of the treatment unit boundaries, or changes in how the specific treatment tool (prescribed fire ignitions or mechanical thinning) is implemented.

**Example 2** - The action is to replace a damaged culvert in a 6<sup>th</sup> field HU with a FR baseline. Currently, surface fines are between 12 and 20%, and embeddedness is between 20 and 30%. This action will cause temporary degradation to turbidity and embeddedness indicators downstream, but impacts will not go beyond the 6<sup>th</sup> field HU. The action will also restore the fish passage indicator, and will maintain all remaining indicators. This action will be appropriate because it does not retard the attainment of riparian processes and functions, has measurable long-term ecological benefits by providing fish passage, and does not have substantially measurable short-term effects.

**Example 3** - Existing fine sediment levels in bull trout spawning gravels ( $\leq 6.0$  mm) are approaching the desired condition of  $\leq 12\%$ , and the local bull trout population is small and isolated. A temporary increase in sediment from one individual project could yield significant adverse effects to bull trout that could be significant in both short- and long-term effects on the isolated local population. Also, temporary inputs of sediment could have short- and long-term consequences if channel morphology and stream gradient are associated with infrequent flushing. Low-gradient stream channels might retain sediment for decades.

The question to be answered is whether or not temporary effects from any proposed action will sustain the local isolated population of bull trout and associated beneficial uses. For instance, proposed restoration activities may be appropriate for short-term or long-term recovery, but the timing may not be right if existing stream habitat conditions would be degraded. If the isolated bull trout population would be at risk from temporary effects, it may be prudent to delay project implementation until stream conditions improve, or implement management actions incrementally, using more restrictive BMPs. The over-riding objective is to avoid or minimize temporary jeopardy risks to the bull trout population while striving to recover the habitat that will allow for increasing the bull trout population in the short and long term.

**Example 4** - A new placer mine, timber sale, and road restoration project are planned over several 6<sup>th</sup> field HUs in the same 5<sup>th</sup> field watershed. The placer mine occurs in a 6<sup>th</sup> field HU where most indicators are FA. The timber sale and road projects occur in HUs where many baseline indicators are FUR or FR. Even though the placer mine will have short- and long-term adverse effects to pool quality and streambank indicators, it is allowed to proceed due to the 1872 mining law. The other two projects are designed to restore WCIs in the long term, but will cause degradation in the temporary and short term to sediment and peak flows at the 6<sup>th</sup> field scale.

Cumulative effects from these actions are expected to occur in a low-gradient reach downstream of each project. A second Matrix is prepared to see if cumulative effects will degrade WCIs at the watershed scale and over what time frame. If cumulative effects are determined not to degrade or retard indicator functions, the actions can proceed. If cumulative effects degrade indicators at the subwatershed scale, then projects are modified to reduce effects or delayed until baseline conditions improve to be consistent with the Forest Plan.

### **How To Modify The Matrix**

When a WCI value identified in the Matrix is not physically or biologically appropriate, given the inherent characteristics (geoclimatic setting) of the subwatershed, the WCI should be modified. WCIs should be refined to better reflect conditions that are functionally attainable in a specific watershed or stream reach based on local geology, land and channel form, climate, historic and potentially recoverable fish species habitat, and potential vegetation. Modification of interim default WCIs may be completed through a variety of methods such as mid-level analysis, Forest-wide monitoring results, and collection and evaluation of watershed and/or stream reach specific data.

Ideally, when modifying WCIs, suitable reference conditions should be used to adopt more functionally attainable indicator values. Reference conditions should be as representative as possible of historical values prior to significant management disturbance. However, since pristine subwatersheds are uncommon, there will need to be agreement on what constitutes an acceptable site to determine suitable reference conditions. Reference conditions may be established using a combination of methods including surveys, historical data, and inferences made from literature, professional judgment, and local landscape conditions. Regardless of what methods are used, written documentation of the methods and procedures, quality and source of data, and rationale supporting the modifications should be included in record documentation for the project or mid-level analysis. In watersheds with ESA-listed fish species, modification of WCIs will be coordinated with NOAA Fisheries and/or USFWS through Section 7 consultations.

**The Matrix Tables**

(Note: Parameters were taken from the 8/96 NMFS and 2/98 FWS Matrices)

**Table B-1. Pathways and Watershed Condition Indicators (WCIs) - Reference Conditions**

| Pathways and WCIs                                                    | Functioning Appropriately                                                                                                                                                                                                                                                                                                                                                     | Functioning at Risk                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Functioning at Unacceptable Risk                                                                                                                                                                                                                        |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bull Trout Local Population Characteristics within Core Areas</b> |                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                         |
| Local Population Size                                                | Mean total local population size or local habitat capacity more than several thousand individuals. Adults in local population > 500. All life stages are represented within the local population.                                                                                                                                                                             | Adults in local populations < 500 but > 50. <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Adults in local population < 50.                                                                                                                                                                                                                        |
| Growth and Survival                                                  | Local population has the resilience to recover from temporary or short-term disturbances (e.g., catastrophic events, etc.) or local population declines within 1 to 2 generations (5-10 years). The local population is characterized as increasing or stable. At least 10 years of data support this estimate. <sup>2</sup>                                                  | When disturbed, the local population will not recover to pre-disturbance conditions within 1 generation (5 years). Survival or growth rates have been reduced from those in the best habitats. The local population is reduced in size, but the reduction does not represent a long-term trend. At least 10 years of data support this characterization. If less data are available and a trend cannot be confirmed, a local population will be considered at risk until enough data is available to accurately determine its trend. | The local population is characterized as in rapid decline or is maintaining at alarmingly low numbers. Under current management, the local population condition will not improve with 2 generations. This is supported by a minimum of 5 years of data. |
| Life History Diversity and Isolation                                 | The migratory form is present and the local populations are in close proximity to each other. Migratory corridors and rearing habitat (lake or larger river) are in good to excellent condition for the species. Neighboring local populations are large with high likelihood of producing surplus individuals or straying adults that will mix with other local populations. | The migratory form is present but the local population is isolated or fragmented.                                                                                                                                                                                                                                                                                                                                                                                                                                                    | The migratory form is absent and the local population is isolated to the local stream or a small watershed not likely to support more than 2,000 fish.                                                                                                  |

<sup>1</sup> Rieman, B.E. and J.D. McIntyre. 1993. Demographic and habitat requirements for conservation of bull trout. U.S.D.A. Forest Service, Intermountain Research Station, Boise ID.

<sup>2</sup> Rieman, B.E. and D.L. Meyers. 1997. Use of redd counts to detect trends in bull trout (*Salvelinus confluentus*) populations. Conservation Biology 11(4): 1015-1018.

**Table B-1. Pathways and Watershed Condition Indicators (WCIs) - Reference Conditions (continued)**

| Pathways and WCIs                                                                | Functioning Appropriately                                                                                                                                                                                                                                                                                                    | Functioning at Risk                                                                                                                                                                                                                                                                                                                                     | Functioning at Unacceptable Risk                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bull Trout Local Population Characteristics within Core Areas (continued)</b> |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                  |
| Persistence and Genetic Integrity                                                | Connectivity is high among multiple (5 or more) local populations with at least several thousand fish each. Each of the relevant local populations has a low risk of extinction. The probability of hybridization or displacement by competitive species is low to nonexistent.                                              | Connectivity among multiple local populations does occur, but habitats are more fragmented. Only 1 or 2 local populations represent most of the fish production. The probability of hybridization or displacement by competitive species is imminent, although few documented cases have occurred.                                                      | Little or no connectivity remains for re-founding local populations in low numbers, in decline, or nearing extinction. Only a single local population, or several local populations that are very small or that otherwise are at high risk remain. Competitive species readily displace bull trout. The probability of hybridization is high and documented cases have occurred. |
| <b>Water Quality</b>                                                             |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                  |
| Temperature (steelhead, chinook)                                                 | 7-day average minimum. Spawning, rearing and migration: 50-57°F (10-13.9°C) <sup>3</sup>                                                                                                                                                                                                                                     | Spawning: 57-60 °F (13.9-15.5°C)<br>Migration and rearing: 57-64°F (13.9-17.7°C) <sup>4</sup>                                                                                                                                                                                                                                                           | Spawning: >60 °F (>15.5°C)<br>Migration and rearing: >64°F (>17.7°C)                                                                                                                                                                                                                                                                                                             |
| Temperature (bull trout)                                                         | 7-day average maximum temperature in a reach during the following life history stages: <sup>5</sup><br>Incubation: 2-5°C or 35.6-41.0°F<br>Rearing: 4-12°C or 39.2-53.6°F<br>Spawning: 4-9°C or 39.2-48.2°F<br>Also temperatures do not exceed 15°C or 59.0°F in areas used by adults during migration (no thermal barriers) | 7-day average maximum temperature in a reach during the following life history stages: <sup>5</sup><br>Incubation: <2°C or 6°C or <35.6° or 42.8°F.<br>Rearing: <4°C or 13-15°C or <39.2°F or 55.4-59.0°F<br>Spawning: <4°C or 10°C or 39.2°F or 50.0°F.<br>Also temperatures in areas used by adults during migration sometimes exceed 15°C or 59.0°F. | 7-day average maximum temperature in a reach during the following life history stages: <sup>5</sup><br>Incubation: <1°C or >6°C or <33.8°F or > 42.8°F.<br>Rearing: >15°C or > 59.0°F<br>Spawning: <4°C or >10°C 39.2°F or > 50.0°F<br>Also temperatures in areas used by adults during migration regularly exceed 15°C or 59.0°F (thermal barriers present)                     |

<sup>3</sup> Bjornn, T.C. and D.W. Reiser. 1991. Habitat requirements of salmonids in streams, American Fisheries Society Special Publication 19.83-138, Meehan, W.R., ed

<sup>4</sup> Biological Opinion on Land and Resource Management Plans for the: Boise, Challis, Nez Perce, Payette, Salmon, Sawtooth, Umatilla, and Wallowa-Whitman National Forests. March 1, 1995.

<sup>5</sup> Buchanan, D.V. and S.V. Gregory. 1997. Development of water temperature standards to protect and restore habitat for bull trout and other coldwater species in Oregon, W.C. Mackay, M.K. Brewen, and M. Monita, eds. Friends of the Bull Trout Conference Proceedings, held in Calgary, Alberta, May 5-7, 1994

**Table B-1. Pathways and Watershed Condition Indicators (WCIs) - Reference Conditions (continued)**

| Pathways and WCIs                                                                                                      | Functioning Appropriately                                                                                                                                              | Functioning at Risk                                                                                                                                                          | Functioning at Unacceptable Risk                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Water Quality (continued)</b>                                                                                       |                                                                                                                                                                        |                                                                                                                                                                              |                                                                                                                                                                           |
| Temperature (other fish species: i.e., redband, rainbow, wood river sculpin, etc.)                                     | Use 7-day average maximum temperature.<br><br>Species-specific criteria should be developed.                                                                           |                                                                                                                                                                              |                                                                                                                                                                           |
| Sediment/Turbidity (steelhead, chinook)                                                                                | Low turbidity is indicated by < 12% surface fines (< 0.85 mm) <sup>6</sup>                                                                                             | Moderate turbidity is indicated by 12-20% surface fines (< 0.85 mm) <sup>4</sup>                                                                                             | High turbidity is indicated by > 20% surface fines (< 0.85 mm) <sup>4</sup>                                                                                               |
| Sediment/Turbidity (in areas of spawning and incubation; rearing areas will be addressed under substrate) (bull trout) | < 12% fines (< 0.85 mm) in gravel. <sup>6</sup><br>Surface fines (≤6mm) ≤ 20% <sup>7, 8</sup>                                                                          | 12-17% fines (<0.85mm) in gravel. <sup>6</sup><br>Surface fines (≤6mm) are 12-20%.                                                                                           | >17% fines (< 0.85mm) in gravel; <sup>6</sup> Surface fines (< 6mm) or depth fines (< 6mm) in > 20% in spawning habitat                                                   |
| Sediment/Turbidity (other fish species: i.e., red band, rainbow, wood river sculpin, etc)                              | Species-specific criteria should be developed.                                                                                                                         |                                                                                                                                                                              |                                                                                                                                                                           |
| Chemical Contamination/Nutrients                                                                                       | Low levels of chemical contamination from agricultural, industrial, and other sources; no excess nutrients, no 303(d) water quality limited water bodies. <sup>9</sup> | Moderate levels of chemical contamination from agricultural, industrial, and other sources; some excess nutrients, one 303(d) water quality limited water body. <sup>9</sup> | High levels of chemical contamination from agricultural, industrial, and other sources; high excess nutrients, >1 303(d) water quality limited water bodies. <sup>9</sup> |

<sup>6</sup> Washington Timber/Fish Wildlife Cooperative Monitoring Evaluation and Research Committee, 1993. Watershed Analysis Manual (Version 2.0). Washington Department of Natural Resources.

<sup>7</sup> Overton, C.K., J.D. McIntyre, R. Armstrong, S.L. Whitewell, and K.A. Duncan. 1995. User's guide to fish habitat: descriptions that represent natural conditions in the Salmon River Basin, Idaho. U.S. Department of Agriculture, Forest Service, Intermountain Research Station, Gen Tech. Rep. INT-GTR-322.

<sup>8</sup> Overton, C.K., S.P. Wollrab, B.C. Roberts, and M.A. Radko. 1997. R1/R4 (Northern/Intermountain Regions) Fish and Fish Habitat Standard Inventory Procedures Handbook. U.S. Department of Agriculture, Forest Service, Intermountain Research Station, Gen Tech. Rep. INT-GTR-346.

<sup>9</sup> A Federal Agency Guide for Pilot Watershed Analysis (Version 1.2). 1994.

**Table B-1. Pathways and Watershed Condition Indicators (WCIs) - Reference Conditions (continued)**

| Pathways and WCIs                                                                                                                                                                                                         | Functioning Appropriately                                                                                                                                                      | Functioning at Risk                                                                                                                                                                     | Functioning at Unacceptable Risk                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>Habitat Access</b>                                                                                                                                                                                                     |                                                                                                                                                                                |                                                                                                                                                                                         |                                                                                                                                      |
| Physical Barriers (address subsurface flows impeding fish passage under the pathway "Flow/Hydrology")                                                                                                                     | Any man-made barriers present in watershed allow upstream and downstream fish passage at all flows.                                                                            | Any man-made barriers present in watershed do not allow upstream and/or downstream fish passage at base/low flows.                                                                      | Any man-made barriers present in watershed do not allow upstream and/or downstream fish passage at a range of flows.                 |
| Substrate Embeddedness (Bull trout rearing areas. Spawning and incubation areas are addressed under the Sediment/Turbidity WCI)                                                                                           | Dominant substrate is gravel or cobble (interstitial spaces clear), or embeddedness is < 20%. <sup>6, 10, 11</sup>                                                             | Gravel and cobble is subdominant, or if dominant, embeddedness is 20-30%. <sup>6, 10</sup>                                                                                              | Bedrock, sand, silt, or small gravel dominant, or if gravel and cobble dominant, embeddedness is > 30%. <sup>4, 10</sup>             |
| Large Woody Debris (Consider variations based on local biophysical elements, i.e., vegetation habitat type/community type, ecological processes, stream channel width and type, landform, etc., appropriate to the site.) | > 20 pieces per mile, > 12 inches in diameter, > 35 feet length; <sup>4, 12</sup> and adequate sources of large woody debris for both long and short-term recruitment in RCAs. | Currently meets standards for functioning appropriately, but lacks potential sources of short or long-term large woody debris recruitment from RCAs to maintain that desired condition. | Does not meet standards for functioning appropriately and lacks potential large woody debris for short and/or long-term recruitment. |

<sup>10</sup> Biological Opinion on Implementation of Interim Strategies for Managing Anadromous fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (Pacfish). National Marine Fisheries Service. Northwest Region, January 23, 1995.

<sup>11</sup> Shepard, B.B., K.L. Pratt, and P.J. Graham. 1984. Life histories of westslope cutthroat and bull trout in the Upper Flathead River Basin, MT. Environmental Protection agency Rep. Contract No. R008224-01-5.

<sup>12</sup> Interior Columbia Basin Ecosystem Management Project Draft Environmental Impact Statement and Appendices.



**Table B-1. Pathways and Watershed Condition Indicators (WCIs) - Reference Conditions (continued)**

| Pathways and WCIs                                                                                                                                                                                                              | Functioning Appropriately                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Functioning at Risk | Functioning at Unacceptable Risk |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------|-----|-----|------|----|-------|----|-------|----|-------|----|-------|----|-------|----|--------|----|-------------|----------------|-----|----|------|----|------|----|-------|----|-------|----|-------|----|-------|----|-------|---|--------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Habitat Access (continued)                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| Pool Frequency and Quality: consider variations based on local biophysical elements i.e., vegetation habitat type/community type, ecological processes, stream channel width and type, landform etc., appropriate to the site. | <p>Pools have good cover and cool water, and only minor reduction of pool volume by fine sediment. Large woody debris recruitment standards for functioning appropriately (above) are met and pool frequency in a reach closely approximates:<sup>7, 13</sup></p> <p><b>Steelhead and chinook:</b><br/>Channel</p> <table><tr><th>Width (ft.)</th><th>No. Pools/Mile</th></tr><tr><td>0-5</td><td>184</td></tr><tr><td>5-10</td><td>96</td></tr><tr><td>10-15</td><td>70</td></tr><tr><td>15-20</td><td>56</td></tr><tr><td>20-25</td><td>47</td></tr><tr><td>25-50</td><td>26</td></tr><tr><td>50-75</td><td>23</td></tr><tr><td>75-100</td><td>18</td></tr></table> <p><b>Bull Trout:</b><br/>Wetted</p> <table><tr><th>Width (ft.)</th><th>No. Pools/Mile</th></tr><tr><td>0-5</td><td>39</td></tr><tr><td>5-10</td><td>60</td></tr><tr><td>0-15</td><td>48</td></tr><tr><td>15-20</td><td>39</td></tr><tr><td>20-30</td><td>23</td></tr><tr><td>30-35</td><td>18</td></tr><tr><td>35-40</td><td>10</td></tr><tr><td>40-65</td><td>9</td></tr><tr><td>65-100</td><td>4</td></tr></table> <p>Can use the formula:<br/>pools/mile =</p> <p><u>5280/wetted channel width</u><br/>= # pools/mi<br/># channel widths per pool</p> | Width (ft.)         | No. Pools/Mile                   | 0-5 | 184 | 5-10 | 96 | 10-15 | 70 | 15-20 | 56 | 20-25 | 47 | 25-50 | 26 | 50-75 | 23 | 75-100 | 18 | Width (ft.) | No. Pools/Mile | 0-5 | 39 | 5-10 | 60 | 0-15 | 48 | 15-20 | 39 | 20-30 | 23 | 30-35 | 18 | 35-40 | 10 | 40-65 | 9 | 65-100 | 4 | Pool frequency is similar to values in “functioning appropriately”, but pools have inadequate cover/temperature, <sup>6</sup> and/or there has been a moderate reduction of pool volume by fine sediment. Large woody debris recruitment is inadequate to maintain pools over time. | Pool frequency is considerably lower than values desired for “functioning appropriately”; also cover/temperature is inadequate, <sup>6</sup> and there has been a major reduction of pool volume by fine sediment. |
| Width (ft.)                                                                                                                                                                                                                    | No. Pools/Mile                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 0-5                                                                                                                                                                                                                            | 184                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 5-10                                                                                                                                                                                                                           | 96                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 10-15                                                                                                                                                                                                                          | 70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 15-20                                                                                                                                                                                                                          | 56                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 20-25                                                                                                                                                                                                                          | 47                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 25-50                                                                                                                                                                                                                          | 26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 50-75                                                                                                                                                                                                                          | 23                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 75-100                                                                                                                                                                                                                         | 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| Width (ft.)                                                                                                                                                                                                                    | No. Pools/Mile                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 0-5                                                                                                                                                                                                                            | 39                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 5-10                                                                                                                                                                                                                           | 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 0-15                                                                                                                                                                                                                           | 48                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 15-20                                                                                                                                                                                                                          | 39                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 20-30                                                                                                                                                                                                                          | 23                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 30-35                                                                                                                                                                                                                          | 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 35-40                                                                                                                                                                                                                          | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 40-65                                                                                                                                                                                                                          | 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 65-100                                                                                                                                                                                                                         | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                     |                                  |     |     |      |    |       |    |       |    |       |    |       |    |       |    |        |    |             |                |     |    |      |    |      |    |       |    |       |    |       |    |       |    |       |   |        |   |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                    |

<sup>13</sup> USDA Forest Service. 1994. Section 7 Fish Habitat Monitoring Protocol for the Upper Columbia River Basin.

**Table B-1. Pathways and Watershed Condition Indicators (WCIs) - Reference Conditions (continued)**

| Pathways and WCIs                                                                                                                                                     | Functioning Appropriately                                                                                                                                                                                                           | Functioning at Risk                                                                                                                                                                                                                       | Functioning at Unacceptable Risk                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Habitat Access (continued)</b>                                                                                                                                     |                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                           |                                                                                                                                                               |
| Large Pools/Pool Quality (All Fish Species) In adult holding, juvenile rearing, and over wintering reaches where streams are 0.3 meters in wetted width at base flow. | Each reach has many large pools > 3.28 feet (1 meter deep). <sup>6</sup> Pools have good cover and cool water, and only minor reduction of pool volume by fine sediment.                                                            | Reaches have few large pools > 3.28 feet (>1 meter) present <sup>6</sup> or inadequate cover/temperature. Moderate reduction of pool volume by fine sediment.                                                                             | Reaches have no deep pools > 3.28 feet (> 1 meter) <sup>6</sup> and inadequate cover/temperature. There is a major reduction of pool volume by fine sediment. |
| Off-channel Habitat (Appropriate to the watershed and associated stream system; is the stream capable of using its floodplain similar to an unmanaged stream system?) | Watershed has many ponds, oxbows, backwaters, and other off-channel areas with cover; side channels are low energy areas. <sup>6</sup>                                                                                              | Watershed has some ponds, oxbows, backwaters, and other off-channel areas with cover; but side channels are generally high-energy areas. <sup>6</sup>                                                                                     | Watershed has few or no ponds, oxbows, backwaters, or other off-channel areas. <sup>6</sup>                                                                   |
| Refugia (steelhead, chinook) (see glossary for definition of steelhead and chinook refugia)                                                                           | Habitat refugia exist and are adequately buffered (e.g., by intact riparian conservation areas); existing refugia are sufficient in size, number, and connectivity to maintain viable populations or sub-populations. <sup>14</sup> | Habitat refugia exist but are not adequately buffered (e.g., by intact riparian conservation areas); existing refugia are insufficient in size, number, and connectivity to maintain viable populations or sub-populations. <sup>14</sup> | Adequate habitat refugia do not exist. <sup>14</sup>                                                                                                          |
| Refugia (bull trout) (see glossary for definition of bull trout refugia)                                                                                              | Habitats capable of supporting strong and significant local populations are protected and are well distributed and connected for all life stages and forms of the species. <sup>14, 15</sup>                                        | Habitats capable of supporting strong and significant local populations are insufficient in size, number, and connectivity to maintain all life stages and forms of the species. <sup>14, 15</sup>                                        | Adequate habitat refugia do not exist. <sup>14</sup>                                                                                                          |

<sup>14</sup> Frissell, C.A., W.J. Liss, and David Bayles. 1993. An Integrated Biophysical Strategy for Ecological Restoration of Large Watersheds. Proceedings from the Symposium on Changing Roles in water Resources Management and Policy, June 27-30, 1993 (American Water Resources Association), p. 449-456.

<sup>15</sup> Lee, D.C., J.R. Sedell, B.E. Rieman, R.F. Thurow, J.E. Williams and others. 1997. Chapter 4: Broadscale Assessment of aquatic Species and Habitats. In T.M. Quigley and S.J. Arbelbide eds "An Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins Volume III." U.S. Department of Agriculture, Forest Service, and U.S. Department of Interior, Bureau of Land Management, Gen Tech. Rep PNW-GTR-405.

**Table B-1. Pathways and Watershed Condition Indicators (WCIs) - Reference Conditions (continued)**

| Pathways and WCIs                                                                                                                       | Functioning Appropriately                                                                                                                                                                | Functioning at Risk                                                                                                                                                                                                                              | Functioning at Unacceptable Risk                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Channel Conditions and Dynamics</b>                                                                                                  |                                                                                                                                                                                          |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                           |
| Average Wetted Width/Maximum Depth Ratio in scour pools in a stream reach. (Consider variation in ranges based on stream channel type). | $\leq 10^{4, 7, 10}$                                                                                                                                                                     | 11-20 <sup>7</sup>                                                                                                                                                                                                                               | $> 20^7$                                                                                                                                                                                                                                                                                  |
| Streambank Condition (Consider variation in ranges based on stream channel type).                                                       | $> 90\%$ of any stream reach has stable banks <sup>4, 7</sup> relative to the percent of inherent stable streambanks associated with a similar unmanaged stream system.                  | 80-90% of any stream reach has stable banks relative to the percent of inherent stable streambanks associated with a similar unmanaged stream system.                                                                                            | $< 80\%$ of any stream reach has stable banks relative to the percent of inherent stable streambanks associated with a similar unmanaged stream system.                                                                                                                                   |
| Floodplain Connectivity (Consider local landform, stream channel type, climatology, vegetation, etc.)                                   | Within RCAs, floodplains and wetlands are hydrologically linked to the main channel; overbank flows occur and maintain wetland/floodplain functions; and riparian vegetation succession. | Within RCAs, reduced linkage of wetlands and floodplains to the main channel; overbank flows are reduced relative to historic frequency, as evidenced by moderate degradation of wetland/floodplain function and riparian vegetation succession. | Within RCAs, severe reduction in linkage of wetlands, floodplains and riparian areas to the main channel; overbank flows are drastically reduced relative to historic frequency, as evidenced by substantial reduction of wetland/floodplain function and riparian vegetation succession. |
| <b>Flow/Hydrology</b>                                                                                                                   |                                                                                                                                                                                          |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                           |
| Change in Peak/Base Flows                                                                                                               | Watershed hydrograph indicates peak flow, base flow, and flow timing characteristics comparable to an undisturbed watershed of a similar size, geomorphology and climatology.            | Some evidence of altered peak flow, base flow, and/or flow timing relative to an undisturbed watershed of similar size, geomorphology and climatology.                                                                                           | Pronounced changes in peak flow, base flow, and/or flow timing relative to an undisturbed watershed of similar size, geomorphology and climatology.                                                                                                                                       |
| Change in Drainage Network                                                                                                              | Zero or minimum change in active channel length correlated with human caused disturbance.                                                                                                | Low to moderate change in active channel length correlated with human caused disturbance.                                                                                                                                                        | Greater than moderate change in active channel length correlated with human caused disturbance.                                                                                                                                                                                           |

**Table B-1. Pathways and Watershed Condition Indicators (WCIs) - Reference Conditions (continued)**

| Pathways and WCIs                   | Functioning Appropriately                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Functioning at Risk                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Functioning at Unacceptable Risk                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Watershed Conditions</b>         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Road Density/Location <sup>16</sup> | Total road density < 0.7 miles/square mile of subwatershed, <sup>16</sup> no roads within RCAs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Total road density 0.7-1.7 miles/square mile of subwatershed, <sup>16</sup> few roads within RCAs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | > 1.7 miles/square mile of subwatershed, <sup>16</sup> many roads within RCAs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Disturbance History                 | < 15% ECA (entire watershed) with no concentration of disturbance in areas with landslide or landslide prone areas, and/or refugia, and/or RCAs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | < 15% ECA (entire watershed) but disturbance concentrated in landslide or landslide prone areas, and/or refugia, and/or RCAs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | > 15% ECA (entire watershed) and disturbance concentrated in landslide or landslide prone areas, and/or refugia, and/or RCAs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Riparian Conservation Areas         | <p>The riparian conservation areas within the subwatershed(s) have historic and occupied refugia for listed, sensitive or native/desired nonnative fish species which are present and provide: adequate shade, large woody debris recruitment, sediment buffering, connectivity, and habitat protection and connectivity to adequately minimize adverse effects from land management activities (&gt;80% intact).</p> <p>All vegetative components are within desired conditions identified in Appendix A of the Forest Plan. RCA functions and processes are intact, providing resiliency from adverse affects associated with land management activities. Conditions fully support habitat for aquatic species.</p> | <p>The riparian conservation areas within the subwatershed(s) contain known historic refugia for listed, sensitive, or native/desired nonnative fish species that are currently absent (but could be re-colonized). Land management activities have resulted in moderate loss to shade, large woody debris recruitment, sediment buffering, connectivity, and habitat protection. (Refugia &lt; 70-80% intact.)</p> <p>Some vegetative components are outside desired conditions in Appendix A of the Forest Plan. RCA functions and processes are still generally intact, providing some resiliency from adverse affects associated with land management activities. Conditions generally support habitat for aquatic species.</p> | <p>Riparian conservation areas as a result of land management have resulted in loss of or substantially fragmented historic refugia, and provide inadequate protection of habitats for listed, sensitive, native or desired non-native fish species (&lt; 70% intact). Historical refugia are currently absent of listed, sensitive, or native/desired non-native fish species.</p> <p>Most vegetative components are outside desired conditions in Appendix A of the Forest Plan. RCA functions and processes are not sufficiently intact, to mitigate adverse affects from land management activities. Conditions may not support habitat for aquatic species</p> |

<sup>16</sup> ICBEMP Science Assessment, Supplemental Roads Analysis

**Table B-1. Pathways and Watershed Condition Indicators (WCIs) - Reference Conditions (continued)**

| Pathways and WCIs                                   | Functioning Appropriately                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Functioning at Risk                                                                                                                                                                                                                                                                                                                                                                                                           | Functioning at Unacceptable Risk                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Watershed Conditions (continued)</b>             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Disturbance Regime                                  | Disturbance resulting from land management activities are negligible or temporary. Streamflow regimes are appropriate to the local geomorphology, potential vegetation and climatology resulting in appropriate high quality habitat and watershed complexity that provide refugia and rearing space for all life stages or multiple life-history forms. Ecological processes are within historical ranges. Resiliency of habitat to recover from land management disturbances is high. | As a result of land management activities, scour events, debris torrents, or catastrophic fire are localized events that occur in several minor parts of the watershed. Ecological processes are moderately outside of historical ranges. Resiliency of habitat to recover from land management disturbances is moderate.                                                                                                     | Frequent flood or drought producing highly variable and unpredictable flows, scour events, debris torrents, or high probability of catastrophic fire exists throughout a major part of the watershed. The channel is simplified, providing little hydraulic complexity in the form of pools or side channels. Ecological processes are substantially outside of historical ranges. Resiliency of habitat to recover from land management disturbances is low. |
| <b>Integration of Pathways (steelhead, chinook)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                     | Habitat quality and connectivity among subpopulations is high. Disturbance has not altered channel equilibrium. Fine sediments and other habitat characteristics influencing survival and growth are consistent with the desired conditions for the habitat. The subpopulation has the resilience to recover from short-term disturbance within one to two generations (5-10 years). The subpopulation is fluctuating around an equilibrium or is growing.                              | Fine sediments, stream temperatures, or the availability of suitable habitats have been altered and will not recover to pre-disturbance conditions within one generation (5 years). Survival or growth rates have been reduced from those in the best habitats. The subpopulation is reduced in size, but the reduction does not represent a long-term trend. The subpopulation is stable or fluctuating in a downward trend. | Cumulative disruption of habitat has resulted in a clear declining trend in the subpopulation size. Under current management, habitat conditions will improve within two generations (5 to 10 years). Subpopulation survival and recruitment responds sharply to normal environmental events.                                                                                                                                                                 |

**Table B-1. Pathways and Watershed Condition Indicators (WCIs) - Reference Conditions (continued)**

| Pathways and WCIs                                                                                     | Functioning Appropriately                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Functioning at Risk                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Functioning at Unacceptable Risk                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Integration of Pathways (bull trout)</b>                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                       | Habitat quality and connectivity among local populations is high. The migratory form is present. Disturbance has not altered channel equilibrium. Fine sediments and other habitat characteristics influencing survival and growth are consistent with pristine habitat. The local population has the resilience to recover from short-term disturbance within one to two generations (5 to 10 years). The local population is fluctuating around an equilibrium or is growing. | Fine sediments, stream temperatures, or the availability of suitable habitats have been altered and will not recover to pre-disturbance conditions within one generation (5 years). Survival or growth rates have been reduced from those in the best habitats. The local population is reduced in size, but the reduction does not represent a long-term trend. The local population is stable or fluctuating in a downward trend. Connectivity among the local populations occurs but habitats are more fragmented. | Cumulative disruption of habitat has resulted in a clear declining trend in the subpopulation size. Under current management, habitat conditions will improve within two generations (5 to 10 years). Little or no connectivity remains among local populations. Local population survival and recruitment responds sharply to normal environmental events. |
| <b>Integration of Pathways (other fish species, i.e., redband, rainbow, wood river sculpin, etc.)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                       | Species-specific criteria should be developed.                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                             |

Table B-2. Environmental Baseline – Current Conditions

|                         |  |                          |  |
|-------------------------|--|--------------------------|--|
| Agency/Unit:            |  | HU Code & Name:          |  |
| Fish Species Present:   |  | Spatial Scale of Matrix: |  |
| (Anad. Sp.) Population: |  | Subpopulation:           |  |
| (Bull trout) Core Area: |  | Local Population:        |  |
| Management Action(s):   |  |                          |  |

| Pathways<br>Indicators <sup>a, c</sup> | Population and Environmental Baseline |                                                                     |                                               |
|----------------------------------------|---------------------------------------|---------------------------------------------------------------------|-----------------------------------------------|
|                                        | Desired<br>Condition                  | <input checked="" type="checkbox"/> = Data<br>Baseline <sup>b</sup> | Discussion of Baseline –<br>Current Condition |
| <b>Subpopulation Character</b>         |                                       |                                                                     |                                               |
| Subpopulation Size                     |                                       |                                                                     |                                               |
| Growth and Survival                    |                                       |                                                                     |                                               |
| Life History Diversity and Isolation   |                                       |                                                                     |                                               |
| Persistence and Genetic Integrity      |                                       |                                                                     |                                               |
| <b>Water Quality</b>                   |                                       |                                                                     |                                               |
| Temperature                            |                                       |                                                                     |                                               |
| Sediment                               |                                       |                                                                     |                                               |
| Chemical Contaminants/Nutrients        |                                       |                                                                     |                                               |
| <b>Habitat Access</b>                  |                                       |                                                                     |                                               |
| Physical Barriers                      |                                       |                                                                     |                                               |
| <b>Habitat Elements</b>                |                                       |                                                                     |                                               |
| Substrate Embeddedness                 |                                       |                                                                     |                                               |
| Large Woody Debris                     |                                       |                                                                     |                                               |
| Pool Frequency                         |                                       |                                                                     |                                               |
| Pool Quality                           |                                       |                                                                     |                                               |
| Off-Channel Habitat                    |                                       |                                                                     |                                               |
| Refugia                                |                                       |                                                                     |                                               |

a. Matrix checklist adapted from USFWS and NMFS 1998.

b. FA = Functioning Appropriately, FR = Functioning at Risk, UR = Functioning at Unacceptable Risk, N = Not Applicable

note: "☒" in baseline discussion indicates actual data were used as the primary source of baseline assessment, otherwise reflects a professional estimate of condition.

c. Evaluated against local criteria where appropriate and available (see IV.C)

Table B-2. Environmental Baseline – Current Conditions (continued)

| Pathways<br>Indicators <sup>a, c</sup>           | Population and Environmental Baseline |                                                                     |                                               |
|--------------------------------------------------|---------------------------------------|---------------------------------------------------------------------|-----------------------------------------------|
|                                                  | Desired<br>Condition                  | <input checked="" type="checkbox"/> = Data<br>Baseline <sup>b</sup> | Discussion of Baseline –<br>Current Condition |
| <b>Channel Condition and Dynamics</b>            |                                       |                                                                     |                                               |
| Width/Depth Ratio                                |                                       |                                                                     |                                               |
| Stream bank Condition                            |                                       |                                                                     |                                               |
| Floodplain Connectivity                          |                                       |                                                                     |                                               |
| <b>Flow/Hydrology</b>                            |                                       |                                                                     |                                               |
| Change in Peak/Base<br>Flows                     |                                       |                                                                     |                                               |
| Drainage Network Increase                        |                                       |                                                                     |                                               |
| <b>Watershed Conditions</b>                      |                                       |                                                                     |                                               |
| Road Density and Location                        |                                       |                                                                     |                                               |
| Disturbance History                              |                                       |                                                                     |                                               |
| Riparian Conservation<br>Areas                   |                                       |                                                                     |                                               |
| Disturbance Regime                               |                                       |                                                                     |                                               |
| Integration of Species and<br>Habitat Conditions |                                       |                                                                     |                                               |

a. Matrix checklist adapted from USFWS and NMFS 1998.

b. FA = Functioning Appropriately, FR = Functioning at Risk, UR = Functioning at Unacceptable Risk, N = Not Applicable

note: "☒" in baseline discussion indicates actual data were used as the primary source of baseline assessment, otherwise reflects a professional estimate of condition.

c. Evaluated against local criteria where appropriate and available (see IV.C)



Table B-3. Effects of Management Actions

|                         |  |                          |  |
|-------------------------|--|--------------------------|--|
| Agency/Unit:            |  | HU Code & Name:          |  |
| Fish Species Present:   |  | Spatial Scale of Matrix: |  |
| (Anad. Sp.) Population: |  | Subpopulation:           |  |
| (Bull trout) Core Area: |  | Local Population:        |  |
| Management Action(s):   |  |                          |  |

| Pathways Indicators <sup>a, d</sup>                    | Effects of the Management Action(s) |                                   |                                    |                                   |                       |
|--------------------------------------------------------|-------------------------------------|-----------------------------------|------------------------------------|-----------------------------------|-----------------------|
|                                                        | Effects <sup>b, c</sup>             | Temporary trend/effect (+/-/none) | Short-term trend/effect (+/-/none) | Long-term trend/effect (+/-/none) | Discussion of Effects |
| <b>Subpopulation Character</b>                         |                                     |                                   |                                    |                                   |                       |
| Subpopulation Size (bull trout only)                   |                                     |                                   |                                    |                                   |                       |
| Growth and Survival (bull trout only)                  |                                     |                                   |                                    |                                   |                       |
| Life History Diversity and Isolation (bull trout only) |                                     |                                   |                                    |                                   |                       |
| Persistence and Genetic Integrity (bull trout only)    |                                     |                                   |                                    |                                   |                       |
| <b>Water Quality</b>                                   |                                     |                                   |                                    |                                   |                       |
| Temperature                                            |                                     |                                   |                                    |                                   |                       |
| Sediment                                               |                                     |                                   |                                    |                                   |                       |
| Chemical Contaminants/ Nutrients                       |                                     |                                   |                                    |                                   |                       |
| <b>Habitat Access</b>                                  |                                     |                                   |                                    |                                   |                       |
| Physical Barriers                                      |                                     |                                   |                                    |                                   |                       |
| <b>Habitat Elements</b>                                |                                     |                                   |                                    |                                   |                       |
| Substrate Embeddedness                                 |                                     |                                   |                                    |                                   |                       |
| Large Woody Debris                                     |                                     |                                   |                                    |                                   |                       |
| Pool Frequency                                         |                                     |                                   |                                    |                                   |                       |
| Pool Quality                                           |                                     |                                   |                                    |                                   |                       |
| Off-Channel Habitat                                    |                                     |                                   |                                    |                                   |                       |
| Refugia                                                |                                     |                                   |                                    |                                   |                       |

a. Matrix checklist adapted from USFWS and NMFS1998.

b. This displays the potential effects of the action on habitats or individuals, and not on the status of the entire local population/ watershed. I = Improve, M = Maintain, D = Degrade, N = No Influence

c. Effects that "Maintain" or "Improve" indicators are compliant with Pacfish and Infish objectives (see USFWS 1998 for crosswalk).

d. Evaluated against local criteria where appropriate and available (see IV.C)

Table B-3. Effects of Management Actions (continued)

| Pathways<br>Indicators <sup>a, d</sup>              | Effects of the Management Action(s) |                                         |                                          |                                         |                       |
|-----------------------------------------------------|-------------------------------------|-----------------------------------------|------------------------------------------|-----------------------------------------|-----------------------|
|                                                     | Effects <sup>b, c</sup>             | Temporary<br>trend/effect<br>(+/-/none) | Short-term<br>trend/effect<br>(+/-/none) | Long-term<br>trend/effect<br>(+/-/none) | Discussion of Effects |
| <b>Channel Condition and Dynamics</b>               |                                     |                                         |                                          |                                         |                       |
| Width/Depth Ratio                                   |                                     |                                         |                                          |                                         |                       |
| Stream bank<br>Condition                            |                                     |                                         |                                          |                                         |                       |
| Floodplain<br>Connectivity                          |                                     |                                         |                                          |                                         |                       |
| <b>Flow/Hydrology</b>                               |                                     |                                         |                                          |                                         |                       |
| Change in Peak/Base<br>Flows                        |                                     |                                         |                                          |                                         |                       |
| Drainage Network<br>Increase                        |                                     |                                         |                                          |                                         |                       |
| <b>Watershed Conditions</b>                         |                                     |                                         |                                          |                                         |                       |
| Road Density and<br>Location                        |                                     |                                         |                                          |                                         |                       |
| Disturbance History                                 |                                     |                                         |                                          |                                         |                       |
| Riparian Conservation<br>Areas                      |                                     |                                         |                                          |                                         |                       |
| Disturbance Regime                                  |                                     |                                         |                                          |                                         |                       |
| Integration of Species<br>and Habitat<br>Conditions |                                     |                                         |                                          |                                         |                       |

a. Matrix checklist adapted from USFWS and NMFS1998.

b. This displays the potential effects of the action on habitats or individuals, and not on the status of the entire local population/watershed. I = Improve, M = Maintain, D = Degrade, N = No Influence

c. Effects that "Maintain" or "Improve" indicators are compliant with Pacfish and Infish objectives (see USFWS 1998 for crosswalk).

d. Evaluated against local criteria where appropriate and available (see IV.C)

**Table B-4. Dichotomous Key For Making ESA Determination Of Effects**

(Circle the conclusion at which you arrive)

Name and location of action:

1. Are there any proposed/listed fish species and/or proposed/designated critical habitat in the watershed or downstream from the watershed?

NO ..... No Effect  
 YES ..... Go to 2<sup>1</sup>

2. Will the proposed action(s) have any effect whatsoever<sup>1</sup> on the species and/or critical habitat?

NO ..... No Effect  
 YES ..... Go to 3

3. Does the proposed action(s) have the potential to hinder attainment of relevant properly functioning indicators (from Table II)?

NO ..... Go to 4  
 YES ..... Likely to adversely affect<sup>2</sup>

4. Does the proposed action(s) have the potential to result in “take”<sup>2</sup> of proposed/listed fish species or adversely affect proposed/designated critical habitat?

- a) There is a negligible (extremely low) probability of take of proposed/listed fish species, or of adversely affecting proposed/designated critical habitat...Not likely to adversely affect
- b) There is more than a negligible probability of take of proposed/listed fish species or of adversely affecting proposed/designated critical habitat...Likely to adversely affect<sup>2</sup>

<sup>1</sup> “Any effect whatsoever” includes small effects, effects that are unlikely to occur, and beneficial effects (all of which are recognized as “may affect” determinations). A “no effect” determination is only appropriate if the proposed action will literally have no effect whatsoever on the species and/or critical habitat, not a small effect, an effect that is unlikely to occur; or a beneficial effect.

<sup>2</sup> “Take” – The ESA (Section 3) defines take as “to harass, harm, pursue, hunt, shoot, wound, trap, capture, collect, or attempt to engage in any such conduct”. The USFWS (USFWS, 1994) further defines “harm” as “significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering”, and “harass” as “actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering”. In 1999, NMFS (64 FR 60727) further defined harm to include “spawning” and “rearing” as additional behavioral patterns.

<sup>3</sup> Document expected incidental take on next page of this key.

## Modification Considerations For Pathways And WCIs

This section is intended to provide a basis for general modification of the WCIs contained in the Matrix and recommendations for data sources or evaluation.

WCIs are an integrated suite of aquatic (including biophysical components), riparian (including riparian-associated vegetation species), and hydrologic (including uplands) condition measures that are intended to be used at the a variety of watershed scales. They assist in determining the current condition of a watershed and should be used to help design appropriate management actions or alter or mitigate proposed and or ongoing actions to move watersheds toward desired conditions. Common sources of information are likely to include Forest Service and other agencies' habitat and population surveys, walk-through surveys, professional judgment, and monitoring and remote sensing data.

The following descriptions are generated to stimulate discussions on Level I teams associated with listed fish species, and Interdisciplinary Teams on evaluations of all the WCIs/Pathways through which riparian functions and ecological processes, aquatic habitat, and fish populations can be altered. These descriptions are not all inclusive, and it is recommended that both field review and literature review be conducted to better understand the inherent variability and interactions of the biophysical resources for any management action within a given watershed.

Use of fairly comprehensive databases such as the "Natural Conditions Dataset" (Overton et al. 1995), may be useful in developing more localized values. Where appropriate, refinement of WCI values can be stratified by several geoclimatic variables, some of which include: geomorphology, landform, stream type and size, climate historic, and potential vegetation.

### **Pathway: Bull Trout Local Population Characteristics Within Core Areas**

**WCI -1: Local Population Size.** DATA AND ANALYSIS: Determinations of baseline will reflect the known status of the local population as compared against the numeric criteria. Definitions of functionality are derived from Rieman and McIntyre (1993). Determination of baseline "current condition" will reflect the known status of the local population as compared against the numeric criteria.

Utilize primarily professional judgment, or data where available. No criteria for species other than bull trout are needed. Most information sources will reflect only confirmed presence or assumed absence. Where population surveys exist, the data may be sufficient to apply the numeric criteria in Table I, but will unlikely represent the true "population". It may be difficult in some watersheds to separate historic non-use from contemporary non-use, that is, was the species ever present? For the purpose of consistency, the numeric criteria should be applied as written, unless evidence exists to demonstrate historic non-use.

**WCI-2: Growth and Survival.** DATA AND ANALYSIS: It is unlikely that 5 to 10 years of data exists to support any baseline assessment, as identified in Table I; therefore, analysis should use available data and information to arrive at a professional estimate of the condition. Inferences may be derived from related information such as water temperature or macro-invertebrate data. Unknowns suggest a conservative application of the numeric criteria as written. No criteria for species other than bull trout are needed. Use professional judgment.

The ratio of adults to pre-adults and the extent of the available habitat are used to estimate productivity for growth and survival. Bull trout greater than 6 inches in length are assumed to be adult fish (based on age analyses of resident fish collected on the Forest).

**WCI-3: Life History Diversity and Isolation.** DATA AND ANALYSIS: Utilize primarily professional judgment, or data where available. Most information sources will reflect only confirmed presence or assumed absence. Known connectivity and past observation of larger migratory bull trout can assist in estimating the current condition. Where neighboring local population surveys exist, the data may be sufficient to apply the matrix standards. Unknowns suggest a conservative application of the numeric criteria as written. No criteria for species other than bull trout are needed.

**WCI-4: Persistence and Genetic Integrity.** DATA AND ANALYSIS: Utilize primarily professional judgment, or data where available. Most information sources will reflect only confirmed presence or assumed absence. Where neighboring local population surveys exist, the data may be sufficient to apply the Matrix criteria. Unknowns suggest a conservative application of the numeric criteria as written. No criteria for species other than bull trout are needed.

**Pathway: Water Quality**

**WCI-1: Temperature.** DATA AND ANALYSIS: Recording thermographs, both within the habitats of concern and during the applicable timeframes (e.g., spawning, rearing, and migration periods), will be required to directly evaluate the Matrix parameters. Spot measurements are typically not sufficient, but could be used to indicate a temperature extreme that warrants further examination. Daily thermograph maximums need not be further processed into 7-day average unless necessary to discriminate between baseline conditions. For spawning temperature criteria, conditions need to meet the criteria throughout the spawning period.

**WCI-2: Sediment/Turbidity.** DATA AND ANALYSIS: Unless sufficient data/information is available to determine otherwise, no baseline condition will be identified as "functioning appropriately" for any reach within a watershed that is currently included on the 303(d) impaired water body list with sediment identified as the pollutant. If sufficient information is available to dispute the listing, it may be considered "functioning at risk"; otherwise, a 303d listing for sediment will be considered "functioning at unacceptable risk". The values for this indicator may vary greatly and should be refined to better reflect local conditions (geoclimatic setting). Modification of the sediment criteria can utilize the more localized Natural Conditions Dataset (Overton et al. 1995) to incorporate the local geomorphology, landform, stream type and size, potential vegetation type for the stream reach or subwatershed. Surface fines are currently being used as a surrogate for turbidity. If surface fine information is not available, naturally erosive soils and/or stream bank condition indicator may be used in its place. In watersheds with ESA-listed fish species, consult with the Level 1 consultation team before making changes.

**WCI-3: Chemical Contamination/Excess Nutrients.** DATA AND ANALYSIS: Consider rates of chemical and a nutrient source of contamination only, do not include sediment or temperature (the basis for listing most 303d streams). Where available, utilize appropriate state and federal water quality rules and regulations.

**Pathway: Habitat Access**

**WCI-1: Physical Barriers.** DATA AND ANALYSIS: This indicator identifies the known and or potential barriers to fish movement both within a local population and among core areas. This includes but is not limited to dams, culverts, bridges, and fords, as well as barriers associated with thermal or chemical alterations to the water column. Estimation on the amount and extent of fish barriers may be completed using GIS layers of roads (classified and unclassified) and the 1:24,000 streams layer. Natural barriers such as waterfalls, cascades, and elevated stream temperatures from hot springs are important to identify, but should not have an influence on the functionality rating.

**Pathway: Habitat Elements**

**WCI- 1: Substrate Embeddedness.** DATA AND ANALYSIS: This indicator identifies the extent to which larger particles are embedded or buried by fine sediment. A commonly used procedure for measuring embeddedness is by selecting particles from the streambed and then measuring both the particle height and embedded height perpendicular to the streambed surface. Percent embeddedness is calculated for each particle until at least 100 particles are measured. The values for this indicator may vary greatly and should be refined to better reflect local conditions (geoclimatic setting).

**WCI- 2: Large Woody Debris.** DATA AND ANALYSIS: The indicator considers the number and size of in-channel wood, as well as future recruitment of wood in RCAs. A number of methods can be used to collect in-channel wood data. Most surveys count only those pieces that extend below the waterline at bankfull discharge and exceed some minimum size limit over a specific stream distance. Sometimes spanners or bridged pieces are also included in the count. An adequate source of wood recruitment is generally an estimate of the number of pieces that may fall into the stream in the future. This information is commonly collected through a walk-through survey or intensive riparian survey. Several studies have shown that most (70 to 90 percent) large wood recruited to streams is from trees growing within 65-100 ft of the channel on flat terrain (Murphy and Koski 1989, McDade et al. 1990). Potential wood recruitment should at a minimum be considered within one site potential tree height. This height will vary by potential vegetative group (PVG), and can range from 50 feet in PVG 11 to 120 feet in PVG 1. Analysis should be cognizant of the distribution of terrestrial vegetation habitats within the watershed. For example, stream reaches flowing through broad shrub-dominated meadows lack natural sources of LWD, and would not be expected to meet the numeric criteria. Generally, watersheds or stream reaches with a mosaic of conifer and shrub habitats would be considered at desired conditions unless evidence displays manipulation or disturbance of streamside forests, regardless of LWD numeric levels.

**WCI- 3: Pool Frequency and Quality.** DATA AND ANALYSIS: This indicator is based on the number of pools meeting a minimum size criteria defined by the appropriate methodology by channel width. It also considers the amount of cover in each pool, water temperature, and filling by sediment. Most stream surveys have typically considered this habitat element. "Pocket pools" or other such quantified microhabitat can also be appropriately considered as pools. Where data is lacking, use professional judgment with inference from related mechanisms such as known disturbance within the watershed (e.g., an increase in sediment loads will generally result in a decrease in pool frequency and quality).

**WCI-4: Large Pools.** DATA AND ANALYSIS: This indicator is based upon the number of pools with maximum depth greater than 3.28 feet. It also considers the amount of cover in each pool, water temperature, and filling by sediment. Most stream surveys have typically considered this habitat element. The values for this indicator may vary greatly and should be refined to better reflect local conditions (geoclimatic setting).

**WCI-5: Off-Channel Habitat.** DATA AND ANALYSIS: This indicator is based upon the number of side channels, ponds, oxbows, and other backwater areas. Typically this is a measure of either the total number of these habitat types or the total linear distance over a specific reach. Utilize available data and information with professional judgment. Some habitat surveys have quantified conditions in off-channel habitats, and most have at least commented about the existence of such. However, no numeric standard exists.

**WCI-6: Refugia.** DATA AND ANALYSIS: This is a large-scale indicator based upon the quality, uniqueness, and importance of the 6<sup>th</sup> or 5<sup>th</sup> field HU the project being analyzed falls within. Utilize available data and tools, such as aerial photos, with professional judgment. This indicator speaks to the current situation of habitats within the local –population–that is, within the watershed.

**Pathways: Channel Conditions and Dynamics**

**WCI-1: Average Width/Maximum Depth Ratio.** DATA AND ANALYSIS: The determination of channel width and channel depth is problematic because both parameters are flow-dependent. Depth tends to increase with flow more rapidly than width, but this relationship may not be constant at any given cross-section. Recent surveys have typically evaluated only wetted channel conditions. Maximum depth identification requires specialized abilities in identifying bankfull features and so has not been consistently collected. Ideally these parameters should be measured at specific discharges and locations. Where no data exists, those familiar with the stream can compare visual observations of it with stream references such as found in the Natural Conditions Dataset (Overton et al. 1995), or Applied River Morphology (Rosgen 1996). The values for this indicator may vary greatly by channel type and should be refined to better reflect local conditions (geoclimatic setting). Utilize available data and information, or professional judgment.

**WCI-2: Streambank Condition.** DATA AND ANALYSIS: Many stream surveys have evaluated streambank condition (stability), although until recently it was rarely quantified. Where quantified, if summarized by habitat type, this indicator can be evaluated as in the USFWS matrix; that is, what portion of the habitat units have at least 90% stable banks. However, if summarized only by reach, simply consider the portion of the total length that is "stable". Engineered revetment should generally not be considered "stable". Where no quantitative data exists, qualitative assessments common in the 1980s such as the Stream Reach Inventory and Channel Stability Evaluation (Pfankuch 1975) can provide considerable inference. Utilize available data and information, or professional judgment.

**WCI-3: Floodplain Connectivity.** DATA AND ANALYSIS: This indicator is based on whether floodplains and wetlands are hydrologically linked to the main channel. Evidence of channel entrenchment, manipulation, levees, revetment, or alteration should be absent to be considered "functioning appropriately". This indicator is closely related to variations in local geomorphology, landform, stream size and type, climate, and potential vegetation. Utilize primarily professional judgment, or data, information, or photographs if available.

**Pathway: Flow/Hydrology**

**WCI-1: Change in Peak or Base Flows.** DATA AND ANALYSIS: This indicator is typically based on field observations and an assessment of management impacts at the 6<sup>th</sup> or 5<sup>th</sup> field HU scales. In-channel observations may include channel adjustments such as nick points; scour marks, and eroding banks to dewatered streams. Larger-scale measurements may include past harvest history, road densities and location, and acres burned. Utilize primarily professional judgment, or data and information if available.

**WCI-2: Changes in Drainage Network.** DATA AND ANALYSIS: This indicator is typically based on field observations and an assessment of management impacts at the 6<sup>th</sup> or 5<sup>th</sup> field HU scales. Management activities typically observed are roads with extensive inside ditches and few relief culverts, dewatered or expanded streams below roads, compacted ground within harvest units, and intensive livestock grazing. Utilize primarily professional judgment, or data and information if available.

**Pathway: Watershed Conditions**

**WCI-1: Road Density and Location.** DATA AND ANALYSIS: Classified and unclassified road densities and miles within the RCAs can quickly be evaluated, particularly with GIS tools. Utilize available data and information, or professional judgment. Road density default values are from the “Supplemental Roads Analysis of Road Impacts pages 1253-1260 in Volume III of Quigley and Arbelbide, 1997.

**WCI-2: Disturbance History.** DATA AND ANALYSIS: This indicator is typically based on vegetative recovery from disturbance. The values for this indicator may vary greatly from the default values and should be refined to better reflect local conditions. Local refinements of these indicator values should consider local research data (e.g., Silver Creek Watershed Research Projects, King 1989). It is difficult to predict how much a particular change in ECA will affect watershed function and effect on salmonids; therefore professional judgment will be required.

**WCI-3: Riparian Conservation Areas.** DATA AND ANALYSIS: Actions and historic disturbance within an RCA can help infer RCA condition and trend. Classified and unclassified roads and number of stream crossings can also be quickly evaluated within a given watershed, particularly with GIS tools. Utilize primarily professional judgment, or data, tabular information, or aerial photographs if available.

**WCI-4: Disturbance Regime.** DATA AND ANALYSIS: Ecological processes including the disturbance processes that create dynamic soil, water, and hydrologic, riparian and aquatic habitats within watersheds. The results of these processes determine the physical and biological capability within watersheds, including water quality and aquatic habitat. Differences in climate, geomorphology, soils, and potential vegetation (geoclimatic setting) greatly influence the amount and recurrence of disturbance process (disturbance regimes), as well as the ability and rate for a subwatershed to recover (resiliency). The intent of this indicator is to determine the amount of effect that land management activities have or may have on the overall watershed function and resiliency. Utilize primarily professional judgment, based on available data and information when available.

**Pathway: Integration of Species and Habitat Conditions**

**No individual watershed condition indicators identified.** DATA AND ANALYSIS: This pathway is an integration of the biophysical and aquatic habitat conditions. Individual WCIs represent a starting point to describe the current and desired conditions for water quality and aquatic habitat. This pathway synthesizes the information evaluated for individual indicators to determine the overall functional status of the subwatershed. Utilize professional judgment and reference specific WCIs that have a major influence on the overall condition.



## **GUIDANCE FOR DELINEATION AND MANAGEMENT OF RIPARIAN CONSERVATION AREAS**

### **Introduction**

The third component of the Aquatic Conservation Strategy is the delineation of Riparian Conservation Areas (RCAs). Naiman et al. (2000) identifies that recent discoveries about the structure and dynamics of riparian zones have extended the scope of understanding about this portion of the landscape and have important implications for stream and watershed management. The following guidance has been developed to assist interdisciplinary teams in becoming familiar with and consistently applying criteria to: 1) appropriately delineate RCAs; and 2) analyze important considerations in developing appropriate management actions within or affecting RCAs. The objective is to ensure that interdisciplinary teams adequately consider riparian functions and ecological processes in both the delineation of RCAs and determination of appropriate management actions within or affecting RCAs.

The revised Forest Plan direction (goals, objectives, standards, and guidelines) found in Chapter III of this document replaces direction in the 1988 Payette National Forest Land and Resource Management Plan, as amended by Pacfish/Infish, NMFS' 1995 LRMP Biological Opinion (BOs), and the NMFS' and USFWS' 1998 Biological Opinions for steelhead and bull trout. With that replacement, the definitions and delineations of Pacfish/Infish Riparian Habitat Conservation Areas are replaced by the definitions and delineations of RCAs.

### **Overview Of The RCA Delineation Guidance**

Aquatic and riparian systems are easily affected by land management activities on the surrounding hillslopes. RCAs provide both a linkage and transitional habitat between hillslopes and upland terrestrial habitats and the aquatic habitats within stream channels.

In general, there is little controversy over the need to define RCAs in order to maintain riparian functions and ecological processes. The controversy is over the width of the RCA, the extent and type of management activities that can occur within them, and the purposes for those activities. Management activities that occur within, or adjacent to, an RCA are subject to specific goals, objectives, standards and guidelines. Forest plans and the associated management direction regulate two major features of RCAs: 1) their width; and 2) the kind and amount of activity that can take place within or influence them (Spence et al. 1996, Quigley and Arbelbide 1997).

Riparian zones are among the biosphere's most complex ecological systems and also among the most important for maintaining the vitality of the landscape and its rivers (Naiman et al. 2000). Evaluating the effectiveness of RCAs to manage for riparian functions and ecological processes is difficult because of: the complexities of such areas, the extended time over which impacts can occur; and the resiliency and rate of recovery. The RCA should be designed to maintain riparian functions and ecological processes with consideration of multiple scales (stream reach, subwatershed, and watershed scale).

### **RCA Delineation Criteria For Southwest Idaho Ecogroup**

The following are criteria to be used to delineate RCAs for perennial and intermittent streams, ponds, lakes, reservoirs, and wetlands.

**I. Forested Streams\***

*Perennial streams (and intermittent streams providing seasonal rearing and spawning habitat) –*

In the absence of local field data, 300-foot slope distance from the ordinary high water mark,

OR

Flood-prone width or two site-potential tree heights, whichever is greatest,

OR

Defined based on a site-specific analysis by a qualified specialist with expertise in the field of riparian function and ecological processes.

**II. Forested Streams\***

*Intermittent streams –* In the absence of local field data, 150-foot slope distance from the ordinary high water mark,

OR

Flood-prone width or one site-potential tree height, whichever is greatest,

OR

Defined based on a site-specific analysis by a qualified specialist with expertise in the field of riparian function and ecological processes.

**III. Ponds, Lakes, Reservoirs, and Wetlands \***

In the absence of local field data, 150-foot slope distance from the ordinary high water mark,

OR

Outer edge of seasonally saturated soils, outer edge of riparian vegetation, or one site-potential tree height, whichever is greatest,

OR

Defined based on a site-specific analysis by a qualified specialist with expertise in the field of riparian function and ecological processes.

**IV. Non-Forested Streams\***

*Perennial and intermittent streams –*

The extent of the flood prone width, or riparian vegetation, whichever is greatest,

OR

Defined based on a site-specific analysis by a qualified specialist with expertise in the field of riparian function and ecological processes.

\*Note: Sediment delivery distances vary based upon the combination of proposed management actions and the inherent site characteristics. Because sediment delivery distances may exceed the selected option, RCAs may need to be adjusted to avoid or minimize delivery to the associated water body under any option.

**Step-Down Process For RCA Delineation**

Effective use of the RCA delineation requires a full understanding of the selection criteria options within each of the four Categories.

Delineating an RCA requires two decisions to be made. First, the area needs to be correlated with one of the four Categories (I, II, III, or IV). The second decision is identifying which option, or criteria, within that Category to use.

The decision as to which option or criteria should be chosen should occur through discussions with the interdisciplinary team, resource specialists, and/or the line officer. In general, determining the level of analysis that best suits the needs of the project will be driven by the potential effects of the project,

baseline conditions, management direction, and issues associated with the project/area of interest that were identified through scoping, the work of the interdisciplinary team, or the line officer.

Written documentation of the chosen RCA delineation option within a category, and the rationale behind the choice, should be included in record documentation for the project.

The options within a given Category have varying levels of associated analysis that are involved with delineating the RCA. Category IV, Non-forested Streams, differs from the other Categories in that it does not designate a set distance and therefore has two options rather than three.

**Option 1**

In lieu of field data, selection of the first option provides a conservative boundary--generally in excess of two site-potential tree heights in the case of the 300-foot slope distance, and greater than one site-potential tree height in the case of the 150-foot slope distance--that would be expected to account for most riparian processes including stream shading, LWD recruitment, fine organic litter input, bank stabilization, sediment filtration, wind-throw, riparian microclimate and productivity, and wildlife habitat. Again, selection of this option is expected to provide land managers with the option of delineating an RCA in the absence of field confirmation, with the expectation that the distances would account for most riparian functions and ecological processes in a system.

**Option 2**

The second criteria option, which is used similarly in Categories I-IV, requires field verification of certain site characteristics and provides a more site-based delineation of an RCA boundary for a specific location. Depending on which Category (I, II, III, or IV) is involved, options include use of flood-prone width, site-potential tree height, or riparian vegetation, whichever is greatest given the category.

Flood-prone width is a relatively easily surveyed geomorphic feature in the field, and it accounts for riparian processes, such as fine organic litter input or bank stabilization, and for various degrees of sediment delivery distances.

Site-potential tree height is spoken to in the literature and correlated with the protection of riparian functions and ecological processes such as stream shading, LWD recruitment, fine organic litter input, bank stabilization, sediment filtration, wind-throw, riparian microclimate and productivity, and wildlife habitat (Spence et al. 1996, Quigley and Arbelbide 1997, FEMAT 1993).

Riparian vegetation is defined through classification of the vegetation associated with the aquatic habitat and its outer extent (see glossary), and it generally influences riparian processes such as fine organic litter input, bank stabilization, sediment filtration, stream shading, and wildlife habitat.

Option 2 requires the use of certain field data to be collected from the project area and analyzed to determine the RCA boundary. It is considered an option requiring potentially less than a site-specific analysis (Option 3), but it is more appropriately tied to the landscape than a default distance might be (Option 1).

**Option 3**

The third option, which is used in Categories I-IV, is the use of a site-specific analysis to define the RCA. This option requires potentially the most analysis of the three options. When defining the RCA, the specialist conducts an on-site analysis of the riparian functions and ecological processes associated with the stream, pond, lake, reservoir or wetland, and defines the RCA based on the distance that best encompasses the extent of those functions and processes. The value gained from this effort is a site-specific RCA delineation appropriate to the functions and processes between upland terrestrial habitats

and adjacent aquatic habitats for that area. This information potentially provides more opportunities for project design because the existing condition is better known, and therefore effects of actions can be better assessed, and projects can be more responsive to needs of the aquatic ecosystem.

In summary, RCA delineation is set up in a manner that provides flexibility for different levels of analysis that, regardless of the option chosen, will provide for riparian functions and ecological processes. The decision on which option to use must involve considerations of the project in regard to potential effects, baseline conditions, and issues and their relationship to riparian functions and ecological process.

The effectiveness of delineating an accurate RCA provides decision-makers with the information necessary for sound decisions regarding management activities within a watershed. With an understanding of the riparian functions and ecological processes of a system, and the means by which actions may affect them, decision makers are provided an opportunity to design activities to maintain or restore listed fish species, their habitats, and other SWRA resources.

### **Flood-Prone Width For Use In Identifying RCAs**

Rosgen (1996) identifies an acceptable field methodology for determining the flood-prone area width. To measure the width of the flood-prone area, select the elevation that corresponds to twice the maximum bankfull channel depth as determined by the vertical distance between bankfull stage and the thalweg of a riffle. The flood-prone area generally includes the active floodplain and the low terrace (Rosgen 1996). This area can assist to varying degrees in the protection for: stream shading, large woody debris recruitment, fine organic litter, bank stabilization, sediment filtration, nutrients and other dissolved materials, riparian microclimate and productivity, wildlife habitat, and windthrow.

Flood-prone width, as defined by Rosgen (1996), will vary greatly depending on valley form and channel entrenchment. For example, flood-prone widths would be expected to be narrower in confined, entrenched streams, and wider in broad valley forms with less entrenched streams. Because site-potential tree heights will typically provide a wider RCA in confined, entrenched streams, flood-prone width will not typically be used to define RCAs in these stream types. Similarly, flood-prone width will be more likely to be used in the broad valley forms with low channel entrenchment.

### **Site-Potential Tree Heights For Use In Identifying RCAs**

When planning and implementing vegetation management projects, distances equivalent to one or two site-potential tree heights may be used to determine RCA boundaries, provided a site visit has been completed. Current conditions and dominant potential vegetation group (PVG) for the site/project area must be verified in the field.

Once the dominant PVG has been field-verified, the site-potential tree height criteria in the following table will be used to determine RCA widths in the management units. See the glossary in this appendix for definitions of site-potential tree height, site tree, and seral tree species. For more information about forested vegetation and PVGs, refer to Appendix A of the Forest Plan.

**Table B-5. Site Potential Tree Heights by Potential Vegetation Group**

| Potential Vegetation Group                    | Age | 1 Site Tree Height (feet) | 2 Site Tree Heights (feet) |
|-----------------------------------------------|-----|---------------------------|----------------------------|
| 1 - Dry Ponderosa Pine/Xeric Douglas-fir      | 200 | 120                       | 240                        |
| 2 - Warm Dry Douglas-fir/Moist Ponderosa Pine | 200 | 120                       | 240                        |
| 3 - Cool Moist Douglas-fir                    | 200 | 120                       | 240                        |
| 4 - Cool Dry Douglas-fir                      | 200 | 100                       | 200                        |
| 5 - Dry Grand Fir                             | 200 | 110                       | 220                        |
| 6 - Cool Moist Grand Fir                      | 200 | 120                       | 240                        |
| 7 - Cool Dry Subalpine Fir                    | 200 | 100                       | 200                        |
| 8 - Cool Moist Subalpine Fir                  | 200 | 110                       | 220                        |
| 9 - Hydric Subalpine Fir                      | 200 | 110                       | 220                        |
| 10 - Persistent Lodgepole Pine                | *   | 90                        | 180                        |
| 11 - High Elevation Subalpine Fir             | 200 | 80                        | 160                        |

\*In PVG 10 individual trees and stands normally do not achieve an average of 200 years. However, mature lodgepole pine site trees can achieve an average height of approximately 80 feet.

### **Riparian Functions And Ecological Processes: Considerations**

The determination of RCA widths must consider the various riparian functions and ecological processes that exert an influence on the adjacent aquatic and terrestrial environment. Integral to the success of proper management, is an understanding of riparian functions and ecological processes, and local knowledge of the site being managed. With field data in hand, design of an appropriate RCA width can focus on conservation of appropriately functioning processes and restoration of damaged processes of concern based on the existing conditions of the site, proposed activities, and issues at hand.

Megahan and Hornbeck (2000) state that a properly designed and managed riparian area can provide a variety of amenities, while protecting riparian functions and ecological processes and diversity of species composition. They further state that a properly designed and managed riparian area includes careful management of forests both within, and outside of the riparian area.

Spence et al. (1996) and Quigley and Arbelbide (1997) identify several important considerations when appropriately delineating and designing management activities within or affecting RCAs. These are as follows:

- a) A stream requires predictable and near-natural energy and nutrient inputs.
- b) Many plant and animal communities rely on streamside or wetland forests and vegetation for migratory or dispersion habitat.
- c) Small streams are generally more affected by hillslope activities than are larger streams.
- d) As adjacent slopes become steeper, the likelihood of disturbance resulting in discernable instream effects increases.
- e) Riparian vegetation 1) provides shade to stream channels; 2) contributes large woody debris; 3) adds small organic matter; 4) stabilizes stream banks; 5) controls sediment inputs from surface erosion; 6) and regulates nutrient and pollutant inputs to streams.

Taking a functional approach to delineating an RCA by looking at “zones of influence” (Spence et al. 1996) allows the qualified specialist to focus on specific riparian functions where a relationship between those functions and RCA widths are known. The ‘zone of influence’ approach provides the qualified specialist a means to distinguish between those riparian functions and ecological processes potentially affected by the proposed actions and those that, regardless of the RCA delineation, the proposed actions will not impair. The functions and processes that would be unaffected by the proposed action, regardless of the RCA delineation, could then be dropped from further discussion. When defining the RCA through site-specific analysis this rationale should be documented.

The riparian functions and processes that may be affected by the proposed action(s) (given the existing conditions and associated issues) should then be addressed through the RCA delineation. In general, the riparian functions and ecological processes that should be considered during delineation of RCAs through site-specific analysis include (taken primarily from Spence et al. 1996):

- Stream Shading
- Large Woody Debris Recruitment
- Fine Organic Litter
- Bank Stabilization
- Sediment Control
- Nutrients and Other Dissolved Materials
- Riparian Microclimate and Productivity
- Wildlife Habitat
- Windthrow
- Importance of Small Streams
- Importance of Hillslope Steepness

The following are brief discussions on some of the riparian functions and ecological processes that are intended to assist the practitioner in a thorough analysis.

**Stream Shading** (excerpted from Spence et al. 1996)

The ability of riparian forests to provide shade to stream channels is a function of numerous site-specific factors including vegetation composition, stand height, stand density, latitude, (which determines solar angle), topography, stream width, and orientation of the stream channel. These factors influence how much incident solar radiation reaches the forest canopy and what fraction passes through to the water surface. The shading influence of an individual tree can be expressed geometrically as a function of tree height, slope, and solar angle. In natural forests, stand density and composition may moderate the shading influence of trees within this zone, with trees closer to the stream channel and understory shrubs providing the majority of stream shade.

More research on riparian influences on shading for all ecosystems east of the Cascades is needed; however, in most instances, RCA widths designed to protect other riparian functions (e.g., LWD recruitment) are likely to be adequate to protect stream shading.

**Large Woody Debris Recruitment** (excerpted from Spence et al. 1996)

Large wood enters stream channels by a variety of mechanisms, including toppling of dead trees, windthrow, debris avalanches, deep-seated mass soil movements, undercutting of streambanks, and redistribution from upstream. In some systems, wood delivered from upslope areas (via land-sliding) or upstream reaches (via floods or debris torrents) may constitute a significant fraction of the total wood present in a stream reach. When evaluating RCAs, consideration should be given to potential recruitment of wood from upslope areas and non-fish-bearing channel in addition to wood delivered by toppling, windthrow, and bank undercutting.

The potential for a tree or portions of a tree to enter the stream channel by toppling, windthrow, or undercutting is primarily a function of slope distance from the stream channel in relation to tree height and slope angle. Consequently, the zone of influence for large wood recruitment is defined by the particular stand characteristics rather than an absolute distance from the stream channel or floodplain. Other factors, including slope and prevailing wind direction, may influence the proportion of trees that fall in the direction of the stream channel.

**Fine Organic Litter** (excerpted from Spence et al. 1996)

Smaller pieces of organic litter (leaves, needles, branches, tree tops, and other wood) enter the stream primarily by direct leaf or debris fall, although organic material may also enter the stream channel by overland flow of water, mass soil movements, or shifting of stream channels in unconstrained reaches. Little research has been done relating litter contributions to streams as a function of distance from the stream channel; however, it is assumed that most fine organic litter originates within 30 meters, or 0.5 potential tree heights from the channel.

**Bank Stabilization** (excerpted from Spence et al. 1996)

Roots of riparian vegetation help to bind soil particles together, making streambanks less susceptible to erosion. In addition, riparian vegetation provides hydraulic roughness elements that dissipate stream energy during high or overbank flows, further reducing bank erosion. In most instances, vegetation immediately adjacent to the stream channel is most important in maintaining bank integrity; however, in wide valleys with shifting stream channels, vegetation throughout the floodplain may be important over longer time periods. Although data quantifying the effective zone of influence relative to root strength is scarce, most of the stabilizing influence of riparian root structure is probably provided by trees within 0.5 potential tree heights of the stream channel. Consequently, delineating RCA widths to provide for other riparian functions (e.g., LWD recruitment, shading) are likely to maintain bank stability. In addition, consideration should be given to the composition of riparian species within the area of influence because of differences in the root morphology of conifers, deciduous trees, and shrubs. Specific relationships between root types and bank stabilization have not been documented; however, if the purpose of riparian protection is to restore natural bank characteristics, then retaining natural species composition is a reasonable target for maintaining bank stabilization function of riparian vegetation.

**Sediment Control and Importance of Hillslope Steepness** (excerpted from Quigley and Arbelbide 1997)

The ability of RCAs to control sediment input from surface erosion depends on several site characteristics including the presence of vegetation or organic litter, slope steepness and slope roughness, soil type, and drainage characteristics. These factors influence the ability of vegetation to trap sediments by determining the infiltration rate of water and the velocity (and hence the erosive energy) of overland flow.

The likelihood of disturbance resulting in discernible instream effects increases as adjacent slopes become steeper. Thus, greater preventive measures to avert negative effects to streams, or restore riparian function and ecological processes on steeper slopes may be required to prevent or reduce instream effects. The designation of RCA widths can easily incorporate the major topographic driver of surface erosion and slope steepness.

Prior research on a variety of wildland and agricultural settings has demonstrated that surface erosion increases with increasing slope steepness, although the increase is not linear. The effect of slope has generally been modeled empirically, and has taken the shape of a power function where the exponent is less than 1, so that slope effects are large for gentle slopes and decline, as slopes get steeper. Megahan and Ketcheson (1996) found that sediment travel distances from road cross drains in the Idaho Batholith are proportional to slope gradient (in percent) raised to the 0.5 power.

Megahan and Ketcheson (1996) and Ketcheson and Meghan (1996) present equations for estimating sediment travel distance below road fills (non-channelized flow) and cross drains (channelized flow) that incorporate sediment volume, obstructions, slope angle, and source area as significant explanatory variables. Slope is a significant predictor of distance, and it is not unreasonable to adjust an RCA width to slope when lacking other intensive site-variable information. At slopes greater than 50 percent, other screening tools that incorporate landslide prone hazards are needed (refer to the Guidelines for Management on Landslide and Landslide Prone Areas in this Appendix).

The strongest single variable affecting sediment travel distance from soil disturbing activities is the volume of material displaced, or delivered to a point on a slope from a culvert, drain, etc. Over 78 percent of the variance in sediment travel distance is explained by volume in the culvert model (channelized flow) of Meghan and Ketcheson (1996).

They suggest that, except on steep slopes, RCAs be designed to protect other riparian functions will generally control sediments to the degree that they can be controlled by riparian vegetation. It is essential, however, that riparian protection be complemented with practices for minimizing sediment contributions from outside the riparian area, particularly those from roads and associated drainage structures, where large quantities of sediment are often produced. In addition, activities within the RCAs that disturb or compact soils, destroy organic litter, remove large down wood, or otherwise reduce the effectiveness of RCAs as sediment filters should be avoided.

#### **Nutrients and Other Dissolved Materials** (excerpted from Spence et al. 1996)

Riparian vegetation takes up nutrients and other dissolved materials as they are transported through the riparian zone by surface or near-surface water movement. However, the relationship between RCA width and filtering capacity is less well understood than other riparian functions and ecological processes. Those studies that have been published indicate substantial variability in the effectiveness of RCAs in controlling nutrient inputs. Identifying an appropriate RCA width that can function as a filter for nutrients and other dissolved materials depends on the specific type and intensity of land use, type of vegetation, quantity of organic litter, infiltration rate of soils, slopes, and other site-specific characteristics.

Because of the variability observed in the effectiveness of RCAs in controlling input of nutrients and other dissolved materials, it is difficult to recommend specific criteria for this function. Spence et al. (1996) suggests that for most forestlands, RCAs designed to protect other riparian functions (e.g., LWD recruitment, shading) are probably adequate for controlling nutrient inputs to the degree that such increases can be controlled by RCAs. Exceptions may occur when fertilizer or other chemical applications result in high concentrations of nutrients in surface runoff.

RCA widths for nutrient and pollution control on rangelands should be tailored to specific site conditions, including slope, degree of soil compaction, vegetation characteristics, and intensity of land use. In many instances, RCA widths designed to protect LWD recruitment and shading may be adequate to prevent excessive nutrient or pollution concentrations. However, where land use activity is especially intense, RCAs for protecting nutrient and pollutant inputs may need to be wider than those designed to protect other riparian functions and ecological processes, particularly when land-use activities may exacerbate existing water quality problems.



**Riparian Microclimate and Productivity** (excerpted from Spence et al. 1996)

Changes in micro-climatic conditions within the riparian zone resulting from removal of adjacent vegetation can influence a variety of riparian functions and ecological processes that may affect the long-term integrity of riparian ecosystems. However, the relationship between RCA width and riparian microclimate has not been documented in the literature. FEMAT (1993) and Spence et al. (1996) suggest using the generalized curves in FEMAT 1993, relating protection of microclimatic variables relative to distance from stand edges into forests.

**Wildlife Habitat** (excerpted from Spence et al. 1996)

The importance of riparian areas to many wildlife species is well documented. However, generic recommendations for riparian RCAs to protect wildlife are not justifiable because each species has unique habitat requirements. Some terrestrial and aquatic plant and animal communities rely on the forest and shrubs adjacent to streams and wetlands for all or parts of their life cycles. Animals such as beavers, otters, dipper, and some amphibians are obligate stream and riparian vegetation dependent organisms. Other bird and mammal species and many bat species need the RCAs at crucial life history periods or seasonally for feeding or breeding. Wildlife has a disproportionally high use of riparian areas and streamside forests compared with the overall landscape. RCAs provide habitat needs such as water; cover; food; plant community structure, composition, and diversity; increased humidity; high edge-to-area ratios; and migration routes. When identifying RCAs it is important to also consider the needs of wildlife species.

**Windthrow** (excerpted from Spence et al. 1996)

Trees within RCAs that are immediately adjacent to clearcuts have a greater tendency to topple during windstorms than trees in undisturbed forests. Extensive blowdown can potentially affect aquatic ecosystems in a number of ways, both positive and negative. In stream systems that lack wood because of past management practices, blowdown may immediately benefit salmonids by providing structure to the channel. Over the long term, however, blowdown of smaller trees may hinder the recruitment of large wood pieces that are key to maintaining channel stability and that provide habitats for vegetation and wildlife within the riparian zone. In addition, soil exposed at the root wads of fallen trees may be transported to the stream channel, increasing sedimentation. Other riparian functions, including shading, bank stabilization, and maintenance of riparian microclimates may also be affected.

**Importance of Small Streams**

Small streams are more affected by hillslope activities than are larger streams because there are more smaller than larger streams within watersheds (actual area and extent); smaller channels respond more quickly to changes in hydrologic and sediment regimes; and streamside vegetation is a more dominant factor in terms of woody debris inputs and leaf litter and shading. Small perennial and intermittent non-fish-bearing streams are especially important in routing water, sediment, and nutrients to downstream fish habitats.

Channelized flow from intermittent and small streams into fish-bearing streams is a primary source of sediment in mountainous regions. In steep, highly dissected areas, intermittent streams can move large amounts of sediment hundreds of meters, through RCAs, and into fish-bearing streams. In-channel sediment flows are limited primarily by the amount and frequency of flow and by the storage capacity of the channel. Flows in forested, intermittent streams are generally insufficient to move the average-sized wood piece, allowing large wood to accumulate in small channels. These accumulations increase the channel storage capacity and reduce the likelihood of normal flows moving sediment downstream.

**Additional Considerations**

The publication: *Riparian Reserve Evaluation Techniques and Synthesis*, (USDA Forest Service 1997) provides an optional toolbox of analysis methods and techniques that addresses the physical and biological elements that are necessary to delineate appropriate widths and appropriate and inappropriate management activities within or that may effect riparian functions and ecological processes. Additional literary references to consider when delineating RCAs are the following:

- 1) Quigley and Arbelbide (1997) An Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins, Volume III (PNW-GTR-405, 1997); An Ecosystem Approach to Salmonid Conservation (NMFS TR-4501-96-6057, 1996);
- 2) Naiman et al. (2000) Riparian Ecology and Management in the Pacific Coastal Rain Forest Bioscience November 2000 Vol. 50 No. 11, pages 996-1011
- 3) Megahan and Hornbeck (2000) Lessons Learned in Watershed Management: A Retrospective View USDA Forest Service Proceedings Rocky Mountain Research Station – P – 13. 2000
- 4) Spence et al. (1996) An Ecosystem Approach to Salmonid Conservation December 1996 TR-4501-96-6057
- 5) USDA Forest Service (1997) Riparian Reserve Evaluation Techniques and Synthesis, Supplement to Section II of Ecosystem Analysis at the Watershed Scale: Federal Guide For Watershed Analysis. Version 2.2.

**IMPLEMENTATION GUIDE FOR IDENTIFYING AND MANAGING LANDSLIDE AND LANDSLIDE PRONE AREAS****Introduction**

This implementation guide describes the basis for Forest-wide landslide-prone (LSP) area management direction and provides a multi-scale step down approach to implementing management actions on LSP areas.

This implementation guide describes the basis for Forest-wide landslide-prone (LSP) area management direction and provides information for how to implement management actions on LSP areas.

Landslides are a part of a watershed's natural disturbance regime and contribute to proper watershed function and development of aquatic habitat by providing coarse sediment and large woody debris. The potential for accelerating landslides above some natural level should be minimized (Frissel et al. 1996). This can be accomplished in three ways: 1) Delineating LSP areas with both coarse and fine filters; 2) Developing Forest-wide management direction to properly manage these sensitive areas; and 3) Mitigating management practices based on the relative landslide hazard and associated risk(s).

Identification and development of Forest-wide management direction for LSP areas is a relatively recent requirement for implementing land management actions on the Forest. Development of the Forest-wide management direction incorporated the intent of reducing the threats associated with management actions that might initiate landslides. This Forest-wide direction is similar to the direction

identified in recent documents including: Pacfish EA (USDA Forest Service and USDI BLM 1994); Infish EA (USDA Forest Service 1995); Steelhead Biological Opinion (US Dept of Commerce NMFS 1998); and Bull Trout Biological Opinion (USDI FWS 1998). Chapter III in this Forest Plan has goals, objectives, standards, and guidelines related to identification and management of landslide and LSP areas.

## Background

The process for determining LSP areas needs to be consistent, based on the most recent science and literature, applicable from mid-scale to the site or project level at both broad scale and fine scale, and reproducible over large geographic areas. The use of a physically based model to provide a practical alternative to using riparian buffers for the purpose of protecting potentially unstable ground was identified by Tang and Montgomery (1995). The process needed to be based in a GIS environment in order to be reproducible over large geographic areas. Ground slope and contributing drainage area obtained from Digital Elevation Model (DEM) in the GIS would also be important. Personnel at the Rocky Mountain Research Station (RMRS) in Boise, Idaho recommended several computer models (some of which are GIS based) for determining land slope stability. These models included: LISA, SHALSTAB, and SINMAP. The SINMAP (Stability Index Mapping) model was found to be to best meet the needs identified above after testing with assistance from Boise State University, Utah State University, and RMRS personnel (Dixon et al. 1999). SINMAP is a terrain stability mapping tool that has application in areas that experience shallow translational landsliding, the dominate type of landslide found within the Forest (Megahan et al. 1978, Clayton 1983, Dixon 2001).

## SINMAP Model

LSP maps/coverages were developed using the SINMAP model (Pack et al. 1997) and a relatively large database of actual landslides to assist in the calibration of the model. The SINMAP model has accurately delineated the pattern of landsliding in British Columbia (Pack et al. 1997) and meets the intent of the 1998 Steelhead BO that states, "To define landslide prone areas, utilize methods described by Prellwitz et al. (1994), or use at least an equivalent peer reviewed methodology with at least a 90 percent probability of identifying landslide prone slopes." SINMAP is also mentioned as a tool for analyzing shallow landsliding potential in the recent publication, *Roads Analysis: Informing Decisions About Managing The National Forest Transportation System* (USDA, Forest Service 1999).

SINMAP is an Arc View extension that implements the computation and mapping of a slope stability index based upon geographic information, primarily digital elevation data. SINMAP has its theoretical basis in the infinite plane slope stability model with wetness obtained from a topographically based steady state model of hydrology. The SINMAP model uses landslide initiation points (identified in the field or through aerial photos) in GIS and three input parameters (T/R; C'; and Phi) to calibrate the model. The term T/R is the ratio of transmissivity to the effective recharge rate of the storm being modeled. T/R may be abstractly thought of as the slope distance required for soil saturation on a straight slope. The term C' is dimensionless cohesion of soil. The term is a combination of root and soil cohesion divided by soil depth. The term Phi is the internal angle of friction of the soil. The SINMAP model uses uniform probability distributions of the input parameters using a lower and upper limit. This approach reflects the uncertainty associated with estimating parameters in terrain stability mapping (Prellwitz et al. 1994, Dixon et al. 1999).

DEM methods are used to obtain slope and catchment areas for each individual pixel mapped. Input parameters are allowed to be uncertain following uniform distributions between specified limits. Input parameters are adjusted and calibrated for geographic "calibration regions" based upon landform, soil, vegetation, climatic, and/or geologic data. The calibration involves an interactive visual calibration that adjusts parameters while referring to observed landslides (mapped in GIS). The calibration involves adjustment of parameters so that the stability map "captures" a high proportion of observed landslides in regions with low stability index, while minimizing the extent of the low stability regions. The SINMAP modeling produces a stability index for each pixel of the DEM analyzed. The pixels are then grouped into four relative hazard classes (stable, low, moderate, and high) based on their calculated stability index.

### **Step-Down Implementation Process**

This guide is not intended to be a decision-making process but will assist in informing land managers in making decisions related to management of LSP areas and potential hazards and risks to other resources. It is to be used in conjunction with the Forest-wide management direction associated with landslide and LSP areas (see Chapter III of the revised Forest Plan). A step-down process for using information at multiple scales to aid in decision-making will be implemented using a coarse filter and fine filter approach to ensure that decisions on management actions will be informed.

The coarse-filter programmatic LSP hazard coverage can be used qualitatively to make relative comparisons between areas, and to identify those that should be targeted for additional fine-filter verification associated with proposed management actions. The SINMAP model and the associated Forest-wide programmatic coarse-scale LSP maps (as well as other appropriate methodologies) are to be used by investigators who have some knowledge and experience concerning landslide behavior and geotechnical properties of soils. The model requires professional judgment and common sense (in the field and office), both in developing input coefficients and interpreting the results. It does not give a unique "right" answer. This is a tool to help understand slope stability processes; to quantify/qualify observations and judgments; and to document and communicate those observations and judgments to land managers. The computer modeling should be used to focus on specific areas of concern for on-the-ground field verification of LSP areas.

SINMAP or other appropriate methodologies do not provide a complete risk analysis; the risk or consequence of potential failures needs to be evaluated by the user. The user may want to assess the potential damage to aquatic habitat and soil productivity, or to roads and structures, or the potential for injury or loss of life resulting from landslides. As an example, two slopes may have the same estimated LSP hazard. However, if an anadromous spawning area or bridge lies below one of the slopes and not the other, the risks associated with the failure of the first slope are much greater than are those associated with the other slope. This guidebook is not intended to serve as a comprehensive risk analysis tool.

### **Coarse Filter Process and Intended Use**

The LSP coarse filter has been completed and the results are in the form of a Forest-wide GIS coverage that has rated each 30-meter topographic cell a relative LSP hazard rating (stable, low, moderate and high) (Dixon et al. 1999). This coarse-filter modeling effort results in a relatively conservative estimate and identifies where additional field verification (fine filter) is warranted for proposed management actions.

This coarse-filter process utilized numerous landslide initiation points and a stratification of the Forest's land base (approximately 2-3 million acres) using groupings of landtype associations. The relatively rich landslide inventory database on the Forest, combined with 15 groupings of landtype associations to assist in the calibration of the SINMAP model, enabled a relatively accurate identification of LSP areas for the coarse filter.

Additional landslide hazard modeling at finer scales (project or watershed areas) allows for more detailed analysis based on site-specific parameters. Locally based landslide inventories are important for developing site-specific parameters for modeling, as well as criteria for field verification of LSP areas. Accurate landslide locations in GIS greatly assist in the calibration of the SINMAP model. Inventoried landslide data gathered on the ground--such as ground slope, soil depth, soil texture, vegetation, slope shape, slope position, and contributing area--provide valuable information for both modeling and field verification of LSP areas. The accuracy in identification of LSP areas and their relative hazards will increase as more data is available through fine-filter analysis. When considering the percentage of land area involved in landslides, we must realize that LSP areas may actually occur on a relatively small portion of the landscape. Published landslide inventories indicate values on the order of 0.5 to 15 percent of the area inventoried (Ice 1985). As more fine-filter data (field verification and data from landslide inventories) become available, the certainty in identifying LSP areas should increase.

The following Forest-wide management direction based on the coarse and fine filters applies to both Forest-wide and project-level analysis:

*SWRA Standard 12* - Site-specific analysis or field verification of broad-scale landslide-prone models shall be conducted in representative areas that are identified as landslide prone during site/project-scale analysis involving proposed management actions that may alter soil-hydrologic processes. Based on the analysis findings, design management actions to avoid the potential for triggering landslides. Refer to the *Implementation Guide for Management on Landslide and Landslide Prone Areas* located in Appendix B to help determine compliance with this standard.

*SWRA Guideline 3* - Where proposed management actions may alter soil-hydrologic processes, representative sample of landslides and landslide-prone areas should be field-verified to identify and interpret controlling and contributing factors of slope stability. Integrate the resulting information with supporting data to provide a final stability assessment and identification of appropriate land management actions in landslide and landslide-prone areas. Refer to the *Implementation Guide for Management on Landslide and Landslide Prone Areas*, located in Appendix B.

*SWRA Guideline 4* - General Field Verification Procedures for Landslide and Landslide-Prone Areas: Six major groups of known characteristics should be investigated to supply information adequate to characterize unstable conditions. These are:

- Landform
- Overburden
- Geological Processes on the Hillslope
- Bedrock Lithology and Structure
- Hydrology
- Vegetation

Refer to the *Implementation Guide for Management on Landslide and Landslide Prone Areas*, located in Appendix B.

## **Fine-Filter Process and Intended Use**

Verification through a combination of field work, aerial photograph analysis, and further SINMAP modeling, will reclassify the relative slope stability hazard rating for a given area. This reclassification increases the accuracy/probability of identifying LSP hazards and assists in the development of management practices appropriate for the site, thereby greatly reducing the threats of negative effects to other resources.

The fine-filter process is intended for field verification and reclassification of the coarse filter LSP area coverage. Field evaluation of slope stability is warranted along road corridors, for timber sale areas and associated harvest units, and other site-specific management actions with the likelihood of modifying landslide processes. Proper management of LSP areas is not based solely on the effects to fish habitat but also effects to long-term soil productivity, water quality, and watershed function, and identifying risks to life and property.

## **Measures for Avoidance and Prevention of Landslides on LSP Areas**

Measures for avoidance and prevention of landslides associated with management actions on LSP areas are improved through fine-filter verification. Recognition and avoidance of high-risk LSP areas are the most effective and cost-efficient methods in implementing management actions. On extreme slopes, abandonment of the area may be the best environmental and economic solution. In most instances within the Forest, the LSP portion of a slope covers only a small area. Megahan et al. (1978) found that, of more than 1,400 landslides inventoried, 90 percent occurred in drainages of four hectares (about 10 acres) or less. Careful field verification can locate the LSP areas. Often they may be easily avoided during road location or deleted from the timber harvest units. Slight changes in the road location or changes in road grade are often adequate to bypass the LSP area. Chapters 3 and 4 of the publication, *A Guide for Management of Landslide-Prone Terrain in the Pacific Northwest* (Chatwin et al. 1994) provide good assistance in both field-identifying landslide prone areas and developing site-specific management practices and mitigation on LSP areas.

In order to avoid or prevent landslides, it is important to understand what disturbances (management-related or natural) have a greater potential to initiate landslides. Road construction is the main destabilizing activity related to forest management actions. Megahan et al. (1978) found that 58% of management-related landslides were related solely to roads, while forest vegetation removal accounted for only 9% of landslides. Roads in combination with logging or wildfire accounted for 88% of all management-related landslides. Gucinski et al. (2001) identified several studies where landslide erosion from roads was one to several orders of magnitude higher than forest vegetation management.

The effects of wildfire may also greatly influence occurrence of landslides. Shaub (2001) found that, of 246 landslides inventoried in the South Fork Payette River watershed near Lowman, Idaho, occurrences of landslides within the burned area of the 1989 Lowman wildfire was 2.5 times greater than in the unburned area. None of these landslides was attributed to past or current management actions. Megahan et al. (1978) postulates that careful land use decisions, considering the amount and nature of disturbance and various site factors, can substantially reduce the occurrence of landslides and the magnitude of their effects.

Fine-filter LSP areas are more accurately identified, allowing for increased accuracy and probability of identifying LSP hazards and assisting in the development of management practices appropriate for the site. Depending on the proposed management action and the associated relative LSP rating, a variety of

management practices may be developed. These practices vary based on the type and potential effect of management action and the relative landslide prone hazard in which actions will occur. In general, land managers should consider the following contributing factors when designing and implementing management actions that might initiate or contribute to landslides.

- Altering vegetation can affect landsliding potential. Large blocks of tree mortality caused by wildfire, insects and disease, or logging can decrease evapotranspiration and raise ground water tables (T/R). The increased ground water can add to the slope instability on LSP areas during storm events that may initiate landsliding.
- Rooting strength of vegetation in LSP areas is a major factor adding stability to the slopes. Altering the vegetation by management practices such as timber harvest and controlled burning has the potential to affect rooting strength (C'). Wildfires also alter vegetation (sometimes greatly with uncharacteristic wildfires), causing tree mortality and affecting rooting strength. Trees provide the greatest amount of rooting strength on forested slopes. Generally the larger trees have a more developed root system and provide more stability to the slopes. Tree species such as ponderosa pine that have a deep tap root provide deeper rooting strength and more stability than similar size species like Douglas-fir that do not have a deep tap root. Burroughs and Thomas (1977) indicates that since a relatively high percentage of mass failures (landslides) occur on areas burned over by wildfires compared with undisturbed forests, that declining root strength following death of trees is an important factor in mass failure of shallow soils on steep slopes in the Idaho Batholith.
- Soil depth influences landslide potential. Deeper soils tend to slide on less steep of a slope than shallow soils. Soil properties affect landslide potential. Rocky soils with angular rock fragments have a higher internal angle of friction than soils with only minor amounts of rock fragments. The soils with a higher internal angle of friction will be more stable than soils with low internal angle of friction on the same slope gradient. Soils with coarse angular sands have a higher internal angle of friction than soils composed of fine sands. For example, oversteepened granitic canyonlands with shallow non-cohesive soils are more susceptible to landslides than maturely dissected mountain slopes with deep loamy skeletal soils.
- The water collection area above a potential landslide prone area has a major influence on landslide potential. Areas where water tends to collect--such as the head of ephemeral draws, bowl shaped areas, and hollows--tend to have high groundwater levels during storm events (T/R) that initiate landslides. Soils at or near saturation tend to have less strength and are more prone to landslides than soils with lower groundwater levels. For example, 3 feet of soil at the head of an ephemeral draw on a 60 percent slope at or near saturation would be much more prone to landslides than 3 feet of soil on a 60 percent slope where the groundwater table is lower.
- Roads have the potential to affect landsliding in several ways. Roads alter the natural ground slope with cuts and fills. Road cuts may destabilize slopes above the cuts by removing material that provided stability to the slope above. Road fills place additional material on slopes that tends to load the slope below the road, increasing the risk of mass failures. Road drainage features such as dips and culverts tend to collect water and concentrate it on slopes below. The additional water can add instability to the slopes. Care should be taken with road drainage so that water is not collected and concentrated on LSP areas below roads.

Other risks should be considered when proposing practices on LSP areas. One major factor is what lies within the path of the landslide that it could potentially affect. Landslides that initiate in the heads of ephemeral draws often trigger channel-scouring debris torrents that can disturb a larger area within a stream channel than the landslide itself. Landslides and their associated debris torrents can and have

blocked highways, damaged homes, and other facilities. Deeply scoured channels can take several decades to recover, and are persistent sediment sources due to the raw and oversteepened banks. This sediment may have a lasting effect on water quality and fisheries habitat. Existing and proposed facilities should be located in areas away from the mouths of steep-gradient streams and draws where there is potential for damaging debris torrents initiated by landsliding.

Methods for avoidance and preventing landslides may include but are not limited to:

- Standard Practices – (In Stable and Low Hazard Areas) No special restrictions on management actions are needed as long as the actions are in compliance with other Forest-wide or management area direction.
- Limited Practices – (In Moderate Hazard Areas with Low to Moderate Relative Risk) Management actions are designed with review and guidance of appropriate resource specialists. Limited practices may include but are not limited to: reducing yield or basal area removal of forested vegetation, increased rotation lengths, selective harvest with full suspension yarding, relocating existing or proposed road alignment, improving road drainage design, etc.
- Restricted Practices – (In High Hazard or Moderate Hazard Areas with High Relative Risks) Management actions are severely restricted or eliminated so as to minimize initiation of landslides and effects to other resources.

Chapter 2 in the publication – “A Guide for Management of Landslide-Prone Terrain in the Pacific Northwest” (Chatwin et al. 1994) has a good discussion and field evaluation forms that may serve as a good reference to assist in completing fine-scale field verification.



## AQUATIC CONSERVATION STRATEGY

### Introduction

The Aquatic Conservation Strategy (ACS) strategy provides direction to maintain and restore characteristics of healthy, functioning watersheds, riparian areas, and associated fish habitats. How these components are applied at the subwatershed and site-specific levels will affect the types and outcomes of management actions and will therefore be an overriding factor that influences potential effects for SWRA resources.

The intent of this section is to examine the eight components of the ACS and the level of protection to demonstrate how they address the threats associated with the factors of decline and provide for recovery and restoration of listed species, their habitat, and soil, water, aquatic and riparian (SWRA) resources. For further detailed description of the eight ACS components refer to Section III.E in the Biological Assessment for the SWIE Revision.

The Forest Plans were developed to provide direction (i.e. goals, objectives, standards and guidelines) for broad classes of management activities and land and water management practices that may affect SWRA resources. Embedded within the ACS, Forest Plans provide policy guidance and requirements. The ACS is a long-term strategy to restore and maintain the ecological health of watersheds and aquatic ecosystems contained within lands administered by this National Forest. It is a refinement and furtherance of approaches outlined in the ICBEMP Implementation Strategy and the USFWS and NMFS 1998 Biological Opinions.

The eight ACS components are identified below. Each component is discussed in detail, including its role in addressing reduction of threats associated with factors of decline and/or its role in a comprehensive recovery and restoration strategy for listed fish species and their habitats. Any of these components has the potential to influence any of the factors of decline or the recovery/restoration strategy.

1. Goals to Maintain and Restore SWRA Resources
2. Watershed Condition Indicators for SWRA Resources
3. Delineation of Riparian Conservation Areas (RCAs)
4. Objectives, Standards, and Guidelines for Management of SWRA Resources, including RCAs
5. Determination of Priority Subwatersheds within Subbasins
6. Multi-Scale Analyses of Subbasins and Subwatersheds
7. Determination of the Appropriate Type of Subwatershed Restoration and Prioritization
8. Monitoring and Adaptive Management Provisions

The ACS provides a scientific basis for protecting aquatic ecosystems; providing for a comprehensive short and long-term recovery of listed fish species; restoration of aquatic habitats and surrounding terrestrial uplands; de-listing of water quality impaired water bodies; and planning for sustainable resource management. In essence, this strategy integrates many of the goals and objectives of both the Endangered Species Act and the Clean Water Act.

The eight components of the ACS are designed to work in concert to maintain and restore the productivity and resilience of watersheds and their associated aquatic systems. The following discussion reviews each of the eight ACS components and how they reduce threats and or assist in the recovery/restoration of listed fish species, their habitats, and SWRA resources.

**ACS Component 1. Goals To Maintain And Restore SWRA Resources**

ACS Component 1 serves to reduce the threats associated with the factors of decline and contributes to the comprehensive recovery and restoration strategy for listed fish species and their habitats. The ACS goals, objectives, and management actions are integrated with the other resource and social-economic components of the ecosystem. Ecosystems are healthy and sustainable when their intertwined components and processes are functioning properly, in the context of the desires and needs of society. The ACS components and processes are woven together by the thread of succession/disturbance regimes (e.g., wildfire, landslides, floods, insects and disease) and ecological processes (e.g., flows and cycles of energy, nutrients, and water). Intact succession/disturbance regimes provide for aquatic and terrestrial habitats, intact hydrologic processes, and the continuous and predictable flow of products and land uses. These landscape considerations and their dynamics are the cornerstone of the combined Forest-wide SWRA goals.

The goals to maintain and restore SWRA resources establish a vision of management direction that reduces threats associated with the factors of decline with the expectation that this will promote the characteristics of healthy, functioning watersheds, riparian areas, and associated fish habitats. Because the quality of water and fish habitat in aquatic systems is inseparably related to the integrity of upland and riparian areas within the subwatersheds, the goals encompass both aquatic and terrestrial processes and functions.

The long-term ACS and associated goals to maintain and restore SWRA resources greatly reduce threats and risks of negative effects to listed fish species, resident fish, and water quality conditions in several ways. Primarily, the goals provide the basis for management direction that will be applied to all activities that can affect SWRA and related resources, including listed fish species and their habitats. Other ways that the goals reduce threats and contribute to recovery/restoration include:

- Goals to restore and maintain SWRA resources have been coordinated and integrated with the goals of other resource areas.
- The predicted production of goods and services for key resources has been adjusted to show a more realistic potential for achieving resource goals. For example, RCAs and high landslide prone areas were removed from the suited timber base to indicate that these areas will not be used as a source of predictable timber supply.
- Forest vegetation management goals and their associated management actions (mechanical harvest, fire use and road-related activities) were analyzed using the Cumulative Watershed Effects (Menning et al. 1996) approach for each subbasin to determine their feasibility and compatibility with aquatic resources and water quality beneficial uses.
- Goals identify the destination toward which objectives move baseline conditions during the life of the planning period. There are numerous Forest-wide and Management Area riparian-related goals with associated objectives that spatially and temporally identify restoration prioritization based on the long- and short-term recovery needs of listed fish species and the de-listing of water quality impaired water bodies.
- Goals to restore and maintain SWRA resources were developed with an interdisciplinary team approach to make them understandable, consistent, and capable of being implemented. This approach will further reduce the potential for negative effects from misinterpretation in the planning and implementation of management actions.

- Goals have been developed to achieve the desired conditions described in the TEPC Species and SWRA Resources sections in Chapter III of the Forest Plan, and in the Desired Conditions Common to All Resources section. These desired conditions, in general, envision a landscape that maintains and restores productive and sustainable ecosystems, of which SWRA and TEPC resources are inextricably linked.

## **ACS Component 2. Watershed Condition Indicators For SWRA Resources**

ACS Component 2 serves to reduce the threats associated with the factors of decline and contributes to the comprehensive recovery and restoration strategy for listed fish species and their habitats. Watershed Condition Indicators (WCIs) represent diagnostic indicators of the health and trend of watersheds and associated aquatic systems. The WCIs identify various biological and physical components of aquatic systems and associated terrestrial uplands that influence riparian functions and ecological processes. The WCIs are organized into eight Pathways that represent the processes or mechanisms by which management actions can potentially affect watersheds, listed fish species, native and desired non-native fish species and their habitats, and beneficial uses.

The evaluation of WCIs provides a consistent and logical line of reasoning to recognize when, where, and why adverse, beneficial, or no effects may occur to related resources. WCIs are not independent from other components of the ACS but provide a starting point to describe the current and desired conditions for uplands, riparian areas, water quality, and aquatic habitat.

Evaluation procedures consider the suite of WCIs that are likely to be affected by proposed management actions, not just effects to any individual WCI. WCIs are described in terms of how they are functioning (Functioning Appropriately, At Risk, or At Unacceptable Risk), with Functioning Appropriately representing the range of desired conditions to strive toward for each WCI. The WCIs incorporate riparian functions and ecological processes of the entire watershed.

The step-down implementation process is outlined later in this Appendix. This process will assist land managers with making informed decisions by determining the relevant WCIs that should be considered when proposed management actions may affect the habitat of listed fish species; inland native; or desired non-native fish; or water quality beneficial use status.

The Matrix of Pathways and Watershed Condition Indicators is a combined matrix based upon individual USFWS and NMFS Matrices. It assesses potential threats of management actions. The use of this matrix can greatly reduce the risk of negative effects to listed fish species, resident fish and water quality conditions by providing:

- A process to identify how management actions may potentially influence the condition and trend of soil, water, riparian, and aquatic resources, including native and desired non-native fish species and their habitats, and beneficial uses;
- A decision framework to assist decision makers in ensuring that management actions will not retard or prevent attainment of properly functioning soil, water, riparian, and aquatic desired conditions;
- A tool to assist in making ESA determinations of effects to listed fish species important to assessing ESA compliance;

- A clear and comprehensive set of terms/definitions and Forest-wide standards and guidelines to help prevent degradation of areas that currently surpass the WCIs range of desired conditions, are within the range of, and are currently below the range of WCIs;
- A benchmark by which changes to landscape conditions through management activities can be measured over time;
- Criteria against which attainment or progress toward attainment of multiple goals, standards and guidelines in Chapter III of the Forest Plans can be directly or indirectly measured;
- Criteria for different scales of evaluation, important for assessing effects of project-level management in context of multiple scales.

### **ACS Component 3. Riparian Conservation Areas – Delineation**

ACS Component 3 serves to reduce the threats associated with the factors of decline and contributes to the comprehensive recovery and restoration strategy for listed fish species and their habitats. Aquatic and riparian systems are easily affected by land management activities within RCAs and on the surrounding terrestrial uplands. RCAs contribute to maintaining the integrity of aquatic ecosystems by (1) influencing the delivery of coarse sediment, organic matter and woody debris to streams; (2) providing root strength for channel stability; (3) shading the stream; and (4) protecting water quality. Additional processes and functions provided by RCAs can include wildlife habitat and riparian microclimate and productivity.

Because of the importance of riparian systems on the integrity of aquatic ecosystems that support listed fish habitat, appropriate delineation of RCAs is needed. Recent discoveries about the structure and dynamics of riparian zones have extended the scope of understanding about this portion of the landscape and have important management implications for streams, riparian areas, and adjacent uplands (Spence et al. 1996, Quigley and Arbelbide 1997). The process and methodology for RCA delineation is described in detail earlier in this Appendix.

Implementation of the “Guidance for Delineation and Management of Riparian Conservation Areas” in this Appendix would substantially reduce threats associated with the design and implementation of management actions. This implementation guide provides a consistent and thorough procedure in the delineation of appropriate RCAs across the Forest. The reduction of threats is based on the following:

- The range of options that may be used to delineate an RCA allows land managers to determine the level of analysis that best suits the needs of a project based on potential effects, baseline conditions, management direction, and issues. Regardless of the option chosen, the RCA delineation provides for consideration of riparian functions and ecological processes.
- The integration of Forest-wide management direction and guidance for delineation of RCAs defines the type and levels of management actions that are suitable within or adjacent to RCAs.
- The effectiveness of delineating an appropriate RCA provides decision-makers with the information necessary for sound decisions regarding management activities within a subwatershed. An understanding of riparian functions and ecological processes, and the means by which actions may affect them, allows decision makers the opportunity to design activities to maintain or restore listed fish species, their habitats, and other SWRA resources.

- RCA delineation makes use of information obtained through multi-scale analysis (ACS Components 6 and 7) to determine the appropriate scale for assessing the different riparian functions and ecological processes that need to be addressed.
- Delineation of RCAs establishes a network of refugia that promotes the conservation of listed fish species while preserving and restoring riparian function and ecological processes;
- RCA delineation will use data collected at mid-, fine-, or project scales to ensure that site-specific riparian function and ecological processes are maintained or restored.

#### **ACS Component 4. Objectives, Standards, And Guidelines For Management Of SWRA Resources, Including RCAs**

ACS Component 4 serves to reduce threats associated with the factors of decline and contributes to the comprehensive recovery and restoration strategy for listed fish species, their habitats, and SWRA resources. Management direction within Chapter III in the Forest Plan includes Forest-wide direction, Management Area direction, and Management Prescription Category direction. Together this direction provides the operating sideboards for implementation of management activities designed to further the achievement of the ACS components as well as other resource goals described in the Forest Plan. Specific objectives designed to achieve Forest-wide management goals are also included in this ACS component.

The development of the long-term ACS and associated objectives, standards, and guidelines to maintain and restore SWRA resources primarily reduces threats and the risks of negative effects to listed fish species, resident fish, and water quality conditions by providing protection necessary to conserve listed fish species and water quality, and direction to maintain or restore priority subwatersheds. The reduction in threats and risks of negative effects is accomplished under this ACS component in a variety of ways:

- The development of the objectives, standards and guidelines to restore and maintain SWRA and other related resources was coordinated and integrated with direction for other resource areas to ensure compatibility and consistency in implementation.
- Forest vegetation management direction and associated management actions (mechanical harvest, fire use and road-related activities) were analyzed using a Cumulative Watershed Effects methodology (adapted from Menning et al. 1996) for each subbasin to determine feasibility and compatibility with the values of aquatic resources and water quality beneficial uses.
- Objectives have been designed that will achieve goals both spatially and temporally, address resource concerns and needs, and move existing conditions toward desired conditions over the life of the planning period.
- The development of objectives, standards, and guidelines to restore and maintain SWRA resources was done through coordination between a Level 1 consultation team and an interdisciplinary team to make them clearly understood, and ensure direction could be implemented when integrated with other resource objectives. This integration reduces the likelihood of delays in movement toward achieving goals due to incompatible direction.

**ACS Component 5. Priority Subwatersheds Within Subbasins**

*Note: The results of ACS Component 5 are a result of the multi-scale PFC assessment and analysis in ACS component 6 and its fine-tuning in ACS Component 7. Therefore, it is important to review all three ACS components (5, 6, and 7) to gain a complete understanding of the effects of these components.*

ACS Component 5 serves to reduce the threats associated with the factors of decline and contributes to the comprehensive recovery and restoration strategy for listed fish species, their habitats, and SWRA resources. Priority subwatersheds have been identified that provide a pattern of protection and restoration across the Forest for the recovery of threatened and endangered fish species, the de-listing of water quality impaired water bodies, and the restoration and maintenance of SWRA resources. The identification and management of these priority subwatersheds are designed to complement other recovery/restoration plans and build on actions already taking place to recover these species and de-list impaired water bodies.

The process used to identify ACS priority subwatersheds for the ACS is described in Section III(E)(6) of the Biological Assessment for the SWIE Revision. ACS priority subwatersheds have the highest priority for restoration, monitoring, and future multi-scale analysis. In addition, each ACS priority subwatershed is identified in its respective management area direction. The management areas have objectives for the priority and appropriate type of restoration/conservation. Additional management area standards and guidelines further reduce potential impacts associated with other resource management actions. ACS priority subwatersheds reduce threats and contribute to recovery or restoration through the following:

- Management area direction applied to ACS priority subwatersheds reduces site-specific threats to aquatic and watershed values from management actions;
- Management Area direction recognizes the ACS priority subwatersheds as meriting specific management consideration of their aquatic and watershed values during the planning and implementation of management actions.
- Specific management area objectives identify and prioritize the need for restoration or conservation;
- Forest-wide management direction requires that the Watershed and Aquatic Recovery Strategy be updated every two years, thus contributing to the effectiveness of the recovery plans for listed fish species and de-listing of water quality impaired water bodies.
- The ACS priority subwatershed designation increases the chance to successfully obtain funding and implement restoration by providing out-year project opportunities and a ready source of needed projects that are part of a mid-scale recovery strategy;
- ACS priority subwatersheds are identified for all subbasins regardless of whether listed fish species occur within them. This allows for appropriate conservation of all resident fisheries and de-listing of water quality impaired water bodies.
- ACS priority subwatersheds are identified for each subbasin and provide a “blue print” of short-term recovery while identifying those subwatersheds important for the long-term recovery of the listed fish species.

- The ACS provides a long-term focus for conservation and restoration of high quality strongholds of listed fish species habitat and restoration prioritization of subwatersheds required for further expansion and re-colonization of fish species to adjacent subwatersheds.

### **ACS Component 6. Multi-Scale PFC Assessment Of Subbasins And Subwatersheds**

ACS Component 6 contributes to the comprehensive recovery and restoration strategy for listed fish species, their habitats, and other SWRA resources. The Forest completed a Properly Functioning Condition (PFC) assessment that provides a multi-scale context between each subbasin and its subwatersheds, and identifies current and potential population status, habitat condition and restoration needs, and management risks and opportunities to meet broad-scale and mid-scale objectives through subsequent site-specific management actions. This assessment assessed the current condition of the SWRA resources based on the integration of soil-hydrologic function, dynamic stream equilibrium, associated aquatic habitat, status of listed and native fish populations, and other resource conditions (vegetation hazard, road transportation system, unroaded and undesignated low road density areas, wildland urban interface areas, etc.) for the subbasins and their respective subwatersheds.

The multi-scale assessment provides a step-down implementation process that forms the basis for a much bigger picture of effects (direct, indirect, cumulative effects at a programmatic scale) on the sustainability and recovery of listed fish species and de-listing of water quality impaired water bodies. The assessment shows how an individual subwatershed contributes to recovery of a species within a subbasin. As such, the ACS presents an interim recovery strategy until formal recovery plans are issued for listed fish species.

The multi-scale assessment served as the groundwork in the development of the comprehensive ACS that was used in the development of management direction to support the goals, objectives and requirements of the ESA, CWA, and other fish and water quality statutes. The Forest Plan also requires the update of the WARS environmental baseline, the foundation for the multi-scale assessment, every two years with available data and new science findings. These updates ensure an appropriate, comprehensive, and current ACS to assist in the recovery of listed fish species and de-listing of water quality impaired water bodies.

At a subwatershed scale or site-specific project scale the potential for a management action to contribute to conditions that will positively or negatively contribute to the broader-scale goals and objectives can be completed by viewing project level effects in context to the multi-scale assessment completed in support of Forest Plan revision and other broader-scale assessments (e.g. NWPCC Subbasin Assessments, Final Basinwide Salmon Recovery Strategy, and Final Bull Trout Recovery Plans).

The Multi-scale PFC assessment provides a multi-scale context of each subbasin and its respective subwatersheds' baseline and potential status of population and habitat conditions to develop site-specific management actions to make progress towards attainment of ACS goals. This ACS component provides the appropriate scales to ACS components 5, 7, and 8, that prioritize, design, and evaluate management actions needed to move towards ACS goals and the conservation of the listed fish species, their habitats and other SWRA resources. Other ways that the multi-scale PFC assessment contributes to recovery or restoration include:

- The subbasins and associated subwatersheds on the forest have had consistent and comprehensive multi-scale pfc analyses that have resulted in identification of priority subwatersheds, the appropriate type of approach to subwatershed restoration, and the prioritization of subwatershed restoration.

- The results of the multi-scale assessment have been incorporated into many facets of the forest plan such as forest-wide objectives, standards and guides; management area specific objectives that recognize the importance and value of priority subwatersheds; and development of specific management area objectives for restoration and recovery.
- Identification of unroaded and undesignated low road density areas and their use in determining the condition of geomorphic, water quality and aquatic integrities for each subwatershed and their importance to recovery and restoration goals;
- Forest-wide management direction requires that the watershed and aquatic recovery strategy be updated every two years, which will contribute to a more effective recovery plan for survival and recovery of listed fish species and de-listing of water quality impaired water bodies.
- Multi-scale analyses are required or recommended in support of management actions as identified in the following forest-wide management direction: roads analysis identified in FSM 7700 – Transportation Analysis; FSM 2671.45 - Consultation and Conference; FSH 2509.22 - SOIL AND WATER CONSERVATION PRACTICES FSH (R-1/R-4 AMENDMENT NO. 1) PRACTICE: 11.01 - Determination of Cumulative Watershed Effects:
- Regional and forest program managers can use this information and work with district program managers to bring the larger picture (subbasin-scale layer) of restoration into consideration when planning watershed-scale and site-scale analyses and projects.

### **ACS Component 7. Determination Of The Appropriate Type Of Subwatershed Restoration And Prioritization**

ACS Component 7 contributes to the comprehensive recovery and restoration strategy for listed fish species and their habitats. Identification of both the appropriate type and prioritization of subwatershed restoration/conservation is integrated into all the ACS components. ACS Component 7 identified the appropriate restoration type and subwatershed restoration prioritization for subwatersheds within their respective subbasins.

Inherent in the classification approach of ACS Component 7 is the identification of active, passive, and conservation restoration opportunities based on the subwatershed's geomorphic integrity (GI), water quality integrity (WQI), aquatic integrity (AI), and vulnerability ratings. Together, these ratings provide the information needed to identify the capacity of the subwatershed to restore itself naturally to a desired condition. The ratings also indicate the acceptable or needed time period for restoration in order to determine the type of approach (restoration or conservation) to be used. The determination of types and priorities of restoration activities incorporated information on the entire subwatershed, including the current status and recovery needs of listed fish species.

This restoration priority rating, in conjunction with the restoration type and overall priority watershed classification, provides the focus for the long-term ACS recovery of listed fish species and TMDL watersheds. The spatial display of this restoration strategy is the WARS Map, on file in the Forest's GIS library.



Recovery and restoration activities are prioritized based on the presence and sensitivity of listed fish species, impaired water bodies, and the capacity for response of the subwatershed's ecosystem processes. This restoration prioritization approach formulates the template for recovery and restoration by:

- Consistently applying the restoration type (conservation, active, or passive) and prioritization for subwatershed restoration to all subwatersheds within their respective subbasins across the Forest,
- Providing an efficient means to promote restoration activities and recovery of listed fish species and de-listing of water quality impaired water bodies;
- Increasing the chance to successfully obtain funding and implement restoration by providing out-year project opportunities and a source of needed projects that are part of a mid-scale recovery strategy;
- Influencing the placement of MPCs within a Management Area's subwatersheds.

### **ACS Component 8. Monitoring And Adaptive Management Provisions**

ACS Component 8 serves to reduce the threats associated with the factors of decline and contributes to the comprehensive recovery and restoration strategy for listed fish species and their habitats. One of the lessons learned from implementing the original Forest Plan is that it must be dynamic to account for a multitude of issues. The Forest monitoring plan accomplishes five items: (1) it bases the level of monitoring on the commensurate level of management actions; (2) it provides feedback on the effects of activities; (3) it has a mechanism for monitoring accountability and oversight, (4) it evaluates the implementation and effectiveness in the recovery/restoration of listed fish species, their habitats, and other SWRA resources; and (5) it incorporates the monitoring goals identified in the ICBEMP Implementation Strategy and associated MOU.

This plan has a feedback loop that provides management with the information necessary to make appropriate adjustments to individual activities and Forest-wide programs. The feedback loop allows management adjustments as needed to continue moving towards attainment of ACS goals, recovery of listed fish species, restoration of their habitats, and to assist in the delisting of water quality limited waterbodies. If monitoring concludes a specific restoration practice is ineffective or riparian conditions are not being maintained over a number of sites, changes to management practices will be implemented. Those threats that are easily recognized will be dealt with quickly. Monitoring and adaptive management would reduce threats and contribute to recovery or restoration by the following:

- In some cases, low levels of negative effects from either an individual action or aggregate effects from multiple actions may persist until monitoring can alert managers to the need to change management practices or an adjustment in forest plan direction. The adaptive management process will use monitoring results to ensure forest plan direction is effectively reducing threats to listed fish species, their habitats, and other SWRA resources. If not effective, adaptive management will adjust forest plan direction as necessary;
- Adaptive management provides the mechanism to modify management actions in response to monitoring and evaluation results, changes in laws or regulations, or new information. This includes the ability to make appropriate modifications to restoration direction, mitigation measures, budgets, and monitoring approaches;

- The monitoring program will be complementary with ongoing broad- and mid-scale monitoring programs, for example the Pacfish and Infish Interagency Implementation Team monitoring program. This will allow Forest monitoring to be included with basin-level assessments of recovery/restoration activities for listed fish species and their habitats. Monitoring will be conducted at multiple scales to ensure that management actions are consistent with the context of broad and local recovery and restoration goals and objectives;
- Effectiveness, implementation, and validation monitoring over the life of the plan will be key to determining if individually and collectively management actions have maintained or improved SWRA resources. Multiple sites, representing various ecological conditions, across the Forest will be used. A similar approach will also address changes in TEPC species distributions and abundance, and success of restoration and conservation measures in moving subwatersheds toward their desired conditions.
- Accountability and oversight provided by the monitoring plan will allow adjustments needed to ensure the appropriate rate in achieving restoration goals and objectives is being accomplished. This could include, but not be limited to, adjusting budget allocations, shifting restoration prioritizations, or changing management direction or level of activity for a given area.

## GLOSSARY

The following definitions apply to terms used in this appendix. As such, they may differ somewhat from the same or similar terms used elsewhere in the Forest Plan, or found in the Forest Plan Glossary.

**Bankfull Stage** – The bankfull stage corresponds to the discharge at which channel maintenance is the most effective, that is, the discharge at which moving sediment forms or changes bends and meanders, and generally does work that results in the average morphologic characteristics of channels. This generally describes the incipient elevation on the bank where the stream begins to flow onto a flood plain.

**Composition (species)** – The mix of different species that make up a plant or animal community, and their relative abundance.

**Core Area** - The combination of core habitat (i.e. habitat that could supply all elements for the long-term security of bull trout) and a core population (a group of one or more local bull trout populations that exist within core habitat) constitutes the basic unit for which to gauge recovery within a recovery unit. Core areas require both habitat and bull trout to function biologically, and the number (replication) and characteristics of local populations inhabiting a core area provide a relative indication of the core area's likelihood to persist. Core area boundaries are typically: 1) 4<sup>th</sup> field hydrologic units (HUs), unless evidence of natural isolation (e.g., a natural barrier or presence of a lake supporting adfluvial bull trout) supports designation of a smaller core area; 2) conservative, i.e., the largest areas likely constituting a core area are considered a single core area when doubt exists about the extent of bull trout movement and use of habitats; and 3) non-overlapping (USDI FWS 2002).

**Debris Flows** – A debris flow is a spatially continuous movement of mixed soil or rock in which surfaces of shear are short-lived, closely spaced, and usually not preserved. The distribution of velocities in the displacing mass resembles that in a viscous liquid. Debris slides may become extremely rapid as the material loses cohesion, gains water, or encounters steeper slopes.

**Degrade** - To degrade is to measurably change a resource condition for the worse within an identified scale and time frame. Where existing conditions are within the range of desired conditions, “degrade” means to move the existing condition outside of the desired range. Where existing conditions are already outside the range of desired conditions, “degrade” means to change the existing condition to anything measurably worse. The term “degrade” can apply to any condition or condition indicator at any scale of size or time, but those scales need to be identified.

**Disturbance** - Events that cause significant change in structure, composition, or function of terrestrial or aquatic habitats. Disturbances can include fire, flood, droughts, wind, or earthquake, mortality caused by insect or disease outbreaks, windthrow, timber harvest, road construction, livestock grazing, and the introduction of exotic species.

**Ecological Health** – The state of an ecosystem in which ecological processes, functions and structure are adequate to maintain diversity of biotic communities commensurate with those initially found there.

**Ecological Processes** – The flow and cycling of energy, material, and organisms in an ecosystem. There are three general categories: biotic, hydrologic, and physical. Biotic process refers to plant and animal changes and causes of those changes. Hydrologic processes refer to flooding that alters stream channels, surface erosion, water yield, and stream flow. Physical processes refer to fire, landslides, windstorms, drought, and high moisture periods.

**Flood-prone Area Width** - The area likely to be covered by water if the wetted stream depth were twice the maximum height of the bank full depth. To measure the width of the flood prone area, select the elevation that corresponds to twice the maximum bankfull channel depth as determined by the vertical distance between bankfull stage and the thalweg of a riffle. This width is then extrapolated over the length of the stream reach by averaging several random transects taken within the project area. The area generally includes the active floodplain and the adjacent low terrace.

**Fragmented Population** - The splitting or isolation of populations into smaller patches because of anthropogenic or natural causes.

**Function** – The flow and interaction of abiotic and biotic nutrients, water, energy, or species.

**Geoclimatic Setting** - The geology, climate (precipitation and temperature), vegetation, and geologic processes (such as landslides or debris flows) that are characteristic of a place; places with these similar characteristics are said to have the same geoclimatic setting.

**Geomorphology** – The study of land forms. Also, a natural physical process that is responsible for the movement and deposition of organic and inorganic materials through a watershed under the influence of gravity or water (either on a hillslope or in a stream channel).

**Intermittent Stream** - A stream or portion of a stream that flows only in direct response to precipitation or seasonal run-off, and that receives little or no water from springs or other permanent sources. Unlike ephemeral streams, an intermittent has well-defined channel and banks, and it may seasonally be below the water table.

**Isolated Population** – A population that is not connected as a result of barriers from anthropogenic or natural causes. For fish species, the migratory form is absent and the population is isolated to local streams or a small watershed.

**Landslide** – A landslide is a downslope movement of a soil or rock mass occurring dominantly on surfaces of rupture or on relatively thin zones of intense shear strain. Varnes (1978) emphasized the distinction between rotational and translational slides as significant for stability analyses and control methods. The criterion used in the classification of landslides emphasizes type of movement and type of material. Any landslide can be classified and described by two nouns: the first describes the material and the second describes the type of movement (e.g. debris flow, rock fall).

**Landslide Hazard** – This is the calculated probability of slope failure (Prellwitz et al. 1994). In practical field use, it is a relative (e.g., low, moderate, or high) estimate of the potential susceptibility for landslide occurrence.

**Landslide Prone Areas** – These are areas with a tendency for rapid soil mass movements typified by shallow, non-cohesive soils on slopes where shallow translational planar landsliding phenomena is controlled by shallow groundwater flow convergence. The initiation is often associated with extremely wet periods, such as rain-on-snow events. It does not include slow soil mass movements that include deep earth-flows and rotational slumps, nor snow avalanche or rock fall areas. Translational slides have been documented as the dominant form of landslides for the majority of the Forest.

**Local Population** – For bull trout, this is a group that spawns within a particular stream or portion of a stream system. Multiple local populations may exist within a core area. The smallest group of fish that is known to represent an interactive reproductive unit will be considered a local population. For most waters where specific information is lacking, a local population may be represented by a single headwater

tributary or complex of headwater tributaries. Gene flow may occur between local populations (e.g., those within a core population), but is assumed to be infrequent compared to that among individuals within a local population. (USDI FWS 2002).

**Long-term Effects** - Effects that last 15 years or longer.

**Maintain** - For biological and physical resources, maintain means to produce no change in the existing conditions of a resource relative to their condition status; i.e., functioning properly/appropriately, functioning at risk, or not functioning properly/appropriately. Conditions that are “maintained” are neither restored nor degraded, but remain essentially the same. The term “maintain” can apply to any condition or condition indicator at any scale of size or time, but those scales need to be identified.

**Mass Stability** – The susceptibility of soil masses to stress. Gravitational stresses, on slopes, changes of state (solution), and soil particles cohesion are the main factors involved (USDA Forest Service 1973).

**Metapopulation** - For anadromous fish species, this is the population within a 3<sup>rd</sup> field HU, i.e. Snake River Evolutionarily Significant Unit.

**Ordinary High Water Mark** - The mark on all watercourses that will be found by examining the beds and banks and ascertaining where the presence and action of waters are so common and continuous in ordinary years as to mark upon the soil a character distinct from that of the abutting upland.

**Perennial Stream** - A stream flowing continuously throughout the year, with the possible exception of extreme droughts.

**Population** - For anadromous fish species, this is the population within a 4<sup>th</sup> field HU.

**Reference** - The range of a factor/indicator that is representative of its recent historical values prior to significant alteration of its environment resulting from unnatural disturbance. The reference could represent conditions found in a relic site or sites having little significant disturbances, but does not necessarily represent conditions that are attainable. The purposes of references are to establish a basis for comparing what currently exists to what has existed in recent history. References can be obtained through actual data, such as paired or well-managed watersheds, or through extrapolated techniques such as modeling. Sources of information include inventory and records, general land office and territorial surveys, settlers’ and explorers’ journals, ethnographic records, local knowledge, and newspapers.

**Refugia** - Refugia are watersheds or large areas with minimal human disturbance, having relatively high quality water and fish habitat, or having the potential of providing high-quality water and fish habitat with the implementation of restoration efforts. These high-quality water and fish habitats are well distributed and connected within the watershed or large area to provide for both biodiversity and stable populations (Quigley and Arbelbide 1997).

**Restoration** - Management actions or decisions taken to restore the desired conditions of habitats, communities, ecosystems, resources, or watersheds. For soil, water, riparian, or aquatic resources, restoration may include any one or a combination of active, passive, or conservation management strategies or approaches.

**Restore** - For soil, water, riparian, or aquatic resources, restore means to repair, reestablish, or recover ecosystem functions, processes, or components so that they are moving toward or within their range of desired conditions. This category is appropriate for actions that incrementally move the baseline condition toward the range of desired conditions. However, restoration toward a better condition does not negate the need to consult/confer if take could occur.

**Retard Attainment Of Desired Resource Conditions** - When an effect resulting from a management action, individually or in combination with effects from other management actions, within a specified area and time frame, measurably slows the recovery rate of existing conditions moving toward the range of desired resource conditions.

**Riparian Conservation Areas (RCAs)** – Portions of watersheds encompassing riparian ecosystems, where riparian-dependant resources receive primary emphasis, and management actions are subject to specific goals, objectives, standards, and guidelines. RCAs include traditional riparian corridors, perennial and intermittent streams, wetlands, lakes, springs, reservoirs, and other areas where proper riparian functions and ecological processes are crucial to maintenance of the RCA's water, sediment, woody debris, nutrient delivery system, and associated biotic communities and habitats.

**Riparian Ecosystems** - The area of influence of the riparian ecological functions and processes that serve as a transition between terrestrial and aquatic ecosystems that includes: streams, lakes, wet areas, and adjacent vegetation communities and their associated soils which have free water at or near the surface; an ecosystem whose components are directly or indirectly attributed to the influence of water.

**Riparian Function and Ecological Processes** – The regulation and exchange of ecological processes and disturbances as they relate to geology, landform, climate and micro-climate, soil, water, vegetation and terrestrial and aquatic species in providing a range of habitats, their conditions and trends. Riparian functions and ecological processes can be affected by changes including among others: streambank and hillslope root strength, large wood recruitment to RCAs, nutrient input to streams, shading, water quality (sediment, nutrients, temperature) water yield and timing (including stream subsurface flow), migration barriers, vegetation composition and structure, and micro-climate (soil moisture, soil temperature, solar radiation, air temperature, relative humidity, wind speed).

**Risk** – For landslides and other mass soil movements, risk is a measure of the socio-economic consequences (susceptibility to losses) of slope failure (Prellwitz et al. 1994).

**Rotational Slides** – These are landslides that move along a surface of rupture that is curved and concave. Rotational slides are uncommon and occur infrequently within the Forest (Clayton 1983).

**Short-Term Effects** - Effects lasting from 3 to 15 years in duration.

**Site-Potential Tree Height** - The height that a site tree, of a seral species, has or is expected to attain at an age of 200 years. Stands with trees that are 200 years old are also considered as representing old forest conditions.

**Soil Mass Movement or Mass Erosion** – This is the downslope movement of earth caused by gravity. It includes but is not limited to landslides, rock falls, debris avalanches, and creep. It does not, however, include surface erosion by running water. It may be caused by natural erosional processes, or by natural or human-caused disturbances (FEMAT 1993).

**Stream** - A natural watercourse of perceptible extent, with definite beds and banks, which confines and conducts continuously or intermittently flowing water. Definite beds are defined as having a sandy or rocky bottom that results from the scouring action of water flow.

**Subpopulation** - For anadromous fish species, this is a population within a 5<sup>th</sup> field HU.

**Temporary Effects** - Effects lasting from 0 to 3 years in duration.

**Translational slides** – These are landslides where the mass displaces along a planar or undulating surface of rupture, sliding out over the original ground surface. Translational slides generally are relatively shallower than rotational slides. Translational slides frequently grade into flows or spreads. Shallow translational landsliding is the dominant type of landslide found within the Forest (Megahan et al. 1978, Clayton 1983, Dixon 2001).

**Verification** – Testifying, ascertaining, confirming, or testing the truth or accuracy of, asserting or proving to be true (Prellwitz et al. 1994).

### Definitions Of ESA Effects Thresholds And Examples

The following are definitions of ESA effects or effects determinations, including thresholds and examples.

**Adverse Effect** - For Forest Plan revision, “adverse effect” is used in the context of the Endangered Species Act relative to effects on Threatened, Endangered, Proposed, and Candidate (TEPC) species. Definitions are from *Final Endangered Species Consultation Handbook* (USDI FWS and US Dept of Commerce NMFS 1998). They include both “likely to adversely effect” and “not likely to adversely effect”. Both of these definitions are needed to clearly understand the intent of the phrase “adverse effect” when applied to Forest-wide and management area direction involving TEPC species.

The following is a definition specific to anadromous salmonids developed by NMFS, the Forest Service, and the BLM during the Pacfish consultation and is given as example: “Adverse effects include short- or long-term, direct or indirect management-related, impacts of an individual or cumulative nature such as mortality, reduced growth or other adverse physiological changes, harassment of fish, physical disturbance of redds, reduce reproductive success, delayed, or premature migration, or other adverse behavioral changes to listed anadromous salmonids at any life stage. Adverse effects to designated critical habitat include effects to any of the essential features of critical habitat that would diminish the value of the habitat for the survival and recovery of listed anadromous salmonids” (US Dept of Commerce NMFS 1995).

**No Effect** - This determination is appropriate only “...if the proposed action will literally have no effect whatsoever on the species and/or critical habitat, not a small effect or an effect that is unlikely to occur” (USDI FWS and US Dept of Commerce 1998). Furthermore, actions that result in a “beneficial effect” do not qualify as a “no effect” determination. If a “no effect” determination is derived, conference/consultation does not need to proceed, but it is recommended that these determinations be shared within the Level 1 consultation team. Documentation to substantiate this determination must be filed in the project record.

**May Affect, Not Likely To Adversely Affect** - “The appropriate conclusion when effects on the species or critical habitat are expected to be beneficial, discountable, or insignificant. Beneficial effects have contemporaneous positive effects without any adverse effects to the species or habitat. Insignificant

effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur” (USDI FWS and US Dept of Commerce NMFS 1998). The term “negligible” has been used in many ESA consultations in the Snake River Basin. This term is considered synonymous with “insignificant” as described above. Consultation/conference is required for this effect determination, but can proceed as informal.

**May Affect, Likely To Adversely Affect** - The appropriate finding in a biological assessment (or conclusion during informal consultation) if any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable, insignificant, or beneficial (see definition of “not likely to adversely affect”). In the event the overall effect of the proposed action is beneficial to the listed species, but is also likely to cause some adverse effects, then the proposed action is “likely to adversely affect” the listed species. If incidental take is anticipated to occur as a result of the proposed action, an “is likely to adversely affect” determination should be made. A “likely to adversely affect” determination requires the initiation of formal Section 7 consultation.

For the purposes of Section 7, any action that has more than a negligible potential to result in “take” (see definition below) is likely to adversely affect a proposed/listed species. It is not possible for NMFS or USFWS to concur on a “not likely to adversely affect” determination if the proposed action will cause take of the listed species. Take can be authorized in the Incidental Take Statement of a Biological Opinion after the anticipated extent and amount of take has been described, and the effects of the take are analyzed with respect to jeopardizing the species or adversely modifying critical habitat. Take, as defined in the ESA, clearly applies to individuals; thus actions that have more than a negligible potential to cause take of individual eggs and/or fish are “likely to adversely affect.”

**Likely To Jeopardize The Continued Existence Of** - The Code of Federal regulations define jeopardy as “to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species” (50 CFR §402.02).

**Take** - To harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct [ESA §3(19)]. Harm is further defined by USFWS to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. Harass is defined by USFWS as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering (50 CFR § 17.3).



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# Appendix C

## Botanical Resources

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#### PURPOSE OF THIS APPENDIX

This appendix is designed to provide detailed information about habitat, lifeform, status, distribution, and habitat grouping for the Threatened, Proposed, Candidate, and Sensitive (current and proposed) plant species found on the Payette National Forest. The detailed information is provided to enable managers to more efficiently direct the implementation of Botanical Resources goals, objectives, standards, and guidelines.

Additionally, this appendix provides detailed information about the rare plant communities located on the Payette National Forest and should provide additional support of Forest-wide objectives. Species of cultural importance for the Ecogroup have been identified and should be considered in project-level implementation where possible.

**Table C-1. Federal and State Status, Current and Proposed Forest Service Status, and Global Distribution of the TEPCS Plant Species for the Payette National Forest**

| Species Name                                              | Common Name               | Global <sup>1</sup> | State <sup>2</sup> | Forest Service Status <sup>3</sup> |          | Global Distrib. <sup>4</sup> |
|-----------------------------------------------------------|---------------------------|---------------------|--------------------|------------------------------------|----------|------------------------------|
| <i>Botrychium lineare</i>                                 | Slender moonwort          | C –G1               | SH                 | Candidate for federal listing      |          | sd                           |
| <i>Howellia aquatilis</i>                                 | Water Howellia            | T- G2               | S1                 | Fed. listed                        |          | sd                           |
| <i>Mirabilis macfarlanei</i>                              | MacFarlane's four o'clock | T - G2              | S1                 | Fed. listed                        |          | le                           |
| <i>Silene spaldingii</i>                                  | Spalding's silene         | T - G2              | S1                 | Fed. listed                        |          | re                           |
| <i>Spiranthes diluvialis</i>                              | Ute ladies'-tresses       | T - G2              | S1                 | Fed. listed                        |          | sd                           |
|                                                           |                           |                     |                    | Current                            | Proposed |                              |
| <i>Allium madidum</i>                                     | swamp onion               | G3                  | S3                 | S                                  | S        | re                           |
| <i>Allium tolmiei</i> var. <i>persimile</i>               | Tolmie's onion            | G4/T3               | S3                 | S                                  | S        | le                           |
| <i>Allotropa virgata</i>                                  | candystick                | G4                  | S3                 | S                                  | W        | d                            |
| <i>Astragalus paysonii</i>                                | Payson's milkvetch        | G3                  | S3                 | S                                  | S        | re                           |
| <i>Astragalus vexilliflexus</i> var. <i>vexilliflexus</i> | bent flowered milkvetch   | G4/T? <sup>5</sup>  | S1                 | W                                  | S        | d                            |
| <i>Botrychium lanceolatum</i>                             | Lance-leaved moonwort     | G5T4                | S3                 | N                                  | W        | cb                           |
| <i>Botrychium simplex</i>                                 | Least moonwort            | G5                  | S2                 | N                                  | S        | cb                           |
| <i>Buxbaumia viridis</i>                                  | green bug moss            | G4                  | S2                 | N                                  | S        | w                            |
| <i>Calamagrostis tweedyi</i>                              | Cascade reedgrass         | G3                  | S2                 | S                                  | S        | re                           |
| <i>Camassia cusickii</i>                                  | Cusick camas              | G4                  | S2                 | S                                  | S        | re                           |
| <i>Carex bubaumii</i>                                     | Buxbaum's sedge           | G5                  | S3                 | W                                  | W        | w                            |
| <i>Ceanothus prostratus</i> ssp. <i>prostratus</i>        | Mahala-mat ceanothus      | G5/T2T4             | S1                 | W                                  | S        | d                            |
| <i>Chrysothamnus nauseosus</i> spp. <i>nanus</i>          | dwarf grey rabbitbrush    | G5/T4               | S3                 | N                                  | W        | re                           |
| <i>Crepis bakeri</i> ssp. <i>idahoensis</i> .             | Idaho hawksbeard          | G4/T2               | S2                 | N                                  | S        | le                           |
| <i>Douglasia idahoensis</i>                               | Idaho Douglasia           | G2                  | S2                 | N                                  | W        | le                           |
| <i>Draba incerta</i>                                      | Yellowstone Draba         | G5                  | S2                 | N                                  | S        | re                           |
| <i>Eatonella nivea</i>                                    | White eatonella           | G4                  | S3                 | N                                  | W        | d                            |
| <i>Epipactis gigantea</i>                                 | giant helleborine orchid  | G4                  | S3                 | W                                  | S*       | sd                           |
| <i>Hackelia davisii</i>                                   | Davis' stickseed          | G3                  | S3                 | N                                  | S        | le                           |
| <i>Halimolobos perplexa</i> var. <i>perplexa</i>          | puzzling halimolobos      | G4/T3               | S3                 | S                                  | S        | le                           |
| <i>Haplopappus radiatus</i>                               | Snake River goldenweed    | G3                  | S3                 | S                                  | S        | re                           |
| <i>Helodium blandowii</i>                                 | Blandow's helodium        | G5                  | S2                 | N                                  | S        | cb                           |
| <i>Leptodactylon pungens</i> ssp. <i>hazeliae</i>         | Hazel's prickly phlox     | G5/T2               | S3                 | S                                  | S        | le                           |
| <i>Lewisia kelloggii</i>                                  | Kellogg's bitterroot      | G4                  | S2                 | W                                  | S        | re                           |
| <i>Lobaria scrobiculata</i>                               | pored lungwort            | G3/G4               | S1                 | N                                  | S        | cb                           |
| <i>Mimulus clivicola</i>                                  | bank Monkeyflower         | G4                  | S3                 | S                                  | W        | re                           |
| <i>Peraphyllium ramosissimum</i>                          | squaw apple               | G4                  | S2                 | W                                  | S        | sd                           |
| <i>Pilophorus acicularis</i>                              | Nail lichen               | G4                  | S2                 | N                                  | S        | sd                           |
| <i>Ribes wolfii</i>                                       | wolf's current            | G4                  | S2                 | W                                  | S        | d                            |

| Species Name                                        | Common Name           | Global <sup>1</sup> | State <sup>2</sup> | Forest Service Status <sup>3</sup> |   | Global Distrib. <sup>4</sup> |
|-----------------------------------------------------|-----------------------|---------------------|--------------------|------------------------------------|---|------------------------------|
| <i>Rubus bartonianus</i>                            | Bartonberry           | G2                  | S2                 | S                                  | S | le                           |
| <i>Salix glauca</i>                                 | gray willow           | G5                  | S2                 | N                                  | S | d                            |
| <i>Sanicula graveolens</i>                          | Sierra sanicle        | G4                  | S1                 | W                                  | S | w                            |
| <i>Saxifraga bryophora</i> var. <i>tobiasiae</i>    | Tobias' saxifrage     | G5T2                | S2                 | S                                  | S | le                           |
| <i>Sedum borschii</i>                               | Borch's stonecrop     | G3                  | S2                 | W                                  | S | sd                           |
| <i>Triantha occidentalis</i> ssp. <i>brevistyla</i> | short-style tofieldia | G5/T4               | S1                 | S                                  | S | d                            |

<sup>1</sup>**Global** - Global ranking as assigned by Natural Heritage Program and Idaho Native Plant Society. **T** = Threatened, **C** = Candidate.

<sup>2</sup>**State** - Idaho State ranking, Idaho Native Plant Society Rare Species list 2000.

<sup>3</sup>**Forest Service Status** - **S** = Region 4 Sensitive, **W** = Forest Watch plants, **N** = No current status.

<sup>4</sup>**Global Distribution** - **d** =disjunct, **le** = local endemic (< 100 square miles), **re** = regional endemic (distribution 100-10,000), **sd** = sparsely distributed (isolated populations), **p** = peripheral, **w** = widespread, **cb** = circumboreal, circumpolar.



**Table C-2. Habit, Lifeform, Population Trend, and Habitat Grouping of the TEPCS Plant Species for the Payette National Forest**

| Species Name                                              | Common Name               | Habit         | Lifeform | Trend <sup>1</sup> | Habitat Group                   |
|-----------------------------------------------------------|---------------------------|---------------|----------|--------------------|---------------------------------|
| <i>Botrychium lineare</i>                                 | slender moonwort          | Perennial     | Fern     | U                  | Forest understory, meadow       |
| <i>Howellia aquatilis</i>                                 | water howellia            | Annual        | Herb     | U                  | Aquatic – pothole ponds, oxbows |
| <i>Mirabilis macfarlanei</i>                              | MacFarlane's four-o'clock | Perennial     | Herb     | S                  | Grassland, low elevation        |
| <i>Silene spaldingii</i>                                  | Spalding's silene         | Perennial     | Herb     | D                  | Grassland, low elev.            |
| <i>Spiranthes diluvialis</i>                              | Ute ladies'-tresses       | Perennial     | Herb     | U                  | Aquatic/riparian                |
|                                                           |                           |               |          |                    |                                 |
| <i>Allium madidum</i>                                     | swamp onion               | Perennial     | Herb     | S                  | Riparian - vernal wet           |
| <i>Allium tolmiei</i> var. <i>persimile</i>               | Tolmie's onion            | Perennial     | Herb     | S                  | Grassland, low elevation        |
| <i>Allotropa virgata</i>                                  | candystick                | Perennial     | Herb     | S                  | Forest - understory             |
| <i>Astragalus paysonii</i>                                | Payson's milkvetch        | Perennial     | Herb     | D                  | Forest – open gap               |
| <i>Astragalus vexilliflexus</i> var. <i>vexilliflexus</i> | bent flowered milkvetch   | Perennial     | Herb     | D                  | Subalpine forest                |
| <i>Botrychium lanceolatum</i>                             | lance-leaved moonwort     | Perennial     | Fern     | U                  | Forest - understory             |
| <i>Botrychium simplex</i>                                 | least moonwort            | Perennial     | Fern     | U                  | Forest - understory             |
| <i>Buxbaumia viridis</i>                                  | green bug moss            | N/A           | Moss     | U                  | Forest - understory             |
| <i>Calamagrostis tweedyi</i>                              | Cascade reedgrass         | Perennial     | Grass    | S                  | Forest – open gap               |
| <i>Camassia cusickii</i>                                  | Cusick camas              | Perennial     | Herb     | S                  | Grassland, low elevation        |
| <i>Carex buxbaumii</i>                                    | Buxbaum's sedge           | Perennial     | Sedge    | S                  | Riparian - meadows              |
| <i>Ceanothus prostratus</i> ssp. <i>prostratus</i>        | Mahala-mat ceanothus      | Perennial     | Shrub    | D                  | Forest – open gap               |
| <i>Chrysothamnus nauseosus</i> spp. <i>nanus</i>          | dwarf gray rabbitbrush    | Perennial     | Shrub    | S                  | Rock, shrubland                 |
| <i>Crepis bakeri</i> Greene ssp. <i>idahoensis</i>        | Idaho hawksbeard          | Perennial     | Herb     | D                  | Grassland, low elev.            |
| <i>Douglasia idahoensis</i>                               | Idaho douglasia           | Perennial     | Herb     | S                  | Subalpine, open                 |
| <i>Draba incerta</i>                                      | Yellowstone draba         | Perennial     | Herb     | U                  | Subalpine, open                 |
| <i>Eatonella nivea</i>                                    | white eatonella           | Annual        | Herb     | U                  | Shrubland                       |
| <i>Epipactis gigantea</i>                                 | giant helleborine orchid  | Perennial     | Herb     | D                  | Riparian - streamside           |
| <i>Hackelia davisii</i>                                   | Davis' stickseed          | Perennial     | Herb     | S                  | Rock - cliff                    |
| <i>Halimolobos perplexa</i> var. <i>perplexa</i>          | puzzling halimolobos      | Ann./Biennial | Herb     | S                  | Grassland, forest               |
| <i>Haplopappus radiatus</i>                               | Snake River goldenweed    | Perennial     | Herb     | S                  | Grassland, shrubland            |

**Table C-2. Habit, Lifeform, Population Trend, and Habitat Grouping of the TEPCS Plant Species for the Payette National Forest (continued)**

| Species Name                                        | Common Name           | Habit     | Lifeform   | Trend <sup>1</sup> | Habitat Group         |
|-----------------------------------------------------|-----------------------|-----------|------------|--------------------|-----------------------|
| <i>Helodium blandowii</i>                           | Blandow's helodium    | N/A       | Moss       | S                  | Riparian, forest      |
| <i>Leptodactylon pungens</i> ssp. <i>hazeliae</i>   | Hazel's prickly phlox | Perennial | Shrub-like | S                  | Rock - cliffs         |
| <i>Lewisia kelloggii</i>                            | Kellogg's bitterroot  | Perennial | Herb       | S                  | Rock - outcrops       |
| <i>Lobaria scrobiculata</i>                         | pored lungwort        | N/A       | Lichen     | S                  | Forest – understory   |
| <i>Mimulus clivicola</i>                            | bank monkeyflower     | Annual    | Herb       | S                  | Forest – gap species  |
| <i>Peraphyllum ramosissimum</i>                     | squaw apple           | Perennial | Shrub      | S                  | Woodland, shrubland   |
| <i>Pilophorus acicularis</i>                        | nail lichen           | N/A       | Lichen     | U                  | Rock, talus, open     |
| <i>Ribes wolfii</i>                                 | wolf's currant        | Perennial | Shrub      | S                  | Forest - understory   |
| <i>Rubus bartonianus</i>                            | Bartonberry           | Perennial | Shrub      | S                  | Riparian - vernal wet |
| <i>Salix glauca</i>                                 | gray willow           | Perennial | Shrub      | U                  | Subalpine/riparian    |
| <i>Sanicula graveolens</i>                          | Sierra sanicle        | Perennial | Herb       | U                  | Rock outcrops         |
| <i>Saxifraga bryophora</i> var. <i>tobiasiae</i>    | Tobias' saxifrage     | Perennial | Herb       | D                  | Subalpine             |
| <i>Sedum borschii</i>                               | Borch's stonecrop     | Perennial | Herb       | U                  | Rock talus/scree      |
| <i>Triantha occidentalis</i> ssp. <i>brevistyla</i> | short-style tofieldia | Perennial | Herb       | U                  | Aquatic/riparian      |

<sup>1</sup>**Trend** **D** = declining on National Forest System lands, **S** = stable on National Forest System Lands, **I** = increasing on National Forest System lands, and **U** = unknown at this time.

**Table C-3. Rare Communities, Federal and State Status, Rarity Class, Threats, Trends, and Research Natural Area Distribution for the Payette National Forest**

| Community                                                | Global <sup>1</sup> | State <sup>2</sup> | Rarity Class <sup>3</sup> | Threats <sup>4</sup> | Trend <sup>5</sup> | Research Natural Area Distribution     |
|----------------------------------------------------------|---------------------|--------------------|---------------------------|----------------------|--------------------|----------------------------------------|
| <i>Abies grandis/Coptis occidentalis</i>                 | G2                  | S3                 | B                         | TH, RD, EX           | S                  |                                        |
| <i>Abies grandis/Taxus brevifolia/Clintonia uniflora</i> | G3                  | S3                 | B                         | TH, FS               | D                  | Pony Creek                             |
| <i>Alnus incana/Spirea douglasii</i>                     | G3                  | S3                 | I                         | Unknown              | U                  |                                        |
| <i>Alnus rhombifolia/Betula occidentalis</i>             | G1                  | S? <sup>6</sup>    | B                         | GZ                   | U                  |                                        |
| <i>Alnus sinuata</i>                                     | G3                  | S3                 | I                         | None                 | S                  | Bear Creek, Bruin Mountain, Pony Creek |
| <i>Artemisia tridentata wyomingensis/Stipa comata</i>    | G2                  | S2                 | M                         | AG, GZ, EX, FS       | D                  |                                        |
| <i>Betula occidentalis/Mesic Forb</i>                    | G3                  | S3                 | M                         | GZ, RD               | D                  |                                        |
| <i>Camassia cusickii</i>                                 | G3                  | S1                 | I                         | RD, GZ               | S                  |                                        |
| <i>Cercocarpus ledifolius/Symphoricarpos oreophilus</i>  | G2                  | S2                 | B                         | GZ, FI               | U                  |                                        |
| <i>Festuca idahoensis-Koeleria cristata</i>              | G3                  | S2                 | I                         | Unknown              | U                  | Lost Basin Grassland                   |
| <i>Pinus flexilis/Purshia tridentata</i>                 | G1                  | S2                 | I                         | EX, RC               | S                  |                                        |
| <i>Pinus ponderosa/Calamagrostis rubescens</i>           | G2Q                 | S1                 | B                         | GZ, FX, TH, FS       | D                  |                                        |
| <i>Pinus ponderosa/Crataegus douglasii</i>               | G1                  | S1                 | I                         | TH, DV, RP, GZ       | D                  |                                        |
| <i>Pinus ponderosa/Festuca idahoensis</i>                | G4                  | S2                 | M                         | Unknown              | U                  | Circle End Creek                       |
| <i>Pinus ponderosa/Purshia tridentata</i>                | G3G5                | S3                 | M                         | Unknown              | S                  | Circle End Creek                       |
| <i>Pinus ponderosa/Symphoricarpos oreophilus</i>         | G3                  | S1                 | I                         | FX                   | D                  | Circle End Creek                       |
| <i>Pseudotsuga menziesii/Vaccinium caespitosum</i>       | G5                  | S2                 | M                         | Unknown              | S                  | Phoebe Meadows                         |
| <i>Salix boothii/Carex aquatilis</i>                     | G3                  | S3                 | I                         | GZ, RP               | D                  |                                        |
| <i>Salix eastwoodiae/Carex aquatilis</i>                 | G2                  | S2                 | M                         | GZ                   | U                  |                                        |
| <i>Salix exigua/Mesic Forb</i>                           | G2?                 | S?                 | M                         | GZ                   | U                  |                                        |
| <i>Salix geyeriana/Mesic Forb</i>                        | G3                  | S2                 | M                         | GZ                   | U                  |                                        |

<sup>1</sup>**Global** - Global ranking as assigned by Natural Heritage Program and Idaho Native Plant Society.

<sup>2</sup>**State** - Idaho State ranking, Idaho Native Plant Society Rare Species list 2000.

<sup>3</sup>**Rarity Class** - **I** = intrinsically rare, **M** = managed rare, **B** = both, intrinsically rare communities that are also affected by management.

<sup>4</sup>**Threats** - **AG** = agriculture, **DV** = development, **EX** = exotic plant species, **FI** = fire increased frequency, **FS** = Fire, stand replacing, **FX** = fire exclusion, **GZ** = livestock grazing, **LO** = logging, **MN** = mining, **RC** = recreation, **RD** = road construction.

<sup>5</sup>**Trend** - **D** = declining on National Forest System lands, **S** = stable on National Forest System lands, **I** = increasing on National Forest lands, and **U** = unknown at this time.

Table C-4. Plant Species of Cultural Importance for the Payette National Forest

| Scientific Name                                     | Common Name           |
|-----------------------------------------------------|-----------------------|
| <i>Abies</i> spp. Mill.                             | fir                   |
| <i>Achillea millefolium</i> L.                      | yarrow                |
| <i>Alectoria</i> spp. Ach.                          | pine moss             |
| <i>Allium accuminatum</i> Hook.                     | wild onion            |
| <i>Allium geyeri</i> Wats.                          | wild onion            |
| <i>Allium</i> spp. L.                               | wild onions           |
| <i>Alnus incana</i> (L.) Moench                     | alder                 |
| <i>Alnus sinuata</i> (Regel) Rydb.                  | alder                 |
| <i>Amalanchier alnifolia</i> Nutt.                  | serviceberry          |
| <i>Apocynum cannabinum</i> L.                       | dogbane               |
| <i>Arcostaphylos nevadensis</i> Gray                | manzanita             |
| <i>Arcostaphylos uva-ursi</i> (L.) Spreng.          | kinnikinnick          |
| <i>Artemisia ludoviciana</i> Nutt.                  | prairie sage          |
| <i>Artemisia tridentata</i> Nutt.                   | sagebrush             |
| <i>Asclepias</i> spp. L.                            | milkweed              |
| <i>Atriplex confertifolia</i> (Torr. & Frem.) Wats. | shadscale             |
| <i>Balsamorhiza hookeri</i> Nutt.                   | Hooker's balsamroot   |
| <i>Balsamorhiza sagittata</i> (Pursh) Nutt.         | arrow-leaf balsamroot |
| <i>Berberis repens</i> Lindl.                       | Oregon grape          |
| <i>Brodiaea douglassii</i> Wats.                    | brodiaea              |
| <i>Bryoria fremontii</i> (Tuck) Brodo & Hawksw.     | tree lichen           |
| <i>Calocortus macrocarpus</i> Dougl.                | Mariposa lily         |
| <i>Calocortus nutalli</i> T. & G.                   | sego lily             |
| <i>Calocotus</i> spp. Pursh                         | lilies                |
| <i>Camassia quamash</i> (Pursh) Greene              | camas                 |
| <i>Chenopodium</i> spp. L.                          | goosefoot, pigweed    |
| <i>Celtis levigata</i> var. <i>reticulata</i> Torr. | hackberry             |
| <i>Cercocarpus</i> spp. H.B.K.                      | mountain mahogany     |
| <i>Claytonia lanceolata</i> Pursh                   | spring beauty         |
| <i>Cornus stolonifera</i> Michx.                    | red-osier dogwood     |
| <i>Chimophila umbellata</i> (L.) Bart.              | pipsissewa            |
| <i>Chrysothamnus nauseosus</i> (Pall.) Britt.       | rubber rabbitbrush    |
| <i>Cirsium scariosum</i> Nutt.                      | elk thistle           |
| <i>Cirsium</i> spp. Mill.                           | thistle               |
| <i>Crataegus douglasii</i> Lindl.                   | black hawthorn        |
| <i>Delphinium</i> spp. L.                           | larkspur              |
| <i>Descurania</i> spp. Webb & Berth.                | tansy mustard         |
| <i>Dicenta uniflora</i> Kell.                       | steer's head          |
| <i>Elymus cinerius</i> Scribn. & Merr.              | giant wild rye        |
| <i>Erythronium grandiflorum</i> Pursh               | glacier lily          |
| <i>Evernia vulpina</i> (L.) Ach.                    | pine moss             |
| <i>Fragaria vesca</i> L.                            | strawberry            |

**Table C-4. Plant Species of Cultural Importance for the Payette National Forest (continued)**

| Scientific Name                                                 | Common Name                   |
|-----------------------------------------------------------------|-------------------------------|
| <i>Fragaria virginiana</i> Duchesne                             | strawberry                    |
| <i>Fritillaria pudica</i> (Pursh) Spreng.                       | yellow bell                   |
| <i>Helianthus annuus</i> L.                                     | sunflower                     |
| <i>Heracleum lanatum</i> Michx.                                 | cow parsnip                   |
| <i>Huechera cylindrica</i> Dougl.                               | alumroot                      |
| <i>Iris missouriensis</i> Nutt.                                 | wild iris                     |
| <i>Larix occidentalis</i> Nutt.                                 | western larch                 |
| <i>Ledum glandulosum</i> Nutt.                                  | Labrador tea                  |
| <i>Lewisia redivia</i> Pursh                                    | bitterroot                    |
| <i>Ligusticum canbyi</i> Coult. & Rose                          | lovage                        |
| <i>Lomatium cous</i> (Wats.) Coult. & Rose                      | biscuitroot                   |
| <i>Lomatium canbyi</i> Coult. & Rose                            | biscuitroot                   |
| <i>Lomatium dissectum</i> (Nutt.) Math. & Const.                | fern-leaf desert parsley      |
| <i>Lomatium grayi</i> Coult. & Rose                             | Gray's desert parsley         |
| <i>Lomatium macrocarpum</i> (Nutt.) Coult. & Rose               | large-fruited biscuitroot     |
| <i>Lomatium nudicaule</i> (Pursh) Coult. & Rose                 | bare-stem desert parsley      |
| <i>Lomatium salmoniflorum</i> (Coult. & Rose) Math. & Const.    | salmon-flower desert parsley  |
| <i>Lomatium</i> spp. Raf.                                       | desert parsley, biscuitroot   |
| <i>Lygodesmia juncea</i> (Pursh) D. Don                         | rush skeletonweed             |
| <i>Matricaria matricarioides</i> (Less.) Porter                 | pineapple weed                |
| <i>Mentha arvensis</i> L.                                       | Canada mint                   |
| <i>Mentzelia albicaulis</i> Dougl.                              | blazing star                  |
| <i>Mimulus guttatus</i> DC.                                     | yellow monkey-flower          |
| Mushrooms                                                       | a variety of edible mushrooms |
| <i>Nicotiana attenuata</i> Torr.                                | wild tobacco                  |
| <i>Nuphar variegatum</i> Englem.                                | yellow pond lily              |
| <i>Orobancha uniflora</i> L var. <i>purpurea</i> (Heller) Achey | broomrape                     |
| <i>Oryzopsis hymenoides</i> (R. & S.) Ricker                    | Indian rice grass             |
| <i>Opuntia</i> spp. Mill.                                       | prickly pear cactus           |
| <i>Penstemon wilcoxii</i> Rydb.                                 | Wilcox's penstemon            |
| <i>Perideridia bolanderi</i> (Gray) Nels. & Macbr.              | yampah                        |
| <i>Perideridia gairdneri</i> (H. & A.) Math.                    | yampah                        |
| <i>Phragmites australis</i> L.                                  | reed grass                    |
| <i>Picea</i> spp. A. Dietr.                                     | spruce                        |
| <i>Pinus albicaulis</i> Englem.                                 | whitebark pine                |
| <i>Pinus contorta</i> Dougl.                                    | lodgepole pine                |
| <i>Pinus ponderosa</i> Dougl.                                   | ponderosa pine                |

**Table C-4. Plant Species of Cultural Importance for the Payette National Forest  
(continued)**

| Scientific Name                              | Common Name          |
|----------------------------------------------|----------------------|
| <i>Poa sandbergii</i> Vasey                  | Sandberg's bluegrass |
| <i>Populus tremuloides</i> Michx.            | quaking aspen        |
| <i>Populus trichocarpa</i> T. & G.           | cottonwood           |
| <i>Prunus virginiana</i> L.                  | chokecherry          |
| <i>Rhamnus purchiana</i> DC.                 | cascara              |
| <i>Rhus glabra</i> L.                        | smooth sumac         |
| <i>Ribes aureum</i> Pursh                    | golden currant       |
| <i>Ribes lacustre</i> (Pers.) Poir.          | swamp gooseberry     |
| <i>Ribes viscosissimum</i> Pursh             | sticky currant       |
| <i>Rosa gynocarpa</i> Nutt.                  | wild rose            |
| <i>Rosa</i> spp. L.                          | wild rose            |
| <i>Rubus ideaus</i> L.                       | raspberry            |
| <i>Rubus</i> spp. L.                         | bramble, blackberry  |
| <i>Rumex crispus</i> L.                      | curly-leaved dock    |
| <i>Salix</i> spp. L.                         | willow               |
| <i>Sambucus cerulea</i> Raf.                 | blue elderberry      |
| <i>Sambucus racemosa</i> L.                  | red elderberry       |
| <i>Sarcobatus vermiculatus</i> (Hook.) Torr. | black greasewood     |
| <i>Scirpus</i> spp. L.                       | bulrush              |
| <i>Shepherdia canadensis</i> (L.) Nutt.      | russet buffaloberry  |
| <i>Smilacina stellata</i> (L.) Desf.         | false Solomon's seal |
| <i>Symphoricarpos albus</i> (L.) Blake       | snowberry            |
| <i>Taxus brevifolia</i> Nutt.                | western yew          |
| <i>Typha latifolia</i> L.                    | cattail              |
| <i>Urtica dioica</i> L.                      | stinging nettle      |
| <i>Vaccinium caespitosum</i> Michx.          | dwarf huckleberry    |
| <i>Vaccinium globure</i> Rydb.               | blue huckleberry     |
| <i>Vaccinium membranaceum</i> Dougl.         | mountain bilberry    |
| <i>Vaccinium scoparium</i> Leiberg           | grouse whortleberry  |
| <i>Valeriana edulis</i> Nutt.                | tobacco root         |
| <i>Veratrum viride</i> Ait.                  | false helleborine    |
| <i>Wyethia amplexicaulis</i> Nutt.           | mule's ears          |
| <i>Zigadenus</i> spp. Michx.                 | death camas          |

# Appendix D

## Wild and Scenic Rivers Eligibility Study

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## **INTRODUCTION**

The Wild and Scenic Rivers Act (Public Law 90-542; 16 U.S.C 1271-1287) was enacted by Congress to address the need for a national system of river protection on October 2, 1968. As an outgrowth of a national conservation agenda in the 1950s and 1960s, the Wild and Scenic Rivers Act (Act) was in response to the dams, diversions, and water resource development projects that occurred on America's rivers between the 1930s and 1960s. The Act concluded that selected rivers should be preserved in a free-flowing condition and be protected for the benefit and enjoyment of present and future generations. Since 1968, the Act has been amended many times, primarily to designate additional rivers and authorize the study of other rivers for possible inclusion.

As of September 2002, some 160 river segments comprising 11,292 miles have been protected in the National Wild and Scenic Rivers System (National System). These nationally recognized rivers comprise a valuable network of natural and cultural resources, scenic beauty, and recreational opportunities. The focus of this appendix is on the study initiated by the Forest and the rivers identified as eligible for Wild and Scenic River designation.

## **INTENT OF THE WILD AND SCENIC RIVERS ACT**

The Wild and Scenic Rivers Act seeks to protect and enhance a river's natural and cultural values and provide for public use consistent with its free flowing character, water quality, and outstandingly remarkable values. Designation affords certain legal protection from development. For instance, no new dams can be constructed, nor are federally assisted water resource development projects permitted that might negatively affect the designated river values. Where private lands are involved, the federal managing agency works with local governments and owners to develop protective measures.

There are two ways rivers are designated into the National System: (1) by Act of Congress, or (2) by the Secretary of Interior if the river has first been designated into a valid state river protective system by state law and the appropriate Governor has applied for a Wild and Scenic River designation. To be eligible for designation, a river must be free flowing and contain at least one outstandingly remarkable value that can be scenic, recreational, geological, fish, wildlife, historic, cultural, botanical, hydrological, paleontological, or scientific.

There are two ways rivers can be identified for study as potential additions to the National System; by Act of Congress under Section 5(a) or through an agency-initiated study under Section 5(d)(1) of the Act which requires that "in all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential wild, scenic, and recreational areas."

Through Section 5(d)(1) the Forest Service is required to assess rivers under its management jurisdiction and determine whether these rivers are eligible by applying standardized criteria through a documented evaluation process. River areas that are found to be eligible are then classified as wild, scenic, or recreational, based on the development of shoreline, watercourse, and access. Proposed boundaries and/or river areas and protective management requirements are developed at the time of eligibility determination. For river segments on federal lands determined to be eligible under Section 5(d)(1) of the Act, direction to protect the river as a potential addition to the National System is in effect until such a time as a "suitability" evaluation and subsequent decision is made. A Wild and Scenic River suitability analysis involves determining the best use of the eligible river and the best method to protect the ORV within the river corridor. Rivers subsequently determined suitable will continue to be protected as potential additions to the National System.



Protective management of federal lands in the river area begins at the time the river segment is found eligible. Specific management prescriptions for eligible river segments provide protection, pending a suitability determination, in the following ways:

- **Free-flowing values.** The free-flowing characteristics of eligible river segments cannot be modified to allow stream impoundments, diversions, channelization, and/or riprapping to the extent authorized under law.
- **River-related values.** Each segment is managed to protect outstandingly remarkable values (subject to valid existing rights) and, to the extent practicable, such values are enhanced.

**Classification impacts.** Management and development of the eligible river and its corridor cannot be modified, subject to valid existing rights, to the degree that its eligibility or classification would be affected.

## REVIEW OF ELIGIBILITY METHODOLOGY

### 1988 Payette National Forest Land and Resource Management Plan

A Wild and Scenic River Eligibility Study was completed as part of the 1988 Payette National Forest Land and Resource Management Plan (USDA Forest Service 1988). The Forest used outstandingly remarkable values, stream order identification, impoundments, and water quality as criteria to determine eligibility. The intent of using stream order inventory as a screening criterion was to select the largest stream and trace back its longest reach. Of the rivers evaluated for eligibility, the Payette Forest recommended 11 river segments. Of the 11 river segments, six are entirely within the boundary of the Frank Church-River of No Return Wilderness, of which the Salmon Challis National Forest is the lead management agency.

The absence of outstandingly remarkable values and free-flowing condition was not documented. Identification of river corridors where outstandingly remarkable values exist was documented in the Payette National Forest Land and Resource Management Plan. Public review was provided for through the Payette National Forest Land and Resource Management Plan public involvement process.

### 2000 Draft Payette National Forest Land and Resource Management Plan

In 1997, the Forest Supervisor approved the need for a Wild and Scenic River eligibility study based on new information and changed conditions. In May 1997, the Southwest Idaho Ecogroup Wild and Scenic River Assessment Team was formed to develop alternative strategies for the completion of Wild and Scenic River eligibility and suitability studies and interim management direction. This effort was designed to provide a basis for the Wild and Scenic Rivers analysis in the Forest Plan Revision process or in amendments to the Forest Plan.

In the fall of 1997, the Ecogroup established an interdisciplinary process to review over 600 streams on the Forest for potential Wild and Scenic River eligibility. The process incorporated the Interagency Wild and Scenic River Reference Guide; FSH 1909.12, Chapter 8, "Wild and Scenic River Evaluation"; the Region 4 Desk Guide – Bridge to Revision (USDA Forest Service 1993); the Washington Office Wild and Scenic River Protocol; and the Intermountain Region Wild and Scenic River Protocol. For the review, a corridor of approximately one-quarter mile on either side of the river was used when evaluating eligibility.

The Wild and Scenic River Act states that, in order to be found eligible, a river segment must be free-flowing and contain at least one outstandingly remarkable value (ORV). The Forest determined rivers eligible for inclusion into the Wild and Scenic River System through a process of elimination. That is, if a river did not have a potential ORV in at least one resource, it was not evaluated further. The steps used for this inventory are as follows:

- Determine and document potential ORVs;
- Determine and document ORVs and free-flowing status;
- Determine and document drainage segmentation; and
- Determine and document river classification(s).

### **Criteria For Inclusion In The Eligibility Inventory**

The Wild and Scenic Rivers Eligibility study inventoried the following rivers, within the Forest's administrative boundaries:

- All perennial rivers represented in the Geographic Information System's (GIS) 1:100,000 scale USGS rivers layer (also known as the "major rivers" layer). These rivers were evaluated first for potential outstandingly remarkable values.
- All rivers included in the Pacific Northwest Rivers Study, or the Norwest Power Planning Council Protected Rivers list. These rivers were also first evaluated for potential outstandingly remarkable values.
- All rivers included in the Nationwide Rivers Inventory, or the State of Idaho Comprehensive Water Plan.
- All rivers currently eligible for inclusion into the Wild and Scenic Rivers System. These rivers were updated during the eligibility process for new information and changed conditions since the previous inventory.
- Any rivers identified as part of the public involvement process.

Three major elements contributed to whether a river was found eligible for further study:

**1. Are there any outstandingly remarkable values present within the river corridor?**

In order for a river to become eligible for further study as a possible wild, scenic, or recreational river, it must have one or more outstandingly remarkable resource values present on the National Forest System lands. The outstandingly remarkable values fall into categories that are defined in Section 1(b) of the Act as "scenic, recreational, geologic, fish, wildlife, historic, cultural, or other similar values." "Other similar values" include, but are not limited to, hydrologic, ecological/biological diversity, paleontological, botanical, and scientific study opportunities. A defined Region of Comparison was used as context to assess the uniqueness or rarity of the outstandingly remarkable values.

**2. Is the drainage considered a river consistent with the river definition?**

Using the definition of a river as "a flowing body of water or estuary or a section, portion or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and small lakes," all creeks and rivers on the major river GIS coverage were considered in this evaluation.

**3. Is the river free flowing?**

In order for a river to become eligible for further study, it must be free flowing. To be considered free flowing, the river must be free of impoundments or diversions.

A public involvement process was initiated to provide the public an opportunity to nominate streams or stream segments on the Forest for potential eligibility. An information packet explaining the evaluation process and a "Frequently Asked Questions" fact sheet were mailed to more than 1,000 individuals or groups. This information was also posted on the Southwest Idaho Ecogroup Forest Plan Revision Project's web page ([www.fs.fed.us/r4/sawtooth](http://www.fs.fed.us/r4/sawtooth)).

An interdisciplinary team from each Ranger District reviewed all the streams on the 1:100,000 major river GIS coverage in order to determine if there were rivers with "potential" outstandingly remarkable values. Each stream was evaluated to first broadly screen for potential outstandingly remarkable values using a generalized set of criteria. Streams that were not identified as having one or more potential outstandingly remarkable value were dropped at that time from further consideration for eligibility.

### **Draft Land And Resource Management Plan Findings**

With an initial inventory of 704 individual rivers considered for eligibility, a first screen using broad criteria and a second, more detailed assessment, using specific criteria for determining the presence of outstandingly remarkable values were applied and resulted in 37 streams identified with potential ORVs. These 37 streams were segmented according to the established criteria to determine tentative classification, and they were presented in the Draft Land and Resource Management Plan (USDA Forest Service 2000).

These streams were listed and identified in the Draft Land Management Plan and Draft Environmental Impact Statement (USDA Forest Service 2000) as potentially eligible for inclusion in the Rivers System. The streams were considered "potentially" eligible because: (1) the identified rivers had not been reviewed and commented on by the public, and (2) further analysis was needed to ensure the ORV criteria had been applied consistently.

### **Changes from the Draft to Final Land and Resource Management Plan**

The Forest received comments on the "potentially" eligible rivers presented in the Draft Land and Resource Management Plan during the public comment period following the release of the documents. Comments urged the Forest to reconsider the Region of Comparison as it appeared to be too narrow in scope or applied inconsistently. The Forest also received comments supporting the eligibility of the draft list or suggesting that none of the rivers were eligible and the study should be discontinued. To address these comments a three Forest interdisciplinary team re-evaluated the Regions of Comparison and the ORV criteria to ensure they were national in scope, as mandated by the Wild and Scenic Rivers Act, and that the criteria had been applied consistently by resource specialists throughout the Ecogroup. During this re-evaluation some changes were made to the Regions of Comparison and outstandingly remarkable values criteria. This re-evaluation also determined that the criteria used to assess ORV's had been inconsistently applied. The following summary describes the changed criteria used to determine ORV's and its associated region of comparison. Please refer to the Southwest Idaho Ecogroup Wild and Scenic River Eligibility Inventory User's Guide (USDA Forest Service 2001), for a full discussion of criteria components.

#### **Scenic Outstandingly Remarkable Values**

To define the scenic outstandingly remarkable values resource specialists considered the landscape elements of landform, vegetation, water, color and related factors that result in notable or exemplary visual features and/or attractions within the nation or region. They also considered:

- Whether or not the riverine landscape is distinctive enough to attract visitors from outside the Region of Comparison (Columbia River Basin); and

- If visitors were willing to travel long distances or travel across backcountry specifically to view, photograph, or record the outstanding scenic resource along the riverway.

Additional factors were also considered when determining scenic outstandingly remarkable values, including:

- Whether or not seasonal variations in vegetation exist;
- The scale of cultural modifications; and
- If scenic and visual attractions were highly diverse over the majority of the river or river segment.

#### **Recreation/Interpretive Outstandingly Remarkable Values**

To define recreation/interpretive outstandingly remarkable values, resource specialists considered:

- Whether or not recreation opportunities are or have the potential to be distinctive enough to attract visitors from outside the Region of Comparison (Columbia River Basin);
- If visitors are willing to travel long distances to use the river resources for recreation purposes. River-related opportunities could include, but are not limited to, sight-seeing, wildlife observation, photography, hiking, fishing, hunting, tubing, and floating, including white-water rafting, kayaking, or canoeing
- If interpretive opportunities were exceptional and attract, or have the potential to attract, visitors from outside the Region of Comparison; and
- Whether or not the river may provide, or have the potential to provide settings for national or regional usage or competitive events.

#### **Geological and Hydrological Outstandingly Remarkable Values**

To help define geological/hydrologic outstandingly remarkable values, resource specialists considered:

- If the river or corridor contains an example of a hydrologic or geologic features;
- If the feature is a process or phenomena that is rare to the province or subbasin, or if it is an outstanding example of a commonly occurring feature; and
- If the feature is in an unusually active state of development, represents a “textbook” example, and/or represents a rare or important combination of hydrologic or geologic features or landforms (erosional, volcanic, glacial, drainage patterns, etc.).

The Region of Comparison to determine geologic/hydrologic outstandingly remarkable values is the Province as defined by McNab and Avers in “Ecological Subregions of the United States: Section Descriptions”, USDA publication WO-WSA-5, July 1994 (McNab and Avers 1994). There are three Provinces that occur within the Ecogroup: (1) Province M332-Middle Rocky Mountain Steppe-Coniferous Forest-Alpine Meadow (this encompasses all of the Boise, and most of the Payette and Sawtooth Forests); (2) Province 342-Intermountain Semi-Desert (this encompasses the southern portion of the Sawtooth Forest); and (3) Province 331A-Great Plains - Palouse Dry Steppe (this encompasses the northern central tip of the Payette Forest).

#### **Fish Outstandingly Remarkable Values**

When defining outstandingly remarkable fish values resource specialists considered:

- If the river contains more than one fish species listed under the Endangered Species Act;
- If there is sufficient documentation to support the existence of a listed species in the river corridor within the past 20 years, if the fish species was not currently present;
- Whether or not spawning and rearing habitat exists for listed threatened, endangered, and sensitive species;
- If the river provides near natural assemblages of native fish species, including multiple life histories for the same species, or contains one or more unique/narrow endemic fish species;
- If the river is in a watershed designated Pacfish or Infish high priority (not just key);

- Whether or not the river provides a near-natural condition; and
- If the river represents other habitat for threatened, endangered, and sensitive species in the same types of streams in that geologic setting.

The Region of Comparison for determining fishery values is the Columbia River Basin.

#### **Wildlife Outstandingly Remarkable Values**

When defining outstandingly remarkable wildlife values resource specialists considered:

- If the river corridor contains one or more “unique”/narrow endemic wildlife species;
- If the river corridor contains wintering range for more than two big game species, such as elk, mountain goat, and big horn sheep;
- If the river corridor contains clustered nesting/denning/calving locations used by wildlife species listed under the Endangered Species Act; and
- If the wildlife resource value is tied to unique features associated with the corridor.

The Region of Comparison for determining wildlife values is the Columbia River Basin.

#### **Heritage Outstandingly Remarkable Values**

Heritage values are comprised of three components: Prehistoric, Historic, and Traditional Cultural.

When defining outstandingly remarkable **prehistoric values**, resource specialists considered:

- Whether or not the river corridor contains a site where there is evidence of occupation or use by American Indians or other prehistoric culture; and
- If the sites have national or regional importance for interpreting prehistory; may have been used concurrently by two or more cultural groups or may have been used by cultural groups for rare or sacred purposes.

Of particular significance are sites or features listed in or eligible for inclusion in the National Register of Historic Places (NRHP). The evaluation is based on existing inventory information.

The Regions of Comparison for evaluating prehistoric values are identified as the *Plains, Great Basin, and Columbia Plateau Culture* areas. Generally, prehistoric values have been associated with American Indian prehistory, although other ethnographic groups could be considered if they left traces of their activity on the landscape, or significant events were associated with certain special places.

When defining outstandingly remarkable **historic values**, resource specialists considered:

- If the river corridor contains a site or feature associated with a significant event, an important person, or a cultural activity of the past that was rare, unusual, or important in the region; and
- Whether or not a historic site and/or feature, in most cases, is 50 years old or older.

Of particular significance are national Historic Landmarks or sites or features listed in, or eligible for inclusion in, the NRHP.

The Region of Comparison used to evaluate historic outstandingly remarkable values is the Western United States.

When defining outstandingly remarkable **traditional cultural values**, resource specialists considered:

- Whether or not the river or area with the river corridor contains location(s) of regional importance to Indian tribes (religious activities, fishing, hunting, and gathering). Locations may have unusual characteristic or exceptional cultural value integral to continued pursuit of such activities.

The Regions of Comparison used to evaluate traditional cultural values were the traditional territories of American Indian cultures native to this area.

**Ecological/Botanical Outstandingly Remarkable Values**

When defining outstandingly remarkable ecological/botanical values resource specialists considered:

- If the river corridor contains an important element in a regional plan to conserve biological diversity while maintaining ecosystem integrity.

The Region of Comparison used to evaluate ecological/botanical values was identical to those used to evaluate geologic and hydrologic outstandingly remarkable values. Please refer to that section for further information.

**River Classification**

The types and amounts of activities and changes acceptable within an eligible, suitable, or designated river corridor depend on whether it is classified as a Wild, Scenic, or Recreational river. Activity compatibility with classification can be found in the Wild and Scenic Rivers portion of Chapter 3 in the Environmental Impact Statement. Below is a summary of the criteria used to determine tentative river classification.

**Table D-1. Criteria Used to Determine Tentative Classification**

| Tentative Classification  | Criteria Used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Wild River</b>         | The river is free of impoundments. The shoreline is essentially primitive. The presence of a few inconspicuous structures, particularly those of historic or cultural value, is acceptable. A limited amount of domestic livestock grazing or hay production is acceptable. There is little or no evidence of past timber harvest, and no ongoing timber harvest. The river is generally inaccessible except by trail. There are no roads, railroads, or other provisions for vehicular travel within the river area. A few existing roads leading to the boundary of the river area are acceptable. The river meets or exceeds federal criteria or federally approved state standards for aesthetics, for propagation of fish and wildlife normally adapted to the habitat of the river, and for primary contact recreation (swimming), except where exceeded by natural conditions. |
| <b>Scenic River</b>       | The river is free of impoundments. The shoreline is largely primitive and undeveloped. There is no substantial evidence of human activity. The presence of small communities or dispersed dwellings or farm structures is acceptable. The presence of grazing or crop production is acceptable. Evidence of past or ongoing timber harvest is acceptable, provided the forest appears natural from the riverbank. The river is accessible, in places, by road. Roads may occasionally reach or bridge the river. Short stretches of conspicuous, or longer stretches of inconspicuous roads or railroads are acceptable.                                                                                                                                                                                                                                                              |
| <b>Recreational River</b> | Low dams, diversions, or other modifications of the waterway are acceptable, provided the waterway remains generally natural in appearance. The shoreline has substantial evidence of human activity. Extensive residential development and a few commercial structures are acceptable. Lands may have been developed for the full range of agricultural and forestry uses. The shoreline may show evidence of past and ongoing timber harvest. The river is readily accessible by road or railroad. Parallel roads or railroads on one or both banks, as well as bridge crossings and other river access points, are acceptable.                                                                                                                                                                                                                                                     |

**FINAL LAND AND RESOURCE MANAGEMENT PLAN FINDINGS**

Two rivers with three segments were found eligible through this revised process. The rivers and their segments, classification(s), and ORVs are described in Tables D-2 and D-3, below.

Table D-2. Payette National Forest Eligible Wild and Scenic Rivers

| River Name   | Tributary To        | Segment | Segment Location                                 | Class <sup>1</sup> | Scenic <sup>2</sup> | Recreation | Geologic | Hydro | Fish | Wildlife | Heritage | Eco/Bot |
|--------------|---------------------|---------|--------------------------------------------------|--------------------|---------------------|------------|----------|-------|------|----------|----------|---------|
| Hard Creek   | Little Salmon River | 1       | Headwaters at Hard Creek Lake to Forest boundary | W                  | O                   |            | O        | O     |      |          |          |         |
| Hazard Creek | Little Salmon River | 1       | Headwaters to confluence with Vance Creek        | W                  | O                   |            | O        | O     |      |          |          |         |
| Hazard Creek | Little Salmon River | 2       | Confluence with Vance Creek to Forest boundary   | W                  | O                   |            | O        | O     |      |          |          |         |

Table D-3. Outstandingly Remarkable Values of the Eligible Rivers

| River Name   | ORV Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hard Creek   | <p><b>Scenic:</b> The river area contains very scenic cascading waterfalls, cirque basins, high mountain lakes, rock forms, and offers outstanding views. Fall colors highlight the scenic beauty of the area.</p> <p><b>Geologic/Hydrologic:</b> A combination and extent of several outstanding hydrologic and geologic features are found within this drainage. The landform within the lower half of the Hard Creek dominantly consists of steep to extremely steep mountain headlands and deeply entrenched canyon walls that are adjacent to a major stream. The landforms within the upper half dominantly consist of glacial headlands, uplands, troughs, and cirque basins.</p>   |
| Hazard Creek | <p><b>Scenic:</b> The river area contains very scenic cascading waterfalls, cirque basins, high mountain lakes, rock forms, and offers outstanding views. Fall colors highlight the scenic beauty of the area.</p> <p><b>Geologic/Hydrologic:</b> A combination and extent of several outstanding hydrologic and geologic features are found within this drainage. The landform within the lower half of the Hazard Creek dominantly consists of steep to extremely steep mountain headlands and deeply entrenched canyon walls that are adjacent to a major stream. The landforms within the upper half dominantly consist of glacial headlands, uplands, troughs, and cirque basins.</p> |

<sup>1</sup> Class = Classification of the river segment. W = Wild, R = Recreational, and S = Scenic

<sup>2</sup> Scenic, Recreation, Geologic, Hydro, Fish, Wildlife, Heritage, Eco/Bot = Outstandingly Remarkable Values. Scenic = Scenic Value, Recreation = Recreation Value, Geologic = Geologic Value, Hydro = Hydrologic Value, Fish = Fish Value, Wildlife = Wildlife Value, Eco/Bot = Ecological/Botanical Value.

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# Appendix E

## Wildlife and Fish

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**THREATENED, ENDANGERED, PROPOSED, AND CANDIDATE SPECIES**

Special management emphasis is given to species for which there is a viability concern. The Forest Service has a legal requirement to maintain or improve habitat conditions for Threatened, Endangered, and Proposed species under the Endangered Species Act. Administrative direction also exists to maintain or improve conditions for Candidate species for federal listing.

The U.S. Fish and Wildlife Service has not identified any critical habitat within the Forest for terrestrial species currently listed as threatened or endangered under the ESA. The NOAA Fisheries has identified critical habitat for chinook salmon. The Threatened, Endangered, Proposed, and Candidate species of the Payette National Forest, their locations, and important considerations for management are described in Table E-1.

**Table E-1. Threatened, Endangered, Proposed, or Candidate Species for the Payette National Forest, as of December 2002**

| Type                  | Common Name                    | Status                     | Global Rank* | Habitat                                             | Management Concerns                                                               |
|-----------------------|--------------------------------|----------------------------|--------------|-----------------------------------------------------|-----------------------------------------------------------------------------------|
| <b>Mammal Species</b> | Gray wolf                      | Experimental non-essential | G4           | All PVGs                                            | Threat of mortality                                                               |
|                       | Canada lynx                    | Threatened                 | G5           | PVGs 3, 6, 7, 9, 10, 11                             | Vulnerability, prey availability during winter                                    |
|                       | Northern Idaho ground squirrel | Threatened                 | G2           | PVGs 3, 4, 5                                        | Vulnerability, specific habitat needs                                             |
| <b>Bird Species</b>   | Bald eagle                     | Threatened                 | G4           | Large trees near lakes, reservoirs or large streams | Nesting and roosting sites                                                        |
| <b>Fish Species</b>   | Chinook salmon                 | Threatened                 | NA           | Perennial streams                                   | Sediment in spawning and rearing habitat                                          |
|                       | Steelhead trout                | Threatened                 | NA           | Perennial streams                                   | Sediment in spawning and rearing habitat                                          |
|                       | Bull trout                     | Threatened                 | NA           | Perennial streams                                   | Sediment in spawning and rearing habitat, water temperature, habitat connectivity |

\*Global Rank is a system of ranking the range-wide status of species maintained by State Conservation Data Centers and Natural Heritage Programs throughout North America and several other countries. Numerical rankings range from G1 to G5, where G1 species are considered critically imperiled at the global scale, and G5 species are considered globally widespread, abundant, and secure, although there may be concerns for the viability of local populations. Many researchers believe that species ranked G1-G3 need special consideration or mitigation for management activities that may negatively affect their habitat because their long-term viability is currently a concern (Andelman et al. 2001).

NA = No available ranking from the Conservation Data Center

**INTERMOUNTAIN REGION SENSITIVE SPECIES**

Table E-2 shows the Intermountain Region Sensitive species that occur on the Payette National Forest. The Regional Forester's Sensitive Species List is evaluated annually to see if species need to be added or removed. The Regional Forester designates species as "Sensitive" because their population or habitats are trending downward, or because little information is available on their population or habitat trends. The primary purpose of the Sensitive species program is to conserve or restore habitat conditions for these species to prevent them from becoming federally listed under the ESA.

**Table E-2. Intermountain Region Sensitive Species For the Payette National Forest, as of December 2002**

| Type                     | Common Name                    | Global Rank | Habitat                                    | Management Concerns                                         |
|--------------------------|--------------------------------|-------------|--------------------------------------------|-------------------------------------------------------------|
| <b>Mammal Species</b>    | Wolverine                      | G4T4        | All PVGs, high elevation                   | Vulnerability during denning                                |
|                          | Fisher                         | G5          | PVGs 3, 4, 5, 6, 7, 8, 9, 10               | Habitat fragmentation, snags and logs                       |
|                          | Townsend's big-eared bat       | G4          | Caves, mines, large trees                  | Vulnerability to disruption                                 |
|                          | Spotted bat                    | G4          | Caves, mines, large trees                  | Vulnerability to disruption                                 |
| <b>Bird Species</b>      | Northern Goshawk               | G5          | All PVGs, forested                         | Nesting territories and prey availability                   |
|                          | White-headed woodpecker        | G4          | PVGs 1, 2, 3, 5                            | Large snags, large trees, low tree density                  |
|                          | Northern three-toed woodpecker | G5          | PVGs 3, 7, 8, 9, 10, 11                    | Sufficient snags                                            |
|                          | Flammulated owl                | G4          | PVGs 1, 2, 3, 5, 7                         | Large snags and trees                                       |
|                          | Boreal owl                     | G5          | PVGs 3, 6, 7, 8, 9, 11                     | Sufficient large snags                                      |
|                          | Great gray owl                 | G5          | PVGs 9, 10                                 | High-elevation forests with meadows                         |
|                          | Harlequin duck                 | G4          | Large streams with forested riparian areas | Forested riparian areas                                     |
|                          | Mountain quail                 | G5          | Low-elevation shrubby riparian areas       | Need low-elevation shrubby riparian areas                   |
|                          | Columbian sharp-tailed grouse* | G5T3        | Native shrubland and grassland             | Shrubby wintering areas                                     |
| <b>Fish Species</b>      | Westslope cutthroat trout      | NA          | Perennial streams                          | Sediment in spawning and rearing areas in headwater streams |
| <b>Amphibian Species</b> | Spotted Frog                   | G4Q         | Riparian areas                             | Sufficient still or pond water                              |

NA = No available ranking from the Conservation Data Center.

\*Although there are no known occurrences of this species on the Forest, the close proximity of populations and habitat warrant consideration during project planning and implementation in some areas.

**FOREST MANAGEMENT INDICATOR SPECIES**

Table E-3 shows the Management Indicator Species (MIS) selected by the Payette National Forest. The primary reason that Management Indicator Species (MIS) are selected is because their populations are believed to indicate the effects of management activities. Other reasons are also considered (36 CFR 219.19(a)(1)). By monitoring and assessing habitat conditions of MIS, managers can estimate effects on other species within similar habitats.

**Table E-3. Management Indicator Species For the Payette National Forest**

| Type                | Common Name              | Global Ranking | Habitat           | Management Concerns                                                             |
|---------------------|--------------------------|----------------|-------------------|---------------------------------------------------------------------------------|
| <b>Bird Species</b> | Pileated Woodpecker      | G4             | PVGs 2-9          | Sufficient large trees, snags, and down logs                                    |
|                     | White-headed Woodpecker* | NA             | PVGs 1, 2, 3, 5   | Sufficient snags, and large trees with low crown density                        |
| <b>Fish Species</b> | Bull Trout               | NA             | Perennial Streams | Sediment in spawning and rearing areas, water temperature, habitat connectivity |

\*MIS for Management Areas 1, 2, 3, 5, 10 only.

NA = No available ranking from the Conservation Data Center.

**CHANGES IN SOURCE HABITAT FOR SELECTED SPECIES**

The Wisdom et al. (2000) analysis evaluated 91 wildlife species considered at risk within the Interior Columbia Basin Ecosystem Management (ICBEMP) area. This ICBEMP analysis divided the Columbia River Basin into 13 geographic units called Ecological Reporting Units (ERUs). The Payette National Forest lies almost entirely within ERU 13 (see Table E-4). Within each ERU, changes in source habitat from historic to current times were estimated, and risks factors to species or source habitat conservation were identified. Source habitat is defined as “those characteristics of macro vegetation that contribute to stationary or positive population growth” (Wisdom et al. 2000). A decrease in source habitat of greater than 20 percent was considered significant and a risk to that species long-term viability. Table E-4 shows the changes in source habitat that have occurred basin-wide and in ERU 13 for selected species in the Wisdom et al. (2000) analysis that are known or believed to occur on the Forest. Shading within the table highlights species’ source habitats with a 20% or greater decrease from historical levels.

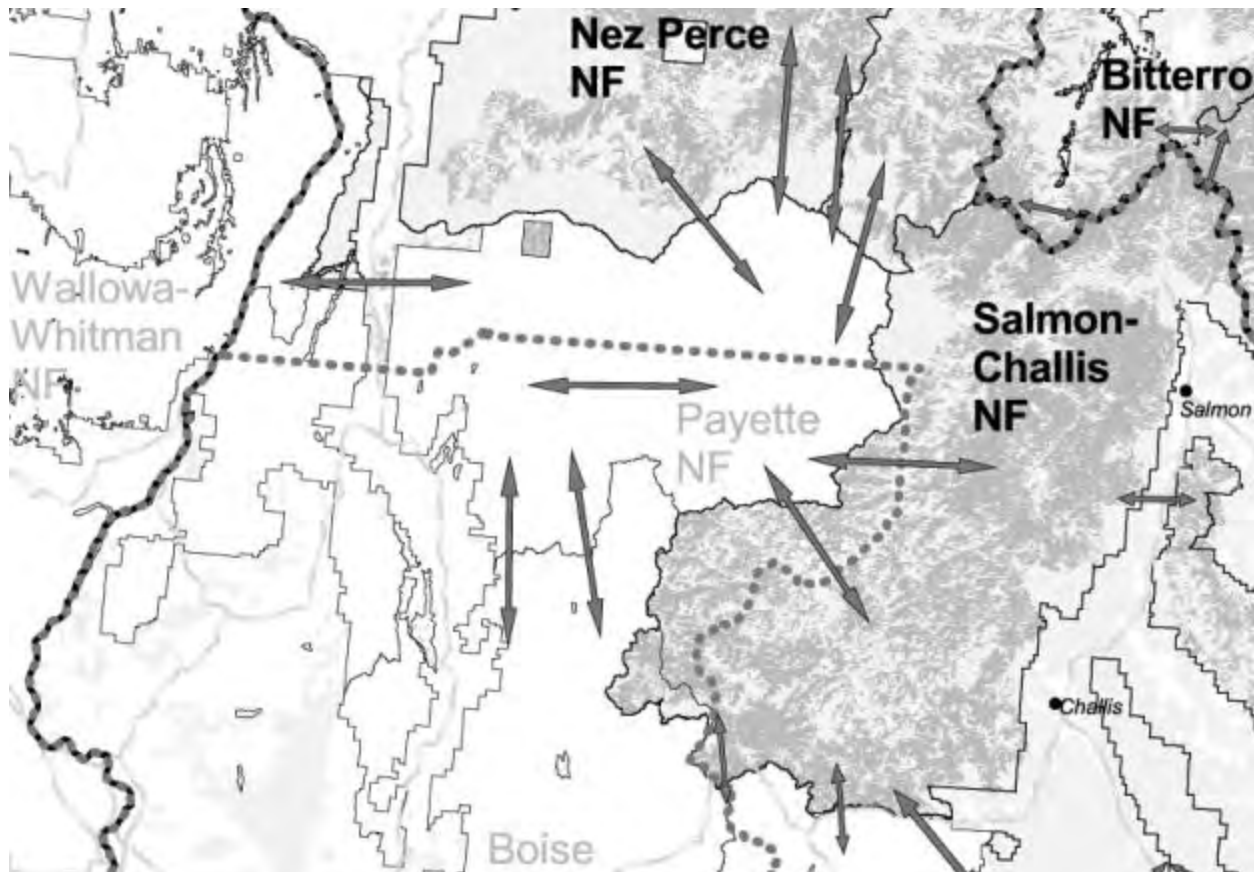
**Table E-4. Changes In Source Habitat For Selected Wildlife Species That Occur within the Forest, Taken from Wisdom et al. 2000**

| Species                               | Basin Wide Change | ERU 13 Change |
|---------------------------------------|-------------------|---------------|
| Canada lynx                           | + 14%             | + 12 %        |
| Gray wolf                             | - 16 %            | - 3 %         |
| White-headed woodpecker               | - 63 %            | - 61%         |
| Pygmy nuthatch                        | - 67 %            | - 62 %        |
| Lewis's Woodpecker, migrant           | - 83 %            | - 63 %        |
| Flammulated owl                       | - 56 %            | - 52 %        |
| Northern goshawk, summer              | - 43 %            | - 7 %         |
| American marten                       | - 38 %            | + 16 %        |
| Fisher                                | - 20 %            | + 35 %        |
| Black-backed woodpecker               | - 34 %            | +1 %          |
| Wolverine                             | + 33 %            | + 32 %        |
| Mountain quail                        | + 16 %            | - 12 %        |
| Bighorn sheep, winter                 | - 49 %            | - 29 %        |
| Bighorn sheep, summer                 | - 41 %            | - 17 %        |
| Vaux's swift                          | - 23 %            | + 51 %        |
| Pileated woodpecker                   | - 21 %            | + 21 %        |
| Northern three-toed woodpecker        | + 22 %            | + 77 %        |
| Boreal owl                            | - 61 %            | + 1 %         |
| Great gray owl                        | - 6 %             | + 31 %        |
| Spotted bat                           | - 17 %            | - 18 %        |
| Townsend's big-eared bat              | - 8 %             | + 20 %        |
| Columbian sharp-tailed grouse, summer | - 45 %            | - 56 %        |

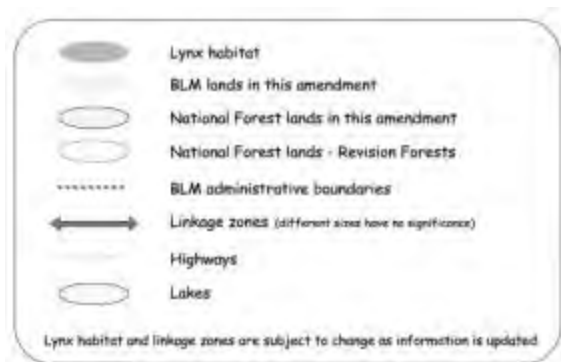
N/A = There were no available survey population records from for these species on FS administered lands within this ERU.

### LYNX HABITAT LINKAGE ZONES

**Figure E-1. Lynx Habitat Linkage Zones for the Payette National Forest**  
(From Northern Rockies Lynx Amendment Area mapping, as of September 2002)



The arrows on the map represent linkage zones.



**MANAGEMENT STRATEGIES TO ADDRESS ELK VULNERABILITY TO MORTALITY, TRAVEL MANAGEMENT IMPACTS, AND SECURITY NEEDS**

The following management strategies are intentionally broad and should be refined through coordination with State agencies, relative to population objectives, local field conditions, and experience with local elk populations. Land managers (biologists, planners, and line officers) should view these strategies as the foundation on which to implement elk habitat management under the Forest Plan (USDA Forest Service 1983). As there are many interacting variables, managers should evaluate each landscape on its own merits, taking into account hunter density and hunter use patterns in combination with access and forest vegetation (Weber et al. 1998). Christensen et al. (1993) provides a step-down process that can be used to coordinate Forest Plans with State strategic Plans.

When a primary issue for land management is elk security and vulnerability, emphasis should be placed on process, content and implementation of information rather than on numerical standards (Christensen et al. 1993). As pointed out by Weber et al. (1998), "It does not seem feasible to assign threshold values to act as maximum road density or minimum patch size guidelines." Nonetheless, there is information on relative road densities, and security needs that can be used as guidance.

Where maintenance of elk habitat quality, security, and/or vulnerability has been determined to be an important management consideration, open road densities, location of open roads and trails, and off-road motorized use should be evaluated to determine effects (Thomas et al. 1988). Elk management goals and objectives should be clear before imposing travel restrictions (Lyon et al. 1985). Because the response of elk to open or closed roads does vary, decisions to construct or close roads should be evaluated on a case-by-case basis (Lyon et al. 1985, Frederick 1991).

Open road density and security quality are both important when considering elk security and vulnerability during the hunting season. See Figure E-2 for display of habitat effectiveness for elk at road densities up to six miles per square mile (Lyon 1983, Lyon et al. 1985, Christensen et al. 1993). The model assumes that existing habitat contains a satisfactory array of security that provides for elk (Lyon 1979). When security and forage is less than desired, the effects of roads may be greater than displayed. Motorized traffic evokes an avoidance response by elk. Habitat effectiveness increases as the miles of road per square mile decreases.

Where the agreed upon management objective is to allow a desired numbers of bull elk to escape harvest, options include: shortening the hunting season, increasing restrictions on hunters, or providing security areas for elk through access restrictions. A combination of these options may be required. Security areas should be of the size, shape, and arrangement to meet desired elk objective and hunting opportunities. Hiding areas and security are not interchangeable components of elk habitat (Lyon and Canfield 1991). Hiding areas may be a factor in security prior to the hunting season, but it does not automatically provide security during the hunting season.

Where the objective is to have long hunting seasons, and distribute the bull harvest over the entire hunting season and maintain a desired level of mature bulls in the post-hunting-season population, guidelines should be developed for retaining or managing for elk security. For example, one recommended approach is to retain 30 percent or more of an analysis area in nonlinear blocks of secure areas equal or greater than 250 acres and equal or greater than ½ mile from motorized access (Hillis et al. 1991, Lyon and Canfield 1991). However, the number, size, and location of areas retained should be determined through use of local information and application of up-to-date information to meet desired conditions.

When addressing big game security at the local level, elk selection for wallows and licks, travel corridors and routes, forage sites, and forest stringers should also be considered. Lyon et al. (1985) point out that security and shelter appear to be the most basic habitat requirements for elk. “Productive elk habitat cannot be evaluated in separate parts.” During any season it is important that all recognized components of elk habitat be considered concurrently and be managed to meet desired outcomes.

Where needed to meet management objectives, vegetation around wallows, licks, travel corridors, created and natural openings, and forest stringers should be managed to maintain security (i.e. dense vegetation, or security areas). Vegetation screening in these areas should be provided and linked where feasible so that elk can make the expected use of these habitats. Vegetation should be managed around these components so that an individual is generally not observable as it makes use of, or travels through them. Specific site distances to provide security should be determined at the project level based on current elk reference sources and local knowledge of elk use. Generally, vegetation around licks or wallows should be two or more site distances as defined in the glossary. Forested vegetation around created and natural meadows should retain adequate vegetation density and stand size to provide for security. Integrity of forested stringers used as travel routes should be retained when necessary to meet desired elk objectives.

Elk winter range should be identified using current winter distribution surveys and habitat use, developed in cooperation with the Idaho Fish and Game Department and cooperators. Forested areas adjacent to winter foraging areas should maintain the vegetative integrity for elk (Lyons et al. 1985).

On winter ranges, modification of forested stands should be planned on a local basis. Primary emphasis is on maintaining adequate thermal and security to meet agreed upon elk management objectives. Forested vegetation should retain the ability following management to provide for continued use by elk to conserve energy and use available forage.



Figure E-2. Elk Habitat Effectiveness and Road Density  
(Lyon et al. 1985)

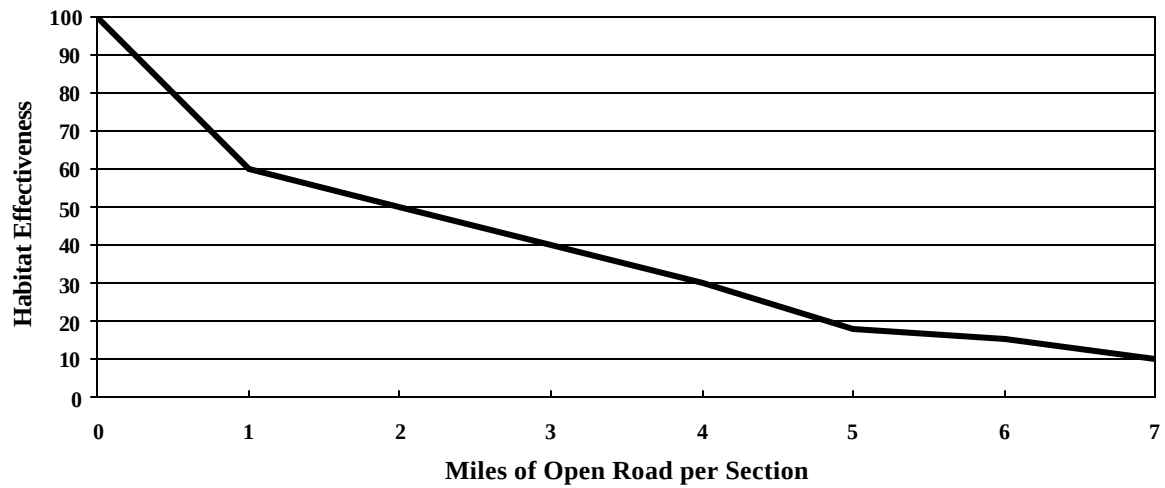
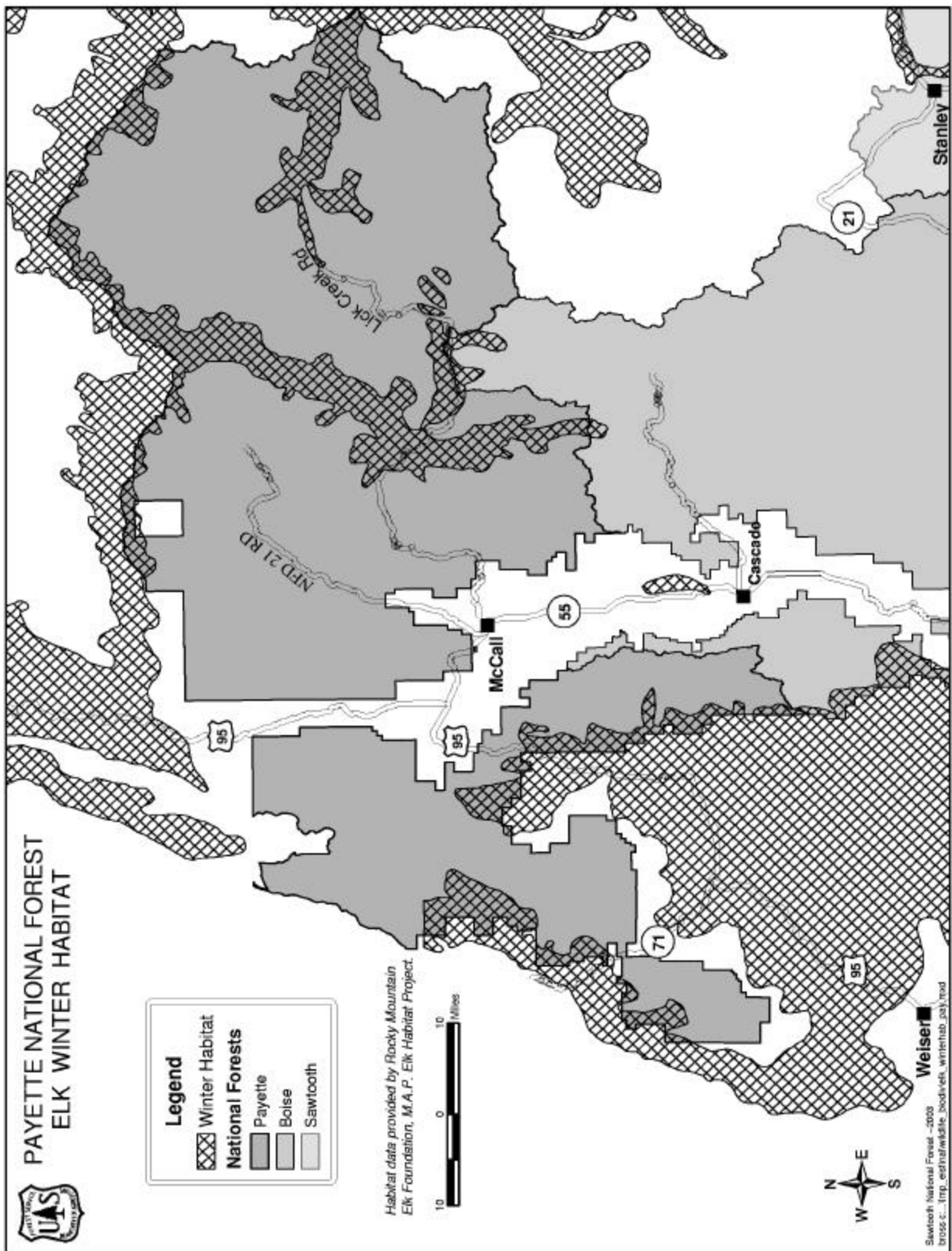


Figure E-3. Elk Winter Habitat



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# Appendix F

## Recreation Opportunity Spectrum

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## APPENDIX F

# RECREATION OPPORTUNITY SPECTRUM

### ROS and its Role in Forest Plan Revision

#### What is ROS?

The Recreation Opportunity Spectrum (ROS) consists of a classification system in which components of recreation settings and facilities—such as access, developed sites, activities, and experiences—are organized and arranged along a continuum or spectrum. The continuum ranges from very primitive settings and experiences to highly concentrated, urbanized ones. Each class is defined in terms of its specific combination of activities, setting, facilities, and experience opportunities.

The ROS provides a framework for defining the types of outdoor recreation opportunities and experiences that the public might desire, as well as the mix of the spectrum that a given National Forest might be able to provide. It also provides a context and tool for estimating and describing recreation resources as well as effects to those resources from alternative management strategies and actions.

#### Applications in Forest Plan Revision

ROS is utilized in the Forest Plan to provide a framework for:

- a) Providing a management context that ensures the maintenance or enhancement of recreation settings and of meeting public expectations for recreation experiences.
- b) Reflecting the overall resource management strategy, as expressed by MPC assignments, within each management area in a recreation opportunity context.
- c) Providing a meaningful context for the expression of recreation management strategy and direction at both the Forest-wide and management area levels. The application of the adopted ROS strategy is illustrated in Figure F-1, below.
- d) Analyzing trade-offs of available recreation opportunities in effects analysis.
- e) Comparing alternatives relative to the mix of recreation opportunities provided.
- f) Monitoring outputs in terms of providing recreation opportunities.
- g) Estimating recreation supply.

#### ROS Class Descriptions

The following descriptions of ROS classes were developed as a supplement to the ROS Users Guide, which contains more detailed information for most of these classes. The *ROS Users Guide* (USDA Forest Service, undated), contains a detailed description of the classes, overall concepts, and describes an inventory methodology. Specific ROS-related guidance for structure and improvement design can also be found in *The Built Environment Image Guide for the National Forests and Grasslands* (USDA Forest Service, 2001). This guide should be consulted when designing any type of structure or improvement on National Forest System lands.

#### Primitive

These areas provide for primitive recreation opportunities in unroaded and non-motorized settings. Unmodified natural and natural-appearing settings dominate the physical environment. In that these areas are generally larger than 5,000 acres, they offer opportunities for solitude, remoteness, and risk, with no on-site controls or restrictions evident after entry. Encounters with other users, and signs of other users, are minimal. Prescribed fire could be used to attain a variety of resource objectives. Generally, snowmobile, ATV, and other OHV uses are inconsistent with this ROS class.

In relatively rare cases, a motorized use may be present within areas classified as Primitive. This may occur as a result of uses authorized by legislation, administrative or emergency use of motorized vehicles, a setting inconsistency, or as an anomaly whose effects are extremely limited.

**Semi-Primitive Non-Motorized**

These areas provide for non-motorized recreation opportunities in unroaded and non-motorized settings. A natural-appearing setting dominates the physical environment, with only subtle or minor evidence of human-caused modifications. In that these areas are generally larger than 2,500 acres, they offer opportunities for solitude, remoteness, and risk, with a minimum of on-site controls and restrictions. Other user encounters should be generally low, with low levels of the sights and sounds of other users.

Management to control undesirable effects of insects, disease, and other pests, as well as management actions designed to maintain or improve the long-term health of the ecosystem, could occur. Prescribed fire could be used to attain a variety of resource objectives. Generally, snowmobile, ATV, and other OHV uses are inconsistent with this ROS class.

In relatively rare cases, a motorized use may be present within areas classified as semi-primitive non-motorized. This may occur as a result of administrative or emergency use of motorized vehicles, a setting inconsistency, or as an anomaly whose effects are extremely limited.

A number of setting inconsistencies may be present during winter periods in this classification. These inconsistencies consist mainly of roads or road prisms, minor structures and developed recreation features, and intermediate timber harvests whose presence becomes far less obvious during winter snow cover. Access during these periods usually shifts dramatically to skis and snowshoes, contributing to more primitive experiences.

Summer/winter shifts between this class and Semi-Primitive Motorized can also occur as a result of different travel management regulations. For example, areas where cross-country motorized travel is prohibited during the summer may be open to snowmobile use during winter periods.

**Semi-Primitive Motorized**

These areas provide for motorized recreation opportunities in semi-primitive settings. In areas seen from travelways, a natural-appearing setting dominates the outdoor physical environment, with only subtle or minor evidence of human-caused modifications. Other areas could have moderately dominant alterations. In that these areas are generally larger than 2,500 acres, they offer opportunities for solitude, remoteness, and risk, with little on-site controls and restrictions. Other user encounters should be generally low; however, the sounds of other users may be evident due to motorized uses.

A range of management activities that are consistent with semi-primitive settings may occur in these areas that support a wide range of other resource objectives. Prescribed fire could be used to attain a variety of resource objectives.

Motorized and non-motorized trails are the primary means of recreational user access within the area. Generally, existing roads within this class would be either inappropriate for or closed to passenger type vehicles. Non-motorized recreation opportunities may be present but these experiences are likely to be influenced by motorized uses in the area. Cross-country snowmobile use may occur on adequate snow depth in accordance with the current travel management plan or map and travel amendments. There may be areas or trails, within this ROS class, where motorized use is prohibited or restricted to enhance recreation experiences or to protect public safety or resources.

In some locations during winter, there may be considerable shifts to the Semi-Primitive Motorized class as the snow cover results in the road network being inaccessible to general automobile use. Where these areas are of sufficient size and are open to over-snow vehicles and/or have groomed snowmobile routes, they may function more closely like a Semi-Primitive Motorized area.

Some of the areas that shift from roaded natural or roaded modified during summer to a semi-primitive setting during winter may have a number of setting inconsistencies. These inconsistencies consist mainly of roads or road prisms, minor structures and developed recreation features, and intermediate timber harvests whose presence becomes far less obvious during winter snow cover. Access during these periods usually shifts dramatically to only over-snow vehicles and/or skis and snowshoes, contributing to more semi-primitive experiences.

Summer/winter shifts between this class and Semi-Primitive Non-Motorized can also occur as a result of different travel management regulations. For example, areas where cross-country motorized travel is prohibited during the summer may be open to snowmobile use during winter periods.

### **Roaded Natural**

These areas provide for a wide range of recreation activities that are generally focused along the primary and secondary travel routes in a natural-appearing, roaded, motorized setting. Recreation facilities are provided to facilitate recreation use. There may be a moderate to high degree of user interaction, as well as the sights and sounds of other users, depending upon the facilities provided. Seasonal or year-round recreation facilities are provided for user comfort and convenience. Although structures may be designed to accommodate numerous users, they generally convey a rustic theme and blend with the natural landscape. There may be considerable on-site user controls or restrictions. Opportunities for isolation, challenge, or risk are generally not very important, although opportunities for practicing outdoor skills may be important.

Scenic values are often emphasized. Recreation is often only one of many management objectives applied to these areas. A wide range of management activities and objectives may occur, generally being guided by the adopted visual quality objectives. Landscape modifications due to resource management activities, where evident, harmonize with the natural setting. Prescribed fire could be used to attain a variety of resource objectives.

A wide range of recreation facilities may be provided for user convenience and comfort. Developed campgrounds of varying size, complexity, and development scale could occur. There may also be a wide range of facilities and structures to support other Forest uses such as telecommunication facilities, power lines, and administrative sites.

A wide range of transportation routes can occur, from State Highways to native-surfaced, timber access roads. Cross-country snowmobile use may occur on adequate snow depth in accordance with the current travel management plan or map and travel amendments. There may be areas, trails, or roads within this ROS class where motorized use is prohibited or restricted to enhance recreation experiences or to protect public safety or resources.

### **Roaded Modified**

These areas provide for a range of recreation experiences that are consistent with substantially modified, motorized settings in which the sights and sounds of humans are readily evident and the interaction between users can be from low to high. Recreation experiences and opportunities in these areas often depend on vehicular access off the primary routes via secondary roads. Camping experiences are relatively primitive, with few on-site facilities provided, requiring some self-reliance and use of primitive outdoor skills.



Recreation is often only one of many management objectives applied to these areas. Recreation management may be secondary to other resource needs and commodity production, or vegetation restoration may be the dominant emphasis. A wide range of management activities and uses, such as providing commercial wood products, may often take priority, and may result in substantially altered settings over much of the area. Prescribed fire could be used to attain a variety of resource objectives.

There may also be a wide range of facilities and structures to support other Forest uses, such as telecommunication facilities, power lines, and administrative sites. There generally should be few recreation developments in these areas. Basic facilities may be provided in some areas for resource protection. Camping occurs at user defined or dispersed camping locations.

The transportation network primarily consists of unpaved, gravel, or native-surface local or secondary roads. Cross-country snowmobile use may occur on adequate snow depth in accordance with the current travel management plan or map and travel amendments. There may be areas, trails, or roads within this ROS class where motorized use is prohibited or restricted to enhance recreation experiences or to protect public safety or resources.

In some locations during winter, there may be considerable shifts to the Semi-Primitive Motorized class as the snow cover results in the road network being inaccessible to general automobile use. Where these areas are of sufficient size and are open to over-snow vehicles and/or have groomed snowmobile routes, they may function more closely like a Semi-Primitive Motorized area.

### **Rural**

Typically, these areas are characterized by recreation sites that can be utilized by large numbers of people at one time. High quality and quantity recreation use characterize these areas. While natural conditions usually do not dominate the activity centers, scenic values are often a critical element of the landscape seen as middleground and background from such areas. Surrounding scenic values are often a valued resource in the adjacent Forest landscape. The recreation opportunities offered are usually managed, regulated, and numerous but also in harmony with nature.

Numerous recreation facilities may be clustered in these areas. Facilities are designed for user comfort to accommodate large groups and are surrounded by highly intensified motorized use and organized parking. Forms of mass transit are often available to carry people throughout the site. The on-site vegetation is often in a manicured or managed state.

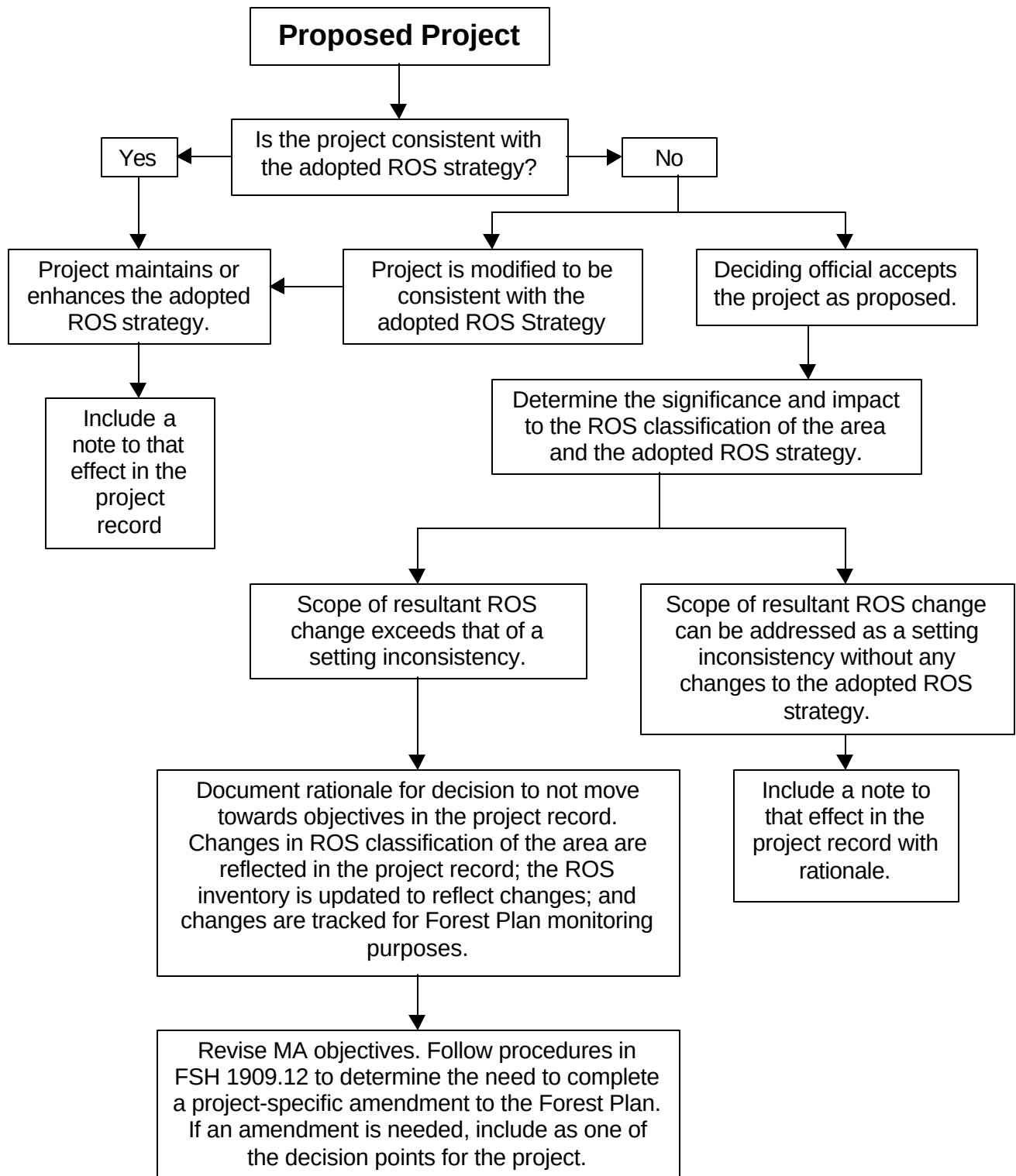
Generally, transportation routes consisting of State and Forest Service paved roadways are the primary means of recreational user access within the area. Trails may also be paved or surfaced in areas of concentrated use. There may be areas, trails, or roads within this ROS class where motorized use is prohibited or restricted to enhance recreation experiences or to protect public safety or resources.

### **REFERENCES**

**USDA Forest Service**, Undated, *ROS Users Guide*

**USDA Forest Service**, 2001, *The Built Environment Image Guide for the National Forests and Grasslands*, FS-710

Figure F-1. ROS Management Direction Implementation Pathway



# Appendix G

## Land Capability Groups

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**LAND CAPABILITY GROUPS AND SUSCEPTIBILITY TO EROSION**

This appendix was derived and based on the methodology and information contained in the publication “Land Systems Inventory, Boise National Forest, Idaho” authored by Wendt et al. (1975). The approach outlined in Wendt’s publication aggregates certain landtype associations together into what are termed land capability groups. These groups are typically defined as areas that have similar characteristics, suitabilities, potentials, and responses to use. Once aggregated, the landtype capability groups are used to make meaningful resource decisions. They reflect management opportunities and constraints that can be the basis for land use planning decisions. For example, lands that have an inherently high productivity potential for timber and low susceptibility to erosion can be identified as areas with the best opportunity for coordinated timber activities with a maximum return for dollars invested. Conversely, lands that have a high susceptibility to erosion may not be the best place to build new roads or intensively harvest timber.

Figure G-1 is to be used as a starting point for making more definitive decisions about determining or “firming up” individual allotment grazing capacities. For this generally purpose, all the Forest’s land capability groups were aggregated into two categories:

- 1) Those with a high susceptibility to erosion, and
- 2) Those with low to moderate susceptibility to erosion.

High susceptibility to erosion is defined as the land capability groups (landtype capability groups 6 through 9) that:

- Have moderately high-to-high erosion potential,
- Have low to moderate forage productivity,
- Require a high level of effort to maintain an intensive land use, and
- Are ranked as having the greatest erosion hazard in conjunction with intensive management.

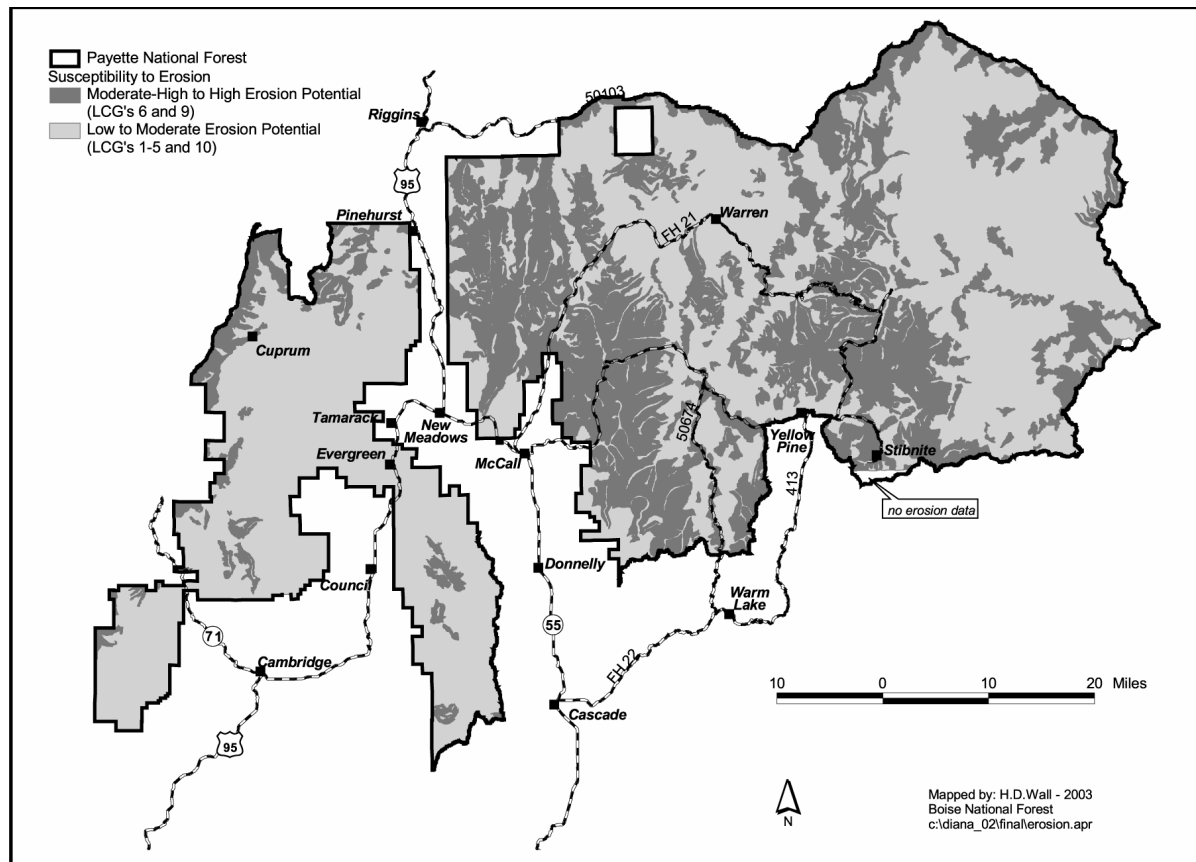
The remaining groups (landtype capability groups 1 through 5, and 10) were placed in the low to moderate category.

Rangeland Resources Guideline 1 of this plan can be applied when ground verification of an allotment’s grazing capacity occurs. By using the following appendix map and determining whether the conditions outlined in the guideline (i.e., ground cover, slope, soil depth) exist, a decision can then be made as to whether a specific piece of the allotment is included as part of the grazing capacity determination. This process can be documented as part of the allotment’s 2210 Analysis and Plans records, and then be used as a basis for term grazing permit adjustment decisions.

**LITERATURE CITED**

**Wendt, George E., Richard A. Thompson, Kermit N. Larson,** 1975, *Land Systems Inventory, Boise National Forest, Idaho – A Basic Inventory for Planning and Management*, USDA Forest Service, Boise National Forest

Figure G-1. Land Capability Groups for the Payette National Forest



# **Appendix H**

## **Legal Requirements and Administrative Framework for Forest Planning and Resource Management**

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## **INTRODUCTION**

This appendix briefly describes some of the major laws, regulations, and policies that govern Forest Planning and resource management on the Payette National Forest, and how this framework provides protection to Forest Resources. Appendix H contains a definition of Forest Plans and information on the following requirements: legal requirements of Forest Plans; National Forest Management Act; Code of Federal Regulations; Forest Service Manual; Statutory, Regulatory, and Policy Authorities on Selected Topics; and Sensitive Species – Key Policies and Requirements. Forest Resources and their additional legal requirements are listed in the same order as they appeared in Chapter 3 of the Forest Plan EIS and Chapter III of the Forest Plan.

## **FOREST PLAN DEFINITION**

A Forest Plan is a document required by Sec. 6 (a) of the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA), as amended by the National Forest Management Act of 1976 (NFMA). Forest Plans guide all natural resource management activities and establish management standards and guidelines for the National Forest System. They determine resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management. [36 CFR §219.1(b)] The six decisions made in a Forest Plan are outlined in Chapter I, Introduction, of this Forest Plan.

## **LEGAL REQUIREMENTS OF FOREST PLANS**

The NFMA and its accompanying regulations (36 CFR §219), along with Forest Service Manual (FSM) 1920, define the legal requirements of Forest Plans. Additional information on planning can be found in the National Environmental Policy Act (NEPA), Case Law, Appeal Decisions, Forest Service Handbook 1909.15, Internal Memos, Informal WO and RO direction, preferences of local managers and planners, and chapters in the Regional Desk Guide.

### **National Forest Management Act Requirements**

The following are requirements for forest plans from the NFMA.

1. Determine forest management systems, harvesting levels, and procedures [16U.S.C. 1604 §6 (e)(2)].
2. Describe proposed and possible actions, including the planned timber sale program and the proportion of probable methods of timber harvest. [16 U.S.C.
  - a. 1604 §6 (f)(2)]
3. [The regulations shall] require the identification of the suitability of lands for resource management. [16 U.S.C. 1604 §6 (g)(2)(A)]
4. Even-aged harvest methods will be used only where...there are established according to geographic areas, forest types, or other suitable classifications the maximum size limits for areas to be cut in one harvest operation. [16 U.S.C. 1604 §6 (g)(3)(F)(iv)]
5. Identify lands within the management area, which are not suited for timber production. [16 U.S.C. 1604 §6 (k)]

**Code of Federal Regulations Requirements**

Planning regulations set forth a process for developing, adopting, and revising Forest Plans. These regulations prescribe how land and resource management is to be conducted on National Forest system lands. Following is a summary of these regulations.

**Scope And Applicability**

Additional planning for special areas (wilderness, wild and scenic rivers, national recreation areas, and national trails) shall be met through forest plans. [36 CFR §219.2 (a)]

**Public Participation**

Public participation activities shall be used early and often throughout the development of plans. [36 CFR §219.6 (c)]

**Monitoring And Evaluation**

A program of monitoring and evaluation shall be conducted. [36 CFR §219.7(f)]

**Forest Plan General Procedures**

Revisions are not effective until considered and approved in accordance with the requirements for the development and approval of a forest plan. [36 CFR §219.10(g)]

**Draft and Final Environmental Impact Statement**

A draft and final environmental impact statement shall be prepared for the proposed plan according to NEPA procedures. [36 CFR §219.10 (b)]

- The draft environmental impact statement shall identify a preferred alternative. [36 CFR §219.10 (b)]
- The interdisciplinary team shall formulate a broad range of reasonable alternatives according to NEPA procedures. [36 CFR §219.12 (f)]
- The physical, biological, economic, and social effects of implementing each alternative considered in detail shall be estimated and compared according to NEPA procedures. [36 CFR §219.12 (g)]
- The interdisciplinary team shall evaluate the significant physical, biological, economic, and social effects of each management alternative that is considered in detail. [36 CFR §219.12 (h)]
- The Forest Supervisor shall recommend to the Regional Forester a preferred alternative to be identified in the draft environmental impact statement and displayed as the proposed plan. [36 CFR §219.12 (i)]

**Record of Decision**

The Regional Forester shall prepare a concise public Record of Decision, which documents approval and accompanies the plan and final environmental impact statement. [36 CFR §219.10 (c)(1)]

The Record of Decision shall include a summarized comparison of the selected alternative with any other alternative considered that is environmentally preferable to the selected alternative, and any other alternative considered that comes nearer to maximizing present net value. [36 CFR §219.12 (j)]



**Forest Plan Content**

A forest plan must contain the following items:

1. A brief summary of the Analysis of the Management Situation. [36 CFR§219.11 (a)]
2. Forest multiple-use goals and objectives [36 CFR §219.11 (b)]
3. A description of the desired future condition of the forest or grassland [36CFR §219.11 (b)]
4. An identification of the quantities of goods and services that are expected to be produced [36 CFR §219.11 (b)]
5. Multiple-use prescriptions and associated standards and guidelines for each management area [36 CFR §219.11 (c)]
6. Proposed and probable management practices such as the planned timber sale program [36 CFR §219.11 (c)].
7. Monitoring and evaluation requirements [36 CFR §219.11 (d)]

**Analysis of the Management Situation**

The analysis of the management situation shall include the following:

- Benchmark analyses to define the range within which alternatives can be constructed [36 CFR §219.12 (e)(1)]
- [Estimates of] the current level of goods and services provided by the unit and the most likely amount of goods and services expected to be provided in the future if current management direction continues [36 CFR §219.12(e)(2)]
- Projections of demand using best available techniques with both price and non-price information [36 CFR §219.12 (e)(3)]
- A determination of the potential to resolve public issues and management concerns [36 CFR §219.12 (e)(4)]
- A determination of the need to establish or change management direction [36 CFR §219.12 (e)(5)]

**Timber Resource Land Suitability**

Lands that are not suited for timber production shall be identified. [36 CFR§219.14]

**Vegetation Management Practices**

The vegetation management practices chosen for each vegetation type and circumstance shall be defined in the forest plan with applicable standards and guidelines. [36 CFR 219.15]

**Timber Resource Sale Schedule**

The selected forest management alternative includes a sale schedule that provides the allowable sale quantity. [36 CFR §219.16]

**Evaluation of Roadless Areas**

Unless otherwise provided by law, roadless areas within the National Forest System shall be evaluated and considered for recommendation as potential wilderness areas during the forest planning process. [36 CFR §219.17 (a)]

**Wilderness Management**

Forest planning shall provide direction for the management of designated wilderness and primitive areas. [36 CFR §219.18]

**Fish and Wildlife Resources**

Each alternative shall establish objectives for the maintenance and improvement of habitat for management indicator species [of fish and wildlife]. [36 CFR§219.19 (a)]

Certain vertebrate and/or invertebrate species present in the area shall be identified and selected as management indicator species, and the reasons for their selection will be stated. [36 CFR §219.19 (a)(1)]

Habitat determined to be critical for threatened and endangered species shall be identified, and measures shall be prescribed to prevent the destruction or adverse modification of such habitat. [36 CFR §219.19 (a)(7)]

**Grazing Resource**

The suitability and potential capability of National Forest System lands for producing forage for grazing animals and for providing habitat for management indicator species shall be determined. [36 CFR §219.20]

- Lands suitable for grazing and browsing shall be identified, and their condition and trend shall be determined. [36 CFR §219.20 (a)]
- The present and potential supply of forage for livestock, wild and free-roaming horses and burros, and the capability of these lands to produce suitable food and cover for selected wildlife species shall be estimated. [36CFR §219.20 (a)]
- The use of forage by grazing and browsing animals will be estimated. [36CFR §219.20 (a)]
- Lands in less than satisfactory condition shall be identified and appropriate action planned for their restoration. [36 CFR §219.20 (a)]

**Recreation Resources**

Forest planning shall identify:

- The physical and biological characteristics that make land suitable for recreation opportunities [36 CFR §219.21 (a)(1)],
- The recreational preferences of user groups and the settings needed to provide quality recreation opportunities [36 CFR §219.21 (a)(2)],
- Recreation opportunities on the National Forest System lands [36 CFR§219.21 (a)(3)].

The visual resource shall be inventoried and evaluated as an integrated part of evaluating alternatives in the forest planning process. [36 CFR §219.21(f)]

Forest planning shall evaluate the potential effects of vehicle use off roads, and classify areas and trails of National Forest System lands as to whether or not off-road vehicle use may be permitted. [36 CFR §219.21(g)]

**Diversity**

Inventories shall include quantitative data making possible the evaluation of diversity [of plant and animal communities and tree species] in terms of its prior and present condition. [36 CFR §219.26]

**Research**

Research needs for management of the National Forest System shall be identified during planning. [36 CFR §219.28]

**Cultural and Historic Resources**

Forest planning shall:

- Provide an overview of known data relevant to history, ethnography, and prehistory of the area under consideration, including known cultural resource sites,
- Identify areas requiring more intensive inventory,
- Identify the need for maintenance of historic sites on, or eligible for inclusion in, the National Register of Historic Places,
- Identify opportunities for interpretation of cultural resources for the education and enjoyment of the American public. [36 CFR §219.24].

**Research Natural Areas**

Planning shall make provision for the identification of examples of important forest, shrubland, grassland, alpine, aquatic, and geologic types that have special or unique characteristics of scientific interest and importance and that are needed to complete the national network of RNAs. [36 CFR §219.25]

**Forest Service Manual Requirements**

1. The forest plan consists of both forest-wide and area specific standards and guidelines that provide for land uses with anticipated resource outputs under the given set of management constraints. (FSM 1922)
2. Minimum results required of forest planning are:
  - a) Identification of resource management issues and concerns and management opportunities [FSM 1922.11 (1)]
  - b) Development of a set of criteria to guide the formulation and evaluation of alternatives [FSM 1922.11 (2)]
  - c) Analysis of the management situation including all items required in 36 CFR219.12 (e) [FSM 1922.11 (3)]
  - d) Formulation of a set of alternatives in accordance with 36 CFR 219.12 (f) [FSM 1922.11 (4)]

- e) Evaluation of alternatives, and identification of a preferred alternative in accordance with NEPA, CEQ regulations, and Forest Service environmental policies and procedures [FSM 1922.11 (5)]
  - f) A forest plan that achieves the 14 principles described in 36 CFR 219.1[FSM 1922.11 (6)]
  - g) A monitoring program to evaluate progress toward achieving the goals, objectives, and standards of the plan and the validity of assumptions and coefficients used to estimate outputs and effects [FSM 1922.11 (7)]
3. In addition, the forest planning process must:
- a) Provide management direction for wilderness, wild and scenic rivers, national recreation areas, national trails, national monuments, national scenic areas, research natural areas, national management emphasis areas, and other identified special interest areas [FSM 1922.15 (1)]
  - b) Determine the silvicultural systems and practices to be applied to suitable land [FSM 1922.15 (3)]
  - c) Determine output levels for fuelwood and other non-industrial wood products where sustained demand is anticipated [FSM 1922.15 (5)]
  - d) Determine the annual net growth on lands suitable for timber production for the fifth decade of the forest plan for at least the preferred alternative [FSM 1922.15 (8)]
  - e) Identify the desired landownership pattern and develop guidelines for landownership adjustments [FSM 1922.15 (15)]
  - f) Identify the specific access requirements and travel management options available to meet the objectives for each management prescription [FSM 1922.15 (17)].
  - g) Determine watershed condition class and include objectives or prescriptions for improving watershed conditions when necessary [FSM 1922.15 (20)]
  - h) Identify groundwater aquifers and provide management direction for their protection [FSM 1922.15 (22)]
4. 36 CFR §219.11 establishes minimum requirements for content of the forest plan. (FSM 1922.2)
5. To revise a forest plan, follow procedures set forth in 36 CFR §219.12 after obtaining approval of the Chief to schedule a revision. (FSM 1922.6)
6. Consideration of wilderness suitability is inherent in land and resource management planning. Planning for potential wilderness designation may occur in development of a forest plan or may require a separate study. (FSM 1923)
7. Consideration of potential wild and scenic rivers is an inherent part of the ongoing land and resource management planning process. (FSM 1924)

## Statutory, Regulatory and Policy Authorities on Selected Topics

Specific direction concerning diversity is given in both the 1976 NFMA statute and implementing regulations of 1982. The NFMA provides statutory direction for managing the National Forest System to provide for diversity of plant and animal communities. Section 6(g)(3)(B) of the NFMA states:

The [planning] regulations shall include, but not be limited to . . . (3) specifying guidelines for land management plans developed to achieve the goals of the [RPA] Program which . . . (B) provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives, and within the multiple-use objectives of a land management plan adopted pursuant to this section, provide, where appropriate, to the degree practicable, for steps to be taken to preserve the diversity of tree species similar to that existing in the region controlled by the plan.

To ensure an adequate consideration of diversity, the NFMA planning regulations (36 CFR 219) address diversity at several points. First, the regulations provide a definition of diversity to guide land and resource management planning:

36 CFR 219.3 Definitions and Terminology. “Diversity: The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan.”

Other sections of the NFMA regulations that specifically use the term “diversity” are:

36 CFR 219.26 Diversity. “Forest planning shall provide for diversity of plant and animal communities and tree species consistent with the overall multiple-use objectives of the planning area. Such diversity shall be considered throughout the planning process. Inventories shall include quantitative data making possible the evaluation of diversity in terms of its prior and present condition. For each planning alternative, the interdisciplinary team shall consider how diversity will be affected by various mixes of resource outputs and uses, including proposed management practices.”

36 CFR 219.27 Management Requirements. “(a) Resource Protection. All management prescriptions shall-- . . . (5) Provide for and maintain diversity of plant and animal communities to meet overall multiple use objectives, as provided in paragraph (g) of this section; . . . (g) Diversity. Management prescriptions, where appropriate and to the extent practicable, shall preserve and enhance the diversity of plant and animal communities, including endemic and desirable naturalized plant and animal species, so that it is at least as great as that which would be expected in a natural forest and the diversity of tree species similar to that existing in the planning area. Reduction in diversity of plant and animal communities and tree species from that which would be expected in a natural forest, or from that similar to the existing diversity in the planning area, may be prescribed only where needed to meet overall multiple use objectives . . .”

FSM 2620 includes direction regarding habitat planning and evaluation, including specific forest planning direction for meeting biological diversity requirements:

"A forest plan must address biological diversity through consideration of the distribution and abundance of plant and animal species, and communities to meet overall multiple-use objectives." (FSM 2622.01)

Specific direction concerning viability is provided in the 1982 NFMA implementing regulations at 36 CFR 219.19:

“Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area. For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area. In order to insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area.” (36 CFR 219.19)

The 1983 USDA Departmental Regulation 9500-4 provides further direction to the Forest Service, expanding the viability requirements to include plant species:

“Habitats for all existing native and desired non-native plants, fish, and wildlife species will be managed to maintain at least viable populations of such species. In achieving this objective, habitat must be provided for the number and distribution of reproductive individuals to ensure the continued existence of a species throughout its geographic range . . . Monitoring activities will be conducted to determine results in meeting population and habitat goals.”

Specific FSM direction, from 1986, concerning viability of plant and animal species includes:

“Management of habitat provides for the maintenance of viable populations of existing native and desired non-native wildlife, fish, and plant species, generally well-distributed throughout their current geographic range” [FSM 2622.01(2)]

“Maintain viable populations of all native and desired non-native wildlife, fish and plant species in habitats distributed throughout their geographic range on National Forest System lands.” [FSM 2670.22(2)]

Specific management requirements and direction concerning management indicator species is provided in the 1982 NMFA implementing regulations at 36 CFR 219.19, and in the Forest Service Manual 2600:

“In order to estimate the effects of each alternative on fish and wildlife populations, certain vertebrate and/or invertebrate species present in the area shall be identified and selected as management indicator species and the reasons for their selection will be stated. These species shall be selected because their population changes are believed to indicate the effects of management activities. In the selection of management indicator species, the following categories shall be represented where appropriate: Endangered and threatened plant and animal species identified on State and Federal lists for the planning area; species with special habitat needs that may be influenced significantly by planned management programs; species commonly hunted, fished, or trapped; non-game species of special interest; and additional plant or animal species selected because their population changes are believed to indicate the effects of management activities on other species of selected major biological communities or on water quality . . .” [36CFR 219.19(a)(1)]

“Planning alternatives shall be stated and evaluated in terms of both amount and quality of habitat and of animal population trends of the management indicator species.” [36 CFR 219.19(a)(2)]

“Population trends of the management indicator species will be monitored and relationships to habitat changes determined . . .” [36 CFR 219.19(a)(6)]

“Habitat determined to be critical for threatened and endangered species shall be identified, and measures shall be prescribed to prevent the destruction or adverse modification of such habitat. Objectives shall be determined for threatened and endangered species that shall provide for, where possible, their removal from listing as threatened and endangered species through appropriate conservation measures, including the designation of special areas to meet the protection and management needs of such species.” [36 CFR 219.19(a)(7)]

Forest Service Manual direction concerning habitat planning is contained in 2620.

“Management Indicators: Plant and animal species, communities, or special habitats selected for emphasis in planning, and which are monitored during forest plan implementation in order to assess the effects of management activities on their populations and the populations of other species with similar habitat needs which they may represent.” (FSM 2620.5)

“Select management indicators for a forest plan or project that best represent the issues, concerns, and opportunities to support recovery of Federally-listed species, provide continued viability of sensitive species, and enhance management of wildlife and fish for commercial, recreational, scientific, subsistence, or aesthetic values or uses. Management indicators representing overall objectives for wildlife, fish, and plants may include species, groups of species with similar habitat relationships, or habitats that are of high concern.” (FSM 2621.1)

“Select ecological indicators (species or groups) only if scientific evidence exists confirming that measurable changes in these species or groups would indicate trends in the abundance of other species or conditions of biological communities they are selected to represent.” [FSM 2621.1(3)].

“Document, in the permanent planning records for a forest plan, the rationale, assumptions, and procedures used in selecting management indicators.” [FSM 2621.1(4)]

“Document, within the forest or project plan, how management indicators collectively address issues, concerns, and opportunities for meeting overall wildlife and fish, including endangered, threatened, and sensitive species goals for the plan or project area.” [FSM 2621.1(5)]

“To preclude trends toward endangerment that would result in the need for Federal listing, units must develop conservation strategies for those sensitive species whose continued existence may be negatively affected by the forest plan or a proposed project. To devise conservation strategies, first conduct biological assessments of identified sensitive species. In each assessment, meet these requirements:

1. Base the assessment on the current geographic range of the species and the area affected by the plan or project. If the entire range of the species is contained within the plan or project area, limit the area of analysis to the immediate plan or project area. If the geographic range of the species is beyond the plan or project area, expand the area of analysis accordingly.
2. Identify and consider, as appropriate for the species and area, factors that may affect the continued downward trend of the population, including such factors as: distribution of habitats, genetics, demographics, habitat fragmentation, and risk associated with catastrophic events.”
3. Display findings under the various management alternatives considered in the plan or project (including the no-action alternative).

“Biological assessments may also be needed for endangered or threatened species for which recovery plans are not available. See FSM 2670 for direction on biological assessments for endangered and threatened species.” (FSM 2621.2)

“In analyzing the effects of proposed actions, conduct habitat analyses to determine the cumulative effects of each alternative on management indicators selected in the plan or project area . . .” (FSM 2621.3)

“The forest plan must identify habitat components required by management indicators; determine goals and objectives for management indicators; specify standards, guidelines, and prescriptions needed to meet management requirements, goals, and objectives for management indicators; prescribe mitigation measures, as appropriate, to ensure that requirements, goals, and objectives for each management indicator will be sufficiently met during plan implementation at the project level.” (FSM 2621.4)

“Conduct monitoring of plans and projects to determine whether standards, guidelines, and management prescriptions for management indicators are being met and are effective in achieving expected results. Use monitoring and evaluation to guide adjustments in management and to revise or refine habitat relationships information and analysis tools used in planning.” (FSM 2621.5)

Specific direction concerning use of best available data is provided in the 1982 NFMA implementing regulations at 36 CFR 219.12(d):

“Each Forest Supervisor shall obtain and keep current inventory data appropriate for planning and managing the resources under his or her administrative jurisdiction. The Supervisor will assure that the interdisciplinary team has access to the best available data. This may require that special inventories or studies be prepared. The interdisciplinary team shall collect, assemble, and use data, maps, graphic material, and explanatory aids, of a kind, character, and quality, and to the detail appropriate for the management decisions to be made.”

Specific direction concerning use of information and scientific data is also provided in the NEPA implementing regulations at 40 CFR 1502.24:

“Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement. An agency may place discussion of methodology in an appendix.”

## LEGAL AND ADMINISTRATIVE FRAMEWORK BY RESOURCE

### Air Quality and Smoke Management

The *Clean Air Act and Amendments* were established to protect public health and welfare. This Act has been strengthened by several amendments, the latest coming in 1990. The Clean Air Act requires that the federal agencies comply with all federal, state, tribal, interstate, and local air quality standards and requirements, including the following:

- Air Quality Related Values for Class I airsheds,



- Ambient Air Quality Standards for six pollutants known to harm human health,
- Visibility Protection and Regional Haze standards related to fine particulate matter,
- Conformity provisions related to federal activities occurring within non-attainment areas.

Additionally, EPA's Interim Air Quality Policy on Wildland Fire and Prescribed Fires was developed to integrate the goals of allowing fire to function in its ecological role while protecting public health and welfare by mitigating the impacts of smoke. Federal agencies are expected to incorporate the requirements of the interim policy into their planning and operations.

The *Forest and Rangeland Renewable Resources Act* (1974), *Federal Land Management Policy Act* (1976), and *National Forest Management Act* (1976) and subsequent rules provide a mandate to:

- Protect and improve the quality of the air resource on National Forests,
- Manage public lands in a manner that protects air quality and atmospheric values,
- Comply with requirements imposed by federal, state, interstate or local authorities or courts.

The *Wilderness Act* (1964) and subsequent Acts designating individual Wilderness Areas were enacted to preserve wilderness resources and character. Although air quality and its effects are not directly mentioned in the Wilderness Act, the Act requires the Forest Service to minimize the effects of human use or influence on natural ecological processes, and preserve natural conditions.

Individual State Rules for Smoke Management Programs, Open Burning and Emergency Air Pollution Episodes. *Idaho Administrative Code IDAPA58.01.01: Rules for the Control of Air Pollution in Idaho* and *Utah Administrative Code Rule R307-202, 204 and 105*. These state laws described rules for fire use, and processes (permits, reporting and other requirements) for the coordinated burning operations of the smoke management programs (MT/ID Airshed Group and the Utah Interagency Smoke Management Program). The state rules for emergency air pollution episodes describe levels for stages and actions required to abate pollution levels such as delaying fire use operations.

## **Soil, Water, Riparian, and Aquatic Resources**

The *Organic Act of 1897* recognizes watersheds as systems that need to be managed to sustain their hydrologic function. One of the primary reasons for establishing the National Forests was to provide for "favorable conditions of water flow".

The *Clean Water Act* (1948-->1987) includes a series of acts designed to restore and maintain the chemical, physical, and biological integrity of the nation's water by complying with state and federal pollution controls.

*National Forest Management Act of 1976* includes direction to prevent watershed conditions from being irreversibly damaged and to protect streams and wetlands from detrimental impacts.

The *Endangered Species Act of 1973* requires federal agencies to conserve threatened and endangered species and the ecosystems they depend upon, including riparian and aquatic ecosystems, and to contribute to recovery of listed species.

The *Safe Drinking Water Amendments of 1977* necessitate federal agencies with jurisdiction over federally owned or maintained public water systems to comply with all authorities respecting the provision of safe drinking water.

*Pacfish* (1995) is the Interim strategy for Forest Service and BLM management of anadromous fish-producing watersheds within eastern Washington and Oregon, Idaho, and portions of California. Designed to offset impacts of all proposed or new projects, and those ongoing activities that pose unacceptable risks to anadromous fish habitat. Amended the 1988 Forest Plan and is being replaced by the revised Forest Plan.

*Infish* (1995) is the Interim strategy for Forest Service management of all stream systems not covered by *Pacfish* that support inland native fish species within eastern Washington and Oregon, Idaho, western Montana, and portions of Nevada. Designed to offset impacts of all proposed or new projects, and those ongoing activities that pose unacceptable risks to inland native fish habitat. Amended the 1988 Forest Plan and is being replaced by the revised Forest Plan.

*Executive Orders 11988 and 11990* direct federal agencies to avoid, where possible, impacts associated with the destruction or modification of floodplains and wetlands.

*Governor's Bull Trout Conservation Plan* (1996) requires strengthening water quality protection within Idaho and improving compliance with the Federal Clean Water Act in order to protect bull trout habitat within State of Idaho.

*Forest Service Manuals 2500 and 2600* pertain to the protection of watershed and fish and wildlife resources from natural resource management activities on Forest Service administered lands.

The *Regional Forester's Sensitive Species Program* is an internal listing process with direction, designed as an attempt to prevent additional imperiled fish, wildlife, and plants from being listed under the Endangered Species Act (ESA).

The *Forest Service Chief's Properly Functioning Condition Memo* (1997) directs Forest Service to adopt the BLM policy to use the Wetland and Riparian Initiative for the 1990s to evaluate and pursue achieving properly functioning condition of riparian resources.

The *Forest Service and Bureau of Land Management Protocol for Addressing Clean Water Act Section 303(d) Listed Waters* (1999) provides a consistent mechanism for the Forest Service to collaborate with the State of Idaho in the assessment and where appropriate, development of a TMDL and water quality restoration plan for impaired water bodies.

The *Clean Water Action Plan* resulted from the recent listings of the salmon, steelhead, and bull trout and their associated Biological Opinions, and more recently, the *Unified Federal Policy for Ensuring a Watershed Approach to Federal Land and Resource Management*, which strongly direct the need to prioritize and restore degraded watersheds and improve the aquatic habitat for these species.

## **Wildlife Resources**

*National Environmental Policy Act*– Requires analysis and public disclosure of effects to wildlife species and habitats from proposed federal actions.

The *Endangered Species Act* requires the Forest Service to maintain or improve habitat conditions for threatened, endangered, and proposed wildlife species.

*National Forest Management Act* - Provides direction for managing terrestrial wildlife species and habitats on National Forest System lands. Includes direction for Management Indicator Species and biological diversity.

*Forest Service Manuals 2500 and 2600* pertain to the protection of watershed and fish and wildlife resources from natural resource management activities on Forest Service administered lands.

*Regional Forester's Sensitive Species Program* - Provides administrative direction to maintain or improve conditions for species on the Regional Forester's Sensitive Species List.

*Forest Service Policy* - Recognizes the Idaho State wildlife and fish agencies as responsible for the management of animals and National Forests as responsible for the management of habitat.

## **Vegetation**

The *Organic Act of 1897* (16 U.S.C. 473 - 475) authorizes the Secretary of Agriculture to establish regulations governing the occupancy and use of National Forests and to protect the forests from destruction.

The *Multiple-Use, Sustained Yield Act of 1960* (U.S.C 528-531) recognizes timber and range as major resources for which the National Forests are to be managed. It further directs the Secretary to develop and administer the renewable surface resources of the National Forests for multiple-use and sustained yield of the many products and services obtained from these resources.

The *Forest and Rangeland Renewable Resources Planning Act of 1974* (RPA) (16 U.S.C. 1600-1614, as amended by the *National Forest Management Act of 1976*) directs the Secretary to periodically assess the forest and rangeland resources of the nation, and to submit to Congress at regular intervals, recommendations for long-range Forest Service programs essential to meet future resource needs.

The *National Forest Management Act (NFMA) of 1976* (16 U.S.C. 472a) provides for balanced consideration of all resources in land management planning and establishes requirements for Land and Resource Management Plans, particularly for forested lands. It specifically addresses most aspects of timber management and how it is related to other resources. It also stresses the maintenance of productivity and the need to protect and improve the quality of biological and physical resources.

The *Endangered Species Act 1973 as amended 1978, 1979, 1982 and 1988* (16 U.S.C. 1531 et seq.) sets forth the requirements for all agencies to conserve endangered and threatened species. Section 7 directs agencies to ensure that actions do not result in destruction or adverse modification of critical habitats for endangered and threatened species.

*36 CFR 219.15 Vegetation Management Practices* set forth a requirement where multiple management practices are used in a vegetation type, conditions for use and evaluation need to be based upon technical and scientific literature and practical experience. *Section 219.26 Diversity* states that forest planning shall provide for diversity of plant and animal communities and tree species consistent with the overall multiple use objectives of the planning area. *Section 219.27 Management Requirements* sets minimum requirements for resource protection, vegetative manipulation, silvicultural practices, even-aged management, riparian areas, and diversity.

## **Botanical Resources (TEPCS Plants)**

The *National Forest Management Act (NFMA) of 1976* (16 U.S.C. 472a) provides for balanced consideration of all resources in land management planning and establishes requirements for Land and Resource Management Plans, particularly for forested lands. The accompanying regulations (36 CFR 219.27 (g) require that "...management prescriptions ...shall preserve and enhance the diversity of plant and animal communities, including endemic, and desirable naturalized plant species...Reductions in

diversity of plant and animal communities and tree species...may be prescribed only where needed to meet overall multiple use objectives.” The regulations state that habitat is to be “managed to maintain viable populations of existing and desired vertebrate species in the planning area.”

The *Endangered Species Act 1973 as amended 1978, 1979, 1982 and 1988* (16 U.S.C. 1531 et seq.) sets forth the requirements for all agencies to conserve endangered and threatened species. Section 5 directs the Secretary of Agriculture to establish and implement a program to conserve fish wildlife and plants, including federally listed species. Section 7 directs agencies to “ensure that actions...do not result in destruction or adverse modification of their critical habitats”. The act also requires conferencing whenever an action is likely to jeopardize the continued existence or when adverse modification of critical habitat may occur for any proposed for listing as threatened or endangered.

*USDA, Departmental Regulation 9500-4* provides direction that expands viability requirements to include plant species. The Secretary of Agriculture’s policy on wildlife, fish, and plant habitat directs the Forest Service to “manage habitats for all existing native and desired non-native plants in order to maintain at least viable populations of such species”. It requires that habitat goals for threatened or endangered plants, or species with special habitat needs, be established in the forest planning process. It also states that monitoring activities will be conducted to determine results in meeting population and habitat goals, and directs “activities and programs to assist in the identification and recovery of threatened and endangered plant species, and to avoid actions which may cause a species to become threatened or endangered.”

### **Non-native Plants**

The *Federal Noxious Weed Act of 1974* delegates authority to the Secretary of Agriculture for noxious weed management. It also addresses eradication and control of certain foreign weeds within the United States, as does current Forest Service policy. Direction is to “...control the establishment, spread, or invasion of non-indigenous plant species in otherwise healthy native vegetative ecosystems.” The 1988 Forest Plan for the Payette National Forest addressed noxious weeds minimally and broadly. Recent direction that is in accordance with the 1990 Farm Bill amendment of the 1974 Noxious Weed Act requires the use of Integrated Weed Management (IWM), the determination of factors favoring the establishment and spread of noxious weeds, and the design of prescriptions that reduce the risks. The first priority of IWM is to prevent the introduction of new invaders or noxious weed species. The amendment also provides direction for cooperation and cost sharing with State and local governments.

On February 3, 1999, the President issued an Executive Order (EO) (Clinton, 1999) “to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause”. The EO further states that, “Each Federal agency whose actions may affect the status of invasive species shall, to the extent practicable and permitted by law...use relevant programs and authorities to: (i) prevent the introduction of invasive species; (ii) detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner; (iii) monitor invasive species populations accurately and reliably; (iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded.

In Idaho, it is unlawful for any individual to allow noxious weeds to propagate or go to seed on their land, unless they are complying with an approved weed management plan. This law directs the counties to develop weed control districts to plan and implement weed control efforts. The law also directs district (county) weed boards to “make all reasonable efforts to develop and implement a noxious weed program covering all land within the district owned or administered by a federal agency”. Accordingly, the Forest Service now requires that all hay, straw, or other feeds brought upon Forest System lands be certified weed seed free.

The State of Idaho has finalized a *Strategic Plan* for managing noxious weeds. The purpose of the strategic plan is two fold: (1) to heighten the awareness among all citizens of the degradation brought to Idaho lands and waters by the explosive spread of non-native weeds and, (2) to bring about greater statewide coordination, cooperation, prioritization, and action that will successfully halt the spread of such weeds and restore infested lands and waters to a healthy and productive condition. The Strategic Plan recommends the statewide formation of “Cooperative Weed Management Areas” and application of “Integrated Weed Management” prevention and control measures. Such a coordinated effort is operating within the Payette River Weed Management Area, established with a Memorandum of Understanding in 1998. Similar opportunities for coordination exist within the three Forests, particularly within the large river corridors and basins.

## **Fire Management**

The *Organic Administration Act* (1897) authorizes the Secretary of Agriculture to provide for protection of national forest lands from destruction by fire.

The *Bankhead-Jones Farm Tenant Act* (1937) authorizes and directs the Secretary of Agriculture to develop a program of land conservation and utilization that protects public lands.

The *Reciprocal Fire Protection Act* (1955) authorizes reciprocal agreements with federal, state, and other wildland fire protection organizations.

The *Wilderness Act* (1964) authorizes the Secretary of Agriculture to take such measures as may be necessary to control fire within designated wilderness.

The *National Forest Management Act* (1976) directs the Secretary of Agriculture to specify guidelines for land management plans to ensure protection of forest resources.

The *Clean Air Act* (as amended 1977 and 1990) provides for the protection and enhancement of the nation's air resources.

The *Federal Wildland Fire Management Policy*, adopted December 18, 1995 by the Secretaries of Agriculture and Interior, directs agencies to implement the principles, policies, and recommendations found in the Final Report of the Federal Wildland Fire Management Policy and Program Review.

## **Rangeland Resources**

The *Forest and Rangeland Renewable Resources Planning Act of 1974* specifies that the Secretary of Agriculture is to promulgate regulations that set out the process for the development and revision of land management plans. This process requires the identification of the suitability of lands for resource management. As result, the Secretary's regulation 36 CFR 219.20 "*Grazing Resource*" specifies that, "In forest planning, suitability and potential capability of National Forest System lands for producing forage for grazing animals and for providing habitat for indicator species shall be determined as provided in paragraphs (a) and (b) of this section. Lands so identified shall be managed in accordance with direction established in forest plans."

To comply with regulations in planning and to be consistent with recent court decisions, the Chief of the Forest Service gave general guidance in 4/97 (Forest Service, 1997), regarding the evaluation of capable and suitable grazing lands during forest plan revision. The guidance removes inconsistent direction in

Forest Service Manual and Handbook, and defines the difference between rangeland capability and suitability. Grazing capacity determination, which is different from capability/suitability assessments, is conducted during project level analysis. *Forest Service Handbook 2209.21* provides guidance for this type of determination (Range Technical Report #2, 1999).

Pursuant to regulations issued by the Secretary of Agriculture, the Chief of the Forest Service is authorized to develop, administer, and protect range resources. He is to permit and regulate grazing use of all kinds and classes of livestock on all National Forest System lands and/or other lands under Forest Service control. This authority originates from many acts (10), from the *Organic Administration Act of 1897* through the *Public Rangelands Improvement Act of 1978* (FSM 2201.1, 1990).

*Forest Service policy* authorizes all livestock grazing and other livestock use on lands under Forest Service administration or control by written grazing permit or agreement. On the Payette National Forest, a term grazing permit is the document used to authorize individuals, partnerships, or corporations to graze livestock. The permit may be issued up to a period of ten years. Forest plan standards and guidelines relating to grazing are incorporated into the term grazing permits as terms and conditions.

### **Timberland Resources**

The *Organic Act of 1897* (16 U.S.C. 473 - 475) authorizes the Secretary of Agriculture to establish regulations governing the occupancy and use of National Forests and to protect the forests from destruction.

The *Knutson-Vandenberg Act of 1930* (16 U.S.C. 576-576b), as amended by the *National Forest Management Act of 1976* (16 U.S.C. 528-531) directs the Secretary to provide for improvement of the productivity of the renewable resources within the National Forest timber sales areas. It authorizes the collection and use of timber receipts for these purposes.

The *Multiple-Use, Sustained Yield Act of 1960* (U.S.C 528-531) recognizes timber as one of the five major resources for which the National Forests are to be managed. It further directs the Secretary to develop and administer the renewable surface resources of the National Forests for multiple-use and sustained yield of the many products and services obtained from these resources.

The *Small Business Act* (15 U.S.C. 644, as amended 1958) provides for federal agencies to participate in programs with the Small Business Administration. This is the authority for the Small Business Timber Sale Set-aside Program.

The *National Environmental Policy Act (NEPA) of 1969* (16 U.S.C. 4321) requires federal agencies to analyze the physical, social, and economic effects associated with proposed plans and decisions, to consider alternatives to the proposed actions, and to document the results of the analysis.

The *Forest and Rangeland Renewable Resources Planning Act of 1974* (RPA) (16 U.S.C. 1600-1614, as amended by the *National Forest Management Act of 1976*) directs the Secretary to periodically assess the forest and rangeland resources of the nation, and to submit to Congress at regular intervals, recommendations for long-range Forest Service programs essential to meet future resource needs.

The *National Forest Management Act (NFMA) of 1976* (16 U.S.C. 472a) sets forth requirements for Land and Resource Management Plans for the National Forest System. It also amends several acts applicable to timber management. It specifically addresses most aspects of timber management and how it is related to other resources. NFMA is the primary authority governing the management and use of timber resources on the national forests.

The *Forest Resources Conservation and Shortage Relief Act of 1990* (16 U.S.C. 620) sets forth restrictions on export of unprocessed timber originating from federal lands. It addresses certain exceptions to export restrictions and establishes reporting requirements.

The following regulations also apply: The rules governing the sale and disposal of timber are set forth at 36 *CFR* 223, *Subparts A and B*. Subpart C governs suspension and debarment of timber purchasers, and Subpart D covers timber export and substitutions restrictions. The Chief's authority to manage and dispose of timber is delegated from the Secretary at 7 *CFR* 2.42 and described at 36 *CFR* 223.1. The text of these rules is set forth in *Forest Service Manual 1010*.

## Mineral Resources

Federal laws and regulations chiefly guide the management of mineral resources on National Forest System lands. Mineral resources are separated into three categories, whose exploration and development is guided by different statutes:

- **Locatable Minerals** are those valuable deposits subject to exploration and development under the *General Mining Law of 1872* and its amendments. Commonly, these minerals are referred to as "hard rock" minerals, and include gold, silver, molybdenum, iron, copper, and lead. The mining law as amended, gives citizens the right to enter public lands to locate and claim valuable minerals. Valuable mineral discovery conveys a property right to the mineral and, through the patent process, also to the surface. The 1872 *Surface Use Act* regulations provide for federal land management that minimizes mining-related adverse environmental impacts to surface resources. The *Organic Act of 1897* specifies that these mining regulations apply to National Forests. These laws authorize the present surface management program for mining claims, which requires written operating plans, reasonable environmental protection measures, reclamation plans, and bonds.
- **Leasable Minerals.** Federally owned leasable minerals may include such minerals as fossil fuels (oil, gas, coal, oil shale, etc.), geothermal resources, phosphates, and sulfur. The *Mineral Leasing Act of 1920* and its amendments authorize the Secretary of the Interior to lease land for these minerals. The Bureau of Land Management has considerable discretion whether or not to lease, and whether to attach special stipulations that are recommended by the Forest Service to ensure resource protection. On a federal mineral lease, the lessee has a vested right to develop the mineral resource after the lease and associated stipulations have been issued. The Forest Service reviews, approves, and administers the surface activities on the Forest, and the BLM manages the exploration and development program.
- **Mineral Materials or Saleables.** Salable mineral materials, or common varieties, are generally deposits of sand, clay, gravel, and stone that are used for road surfacing and building materials. The *Minerals Materials Act of 1947* states that common variety minerals on National Forest are subject to disposal by the Secretary of Agriculture, and are not subject to mining and leasing laws. The Forests have the discretion of whether and how common variety mineral materials should be developed. Use of these materials is by special use authorization.

For those acquired National Forest System lands in which the mineral rights are under federal ownership, mineral rights can be leased but mining claims cannot be staked. For those acquired lands in which the mineral rights are not under federal ownership, mineral rights can be exercised with the consent of the subsurface owner. Leasing on acquired lands is generally subject to Secretary of Agriculture rules and regulations. The *Acquired Lands Leasing Act* authorizes the Secretary of Interior to issue leases and

prospecting permits for hard rock minerals on acquired lands with consent of the surface managing agency. The BLM issues leases and permits with attached special stipulations following a joint agency review and analysis of a proposal. The Forest Service makes recommendations on issuance of leases and permits subject to sufficient bonding by the proposed operator to ensure proper protection of other natural resources, and reclamation of disturbed areas.

*Public Law 167, The Surface Resources Act* (July 23, 1955), recognizes vested surface rights. In these cases, the claimant manages the surface under an approved Plan of Operations.

Special legislation has determined some areas to be unsuitable for mineral production. The Salmon River and the Middle Fork and its tributaries have been closed to dredge and placer mining. Under provisions of the Mining Claim Rights Restoration Act (P.L. 84-359), the Forest Service may, on a case- by-case basis, request a hearing before any mining activity is permitted on a placer mining claim in a power site withdrawal.

Several State laws are specific to mining, and apply to all lands in Idaho, including National Forests. For example, *The Idaho Dredge and Placer Mining Protection Act of 1955* requires reclamation of disturbed areas and adherence to water quality standards. *The Idaho Surface Mining Act of 1971* provides measures to reclaim the lands disturbed by surface mining operations. The State of Idaho Department of Lands administers these laws with State Land Board direction. The Idaho State Department of Health and Welfare administers state water quality laws.

## **Recreation Resources**

The *Organic Administration Act* of 1897 authorized annual permits for land occupied by ski runs as well as undeveloped portions of ski areas.

The *Occupancy Permits Act* of 1915, as amended in 1956, authorized the issuance of term permits for structures or facilities on Nation Forest System lands on up to 80 acres for up to 30 years.

The *Multiple-Use Sustained Yield Act* of 1960 supplements the purposes for which national forests were established and administered including outdoor recreation.

The *Land and Water Conservation Fund Act* of 1964 "assists in preserving, developing, and assuring accessibility to all citizens of the United States of America ... such quality and quantity of outdoor recreation resources as may be available and are necessary and desirable ... by ... providing funds for the federal acquisition and development of certain lands and other areas." The law also provides for the collection of daily recreation use fees for each federal agency developing, administering, providing or furnishing, at federal expense, specialized outdoor recreation sites, facilities, equipment, or services.

The *Architectural Barriers Act* of 1968 states "Standards for design, construction, and alteration of buildings ... will be prescribed to insure whenever possible that physically handicapped persons will have ready access to, and use of, such buildings."

The *National Trails System Act* of 1968 establishes a National Trail System containing national recreation, scenic, historic, and connecting or side trails for the purpose of providing trail recreation opportunities. It prescribes administrative and development matters and encourages the use of volunteers in the trail program. It also established provisions for agreements to carry out the purpose of the Act.



The *National Forest Ski Area Permit Act* of 1986 allows the Forest Service to issue special use permits to the private sector to construct and operate ski areas on an unlimited number of acres of National Forest System lands for a period of up to 40 years.

The *Federal Cave Resources Protection Act* of 1988 provides specific authority to protect cave resources on federal lands. The policy of this Act establishes that "... Federal lands be managed in a manner which protects and maintains, to the extent practical, significant caves."

The *Americans with Disabilities Act* of 1990 establishes additional requirements to ensure that buildings, facilities, rail passenger cars, and vehicles are accessible, in terms of architecture and design, transportation, and communication, to individuals with disabilities.

*Executive Order 11644* and *CFR 295.2 – 295.6* provide direction on the management of off-highway vehicles to protect resources, promote safety, and minimize conflict among users.

*Executive Order 11989* requires land managing agencies to close areas to use when they determine that use causes, or will cause, considerable adverse effects on the soil, vegetation, wildlife, habitat, or cultural or historic resources.

### Scenic Environment

A number of federal laws require all federal land management agencies to consider scenic and aesthetic resources in land and resource management planning, project design, project implementation, and monitoring. The more important authorities for management of the National Forest System's scenic resources lie in the following statutes:

- *The Multiple-Use Sustained Yield Act of June 12, 1960*
- *The Wilderness Act of 1964*
- *The Wild and Scenic Rivers Act of 1968*
- *The Nation Trail System Act of 1969*
- *The National Environmental Policy Act of 1969*
- *The Environmental Quality Act of 1970*
- *The Forest and Rangeland Renewable Resources Planning Act of 1974*
- *The National Forest Management Act of 1976*
- *The Surface Mining Control and Reclamation Act of 1977*

Forest Service policy and regulations are defined in the Forest Service Manual (FSM) Chapter 2300 - Recreation, Wilderness, and Related Resource Management; and Chapter 2380 - Landscape Management. The Forest Service has responded to the above legislation by developing a Landscape Management program with the objective to "manage all National Forest System lands so as to attain the highest possible visual quality commensurate with other appropriate public uses and benefits" (FSM 2380.3).

Each Regional Forester is delegated the responsibility of establishing a management system for this resource and producing visual quality objectives (FSM 2380.4). These objectives are to be determined from consideration of the physical characteristics and scenic quality of the land, as well as the principles of design and the desires and preferences of the public.

### The Heritage Program and Cultural Resources

The *Antiquities Act* of 1906 protects historic or prehistoric remains or any object of antiquity on federal lands and applies to both cultural and paleontological resources.

The *National Historic Preservation Act* of 1966 (*NHPA*), as amended, protects historic and archeological properties during the planning and implementation of federal projects. The law requires the location and identification of cultural resources during the planning phase of a project, a determination of “significance” (based on scientific archaeological value) for potentially affected resources, and provisions for mitigation of any significant sites that may be affected for any federally funded, permitted, or licensed activities on National Forests. This law also fosters the development of agency Heritage Programs that emphasize a balance between protection of historic properties and public outreach, education, and involvement for the enjoyment of American history.

The *Federal Land Policy and Management Act* of 1976 requires that public lands be managed in a manner that will protect the quality of scientific, historical, archeological, and other values. It also requires federal agencies to preserve and protect lands in their natural condition, where appropriate.

The *Archaeological Resources Protection Act* of 1979 requires each federal agency to develop a plan for inventory, survey, and site protection. It also imposes civil penalties for the unauthorized excavation, removal, damage, alteration, or defacement of archaeological resources.

The *Native American Graves Protection and Repatriation Act* of 1990 and its 1995 implementing regulations protect American Indian burials and sacred items. It requires each federal agency to survey and inventory heritage collections for material related to ceremonial usage. Each act requires public and other agency consultations regarding potential impacts to significant sites.

The *1996 Executive Order 13007* requires federal agencies to protect and make accessible Indian sacred sites on public lands for Indian religious practitioners. This includes consultation with Indian tribes for the identification of sacred sites, and for when federal actions or policies may restrict access to or use of a ceremonial site, or may adversely affect the physical integrity of the site.

The *Uniform Rules and Regulations (16 U.S.C.G. 432-433)* coincide with the *Antiquities Act of 1906*. They give the Secretary of Agriculture jurisdiction over ruins, archaeological sites, historic and prehistoric monuments and structures, objects of antiquity, historic landmarks, and other objects of historic or scientific interests on National Forest System lands.

*36 CFR 261.9* prohibits “excavating, damaging, or removing any vertebrate fossil or removing any paleontological resource for commercial purposes without a special use permit.

### **Tribal Rights and Interests**

The basis of a tribe’s unique status stems from the tribe’s inherent sovereignty. This sovereignty is expressly recognized within the context of U.S. Constitutional provisions for federal government's powers for treaty making with other sovereign nations, including tribes. The treaty-making period between the U.S. Government and American Indian tribes ended in 1871. The federal government thereafter relied upon Agreements (signed by both houses) to legally acquire Indian lands, allow tribes to cede lands, establish reservations, provide federal recognition of tribes, and remove Indian peoples to reservations or rancherias.

A tribe’s sovereign status is also recognized and affirmed by treaties and agreements with the U.S. government; Congressional and Executive Branch recognition of the tribe; and federal court affirmation of tribal sovereignty. Tribes also have constitutions and by-laws, which formalize their governmental organization and state their relationship with the U.S. Government.

Additional sources of legal status may be found in federal statutes and Congressional Acts, which often do not distinguish between federally and non-federally recognized tribes and bands. Examples of these acts and statutes are provided below.

### **Laws, Executive Orders, and Policies Pertinent to Tribal Interests and Rights**

The various laws, treaties, executive orders, and Forest Service policies that have established Reservations/Tribal Sovereignty and reserved on- and off-reservation rights are listed below.

**FSM 1563: Tribal Governments**- This Forest Service Manual outlines Forest Service responsibilities to American Indian tribes.

**National Historic Preservation Act of 1966 (NHPA) (P.L. 89-665, as amended, P.L. 91-423, P.L. 94-422, P.L. 94-458 and P.L. 96-515)** - This act pertains only to tangible properties (buildings, structures, sites, or objects) that are important in history and prehistory. It requires agencies to consider the effects of undertakings on properties eligible to or listed in the National Register of Historic Places by following the regulatory process specified in 36CFR800.

The portions of that act that relate specifically to coordination with Indian tribes were added in the 1992 amendments. These additions reflect the increased importance placed on tribal relations. A section of the act directs state and federal governments to assist in the establishment of preservation programs on Indian lands. These sections include:

*Section 2 It shall be the policy of the Federal Government, in cooperation with other nations and in partnership with the State, local governments, Indian tribes, and private organizations and individuals to-*

*(2) provide leadership in the preservation of the prehistoric and historic resources of the United States and of the international community of nations and in the administration of the national preservation program.*

*(6) assist State and local governments, Indian tribes and Native Hawaiian organizations and the National Trust for Historic Preservation in the United States to expand and accelerate their historic preservation programs and activities.*

**National Environmental Policy Act (NEPA) of 1969 (P.L. 91-190)** - Federal agencies must invite Indian tribes to participate in Forest management projects and activities that may affect them.

**National Forest Management Act (NFMA) of 1976 (P.L. 4-588)** - Directs consultation and coordination of National Forest System planning with Indian tribes.

**American Indian Religious Freedom Act of 1978 (AIRFA) (P.L.95-341 as amended, P.L. 103-344)** - AIRFA states that "*...it shall be the policy of the United States to protect and preserve for American Indians their inherent right for freedom to believe, express, and exercise the traditional religions of the American Indian, Eskimo, Aleut, and Native Hawaiians, including but not limited to access to site, use and possession of sacred objects, and the freedom to worship through ceremonies and traditional rites*".

Agencies must make a good faith effort to understand how Indian religious practices may come into conflict with other Forest uses and consider any adverse impacts on these practices in their decision-making practices. The consideration of intangible, religious, ceremonial, or traditional cultural values and concerns that cannot be tied to specific cultural sites/properties could be considered under AIRFA.

**Archaeological Resources Protection Act of 1979 (ARPA) P.L. 96-95** - The purpose of this act is to protect irreplaceable archaeological resources on federal and Indian lands. The act and its regulations defer to American Indian tribal self-government and recognize the preservation and importance of traditional native cultures. ARPA recognizes the appropriateness of allowing tribal members a voice in the permitting of lawful archaeological excavations that might have an impact on areas of tribal religious significance outside of formal Indian lands. It also establishes a permit process for the management of cultural sites on federal lands that provides for consultation with affected tribal governments.

**Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (P.L. 101-601, 25 U.S.C. 3001-3013)** - NAGPRA specifies that an agency must take reasonable steps to determine whether a planned activity may result in the excavation of Native American human remains, funerary objects, and items of cultural patrimony from federal lands. It also provides for repatriation of human remains and various cultural items to Native American individuals or Tribes. NAGPRA has specific requirements for notification of and consultation with Tribes.

**Interior Secretarial Order 3175 of 1992** - Establishes responsibility of all agencies to carry out trust responsibilities of the federal government and assess the impacts of their actions on Indian trust resources. Requires consultation with tribes when impacts are identified.

**Religious Freedom Restoration Act of 1993** - Establishes a higher standard for justifying government actions that may impact religious liberties.

**Executive Order 12866 of 1993, Regulatory Planning and Review** - Enhances planning and coordination with respect to both new and existing regulations. Makes process more accessible and open to the public. Agencies shall seek views of tribal officials before imposing regulatory requirements that might effect them.

**President Clinton's Memorandum to Department Heads, 1994** - Directs federal agencies to honor trust responsibilities and to consult with tribal governments on decisions and policies that may affect tribal interests

**Executive Order 13007 of 1996, Indian Sacred Sites** - Acknowledges the role of federal agencies to protect and preserve the religious practices and places of federally recognized tribes and enrolled tribal members. Requires federal agencies to consult with federally recognized tribes to learn of tribal concerns for sacred sites on public lands. Ensures access to religious places and avoidance of adverse effects to sacred sites in accordance with existing legislation.

**Executive Order 13084 of 1998, Consultation and Coordination with Indian Tribal Governments** - Provides direction regarding consultation and coordination with Indian tribes relative to fee waivers. Calls upon agencies to use a flexible policy with tribes in cases where proposed waivers are consistent with applicable federal policy objectives. It directs agencies to grant waivers in areas where the agency has the discretion to do so, when a tribal government makes a request. When a request is denied, the agency must respond to the tribe in writing with the rationale for denial.

**Forest Service Natural Resource Book on American Indian and Alaska Native Relations (April 1997)** provides information on government-to-government relations with the tribes, including research opportunities.

**American Indian Treaties**

**Shoshone–Paiute Tribes** - The un-ratified Bruneau and Boise Treaties, and Treaty of Ruby Valley establish various rights (or fail to extinguish various rights) pertaining to the Shoshone-Paiute Tribes.

**Shoshone–Bannock Tribes** - Under the Fort Bridger Treaty of 1868, the Shoshone–Bannock Tribes retain off-reservation hunting and fishing rights.

**Nez Perce Tribe** - Under the Nez Perce of 1855, Article 3, the Nez Perce Tribal members retain “the right of taking fish at all usual and accustomed places in common with citizens of the Territory; and of erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed (federal) lands.”

**Roads**

36 *CFR* 219.11 (14-26) provides resource management requirements that cannot be met without putting a viable transportation system in place.

36 *CFR* 212 provides the principal regulations for administration of the forest development transportation system.

*FSM 7700 (Transportation System Manual)* directs the Forest Service to plan, develop, operate, and maintain forest development transportation facilities as a system that is integrated with other public and private transportation facilities while carrying out the objectives and direction established in the Forest Plan. It provides guidance in the form of objectives, policies, responsibilities, and requirements for transportation planning and for documenting system roads.

The *National Forest Roads and Trails Act* of 1964 recognizes that construction and maintenance of an adequate system of roads and trails within and near the National Forest is essential to meeting the increasing demands for timber, recreation, and other uses. It authorizes and establishes procedures related to rights-of-way, easements, construction, and agreements.

The *Surface Transportation Assistance Act* of 1978 establishes criteria for Forest highways and defines Forest roads and Forest development roads and trails.

**Wilderness**

Public laws that provide wilderness management direction include:

- The *Wilderness Act* of 1964 established a National Wilderness Preservation System to be administered in such a manner as to leave these areas unimpaired for future use and enjoyment as wilderness.
- The *Central Idaho Wilderness Act* of 1980 provides provided more specific management direction for a number of Idaho Wildernesses, including the Frank Church – River of No Return Wilderness on the Payette National Forest.

Forest Service policy and regulations are defined in the *Forest Service Manual (FSM)* that provide wilderness management direction include:

- *Chapter 2320 - Recreation, Wilderness, and Related Resource Management* describes wilderness management policies.
- *Chapter 2580 – Air Resource Management* describes the authority and objectives for protecting Air Quality Related Values in Class I wilderness areas.
- *FSM 2700, Special Uses Management and Forest Service Handbook 2709.11, Special Uses Handbook* provides direction related to special use permit administration, fee determination, and outfitter and guide permits.

The *Frank Church-River of No Return Wilderness Management Plan* was approved in December of 1984 and includes management direction for the entire FC-RONR Wilderness. This plan was incorporated into the Forest Plans for the six national forests administering the FC-RONR Wilderness. The management plan and forest plans were amended in July of 1994 to include terms and conditions regarding outfitter and guide operations. This plan was recently updated to reflect changes in conditions or public demand. The updated plan was approved in December 2002.

The *Hells Canyon National Recreation Area Comprehensive Management Plan* was approved in April of 1982 and in 1990 was incorporated without modification into the Wallowa-Whitman National Forest Land and Resource Management Plan. This plan is currently being updated to reflect changes in conditions or public demand.

### **Wild and Scenic Rivers**

The *National Wild and Scenic Rivers Act of 1968* provides a national policy and program to preserve and protect selected rivers, or segments of rivers, in their free-flowing condition in the National System.

The *Wild and Scenic Rivers Act, as amended December 31, 1992* and *Forest Service Handbook 1909.12, Chapter 8*, require that rivers identified as potential wild and scenic rivers be evaluated as to their eligibility, with the findings documented in the Forest Plan. Additionally, it is recommended, but not required, to complete the wild and scenic river suitability study during the Forest Plan revision process. If recommendation is deferred on those rivers identified as eligible where the Forest Service has primary responsibility, the Forest Plan must also provide interim management direction for protection of the outstanding features.

Any recommendation in the Forest Plan for a wild and scenic river designation is a preliminary administrative recommendation only, which will receive further review and possible modification by the Chief of the Forest Service, the Secretary of Agriculture, and the President of the United States. The Congress has reserved any final decisions to designate rivers to the National Wild and Scenic Rivers System.

### **Research Natural Areas**

The identification and establishment of a national network of Research Natural Areas (RNAs) are Congressionally mandated in the National Forest Management Act (36 CFR Sec. 219.25; 36 CFR 251.23) and states, “Forest planning shall provide for the establishment of RNAs. Planning shall make provision for the identification of examples of important forest, shrubland, grassland, alpine, aquatic, and geologic types that have special and unique characteristics of scientific interest and importance...and that are needed to complete the National network of RNAs.”

## Social and Economic

The *National Forest Management Act (NFMA)* and its implementing regulations (36 CFR 219.11[a], 36 CFR 219.12 [e] and 36 CFR 219.12[h]), the *National Environmental Policy Act (NEPA)* and its implementing regulations (40 CFR 1502.14 through 40 CFR 1502.16), *Forest Service Manual 1970*, and *Forest Service Handbook 1909.17* require the evaluation of social and economic effects of alternatives during the Forest Planning process.

In addition to the laws and regulations listed above, the Forest Plan revision socio-economic overview is shaped by evolving thinking about the role of socio-economic assessment in ecosystem management and forest planning. The socio-economic overview is particularly framed by two recent works:

- *Guidelines for Conducting Social Assessments Within a Human Dimensions Framework*, developed by National Forest social scientists and researchers, and university social scientists (Bright et al, 1998). The Guidelines report was developed to improve social science information and applications in forest planning and assessments.
- *Sustaining the People's Land: Recommendations for Stewardship of the National Forests and Grasslands into the Next Century*, released by an interdisciplinary Committee of Scientists in March, 1999 (Committee of Scientists 1999). Secretary of Agriculture Dan Glickman convened the Committee in 1997 to review and evaluate the Forest Service planning process and to identify changes that might be needed to planning regulations.

The Committee's report included several recommendations about social assessments. The report noted that a good assessment will examine quantitative demographic, economic, and social information, and it will include a participatory process that engages communities in a learning process about themselves (Committee of Scientists 1999, p. 47).

The Ecogroup's socio-economic overview addresses the Human Dimensions Framework and many of the recommendations included in the Committee of Scientists report. The overview includes important demographic, economic, and social information, both quantitative and qualitative, in the Payette National Forest Zone of Influence. This information was gathered from a variety of sources, including but not limited to Interior Columbia Basin Ecosystem Management Project (ICBEMP) reports, Idaho Department of Commerce data, University of Idaho and Boise State University studies, and the 1999 "Affected Economic Environment and Baseline for the No-Action Alternative," developed by Economic Modeling Specialists, Inc. for the Ecogroup's Forest Plan Revision process. Personal interviews, community self-assessment surveys, and public comments on the Forest Plan revision were also critical tools, since they provided key insights from those potentially most interested in and affected by this planning process.

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**Clinton, William,** 1999, *Executive Order – Invasive Species*, The White House, Office of the Press Secretary

**Committee of Scientists ,** 1999, *Sustaining the People’s Lands – Recommendations for Stewardship of the National Forests and Grasslands into the Next Century*, U.S. Department of Agriculture, Washington, D.C.



# Appendix I

## Designated Utility Corridors

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## INTRODUCTION

This appendix contains a map of the designated utility corridors on the Payette National Forest. These designated utility corridors relate to Forest-wide Standard LSST09, and are described in Management Areas 1, 4, 16, 17, 19, 20, and 21. They are presented here so that Forest personnel can see where these corridors occur on the Forest and adjust their management activities as needed. Larger-scale maps of the corridors are available in the Forest Plan Revision Project Record.

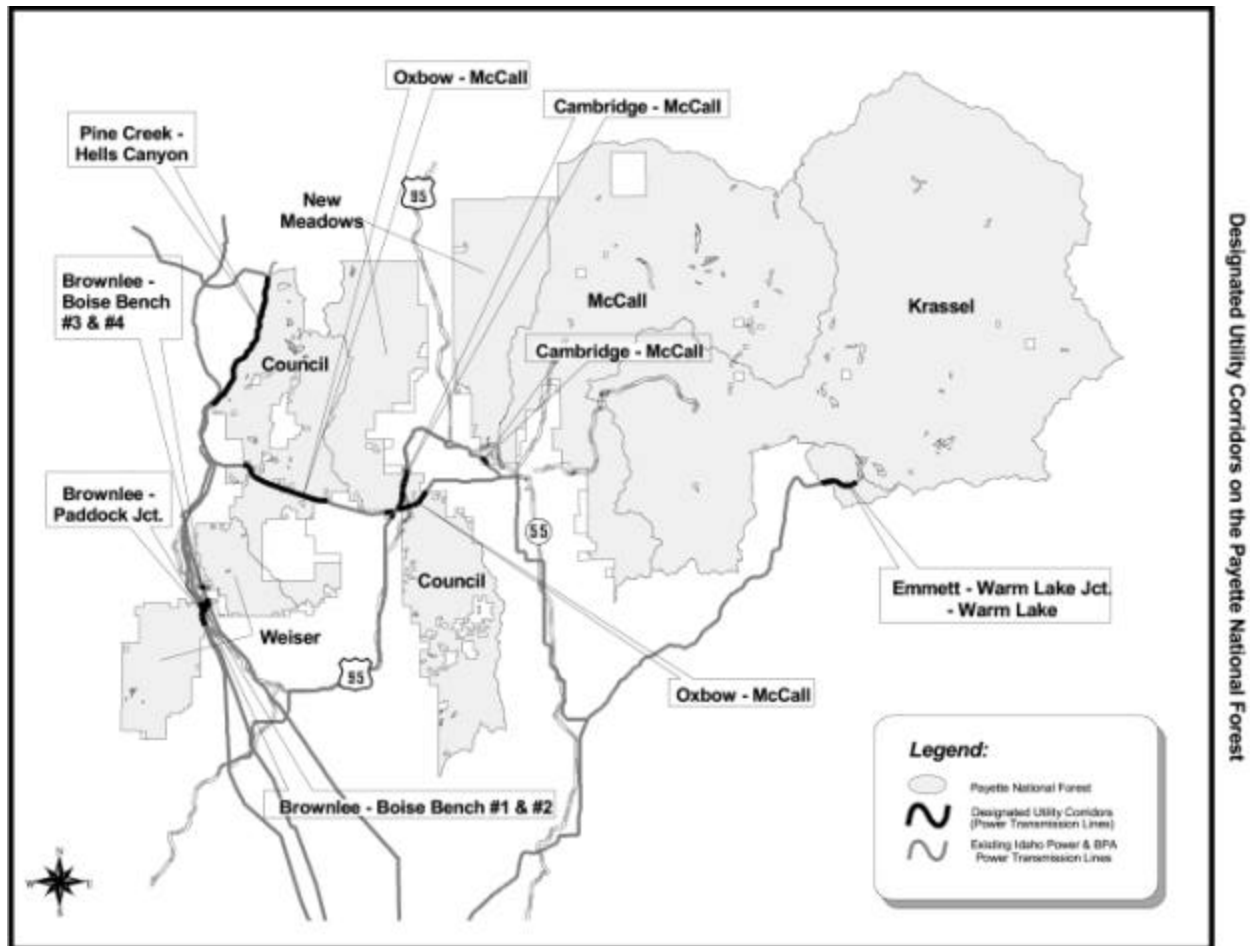


Figure I-1. Designated Utility Corridors on the Payette National Forest

# **Glossary and Acronyms**

## **Changes to Glossary and Acronyms between Draft and Final**

The Glossary and Acronyms have been updated to incorporate definitions for terms that were added since the DEIS and Draft Forest Plans. Also, some definitions for terms in the DEIS and Draft Forest Plans were added in response to comments.

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## **GLOSSARY**

Sources for this glossary include: Forest Ecosystem Management: An Ecological, Economic, and Social Assessment; Report of the Forest Ecosystem Management Assessment Team (FEMAT) 1993; Southwest Idaho Ecogroup Forest Plans; Upper Columbia River Basin DEIS; Region 4 Revision Desk Guide; Resource Planning Act Program Glossary 1995; and USDA Forest Service Manual and Handbook, Pacfish and Infish EAs, State of Idaho Forestry Practices Act, USDA Forest Service and BLM Hydrologic Analysis, American Fisheries Society Glossary, Soil Hydrologic Reconnaissance Reports on the Boise, Payette, and Sawtooth National Forests, and U.S. Fish and Wildlife Service (FWS) Bull Trout Recovery Plans.

### **abiotic**

Non-living (refers to air, rocks, soil particles, etcetera).

### **access management**

See travel management.

### **activity area**

The smallest logical land area where the effect that is being analyzed or monitored is expected to occur. The area may vary in size depending on the effect that is being analyzed or monitored, because some effects are quite localized and some occur across landscapes. Activity areas are to be specifically described when used in planning and project implementation documents.

- **snags** – The activity area for snags is the specific site affected by actions listed below, whether effects are positive or negative. Actions affecting activity areas that need to be assessed include timber harvest, site-preparation reforestation, timber stand improvement, and prescribed fire. The activity area reflects the scale at which to plan projects that provide for maintaining or improving trends in snag amounts.
- **coarse woody debris** – The activity area is the same as for snags above. However, this may also parallel the activity area for detrimental disturbance. See below.
- **detrimental disturbance** – The activity area is the specific area where proposed actions may have detrimental soil impacts, such as harvest units within a timber sale area, an individual pasture unit within a grazing allotment, or a burn block within a prescribed burn project area. Existing designated uses such as classified roads and trails, developed campgrounds, and buildings, are not considered detrimental disturbance within an activity area. See the definition for detrimental disturbance for more information.
- **total soil resource commitment** – Effects are generally measured across an all-inclusive activity area, like a timber sale area, a prescribed burn area, or a grazing allotment, where effects to soil commitment could occur or are occurring. Effects include both proposed actions and existing uses, such as roads (classified and non-classified), dedicated trails and landings, administrative sites, parking lots, and mine excavations. See the definition for total soil resource commitment for more information.

### **adaptive management**

A type of natural resource management in which decisions are made as part of an ongoing process. Adaptive management involves testing, monitoring, evaluation, and incorporating new knowledge into management approaches based on scientific findings and the needs of society.

### **adfluvial fish**

Fish that migrate between lake and river systems; such as land-locked kokanee salmon or some bull trout.

### **adverse effect**

For Forest Plan revision, “adverse effect” is used in the context of the Endangered Species Act relative to effects on Threatened, Endangered, Proposed, and Candidate (TEPC) species. Definitions are from Final Endangered Species Consultation Handbook; NMFS/USFWS, 1998. They include both “likely to adversely effect” and “not likely to adversely effect”. Both of these definitions are needed to clearly understand the intent of the phrase “adverse effect” when applied to Forest-wide and management area direction involving TEPC species. The definition of “take” is also included below to help clarify intent.

- Likely to adversely affect – the appropriate finding in a biological assessment (or conclusion during informal consultation) if any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable, insignificant, or beneficial (see definition of “not likely to adversely affect”). In the event the overall effect of the proposed action is beneficial to the listed species, but is also likely to cause some adverse effects, then the proposed action is “likely to adversely affect” the listed species. If incidental take is anticipated to occur as a result of the proposed action, an “is likely to adversely affect” determination should be made. A “likely to adversely affect” determination requires the initiation of formal Section 7 consultation.
- Not likely to adversely affect – the appropriate conclusion when effects on listed species are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those that are extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully detect, measure, or evaluate insignificant effects; or (2) expect discountable effects to occur.
- Take – to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct [ESA §3(19)]. Harm is further defined by FWS to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. Harass is defined by FWS as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering (50 CFR § 17.3).

### **air pollutant**

Any substance in air that could, if in high enough concentration, harm humans, animals, vegetation, or material. Air pollutants may include almost any natural or artificial matter capable of being airborne in the form of solid particles, liquid droplets, gases, or a combination of these.

### **air quality**

The composition of air with respect to quantities of pollution therein; used most frequently in connection with “standards” of maximum acceptable pollutant concentrations.

### **allelopathic**

Growth inhibiting. Usually refers to chemicals produced by one species of plant to inhibit the growth of surrounding species, thus giving the chemical-producing plant a competitive edge.

**allotment (grazing)**

Area designated for the use of a certain number and kind of livestock for a prescribed period of time.

**Allowable Sale Quantity (ASQ)**

On a National Forest, the quantity of timber that may be sold from a designated area covered by the forest plan for a specified time period.

**All Terrain Vehicle (ATV)**

Any motorized, off-highway vehicle 50 inches or less in width, having a dry weight of 600 pounds or less that travels on three or more low-pressure tires with a seat designed to be straddled by the operator. Low-pressure tires are generally 6 inches or more in width and designed for use on wheel rim diameters of 12 inches or less, utilizing an operating pressure of 10 pounds per square inch (psi) or less.

**alternative**

In an Environmental Impact Statement (EIS), one of a number of possible options for responding to the purpose and need for action.

**amenity**

Resource use, object, feature, quality, or experience that is pleasing to the mind or senses; typically refers to resources for which monetary values are not or cannot be established, such as scenery or wilderness.

**anadromous fish**

Fish that hatch and rear in fresh water, migrate to the ocean, mature there, and return to fresh water to reproduce; for example, salmon and steelhead.

**ancillary facilities** – Auxiliary facilities or structures that do not serve the main purpose of the facility but rather provide for support needs. For example, for a hydroelectric dam, the dam, powerhouse, penstock, and spillway would not be considered ancillary facilities, but a tool storage shed would.

**Animal Unit Month (AUM)**

The amount of forage required by a 1,000-pound cow and its calf, or the equivalent, for 1 month.

**Appropriate Management Response (AMR)**

Actions taken in response to a wildland fire to implement protection and fire use objectives.

**aquatic ecosystem**

40 CFR 230.3 - Waters of the United States that serve as habitat for interrelated and interacting communities and populations of plants and animals. FSM 2526.05 - The stream channel, lake or estuary bed, water, biotic communities and the habitat features that occur therein.

**Aquatic Integrity**

Aquatic integrity is an assessment and comparison of existing fish habitat conditions with historical conditions that existed before Euro-American settlement. Habitat conditions are assessed to determine how their integrity and resilience may have changed due to effects from past or current human-caused (road construction, timber harvest, livestock grazing, etc.) or natural (wildfire, floods, etc.) disturbance. Conditions or values assessed include numerous habitat parameters found in Appendix B of the Forest Plan. Relative integrity ratings are assigned at the subwatershed scale and are based on the quality of habitat conditions and the presence, abundance, and distribution of key native fish species.



### **arterial road**

A road serving a large land area and usually connecting with public highways or other Forest Service arterial roads to form an integrated network of primary travel routes. The location and standards are often determined by a demand for maximum mobility and travel efficiency rather than specific resource management service. Arterial roads are usually developed and operated for long-term land and resource management purposes and constant service.

### **attitudes, beliefs, and values**

FSH 1909.17. Preferences, expectations, and opinions people have for forests and the management and use of particular areas. Differing values and expectations have resulted in polarized perceptions that a healthy environment requires protection of lands from human influence, or increased attention to environmental quality presents a threat to employment, economy, or life-style.

### **background (bg)**

The visual distance zone relating to the distant part of a landscape, generally located from 3 to 5 miles to infinity from the viewer.

### **background wildfire**

Average amount of wildfire that occurs annually from small-sized (a through d) fires.

### **bankfull stage**

The bankfull stage corresponds to the discharge at which channel maintenance is the most effective, that is, the discharge at which moving sediment forms or changes bends and meanders, and generally results in the average morphologic characteristics of channels. This term generally describes the elevation on the stream bank where the stream begins to flow onto a flood plain; however, not all stream channels have distinct flood plains.

### **beneficial effect**

Beneficial effects are contemporaneous positive effects to resource, social, or economic conditions.

Specific to ESA and TEPC species, beneficial effects are contemporaneous positive effects without any adverse effects to the species. The appropriate conclusion when effects on listed species are expected to be beneficial would be: "Is not likely to adversely affect".

### **beneficial use**

Any of the various uses that may be made of the water of an area, including, but not limited to: (1) agricultural water supply; (2) industrial water supply; (3) domestic water supply; (4) cold water biota; (5) primary contact recreational use; (6) secondary contact recreational use; (7) salmonid spawning, overwintering, emergence, and rearing; and (8) warm water biota.

### **Best Management Practices (BMPs)**

Practices determined by the State of Idaho Division of Environmental Quality to be the most effective and practical means of preventing or reducing the amount of pollution generated by non-point sources.

### **big game**

Large wild animals that are hunted for sport and food. This hunting is controlled by state wildlife agencies. Big game animals found on this Forest include deer, elk, and moose.

**bighorn sheep emphasis areas**

Areas identified by state wildlife agencies as being important to bighorn sheep (winter and summer habitat).

**biological diversity (or biodiversity)**

The variety and abundance of life and its processes. Biological diversity includes all living organisms, the genetic differences among them, and the communities and ecosystems in which they occur. Biological diversity also refers to the compositions, structures, and functions of species and habitats and their interactions.

**biophysical components**

Refers to biological and/or physical components in an ecosystem.

**biota**

Living material. The flora and fauna of an area.

**board foot**

A measurement of wood equivalent to a board 1 foot square and 1 inch thick. Usually expressed in terms of thousand board feet (MBF) or million board feet (MMBF).

**broadcast burning**

Burning forest fuels as they are, with no piling or windrowing.

**browse**

Twigs, leaves, and shoots of trees and shrubs that animals eat.

**Burned Area Emergency Response (BAER)**

A procedure used by the federal government to restore watershed conditions following large wildfires. The objective of BAER is to provide for immediate rehabilitation by stabilizing soils, and controlling water, sediment, and debris movement.

**candidate species**

Plant and animal species being considered for listing as endangered or threatened, in the opinion of the U.S. Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS). Category 1 candidate species are groups for which the FWS or NMFS has sufficient information to support listing proposals; category 2 candidate species are those for which available information indicates a possible problem, but that need further study to determine the need for listing.

**classified road**

Roads wholly or partially within or adjacent to national Forest System lands that are determined to be needed for long-term motor vehicle access. Classified roads can include state roads, county roads, privately owned roads, National Forest System roads, and other roads authorized by the Forest Service.

**Clean Air Act**

An Act of Congress established to protect and enhance the quality of the Nation's air through air pollution prevention and control.

### **Clean Water Act**

An Act of Congress which establishes policy to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.

### **coarse filter approach**

A focus on whole communities or watersheds.

### **coarse woody debris (CWD)**

Pieces of woody material having a diameter of at least 3 inches and a length greater than 6 feet (also referred to as large woody debris, or LWD).

### **Cohesive Strategy (Current) Condition Classes**

The Cohesive Strategy for the National Fire Plan defines three current condition classes as follows:

*Condition Class 1* - Fire regimes are within an historical range, and the risk of losing key ecosystem components is low. Vegetation attributes (species composition and structure) are intact and functioning within an historical range.

*Condition Class 2* - Fire regimes have been moderately altered from their historical range. The risk of losing key ecosystem components is moderate. Fire frequencies have departed from their historical frequencies by one or more return intervals (either increased or decreased). This results in moderate changes to one or more of the following: fire size, intensity and severity, and landscape patterns. Vegetation attributes have been moderately altered from their historical range.

*Condition Class 3* - Fire regimes have been significantly altered from their historical range. The risk of losing key ecosystem components is high. Fire frequencies have departed from historical frequencies by multiple return intervals. This results in dramatic changes to one or more of the following: fire size, intensity, severity, and landscape patterns. Vegetation attributes have been significantly altered from their historical range.

### **Cohesive Strategy (Historical Natural) Fire Regimes**

The Cohesive Strategy for the National Fire Plan defines historical natural fire regimes as follows:

- Fire regime I 0-35-year frequency, nonlethal
- Fire regime II 0-35-year frequency, lethal
- Fire regime III 35-100+ year frequency, mixed
- Fire regime IV 35-100+ year frequency, lethal
- Fire regime V 200+ frequency, lethal

### **collaborative stewardship**

Caring for the land and serving people by listening to all constituents and by living within the limits of the land. A commitment to healthy ecosystems and working with people on the land.

### **collector road**

A road serving smaller land areas than an arterial road and usually connected to a Forest arterial road or public highway. These roads collect traffic from Forest local roads and/or terminal facilities. The location and standard are influenced by both long-term multi-resource service needs, as well as travel efficiency. These roads may be operated for either constant or intermittent service, depending on land use and resource management objectives for the area served by the facility.

**common variety minerals**

Minerals of sand, clay, cinders, roadside slough, fill dirt, etc., which have been specifically designated as common variety and are saleable under the discretion of the authorized officer.

**communication sites**

Areas designated for the operation of equipment, which reflect, transmit, and/or receive radio, microwave, and cellular telephone signals, for long-distance transmission or local pickup of programming.

**components of ecosystem management**

Biological diversity, physical diversity, social diversity, and economic diversity are the four components of the Southwest Idaho Ecosystem Management Framework.

**composition (species)**

The species that make up a plant or animal community, and their relative abundance.

**connectivity**

The arrangement of habitat that allows organisms and ecological processes to move across the landscape. Patches of similar habitats are either close together or connected by corridors of appropriate vegetation (or live stream channels). Opposite of fragmentation.

Sites in a landscape are “connected” if there are patterns or processes to link them in some way. These links arise either from static patterns (e.g., landforms, soil distributions, contiguous forest cover) or from dynamic processes (e.g., dispersal, fire). A particular landscape may have radically different degrees of connectivity with respect to different processes. Connectivity usually involves corridors and networks and describes how patches are connected in the landscape.

**conservation strategy or conservation agreement**

1. An active, affirmative process that (a) identifies issues and seeks input from appropriate American Indian governments, community groups, and individuals; and (b) considers their interests as a necessary an integral part of the BLM's and Forest Service's decision-making process.
2. Plans to remove or reduce threats to Candidate or Sensitive species of plants and animals so that a federal listing as Threatened or Endangered is unnecessary.

**controlled hunt area**

An area designated by the Idaho Department of Fish and Game to manage species, usually big game such as elk or deer.

**corridor (landscape)**

Landscape element that connect similar patches of habitat through an area with different characteristics. For example, streamside vegetation may create a corridor of willows and hardwoods between meadows or through a conifer forest.

**cover type**

The current or existing vegetation of an area, described by the dominant vegetation.

**critical habitat**

Endangered Species Act - Designated by the FWS or NMFS, specific areas, within a geographical area occupied by a threatened or endangered species, on which are found physical or biological features essential to conservation of the species. These areas may require special management consideration or protection, and can also include specific areas outside the occupied area that are deemed essential for conservation.

**critical life stages**

Animal life stages associated with the time of the year when reproduction, rearing young, and over-wintering occur.

**cultural resources**

Cultural resources include sites, structures, or objects used by prehistoric and historic residents or travelers. They are non-renewable resources that tell of life-styles of prehistoric and historic people. Cultural resources within the Forests are diverse and include properties such as archaeological ruins, pictographs, early tools, burial sites, log cabins, mining structures, guard stations, and fire lookouts.

**cumulative effects**

Impacts on the environment that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

**decay classes<sup>1</sup> (for snags and coarse woody debris)**

|                                  |       |                                                                                                                                                                                                                       |
|----------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DECAY CLASS 1<sup>2</sup></b> | Snags | Snags that have recently died, typically have little decay, and retain their bark, branches, and top.                                                                                                                 |
|                                  | Logs  | Logs created by trees that have recently fallen over, and still have intact or loose bark, large branches present, a round shape, little to some wood decay, and are resting above or are in contact with the ground. |
| <b>DECAY CLASS 2</b>             | Snags | Snags that show some evidence of decay and have lost some of their bark and branches and often a portion of the top.                                                                                                  |
|                                  | Logs  | Logs with bark partially intact to sloughing, no fine branches, large branches present, wood largely hard to soft, may be round, log may be sagging.                                                                  |
| <b>DECAY CLASS 3</b>             | Snags | Snags that have extensive decay, are missing the bark and most of the branches, and have a broken top.                                                                                                                |
|                                  | Logs  | Bark is absent, few branches present, wood is soft and powdery (when dry), shape is round, oval, or hard to see.                                                                                                      |

<sup>1</sup>From Bull et al. 1997

<sup>2</sup>Grand fir and Douglas-fir tend to retain their bark and therefore snags and coarse wood of these species may not meet the appropriate decay class bark description.

**defensible space**

An area around a structure where fuels and vegetation are treated, cleared, or reduced to slow the spread of wildfire towards the structure. This space also reduces the chance of a structure fire moving from the building to the surrounding forest.

**degradation**

To degrade, or the act of degrading. Refer to the definition of “degrade” in this glossary.

**degrade**

To degrade is to measurably change a resource condition for the worse within an identified scale and time frame. Where existing conditions are within the range of desired conditions, “degrade” means to move the existing condition outside of the desired range. Where existing conditions are already outside the range of desired conditions, “degrade” means to change the existing condition to anything measurably worse. The term “degrade” can apply to any condition or condition indicator at any scale of size or time, but those scales need to be identified. This definition of “degrade” is not intended to define degradation for the State of Idaho as it applies to their Antidegradation Policy (IDAPA 16.01.02.051).

**demographic**

Related to the vital statistics of human populations (size, density, growth, distribution, etcetera).

**denning habitat or sites**

Habitat and locations used by mammals during reproduction and rearing of their young, when the young are highly dependent on adults for survival.

**designated communication site**

An area of National Forest System land, designated through the land and resource management planning process, for use as a communication site. These designations constitute a long-term allocation of National Forest System land. A communications site may be limited to a single communications facility, but often encompasses more than one.

**designated utility corridor**

A linear strip of National Forest System land, designated through the land and resource management planning process, for use as a utility corridor. These designations constitute a long-term allocation of National Forest System land. A utility corridor may be used to accommodate more than one utility use.

**designee**

Related to fire suppression, a designee is a person with delegated line officer authority.

**Desired Condition (DC)**

Also called Desired Future Condition, a portrayal of the land, resource, or social and economic conditions that are expected in 50-100 years if management goals and objectives are achieved. A vision of the long-term conditions of the land.

**Desired Future Condition (DFC)**

Also called desired condition, a portrayal of the land, resource, or social and economic conditions that are expected in 50-100 years if management goals and objectives are achieved. A vision of the long-term conditions of the land.

### **detrimental soil disturbance**

Detrimental soil disturbance (DD) is the alteration of natural soil characteristics that results in immediate or prolonged loss of soil productivity and soil-hydrologic conditions. At least 85 percent of an activity area should be in a non-detrimentally disturbed condition. Stated another way, no more than 15 percent of an activity area should have detrimentally disturbed soil after the management activity is completed. DD can occur from soil that has been displaced, compacted, puddled or severely burned. Determination of DD excludes existing or planned classified transportation facilities, dedicated trails, and landings, mining dumps or excavations, parking areas, developed campgrounds, and other dedicated facilities. However, the impacts of these actions are considered total soil resource commitment (TSRC - see definition in this glossary). DD is represented by any or all of the four characteristics described below.

1. *Detrimental Soil Displacement.* Areas of 1 meter by 1 meter or larger that exhibit detrimentally displaced soil as described below:

- (a) The loss of either 5 cm or half of humus-enriched top soil (A horizon), whichever is less,  
or
- (b) The exceeding of the soil loss tolerance value for the specific soil type.

2. *Detrimental Soil Compaction.* Soil compaction is generally evaluated from 5 to 30 centimeters below the mineral soil surface. Specific depths for measurement are dependent upon soil type and management activities. Detrimental soil compaction is increased soil density (weight per unit volume) and strength that hampers root growth, reduces soil aeration, and inhibits water movement. Measurements of potential detrimental soil compaction may be qualitative or quantitative. Refer to the Region 4 Soil Quality Handbook for methods related to measuring/determining soil compaction.

3. *Detrimental Soil Puddling.* Puddling is generally evaluated at the mineral soil surface. Visual indicators of detrimental puddling include clearly identifiable ruts with berms in mineral soil, or in an Oa horizon of an organic soil. Detrimental puddling may occur in conjunction with detrimental compaction. The guidelines for soil compaction are to be used when this occurs. Detrimentally puddled soils are not always detrimentally compacted. Infiltration and permeability are affected by detrimental soil puddling. Puddling can also alter local groundwater hydrology and wetland function, and provide conduits for runoff.

4. *Severely Burned Soil.* Severely burned soil applies to prescribed fire and natural fires that are managed for resource benefits. Severely burned soils are identified by ratings of fire severity and the effects to the soil. A severely burned soil is generally soil that is within a High Fire Severity burn as defined by the Forest Service Burned Area Emergency Rehabilitation Program (FSH 2509.13) and Debano et al. (1998). An example of a High Fire Severity rating is provided below. Soil humus losses, structural changes, hydrophobic characteristics and sterilization are potential effects of severely burned soil.

Example of High Fire Severity Rating – High soil heating, or deep ground char occurs where the duff is completely consumed and the top of the mineral soil is visibly reddish or orange on severely burned sites. Color of the soil below 1 cm is darker or charred from organic material that has heated or burned. The char layer can extend to a depth of 10 cm or more. Logs can be consumed or deeply charred, and deep ground char can occur under slash concentrations or under burned logs. Soil textures in the surface layers are changed and fusion evidenced by clinkers that can be observed locally. All shrub stems are consumed and only the charred remains or large stubs may be visible. Soil temperatures at 1 cm are greater than 250 C. Lethal temperatures for soil organisms occur down to depths of 9 to 16 cm.

Standards for detrimentally disturbed soils are to be applied to existing or planned activities that are available for multiple uses. These standards do not apply to areas with dedicated uses such as mines, ski areas, campgrounds, and administrative sites.

**developed recreation**

Recreation that requires facilities that in turn result in concentrated use of an area; for example, a campground or ski resort.

**discountable effect**

A discountable effect is one that is highly unlikely to occur. Therefore, no change to a resource, social, or economic condition would be expected from a discountable effect. Determination of a discountable effect may be based on scientific analysis, professional judgment, experience, or logic.

Specific to the ESA and effects on Threatened, Endangered, Proposed or Candidate species, the appropriate determination for discountable effects on these species would be: “Is not likely to adversely affect”. Refer to the “adverse effect” definition in this glossary.

**dispersed recreation**

Recreation that does not occur in a developed recreation setting, such as hunting, scenic driving, or backpacking.

**disturbance**

Any event, such as wildfire or a timber, sale that alters the structure, composition, or function of an ecosystem.

**disturbance regime**

Any recurring event that influences succession, such as fire, insects, ice storms, blow down, drought, etc.

**easement**

A special-use authorization for a right-of-way that conveys a conditioned interest in National Forest System land, and is compensable according to its terms.

**ecological integrity**

In general, ecological integrity refers to the degree to which the elements of biodiversity and the processes that link them together and sustain the entire system are complete and capable of performing desired functions. Exact definitions of integrity are somewhat relative and may differ depending on the type of ecosystem being described.

**ecological function**

The activity or role performed by an organism or element in relation to other organisms, elements, or the environment.

**ecological processes**

The actions or events that link organisms (including humans) and their environment such as disturbance, successional development, nutrient cycling, productivity, and decay.



### **Ecological Reporting Unit (ERU)**

In the Upper Columbia River Basin DEIS, a geographic mapping unit developed by the Science Integration Team to report information on the description of biophysical environments, the characterization of ecological processes, the discussion of past management activities and their effects, and the identification of landscape management opportunities.

### **economic efficiency**

Producing goods and services in areas best suited for that production based on natural biophysical advantage or an area's ability to best serve regional demands of people.

### **economic dependency**

The degree to which a community is dependent upon National Forest resources for employment and income.

### **economic region**

A group of communities and their surrounding rural areas that are linked together through trade.

### **ecosystem**

A naturally occurring, self-maintained system of living and non-living interacting parts that are organized into biophysical and human dimension components.

### **ecosystem health**

A condition where the components and functions of an ecosystem are sustained over time and where the system's capacity for self-repair is maintained, such that goals for ecosystem uses, values, and services are met.

### **ecosystem management**

Scientifically based land and resource management that integrates ecological capabilities with social values and economic relationships, to produce, restore, or sustain ecosystem integrity and desired conditions, uses, products, values, and services over the long term.

### **effective ground cover**

Effective ground cover consists of vegetation, litter, and rock fragments larger than three-fourths inch in diameter. It is expressed as the percentage of material, other than bare ground, covering the land surface. It may include live vegetation, standing dead vegetation, litter, cobble, gravel, stones, and bedrock. The minimum effective ground cover, following the cessation of disturbance in an activity area, should be sufficient to prevent detrimental erosion. Minimum amounts of ground cover necessary to protect the soil from erosion are a function of soil properties, slope gradient and length, and erosivity (precipitation factor), and must be determined locally. Rock fragments, litter, and canopy might be treated independently, depending on the model used to estimate erosion hazard ratings.

### **electronic sites**

See communication sites.

### **elements of ecosystem management**

Essential building blocks of the biophysical (i.e., historical range of variability) and human dimension (i.e., demographics; tribal) components for Southwest Idaho Ecosystem Management Framework.

**eligibility**

For Wild and Scenic Rivers, an evaluation of river features to determine which rivers qualify to be studied for possible addition to the WSR System. Two screening criteria are used for a river segment to be eligible for inclusion in the WSR system. The river must be free-flowing, and it must possess one or more outstandingly remarkable scenic, recreational, geological, fish and wildlife, historical, cultural, ecological, or other value.

**elk site distance**

Distance at which vegetation hides 90 percent of an elk from view.

**encroachments**

Improvements occupied or used on National Forest System lands without authorization.

**encumbrance**

A claim, lien, right to, liability, or interest attached to and binding real property.

**endangered species**

Designated by the FWS or NMFS, an animal or plant species that has been given federal protection status because it is in danger of extinction throughout all or a significant portion of its natural range.

**Endangered Species Act (ESA)**

An act passed by Congress in 1973 intended to protect species and subspecies of plants and animals that are of “aesthetic, ecological, educational, historical, recreational, and scientific value”. It may also protect the listed species’ critical habitat, the geographic area occupied by or essential to the species. The FWS (USFWS) and NMFS share authority to list endangered species, determine critical habitat, and develop species’ recovery plans.

**enhance**

In a Recreation Opportunity Spectrum context, enhance means to address or resolve setting inconsistencies in the adopted ROS strategy classifications.

**entrainment**

The drawing in and transport by the flow of a fluid. For example, fish can be entrained into a canal as water is diverted into the canal, if the diversion is not screened.

**entrapment**

To catch in, as in a trap. For example, the entrainment of fish into a diversion canal may result in fish entrapment in the canal should they not be able to return to the stream they were diverted from.

**ephemeral stream**

A stream or portion of a stream that flows only in direct response to precipitation or run-off events, and that receives little or no continuous water from springs, snow, or other sources. Unlike intermittent streams, an ephemeral usually does not have a defined stream channel or banks, and its channel is at all times above the water table.

**eradicate (noxious weeds)**

To eliminate a noxious weed from a given area, including all viable seeds and vegetative propagules.

### **Essential Fish Habitat (EFH)**

EFH is broadly defined by the Magnuson-Stevens Act as, “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity”. This language is interpreted or described in the 1997 Interim Final Rule [62 Fed. Reg. 66551, Section 600.10 Definitions] -- Waters include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include historic areas if appropriate. Substrate includes sediment, hard bottom, structures underlying the waters, and associated biological communities. Necessary means the habitat required to support a sustainable fishery and the managed species’ contribution to a healthy ecosystem. “Spawning, breeding, feeding, or growth to maturity” covers a species’ full life cycle. Federal agencies are required, under '305(b)(2) of the MSA and its implementing regulations (50 CFR 600 Subpart K), to consult with NMFS regarding actions that are authorized, funded, or undertaken by that agency that may adversely affect EFH).

### **essential habitat**

Used to describe habitat of listed species under ESA, but not designated as “critical habitat”. Essential habitat has all the important elements of habitat necessary to sustain a species.

### **exotic species**

Animals or plants that have been introduced from a distant place and are non-native to the area of introduction.

### **facility**

Structures needed to support the management, protection, and utilization of the National Forests, including buildings, utility systems, bridges, dams, communication system components, and other constructed features. There are three categories of facilities: recreation, administrative, and permitted.

### **fg (foreground)**

The visual distance zone relating to the detailed landscape found within 0 to 0.25 to 0.5 mile from the viewer.

### **fine filter approach**

A focus on individual species (management indicator species, threatened and endangered species, etc.).

### **fire-adapted ecosystem**

An ecosystem with the ability to survive and regenerate in a fire-prone environment.

### **Fire Management Plans**

A strategic plan that defines a program to manage wildland and prescribed fires and documents the Fire Management Program described in the approved Forest Plan.

### **fire regimes**

The characteristics of fire in a given ecosystem, including factors such as frequency, intensity, severity, and patch size. The terms used for the different fire regimes are: Nonlethal, Mixed1, Mixed2, and Lethal. Nonlethal fires are generally of lowest intensity and severity with the smallest patches of mortality, while lethal fires are generally of highest intensity and severity with the largest patches of mortality. The others fall in between.

### **fire intensity**

The effects of fire on the above-ground vegetation generally described in terms of mortality.

**fire severity**

Fire effects at and below the ground surface. Describes the impacts to organic material on the ground surface, changes to soils, and mortality of below-ground vegetative buds, roots, rhizomes, and other organisms.

**fire suppression tactics**

The tactical approaches regarding suppression of a wildland fire. These range from Control, Confine, Contain, and Monitor. Control is the most aggressive tactic, while Monitor is the least.

**fire use**

The combination of wildland fire use and prescribed fire application to meet resource objectives.

**FIREWISE**

A public education program developed by the National Wildland Fire Coordinating Center that assists communities located in proximity to fire-prone lands.

**floodprone area width**

The area that would be expected to be covered by water if the wetted stream depth were twice bank full height, determined at the deepest part on a given transect. This width is then extrapolated over the length of the stream reach by averaging several random transects taken within the project area.

**fluvial fish**

Fish that migrate, but only within a river system. Bull trout that migrate into larger river systems.

**forage**

Plant material (usually grasses, forbs, and brush) that is available for animal consumption.

**forbs**

Broadleaf ground vegetation with little or no woody material.

**forest development road**

See National Forest System road.

**forest development trail**

As defined in 36 CFR 212.1 and 261.2 (FSM 1013.4), a trail wholly or partly within or adjacent to and serving National Forests and other areas administered by the Forest Service that has been included in the forest development transportation plan.

**forest development transportation plan**

The plan for the system of access roads, trails, and airfields needed for the protection, administration, and use of National Forests and other lands administered by the Forest Service, or the development and use of resources upon which communities within or adjacent to National Forests are dependent (36 CFR 212.1).

**forest road**

As defined in Title 23, Section 101 of the United States Code, any road wholly or partly within, or adjacent to, that serves the National Forest System and that is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources.

**forested stringers**

Stands of forested vegetation that are long and narrow and surrounded by non-forested vegetation. Stringers often provide high value habitat for big game and other wildlife species because they are the only hiding or thermal cover in the immediate area.

**forest system trail**

See Forest Development Trail.

**forest telecommunications system**

All equipment and related facilities used for the purpose of Forest communication. This includes but is not limited to radio, voice, data, and video communications.

**forest transportation atlas**

An inventory, description, display, and other associated information for those roads, trails, and airfields that are important to the management and use of National Forest System lands, or the development and use of resources upon which communities within or adjacent to the National Forests depend.

**forest transportation facility**

A classified road, designated trail, or designated airfield—including bridges, culverts, parking lots, log transfer facilities, safety devices, and other transportation network appurtenances—under Forest service jurisdiction that is wholly or partially within or adjacent to National Forest System lands.

**forest transportation system management**

The planning, inventory, analysis, classification, recordkeeping, scheduling, construction, reconstruction, maintenance, decommissioning, and other operations taken to achieve environmentally sound, safe, cost-effective, access for use, protection, administration, and management of National Forest System lands.

**fragmentation**

The splitting or isolation of habitat into smaller patches because of human actions. Habitat can be fragmented by management activities such as timber harvest and road construction, and changes such as agricultural development, major road systems, and reservoir impoundments.

**free flowing**

Existing or flowing in a natural condition without impoundment, diversion, straightening, riprapping, or other modification in the waterway.

**geoclimatic setting**

The geology, climate (precipitation and temperature), vegetation, and geologic processes (such as landslides or debris flows) that are characteristic of a place; places with these similar characteristics are said to have the same geoclimatic setting.

**Geographic Information System (GIS)**

A computer system that stores and uses spatial (mappable) data.

**Geomorphic Integrity**

Geomorphic integrity is an assessment and comparison of existing soil-hydrologic conditions with historical conditions that existed before Euro-American settlement. Upland, riparian, and stream conditions are assessed to determine how their integrity and resilience may have changed due to effects from past or current human-caused (road construction, timber harvest, livestock grazing, etc.) or natural

(wildfire, floods, etc.) disturbance. Relative integrity ratings are assessed at the subwatershed scale and based on the geomorphic resilience of streams and wetland/riparian areas, and the ability of the system to absorb and store water.

**goal**

As Forest Plan management direction, a goal is a concise statement that helps describe a desired condition, or how to achieve that condition. Goals are typically expressed in broad, general terms that are timeless, in that there are no specific dates by which the goals are to be achieved. Goal statements form the basis from which objectives are developed.

**goods and services**

36 CFR 219 - The various outputs produced by forest and rangeland renewable resources. The tangible and intangible values of which are expressed in market and non-market terms.

**guideline**

As Forest Plan management direction, a guideline is a preferred or advisable course of action generally expected to be carried out. Deviation from compliance does not require a Forest Plan amendment (as with a standard), but rationale for deviation must be documented in the project decision document.

**habitat**

A place that provides seasonal or year-round food, water, shelter, and other environmental conditions for an organism, community, or population of plants or animals.

**habitat security**

The protection inherent in any situation that allows big game to remain in a defined area despite an increase in stress or disturbance associated with the hunting season or other human activity. The components of security may include, but are not limited to: vegetation, topography, road density, general accessibility, hunting season timing and duration, and land ownership. Habitat security is area specific, while hiding cover (see definition below) is site specific.

**hardening**

Used in the context of facility management, hardening refers to improvements, usually to the surfacing of roads, trails, campsite areas, and facility access areas, to reduce soil erosion and/or sedimentation in nearby watercourses. These improvements can include paving, gravel surfacing, or a number of other soil stabilization products and techniques.

**head month**

One head month is equal to 1 month's use and occupancy of the range by one animal. For grazing fee purposes, it is a month's use and occupancy of range by one weaned or adult cow with or without calf, one bull, one steer, one heifer, one horse, one burro, or one mule; or five sheep or five goats.

**Heritage Program**

The Forest Service program that encompasses all aspects of cultural resource management, including both project and non-project resource inventory, evaluation, mitigation, curation, interpretation, public participation and education, protection and monitoring, and support to other resources.

**hibernaculum**

Winter residence, or any natural covering for protecting organisms during the winter. This term is often used for bat wintering and roosting areas, which may include caves, mine adits, or loose tree bark.

**hiding cover**

Vegetation capable of hiding 90 percent of an adult elk or deer from a human's view at a distance equal to or less than 200 feet.

**hierarchy**

A general integrated system comprising two or more levels, the higher controlling to some extent the activities of the lower levels; a series of consecutively subordinate categories forming a system of classification.

**historical emissions**

The amount of smoke assumed to be produced annually or decadal, based on the number of acres burned in each historical fire regime. Used to provide a reference for current conditions.

**Historical Range of Variability (HRV)**

The natural fluctuation of healthy ecosystem components over time. In this document, HRV refers to the range of conditions and processes that likely occurred prior to settlement of the area by people of European descent (around the mid 1800s), and that would have varied within certain limits over time.

**historic property**

Any prehistoric or historic district, site, building, structure, or object included on, or eligible for inclusion on the National Register, including artifacts, records, and material remains related to such a property or resource.

**human dimensions**

Refers to social and economic components of an ecosystem.

**hydrologic**

Refers to the properties, distribution, and effects of water. "Hydrology" is the study of water; its occurrence, circulation, distribution, properties, and reactions with the environment.

**Hydrologic Unit Code (HUC)**

A hierarchal coding system developed by the U.S. Geological Service to map geographic boundaries of watersheds of various sizes.

**hydric**

Wet or moist conditions. Can refer to a habitat characterized by, or a species adapted to wet or moist conditions, rather than mesic (moderate) or xeric (dry) conditions.

**Idaho Department of Water Resources Comprehensive Water Plan**

State legislation provides for the development of a comprehensive state water plan that may include protected rivers designated either as natural or recreational rivers. The legislative purpose states that selected rivers possessing outstanding fish and wildlife, recreational, aesthetic, historic, cultural, natural, or geologic values should be protected for the public benefit and enjoyment. The legislation provides that a waterway may be designated as an interim protected river prior to the preparation of the comprehensive plan for the waterway.

**impinge**

To strike or dash, especially with a sharp collision. For fish, impingement, or physical contact with screen material, can cause some level of injury and/or mortality. Fish impingement onto a screen face can usually be avoided with proper consideration of diversion design hydraulics. Fish screen criteria used in the Northwest specifies that approach velocity must be less than 0.4 feet per second to adequately protect salmonid fry.

**indicator**

In effects analysis, a way or device for measuring effects from management alternatives on a particular resource or issue.

**Infish**

Interim Inland Native Fish Strategy for Intermountain, Northern, and Pacific Northwest Regions (USDA Forest Service).

**infrastructure**

The facilities, utilities, and transportation systems needed to meet public and administrative needs.

**in lieu lots (*Sawtooth only*)**

Lots that are permitted to recreation residence tract permittees in lieu of existing lot permits that cannot be renewed due to a change in land use or allocation, etc. See FSH 2709.11, Chapter 2721.23f.

**inner gorge**

Steep valley walls that bound a stream reach. Common in areas of stream downcutting or geologic uplift. More commonly found on the costal and cascade ranges.

**insignificant effect**

An insignificant effect is one that cannot be detected, measured, or evaluated in any meaningful way. Therefore, no change to a resource, social, or economic condition would be expected from a insignificant effect. Determination of an insignificant effect may be based on scientific analysis, professional judgment, experience, or logic.

Specific to the ESA and effects on Threatened, Endangered, Proposed or Candidate species, an insignificant effect can never reach the scale or magnitude where a species take occurs. The appropriate effects determination for insignificant effects on these species would be: "Is not likely to adversely affect". Refer to the "adverse effect" definition in this glossary.

**Integrated Weed Management**

A multi-disciplinary, ecological approach to managing weed infestations involving the deliberate selection, integration, and implementation of effective weed control measures with due consideration of economic, ecological, and sociological consequences.

**interior exclusion**

A parcel of non-National Forest System land within the Forest boundary that can be acquired without having Congress change the exterior Forest boundary.



### **interim management direction**

For Wild and Scenic Rivers, the identified outstandingly remarkable values are afforded adequate protection, subject to valid existing rights. Affording adequate protection requires sound resource management decisions based on NEPA analysis. Protective management may be initiated by the administering agency as soon as eligibility is determined. Specific management prescriptions for eligible river segments provide protection to free-flowing values, river-related values, and classification impacts.

### **intermittent stream**

A stream or portion of a stream that flows only in direct response to precipitation or seasonal run-off, and that receives little or no water from springs or other permanent sources. Unlike ephemeral streams, an intermittent has well-defined channel and banks, and it may seasonally be below the water table.

### **Inventoried Roadless Area (IRA)**

An area that:

- (1) is larger than 5,000 acres or, if smaller, contiguous to a designated wilderness or primitive area;
- (2) contains no improved roads maintained for travel by standard passenger-type vehicles;
- (3) is characterized by a substantially undeveloped character; and
- (4) has been inventoried by the Forest Service for possible inclusion in the Wilderness Preservation System.

These areas include those identified in a set of IRA maps—contained in the Forest Service Roadless Area Conservation Final EIS, Volume 2 (November 2000), and held at the National headquarters of the Forest Service—or any update, correction, or revision of those maps. Refer to Table C-5 in Appendix C to the Forest Plan Revision Final EIS for a listing of IRAs, their location, and acreage.

### **isolated cabin**

Cabins on sites not planned or designated for recreational cabin purposes. These cabins are authorized by special-use permit.

### **key watershed**

Governor's Bull Trout Conservation Plan (7/96) - A watershed that has been designated as critical to long-term persistence of regionally important bull trout populations. Designation is based on existing bull trout population biology and not land ownership. Land management actions emphasize maintenance or recovery of bull trout. Key watersheds must:

- be selected to provide all critical habitat elements;
- be selected from best available habitat, with best opportunity to be restored to high quality;
- provide for replication of strong subpopulations within their boundaries;
- be large enough to incorporate genetic and phenotypic diversity, and small enough that subpopulations interconnect;
- be distributed throughout bull trout historic range.

Pacfish (1995) - A watershed that is important to "at risk" anadromous fish, provides good anadromous fish habitat, or is readily capable of providing good anadromous fish habitat, and is selected to contribute to a network across the landscape that provides for the long-term conservation of anadromous fish. By definition, a key watershed is currently occupied habitat, similar to a bull trout "priority" watershed.

**landscape scale assessment**

An assessment done for a landscape area varying in size from a 6th-field HU to a combination of 5th-field HUs, or approximately 10,000 to 100,000 acres. This scale is synonymous with “fine-scale analysis.” Ecosystem Analysis at the Watershed Scale (EAWS) occurs at this scale.

**landslide**

Any downslope mass movement of soil, rock, or debris.

**landslide prone area**

An area with a tendency for rapid soil mass movements typified by shallow, non-cohesive soils on slopes where shallow translational planar landsliding phenomena is controlled by shallow groundwater flow convergence. The initiation is often associated with extremely wet periods, such as rain-on-snow events. It does not include slow soil mass movements that include deep earth-flows and rotational slumps, nor snow avalanche or rock fall areas. Translational slides have been documented as the dominant form of landslides for the majority of the Forest.

**landtype**

A portion of the landscape resulting from geomorphic and climatic processes with defined characteristics having predictable soil, hydrologic, engineering, productivity, and other behavior patterns.

**landtype associations**

A grouping of landtypes similar in general surface configuration and origin.

**leasable minerals**

Leasable minerals are normally those “soft rock minerals” related to energy resources, such as oil, gas, coal, oil shale, tar sands, etc. Some “hard rock” minerals can become leasable because of land status, i.e., acquired mineral estate.

**lifestyle**

The way people live.

**local road**

Roads that connect terminal facilities with Forest collector or arterial roads, or public highways. The location and standard are usually controlled by topography and specific resource activities rather than travel efficiency. Forest local roads may be developed and operated for long-term, intermittent, short-term, or temporary service.

**locatable minerals**

Locatable minerals are normally those “hard rock minerals” that are either base or precious metals, and that are open and available for appropriation under the General Mining Laws. In Idaho, locatable minerals often include gold, silver, lead, zinc, copper, antimony, cadmium, cobalt, molybdenum, etc.

**Magnuson-Stevens Act**

Public Law 94-265, as amended through October 11, 1996. Ocean fisheries are managed under the Magnuson Fishery Conservation and Management Act of 1976 (also called the Magnuson-Stevens Act [MSA]). The Act provided NMFS legislative authority for fisheries regulation in the United States, in the area between three-miles to 200 miles offshore and established eight Regional Fishery Management

Councils (Councils) that manage the harvest of the fish and shellfish resources in these waters. In 1996, the MSA was re-authorized and changed by amendments to emphasize the sustainability of the nation's fisheries and establish a new standard by requiring that fisheries be managed at maximum sustainable levels and that new approaches be taken in Essential Fish Habitat conservation.

### **maintain**

When used in a management goal or objective for biological and physical resources, “maintain” means to stay within the range of desired conditions. The context is that resource conditions are already within their desired range, and the expectation is that management actions to achieve goals or objectives maintain resource conditions within their desired range in the planning period.

When used in a standard or guideline for biological and physical resources, “maintain” means that current conditions are neither restored or degraded, but remain essentially the same. The context is that resource conditions may or may not be in their desired range, and the expectation is that maintenance management actions do not degrade or restore current conditions.

This is an important distinction because most goal or objective management actions cannot be designed to achieve desired conditions for all resources. Specific actions are designed to achieve desired conditions for specific resources, but may simultaneously have effects on those or other resources. The intent behind “maintain” when used in a standard or guideline is to keep those effects from *degrading* resource conditions; i.e., moving conditions from functioning properly to functioning at risk, or making conditions measurably worse when they are currently functioning at risk or not functioning properly. See definitions for “degrade” and “restore” in this Glossary.

For Recreation, Scenic Environment, Heritage, Lands, Special Uses, and Wilderness resources, “maintain” means to continue a current or existing practice, activity, management strategy, resource condition, or level of use.

For physical improvements managed under the Roads and Facilities programs, “maintain” means to keep the road or facility in a usable condition.

For resource inventories, databases, plans, maps, or other documents related to all resources, “maintain” means to periodically update these items to reflect current conditions and/or status.

### **management action or activity**

As identified in FSM 2527.05 - Any Federal activity including (1) acquiring, managing, and disposing of Federal lands and facilities, (2) providing federally undertaken, financed, or assisted construction or improvements, and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

An exception to this definition is fire suppression, which is considered an emergency response action rather than a management action. FSM 2671.45f, part 2(a) states, “Human safety is the highest priority for every emergency response action (see FSM 5130.3 for related direction on the wildland fire suppression policy and the priority for the safety of firefighters, other personnel, and the public).”

### **management area**

A land area with similar management goals and a common prescription, as described in the Forest Plan.

**Management Indicator Species (MIS)**

Representative species whose habitat conditions or population changes are used to assess the impacts of management activities on similar species in a particular area. MIS are generally presumed to be sensitive to habitat changes.

**Management Prescription Category (MPC)**

Management prescriptions are defined as, “Management practices and intensity selected and scheduled for application on a specific area to attain multiple use and other goals and objectives” (36 CFR 219.3). MPCs are broad categories of management prescriptions that indicate the general management emphasis prescribed for a given area. They are based on Forest Service definitions developed at the national level, and represent management emphasis themes, ranging from Wilderness (1.0) to Concentrated Development (8.0). The national MPCs have been customized during Forest Plan revision to better fit the needs and issues of the Southwest Idaho Ecogroup Forests.

**management strategies**

For Forest Plan revision, this term is used to encompass both management direction and management emphasis (especially MPCs) that set the stage and sideboards for future actions or activities that may occur during the planning period. The strategies do not include any specific actions or activities, but rather focus on the general types and intensities of activities that could occur, given the management direction and prescriptions proposed under the Forest Plan alternatives.

**matrix**

In landscape ecology, a matrix is usually the most extensive and connected element present in a landscape. Patches and corridors are often imbedded in the matrix. The matrix may play a dominant role in the functioning of the landscape without being the most extensive landscape element. Determining the matrix in a landscape depends either on connectivity, dominance, or function. Each landscape should be evaluated individually.

**Maximum Modification (MM)**

Category of Visual Quality Objective (VQO) where human activity may dominate the characteristic landscape, but should appear as a natural occurrence when viewed as background.

**meaningful measures**

A recreation, wilderness, and heritage resources management process that:

- Establishes quality standards, based on validated visitor preferences and expectations, that are used to produce desired services and facilities;
- Accounts for the costs to manage resources;
- Establishes priorities for current budgets; and
- Links recreation resources to other management responsibilities of the agency

**measurable change**

A measurable change is one that can be meaningfully detected, measured, or evaluated using accepted analysis or monitoring methods. A measurable change would not result from an insignificant or discountable effect.

**mesic**

Moderate moisture conditions. Can refer to a habitat characterized by, or a species adapted to moderate moisture conditions rather than hydric (wet) or xeric (dry) conditions.

### **metapopulation**

A group or collection of semi-isolated subpopulations of organisms that are interconnected and interact both physically and genetically. A population comprising local populations that are linked by migrants, allowing for recolonization of unoccupied habitat patches after local extinction events.

### **middleground (mg)**

The visual distance zone between the foreground and the background in a landscape, located from 0.25 – 0.5 mile to 3-5 miles from the viewer.

### **mitigate**

To avoid, minimize, reduce, eliminate, rectify, or compensate for impacts or degradation that might otherwise result from management actions.

### **mitigation measures**

Modifications of actions that: (1) avoid impacts by not taking a certain action or parts of an action in a given area of concern; (2) minimize impacts by limiting the degree or magnitude of the actions and its implementation; (3) rectify impacts by repairing, rehabilitating, or restoring the affected environment; (4) reduce or eliminate impacts over time by preservation and maintenance operations during the life of the action; or (5) compensate for impacts by replacing or providing substitute resources or environments.

### **Modification (M)**

Category of Visual Quality Objective (VQO) where human activity may dominate the characteristic landscape but must, at the same time, follow naturally established form, line, color, and texture. It should appear as a natural occurrence when viewed in foreground or middleground.

### **monitoring**

The process of collecting information to evaluate if objectives and anticipated results of a management plan are being realized, or if implementation is proceeding as planned.

### **Management Prescription Category (MPC)**

MPCs comprise a range of management prescriptions, from wilderness preservation to concentrated development, that can be applied across the Forest to indicate specific management emphasis in different areas.

### **National Environmental Policy Act (NEPA)**

The National Environmental Policy Act of 1969 requires environmental analysis and public disclosure of federal actions.

### **National Fire Plan**

Strategic and implementation goals, budget requests and appropriations, and agency action plans to address severe wildland fires, reduce fire impacts on rural communities, and ensure effective firefighting capability in the future.

### **National Fire Plan Communities**

Those communities identified in the January and August 2001 Federal Register as “Urban Wildland Interface Communities” for each state as part of the National Fire Plan.

### **National Forest Scenic Byway**

A road on National Forest System land that has been designated by the Chief of the Forest Service for its exceptional scenic, historic, cultural, recreational, or natural resources.

**National Forest System road**

A classified Forest road under the jurisdiction of the Forest Service. The term “National Forest System road” is synonymous with the term “forest development road” as used in 23 U.S.C. 205.

**National Historic Preservation Act (NHPA)**

A Federal Act, passed in 1966, which established a program for the preservation of additional historic properties throughout the nation and for other purposes, including the establishment of the National Register of Historic Places, the National Historic Landmarks designation, regulations for supervision of antiquities, designation of the State Historic Preservation Offices (SHPO), guidelines for federal agency responsibilities, technical advice, and the establishment of the Advisory Council on Historic Preservation.

**National Register of Historic Places (NRHP)**

A list of cultural resources that have local, state, or national significance maintained by the Secretary of the Interior.

**National Wilderness Preservation System**

All lands managed under the Wilderness Act and subsequent wilderness designations, irrespective of the department or agency having jurisdiction.

**Nationwide Rivers Inventory (NRI)**

The NRI provides a database for potential additions to the National Wild and Scenic River System. The NRI is maintained and updated by the National Park Service. Just because a segment is listed on the NRI or is on other source lists does not necessarily indicate eligibility, and conversely, absence from any such list or document does not indicate a river’s ineligibility.

**native species**

Animals or plants that originated in the area in which they live. Species that normally live and thrive in a particular ecosystem.

**natural-appearing landscape character**

“Natural-appearing” refers to a visual landscape character that has resulted from a combination of geological processes, climate, disturbance events, and ecological succession.

**new facilities**

Facilities resulting from new construction in locations where no facilities previously existed.

**new road construction**

Activity that results in the addition of forest classified or temporary road miles (36 CFR 212.1).

**no action (alternative)**

The most likely condition expected to exist if current management practices continue unchanged. The analysis of this alternative is required for federal actions under NEPA.

**non-discretionary actions**

Land management activities initiated from outside the National Forest Service—such as mining proposals, special-use permitted activities, or suppression tactics for life-threatening situations.

### **Northwest Power Planning Council Protected Rivers**

The Council has designated certain river reaches in the Columbia River Basin as "protected areas". These are areas where the Council believes hydroelectric development would have unacceptable risks of loss to fish and wildlife species of concern, their productive capacity, or their habitat. Protected rivers are those reaches or portions of reaches listed on the "Protected Areas List".

### **noxious weed**

A state-designated plant species that causes negative ecological and economic impacts to both agricultural and other lands within the state.

### **nutrient cycling**

Circulation or exchange of elements such as nitrogen and carbon between non-living and living portions of the environment. Includes all mineral and nutrient cycles involving mammals and vegetation.

### **objective**

As Forest Plan management direction, an objective is a concise time-specific statement of actions or results designed to help achieve goals. Objectives form the basis for project-level actions or proposals to help achieve Forest goals. The time frame for accomplishing objectives, unless otherwise stated, is generally considered to be the planning period, or the next 10 to 15 years. More specific dates are not typically used because achievement can be delayed by funding, litigation, environmental changes, and other influences beyond the Forest's control.

### **Off Highway Vehicle (OHV)**

Any motorized vehicle designed for or capable of cross-country travel on or immediately over land, water, snow, ice, marsh, swampland, or other natural terrain. These include common vehicles such as motorcycles, ATVs, snowmobiles, 4-wheel drive vehicles, and trail bikes.

### **old forest**

Old forest is a component of the Large Tree Size Class, with the following general characteristics: a variability in tree size that includes old, large trees with signs of decadence, increasing numbers of snags and coarse woody debris, canopy gaps, and understory patchiness. There are two broad types of old forest in the Southwest Idaho Ecogroup area—single-storied and multi-storied. Single-storied old forest is characterized by a single canopy layer of large or old trees. These stands generally consist of widely spaced, shade-intolerant species, such as ponderosa pine and western larch, that are adapted to a nonlethal, high frequency fire regime. Multi-storied old forest is characterized by two or more canopy layers, with large or old trees in the upper canopy. These stands can include both shade-tolerant and shade-intolerant species, and are typically adapted to a mixed regime of both lethal and nonlethal fires. Because old forest characteristics have been aggregated into two basic categories, it is generally easier to identify, monitor, and compare the characteristics of these old forest types with desired vegetative conditions than it is with "old growth" (see old growth definition, below).

### **old growth**

Old growth is a defined set of forested vegetation conditions that reflect late-successional characteristics, including stand structure, stand size, species composition, snags and down logs, and decadence. Minimum amounts of large trees, large snags, and coarse wood are typically required. Definitions of old growth generally vary by forest type, depending on the disturbance regimes that may be present. Also, within a given forest type, considerable variability can exist across the type's geographical range for specific ecological attributes that characterize late seral and climax stages of development. This variability among and within multiple (often 10-20) forest types makes old growth characteristics difficult to identify, monitor, and compare to desired vegetative conditions.

**opening (created)**

Related to vegetation management, openings are created only by planned, even-aged, regeneration timber harvesting. Only those even-aged timber harvest practices that reduce stocking levels to less than 10 percent create openings. Canopy closure will normally be used to determine stocking levels. Residual stands of mature trees will generally have less than 10 percent stocking when fewer than 10 to 15 trees per acre remain following harvest. Even-aged harvest practices that may result in the creation of openings include clear-cutting, reserve tree clear-cutting, seed tree cutting, shelterwood seed cutting, and overstory removal.

**outstandingly remarkable value (ORV)**

In the Wild and Scenic Rivers Act, river values identified include scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values and their immediate environments. The Act does not further define outstandingly remarkable values. The Intermountain Region defines outstandingly remarkable value as, “Characteristic of a river segment that is judged to be a rare, unique, or exemplary feature that is significant at a regional or national scale”.

**Pacfish**

Interim strategies for managing Pacific anadromous fish-producing watersheds in eastern Oregon and Washington, Idaho, and portions of California.

**Pacific Northwest Rivers Study**

A component of the Northwest Power Planning Council's Pacific Northwest Hydro Assessment Study. The study produced a comprehensive rating for five major classes of data including Resident Fish, Wildlife, Cultural Features, Natural Features, and Recreation. The study also identified reaches already protected by other State or Federal institutional constraints. Ratings were on a scale of 1-5, where 1 represented outstanding resource, 2 a substantial resource, 3 a moderate resource, 4 a limited resource, and 5 an unknown or absent resource.

**Partial Retention (PR)**

A category of Visual Quality Objective (VQO) where human activities may be evident to the casual Forest visitor but must remain subordinate to the characteristic landscape.

**Passport In Time**

A nationwide Forest Service program that provides opportunities for “hands-on” public involvement in cultural resources management, such as archeological excavations, historical research, and oral history collection.

**patches**

In landscape ecology, patches are spatial units at the landscape scale. Patches are areas surrounded by matrix, and may be connected by corridors. Patch size can affect species habitat, resource availability, competition, and recolonization. Patch shape and orientation also play an important ecological role. Interpatch distance refers to the distance between two or more patches

**patchy habitat**

Habitat that is naturally isolated from near-by pieces that are similar. Habitat that is patchy should not be referred to as being fragmented because it is not a man-induced condition.

**pattern, or spatial pattern**

The spatial arrangement of landscape elements (patches, corridors, matrix) that determines the function of a landscape as an ecological system.



**perennial stream**

A stream that typically maintains year-round surface flow, except possibly during extreme periods of drought. A perennial stream receives its water from springs or other permanent sources, and the water table usually stands at a higher level than the floor of the stream.

**Persons At One Time (PAOT)**

A recreational capacity measurement term indicating the number of people who can use a facility or area at one time.

**population**

The people, wildlife, fish, or plants that inhabit and reproduce in a specific area. Also, a group of individuals of the same species occupying a defined locality during a given time that exhibit reproductive continuity from generation to generation.

**potential classification**

For Wild and Scenic Rivers, when rivers are considered for eligibility, river segments are tentatively classified either as wild, scenic, or recreational, based on the degree of access and amount of development along the river area.

**potential outstandingly remarkable value assessment**

For Wild and Scenic Rivers, a general look at each river, to determine if the resource values are below average, average, or above average. Rivers determined to contain at least one resource value that is above average will be evaluated in the eligibility process.

**prescribed fire**

Any fire ignited by management actions to meet specific objectives.

**prescription (fire)**

Measurable criteria that define conditions under which a prescribed fire may be ignited, guide selection of appropriate management responses, and indicate other required actions. Prescription criteria may include safety, economic, public health, environmental, geographic, administrative, social, or legal considerations.

**Preservation (P)**

Category of Visual Quality Objective (VQO) that allows for ecological change only.

**primitive**

A Recreation Opportunity Spectrum classification for areas characterized by an essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted.

**priority wildlife habitats**

Those habitats that have most decreased or changed from historic times. They can be used to rank the need for restoration or management emphasis.

**priority watershed**

Governor's Bull Trout Conservation Plan (7/96) - A watershed that is either in the best condition for this species or is most recoverable with the greatest opportunity for success. Priority watersheds can be classified as follows:

*Focal* - highly occupied, existing protection and maintenance, cost for protection is low, chance of success is high over the short term.

*Adjunct* - considerable restoration may be needed, riparian and in-channel restoration stand a good chance of succeeding, good opportunity for colonizing from adjacent habitat, restoration can improve adjacent refuge populations.

*Nodal* - critical to sustaining existing populations within the watershed, connected and accessible to migrating populations, restoration potential is high.

*Critical Contributing Area* - restoration is necessary to secure functional value for associated focal, adjunct, or nodal habitats.

*Lost Cause* - level of effort exceeds benefits.

**private road**

A road under private ownership authorized by an easement to a private party, or a road that provides access pursuant to a reserved or private right.

**professional judgment**

Intuitive conclusions and predictions dependent upon training; interpretation of facts, information, observations, and/or personal knowledge.

**promote**

In the context of recommended wilderness management, to take measures that actively encourage non-conforming uses within recommended wilderness. These measures would include the development or improvement of facilities and infrastructure within recommended wilderness in support of non-conforming uses. These measures would not include actions taken to reduce safety hazards and routine maintenance of existing facilities and infrastructure.

**Properly Functioning Condition (PFC)**

Properly Functioning Condition means that the resource condition is within the range of desired conditions.

**proposed action**

A proposal made by the Forest Service or other federal agency to authorize, recommend, or implement an action to meet a specific purpose and need.

**public road**

Any road or street under the jurisdiction of, and maintained by, a public authority and open to public travel [23 U.S.C. 101(a)].

**RARE I and RARE II**

Roadless area inventory processes, conducted by the Forest Service in 1972 and 1977, respectively, mandated by the Wilderness Act of 1964.

**rear**

To feed and grow in a natural or artificial environment.

**reclamation (mine facilities)**

Reclamation can include removing facilities, equipment, and materials; recontouring disturbed areas to near pre-mining topography; isolating and neutralizing, or removing toxic or potentially toxic materials; salvage and replacement of topsoil, and/or seedbed preparation, and revegetation.

**recreation residences**

Cabins on National Forest System lands that normally were established in tracts and built for recreation purposes with agency approval and supervision. These cabins are authorized by special use permit and are not the primary residences of the owners.

**Recreation Opportunity Spectrum (ROS)**

A framework for stratifying and defining classes of outdoor recreation environments, activities, and experience opportunities. The settings, activities, and opportunities for obtaining experiences are arranged along a continuum or spectrum divided into six classes--primitive, semiprimitive nonmotorized, semiprimitive motorized, roaded natural, rural, and urban.

**recreational river**

In the National Wild and Scenic River System, a river or river segment that is readily accessible by road or railroad, may have some development along their shorelines, and may have undergone some impoundment or diversion in the past.

**Recreation Visitor Day (RVD)**

Twelve hours of recreation use in any combination of persons and hours (one person for 12 hours, three persons for four hours, etc.).

**replacement facilities**

Reconstruction of pre-existing facilities.

**resident fish**

Fish that are non-migratory and spend their entire life cycle within a given freshwater area.

**resilient, resiliency**

The ability of a system to respond to disturbances. Resiliency is one of the properties that enable the system to persist in many different states of successional stages. In human communities, refers to the ability of a community to respond to externally induced changes such as larger economic or social forces.

**resistance-to-control hazard**

Conditions that, given the same topography and weather, have a higher likelihood of becoming a crown fire, which in turn can lead to fire behavior that makes the fire difficult to control.

**restoration**

Management actions or decisions taken to restore the desired conditions of habitats, communities, ecosystems, resources, or watersheds. For soil, water, riparian, or aquatic resources, restoration may include any one or a combination of active, passive, or conservation management strategies or approaches.

**restoration priority**

A means used in this Forest Plan revision to prioritize water quality and aquatic restoration using beneficial uses, current condition, imperiled fish species, 303(d)-listed water bodies, and TMDL-assigned subbasins. This process also includes whether restoration should be active or passive based upon district-level properly functioning condition analyses for 6<sup>th</sup> level hydrologic units (subwatersheds).

**restore**

For biological and physical resources, restore means to repair, re-establish, or recover ecosystem functions, processes, or components so that they are moving toward or within their range of desired conditions.

For the Recreation, Scenic Environment, Heritage, Lands, Special Uses, Wilderness, Roads and Facilities resources, restore means to use management actions to re-establish desired resource conditions.

**retard attainment of desired resource conditions**

When an effect resulting from a management action, individually or in combination with effects from other management actions, within a specified area and time frame, measurably slows the recovery rate of existing conditions moving toward the range of desired resource conditions.

**Retention (R)**

A category of Visual Quality Objective (VQO) where human activities are not evident to the casual Forest visitor.

**riparian areas or zones**

Terrestrial areas where the vegetation complex and microclimate conditions are products of the combined presence and influence of perennial and/or intermittent water, associated with high water tables, and soils that exhibit some wetness characteristics.

**Riparian Conservation Areas (RCAs)**

Portions of watersheds where riparian-dependant resources receive primary emphasis, and management activities are subject to specific goals, objectives, standards, and guidelines. RCAs include traditional riparian corridors, perennial and intermittent streams, wetlands, lakes, springs, reservoirs, and other areas where proper riparian functions and ecological processes are crucial to maintenance of the area's water, sediment, woody debris, nutrient delivery system, and associated biotic communities and habitat.

**Riparian Habitat Conservation Area (RHCAs)**

To be used for the No Action Alternative only. As defined in Pacfish and Infish:

*Fish-bearing streams* - 100-year floodplain, outer edges of riparian area, to top of inner gorge, 300 feet slope distance, or two site potential tree heights, whichever is greatest.

*Perennial nonfish-bearing streams* - 100-year floodplain, outer reach of riparian area, to top of inner gorge, 150 feet slope distance, or one site potential tree height, whichever is greatest.

*Intermittent streams (includes landslide-prone areas and wetlands less than 1 acre)* - top of inner gorge, extent of landslide-prone area, outer edges of riparian area, and for key watersheds one site potential tree height or 100 feet slope distance (whichever is greatest), and for non-key watersheds half site potential tree height or 50 feet slope distance (whichever is greatest).

*Ponds, lakes, and wetlands greater than 1 acre* - outer edges of seasonally saturated soils, edge of riparian area, extent of any unstable soils, one site potential tree height, or 150 feet from maximum pool elevation, whichever is greatest.

### **river segment**

For Wild and Scenic River studies, a portion of the river area, which has been delineated for evaluation and planning purposes, that usually breaks at a change in river character, land status, or classification.

### **road**

A motor vehicle travelway over 50 inches wide, unless designated and managed as a trail. A road may be classified, unclassified, or temporary.

### **road decommissioning**

Activities that result in the stabilization and restoration of unneeded roads to a more natural state (36 CFR 212.1, FSM 7703).

### **road maintenance**

The ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective (FSM 7712.3).

### **road maintenance level**

Road maintenance is classified in terms of the following levels:

- *Maintenance level 1* - Assigned to intermittent service roads during the time they are closed to vehicular traffic. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities.
- *Maintenance level 2* - Assigned to roads open for public or permitted use by high clearance vehicles. Passenger car traffic is not a consideration.
- *Maintenance level 3* - Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities.
- *Maintenance level 4* - Assigned to roads that provide a moderate degree of user comfort and convenience at moderate travel speeds. Some roads may be paved and/or dust-abated.
- *Maintenance level 5* - Assigned to roads that provide a high degree of user comfort and convenience. These roads are normally paved.

### **road obliteration**

Road decommissioning technique used to eliminate the functional characteristics of a travelway and re-establish the natural resource production capability. The intent is to make the corridor unusable as a road or a trail and stabilize it against soil loss, which can involve re-contouring and restoring natural slopes.

### **road reconstruction**

Activity that results in improvement or realignment of an existing classified road as defined below:

- (a) *Road Improvement*– Activity that results in an increase of an existing road’s traffic service level expansion of its capacity, or a change in its original design function.
- (b) *Road Realignment*– Activity that results in a new location of an existing road or portions of an existing road and treatment of the old roadway (36 CFR 212.1).

**roads subject to the Highway Safety Act**

National Forest System roads open to use by the public for standard passenger cars. This includes roads with access restricted on a seasonal basis and roads closed during extreme weather conditions or for emergencies, but which are otherwise open for general public use.

**roaded natural**

A Recreation Opportunity Spectrum classification for areas characterized by a predominantly natural or natural-appearing environment with moderate evidence of the sights and sounds of people. Such evidence usually harmonizes with the natural environment. Interaction between users may be moderate to high, with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is allowed and incorporated into construction standards and design of facilities.

**roadless area**

See Inventoried Roadless Area.

**RS 2477 claim**

A claim for a pre-existing road right-of-way based upon a mining law passed in 1866. The law was later repealed as a part of the Federal Land Policy and Management Act (FLPMA) of 1976.

**RS 2339 claim**

A claim for a pre-existing ditchline or other water transmission structure.

**rural**

ROS classification for areas characterized by a natural environment that has been substantially modified by development of structures, vegetative manipulation, or pastoral agricultural development. Resource modification and utilization practices may be used to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sound of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate user densities are present away from developed sites. Facilities for intensified motorized use and parking are available.

**scale**

Defined in this framework as geographic extent; for example, region, sub-regional, or landscape scale.

**Scenery Management System (SMS)**

An updated system for the management of scenery resources designed to replace the Visual Management System (VMS) and instituted by the Forest Service in 1995. The SMS differs from the VMS in that:

- It increases the role of constituents throughout the inventory and planning process; and
- It borrows from and is integrated with the basic concepts and terminology of Ecosystem Management.

The SMS provides for improved integration of aesthetics with other biological, physical, and social/cultural resources in the planning process. It also incorporates different terminology and planning elements including Ecological Unit Description, Scenic Attractiveness, Scenic Integrity, Landscape Visibility, and Constituent Analysis. Under SMS, Scenic Integrity Objectives (SIOs) are established that define relative levels of deviation from the character valued by constituents for its aesthetic appeal. Implementation of SMS does not necessarily confer greater or less protection for scenic resources. It is merely a different system for managing them.

### **Scenic river**

In the National Wild and Scenic River System, a river or river segment that may be accessible in places by roads, but the shorelines or watersheds are largely primitive and undeveloped.

### **scoping**

The process the Forest Service uses to determine, through public involvement, the range of issues that the planning process should address.

### **security cover or habitat**

Vegetation cover used by elk for concealment during the rifle-hunting season (Lyon and Canfield, 1991).

### **sedimentation**

The action or process of forming and depositing sediments. Stream sedimentation occurs when water velocity cannot transport the bed load and suspended matter is deposited by gravity along the streambed.

### **semiprimitive motorized**

ROS classification for areas characterized by predominantly natural or natural-appearing environment of moderate to large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but would be subtle. Motorized use of primitive roads with predominantly natural surfaces and trails suitable for motorcycles is permitted.

### **semiprimitive nonmotorized**

ROS classification for areas characterized by predominantly natural or natural-appearing environment of moderate to large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but would be subtle. Motorized recreation use is not permitted, but primitive roads used for other resource management activities may be present on a limited basis. Use of such roads may be restricted to minimize impacts on recreational experience opportunities or other resources.

### **sensitive species**

A Forest Service or BLM designation, sensitive plant and animal species are selected by the Regional Forester or the BLM State Director because population viability may be a concern, as evidenced by a current or predicted downward trend in population numbers or density, or a current or predicted downward trend in habitat capability that would reduce a species' existing distribution. Sensitive species are not addressed in or covered by the Endangered Species Act.

### **Sensitivity Level**

A measure of the degree of visitor sensitivity to the visual environment that is used as a component for the determination of Visual Quality Objectives under the Visual Management System. Three sensitivity levels are employed, each identifying a different level of user concern for the visual environment:

- Level 1 – Highest Sensitivity
- Level 2 – Average Sensitivity
- Level 3 – Lowest Sensitivity

**significant cave**

A cave located on federal lands that has been determined to meet the criteria in 36 CFR 290.3(c) or (d) and has been designated in accordance with 36 CFR 290.3(e). A cave considered significant may contain biotic, cultural, mineralogical, paleontologic, geologic, hydrologic, or other resources that have important values for scientific, educational or recreational purposes.

**silviculture**

The care and tending of stands of trees to meet specific objectives.

**site potential tree height**

For delineating RCAs, a site potential tree height is the height that a dominant or co-dominant tree within a stand is expected to attain at an age of 200 years. Outside of RCAs, a site potential tree height is the average height that the dominant or co-dominant tree within a stand will attain within 100 years.

**snag**

A standing dead tree.

**soil erosion**

Soil erosion is the detachment and transport of soil particles or aggregates by wind, water, or gravity. Management practices may increase soil erosion hazard when they remove ground cover and detach soil particles. .

**soil-loss tolerance**

Soil-loss tolerance is the maximum rate of soil erosion at which plant productivity can be sustained indefinitely. It is dependent on the rate of soil formation.

**soil mass movement or soil mass erosion**

Soil mass movement is the downslope movement of earth caused by gravity. This includes but is not limited to landslides, rock falls, debris avalanches, and creep. It does not, however, include surface erosion by running water. It may be caused by natural erosional processes, or by natural disturbances (e.g., earthquakes or wildland fire) or human disturbances (e.g., mining or road construction).

**soil productivity**

Soil productivity includes the inherent capacity of a soil under management to support the growth of specified plants, plant communities, or a sequence of plant communities. Soil productivity may be expressed in terms of volume or weight/unit area/year, percent plant cover, or other measures of biomass accumulation.

**spawning**

The act of fish reproduction. The mixing of the sperm of a male fish and the eggs of a female fish.

**special use authorization**

A permit, term permit, lease, or easement that allows occupancy or use rights or privileges on National Forest System lands (36 CFR 261.2).

**Special-use permit**

A special-use authorization that provides permission, without conveying an interest in land, to occupy and use National Forest System lands or facilities for specific purposes, and which is both revocable and terminable.



**species of concern**

An unofficial status for a species whose abundance is at low levels.

**species richness**

A measure of biological diversity, referring to the number of species in a given area.

**split estate**

Lands where ownership of the surface estate and mineral estate has been separated.

**standard**

As Forest Plan management direction, a standard is a binding limitation placed on management actions. It must be within the authority and ability of the Forest Service to enforce. A project or action that varies from a relevant standard may not be authorized unless the Forest Plan is amended to modify, remove, or waive application of the standard.

**State Historic Preservation Officer (SHPO)**

A person appointed by a state's Governor to administer the State Historic Preservation Program.

**strongholds**

For fish, strongholds are watersheds that: (1) include all major life-history forms (resident, fluvial, adfluvial) that historically occurred there; (2) have numbers that are stable or increasing, with local populations at least half of their historical size; and (3) have populations with at least 5,000 individuals or 500 adults.

**structure**

The size and arrangement, both vertically and horizontally, of vegetation.

**subbasin**

A fourth field hydrologic unit that nests within the hierarchical system developed by the U.S. Geological Survey to describe watersheds. Typically 800,00 to 1,000,000 acres in size, a subbasin is smaller than a river basin (third field unit), and larger than a watershed (fifth field unit).

**substrate**

The composition of a streambed, including mineral and organic materials.

**subwatershed**

An area of land that drains to a common point. A subwatershed is smaller subdivision of a watershed but is larger than a drainage or site. Subwatersheds are often synonymous with sixth-field hydrologic units, which are nested within larger watersheds (fifth-field units), and are comprised of smaller drainages, sites, and stream reaches.

**subwatershed vulnerability**

Subwatershed vulnerability is an assessment of a subwatershed's sensitivity to disturbance and its resiliency or natural ability for restoration. The disturbance may be human-caused and/or natural. This assessment uses several criteria, including soil erosion rates, natural sediment yields, and percentage of landslide-prone areas within the subwatershed.

**succession**

The replacement in time of one plant community with another. The prior plant community (or successional stage) creates conditions that are favorable for the establishment of the next stage. These changes often occur in a predictable order. More specifically, the gradual and natural progression in composition and structure of an ecosystem toward a climax condition or stage.

**suitability**

For Wild and Scenic Rivers, an assessment or determination as to whether eligible river segments should be recommended for inclusion in the National Wild and Scenic Rivers System by Congress or the Secretary of the Interior. Wild and Scenic River suitability involves determining the best use of the eligible river and the best method to protect the outstandingly remarkable values within the river corridor.

**suited land**

Forest land designated in the Forest Plan to be managed for timber production on a regulated basis.

**sustainability**

The ability to maintain a desired condition or flow of benefits over time.

**sweet smelling toilet**

Vault toilet construction and management technology that has been developed specifically to reduce odor problems associated with vault toilets.

**temporary road**

Roads authorized by contract, permit, lease, other written authorization, or emergency operation, that are not intended to be a part of the forest transportation system, and that are not necessary for long-term resource management.

**thermal cover**

Vegetation used by animals to lessen the effects of weather. For elk, thermal cover is typically a stand of coniferous trees, 40 feet or taller, with an average crown closure of 70 percent or more.

**threatened species**

Designated by the FWS or NMFS; a plant or animal species given federal protection because it is likely to become endangered throughout all or a specific portion of its range within the foreseeable future.

**Total Maximum Daily Load (TMDL)**

TMDL is the sum of waste load allocations for point sources, non-point sources, natural background, and a margin of safety. A TMDL specifies the amount of a pollutant that needs to be reduced to meet water quality standards set by the state. TMDL is used in a process to attain water quality standards that (1) identifies water quality problems and contributing pollutant sources, (2) allocates pollution control responsibilities among sources in the watershed, and (3) provides a basis for taking actions needed to restore a water body.

**Total Soil Resource Commitment (TSRC)**

TSRC is the conversion of a productive site to an essentially non-productive site for a period of more than 50 years. Examples include classified or unclassified roads, inadequately restored haul roads, designated skid roads, landing areas, parking lots, mining dumps or excavations, dedicated trails (skid trails also), developed campgrounds, other dedicated facilities, and some stock driveways. Productivity on these areas ranges from 0 to 40 percent of natural.

Standards for detrimentally disturbed soils are to be applied to existing or planned activities that are available for multiple uses. These standards do not apply to areas with dedicated uses such as mines, ski areas, campgrounds, and administrative sites.

### **traditional cultural property**

Traditional cultural property is defined as a property that is associated with cultural practices or beliefs or a living community that (1) are rooted in that community's history, and (2) are important in maintaining the continuing cultural identity of the community (National Register Bulletin 38)

### **trail**

A pathway for purposes of travel by foot, stock, ski, snowshoe, or trail vehicles.

### **trail vehicle**

Vehicles designed for trail use, such as bicycles, snowmobiles, trail bikes, trail scooters, and all terrain vehicles (ATVs).

### **transportation facility jurisdiction**

The legal right to control or regulate use of a transportation facility derived from fee title, an easement, an agreement, or other similar method. While jurisdiction requires authority, it does not necessarily reflect ownership.

### **travel corridor**

A linear strip of land defined for the present or future location of transportation facilities within its boundaries.

### **travel management**

The integrated planning of and providing for appropriate movement of people and products to and through National Forest System lands.

### **travel map or plan**

Physical documentation of the outcome of the travel management process reflecting the access decisions (travel orders) issued by the responsible official to restrict, prohibit, or allow the use of a described area or transportation facility to entry or mode of travel.

### **travelway**

Travelways existing on the national forest but not inventoried as part of the forest development transportation system. These routes vary in width, length and structure. Their origin is typically from off-road public travel, but may also be abandoned routes from past management activities such as mining, oil and gas exploration, grazing, and timber harvesting (see also unclassified roads). These roads may also include roads referred to as "two-tracks," "non-system roads," or "ghost roads".

### **uncharacteristic wildfire**

A fire that is burning in a way that does not emulate historical effects. This may include fire intensity, severity, size, and landscape patterns.

### **uncharacteristic wildfire hazard**

Conditions with the potential to lead to undesirable outcomes, in this case an uncharacteristic wildfire.

**unclassified road**

Roads on National Forest System lands that are not managed as part of the forest transportation system, such as unplanned roads, abandoned travelways, and off-road vehicle tracks that have not been designated and managed as trails. Unclassified roads also include those roads that were once under permit or other authorization and were not decommissioned upon the termination of the authorization (36 CFR 212.1).

**undertaking**

Any project, activity, or program that can result in changes in the character or use of any historic properties located in the area of potential effects (36 CFR 800.2). The project, activity, or program must be under the direct or indirect jurisdiction of a federal agency or licensed or assisted by a federal agency.

**undeveloped character**

In the context of land management, an area of land retaining its primeval character and influence, without permanent improvements or human habitation, which is managed so as to preserve its natural conditions and which generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable.

**unroaded areas**

Areas that do not contain classified roads.

**unstable areas**

Land areas that have a higher probability of increased erosion, landslides, and channel adjustment disturbances during climatic or physical events such as major storms or fires.

**urban**

ROS classification for areas characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Renewable resource modification and utilization practices are often used to enhance specific recreational activities. Vegetative cover is often exotic and manicured. Sights and sounds of humans are predominant on the site. Large numbers of users can be expected both on the site and in nearby areas. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to carry people throughout the site.

**utility corridor**

A linear strip of land defined for the present or future location of utility facilities within its boundaries.

**Variety Class**

A measure of the degree of variety within a visual landscape. There are three variety classes that identify the degree of variation of the natural landscape:

- Class A - Distinctive
- Class B - Common
- Class C - Minimal

**viable population**

A population that is regarded as having the estimated numbers and distribution of reproductive individuals to ensure that it will continue to exist over time and will be well distributed within a given area.

### **Visual Management System (VMS)**

A system for the management of scenery resources instituted by the Forest Service in 1974. It provides criteria for identification and classification of scenic quality on National Forest System lands. Scenic quality objectives are expressed in terms of Visual Quality Objectives (VQOs) that define the extent of allowable alteration of the natural-appearing landscape character. VQOs are determined based on a combination of natural landscape features and human use zones as expressed by Variety Class and Sensitivity Level.

### **Visual Quality Objective (VQO)**

Categories of acceptable landscape alteration measured in degrees of deviation from the natural-appearing landscape. The categories include Preservation, Retention, Partial Retention, Modification, and Maximum Modification.

### **Vulnerability**

Refers to lack of animal security during the hunting season. Vulnerability can be affected by conditions such as road density, road closures, openings, and hunting pressure.

### **Water Quality Integrity**

Water quality integrity is an assessment and comparison of existing water quality conditions with historical conditions that existed before Euro-American settlement. Physical, chemical, and biological water conditions are assessed to determine how their integrity and resilience may have changed due to effects from past or current human-caused (road construction, timber harvest, livestock grazing, etc.) or natural (wildfire, floods, etc.) disturbance. Conditions or values assessed include streambank damage, sediment loads, channel modification, flow disruption, thermal changes, chemical contamination, and biological stress. Relative integrity ratings are assigned at the subwatershed scale and are based on whether any designated beneficial use is not fully supported or any condition/value is seriously degraded.

### **water quality limited water bodies**

Denotes streams or other water bodies not meeting state Water Quality Standards. For purposes of Clean Water Act listing, these are waters that will not meet standards even with application of required effluent limitations.

### **Watershed**

Region or area drained by surface and groundwater flow in rivers, streams, or other surface channels. A smaller watershed can be wholly contained within a larger one, as watersheds are hierarchal in structure. For this document, watersheds are often synonymous with 5th field hydrologic units, which are nested within larger subbasins (4th field units), and are comprised of smaller subwatersheds (6th field units).

### **Watershed Condition Indicator (WCI)**

WCIs are an integrated suite of aquatic (including biophysical components), riparian (including riparian – associated vegetation species), and hydrologic (including uplands) condition measures that are intended to be used at the a variety of watershed scales. They assist in determining the current condition of a watershed and should be used to help design appropriate management actions, or to alter or mitigate proposed and or ongoing actions, to move watersheds toward desired conditions. WCIs represent a diagnostic means to determine factors of current condition and assist in determining future conditions associated with implementing management actions or natural restoration over time.

### **wetlands**

Land areas that are wet at least for part of the year, are poorly drained, and are characterized by hydrophytic vegetation, hydric soils, and wetland hydrology. Examples of wetlands include swamps, marshes, and bogs.

**Wilderness areas**

Areas that are without developed and maintained roads, and that are substantially natural, and that Congress has designated as part of the National Wilderness Preservation System.

**wildfire**

An unwanted wildland fire. Wildfires can be further described by two basic categories:

- (a) *characteristic*, which produce effects similar to those that occurred in the historical fire regime, or
- (b) *uncharacteristic*, which produce effects much different than those in the historical fire regime.

**wildfire risk**

Wildfire risk comprises the probability of an undesired wildfire event and the outcome of it. The undesired event realizes a hazard.

**wildland fire**

Any fire not involving a home or other structure, other than prescribed fire, that occurs in the wildland.

**wildland fire use (for resource benefits)**

The management of naturally ignited wildland fires to accomplish specific predated resource management objectives in predefined geographic areas outlined in Fire Management Plans.

**wildland fire use planning area**

Portions of the Forest that may be considered for wildland fire use consistent with the selected alternative. Delineation of the planning area or areas consider proximity to designated Wilderness, area size, location of administrative boundaries, adjacency to wildland-urban interface, and other factors. Further refinements to identify a feasible implementation area may take place during Fire Management Planning.

**wildland/urban interface**

The line, area, or zone where structures and other human developments meet or intermingle with wildland or vegetative fuel. Interface is further delineated into the following types:

- (a) *wildland/urban interface*—developed areas with residential structures where many structures border wildland on a broad front.
- (b) *wildland/rural interface*—developed areas with private residential structures where developments are few in number scattered over a large area surrounded by wildland.

**Wild river**

In the National Wild and Scenic River System, a rivers or river segment that is generally inaccessible (no roads) except by trail, with watersheds or shorelines that are essentially primitive (free of impoundments and polluted waters).

**winter range**

An area or areas where animals (usually ungulates such as elk, deer, bighorn sheep) concentrate due to favorable winter weather conditions. Conditions are often influenced by snow depth, and the availability or forage and thermal cover.

**xeric**

Dry conditions. Can refer to a habitat characterized by, or a species adapted to dry conditions, rather than hydric (wet) or mesic (moderate) moisture conditions.

**Zone of Influence (ZOI)**

The area that is economically and socio-economically influenced by Forest Service management.

**ACRONYMS AND SYMBOLS**

|        |                                                      |
|--------|------------------------------------------------------|
| ADC    | Animal Damage Control                                |
| AMR    | Appropriate Management Response                      |
| AMS    | Analysis of the Management Situation                 |
| APHIS  | Animal and Plant Health Inspection Service           |
| ASQ    | Allowable Sale Quantity                              |
| ATV    | All Terrain Vehicle                                  |
| AUM    | Animal Unit Month                                    |
| BA     | Biological Assessment                                |
| BAER   | Burned Area Emergency Rehabilitation                 |
| BE     | Biological Evaluation                                |
| Bg     | Background (visual quality distance)                 |
| BLM    | Bureau of Land Management                            |
| BMP    | Best Management Practice                             |
| BO     | Biological Opinion                                   |
| CAA    | Clean Air Act                                        |
| CAP    | Continuous Assessment and Planning                   |
| CCC    | Civilian Conservation Corps                          |
| CFR    | Code of Federal Regulations                          |
| CWA    | Clean Water Act                                      |
| CWD    | Coarse Woody Debris                                  |
| DBH    | Diameter at Breast Height                            |
| DC     | Desired Condition                                    |
| DD     | Detrimental Disturbance (soils)                      |
| DEIS   | Draft Environment Impact Statement                   |
| DFC    | Desired Future Condition                             |
| EA     | Environmental Assessment                             |
| EFH    | Essential Fish Habitat                               |
| EIS    | Environmental Impact Statement                       |
| EM     | Ecosystem Management                                 |
| EPA    | Environmental Protection Agency                      |
| ERU    | Ecological Reporting Unit                            |
| ESA    | Endangered Species Act                               |
| EAWS   | Ecosystem Analysis at the Watershed Scale            |
| FACA   | Federal Advisory Committee Act                       |
| FEIS   | Final Environmental Impact Statement                 |
| FERC   | Federal Energy Regulatory Commission                 |
| Fg     | Foreground (visual quality distance)                 |
| FSH    | Forest Service Handbook                              |
| FSM    | Forest Service Manual                                |
| GI     | Geomorphic Integrity                                 |
| GIS    | Geographical Information System                      |
| HRV    | Historical Range of Variability                      |
| HUC    | Hydrologic Unit Code                                 |
| ICBEMP | Interior Columbia Basin Ecosystem Management Project |
| IIT    | Interagency Implementation Team                      |
| IRA    | Inventoried Roadless Area                            |
| IWM    | Integrated Weed Management                           |
| LRMP   | Land and Resource Management Plan                    |



## ***Glossary and Acronyms***

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|        |                                                                                 |
|--------|---------------------------------------------------------------------------------|
| LTSYC  | Long-Term Sustained Yield Capacity                                              |
| LUCID  | Local Unit Criterion Indicators                                                 |
| M      | Modification (visual quality category)                                          |
| MBF    | Thousand board feet                                                             |
| MFSR   | Middle Fork Salmon River                                                        |
| Mg     | Middleground (visual quality distance)                                          |
| MIS    | Management Indicator Species                                                    |
| MM     | Maximum Modification (visual quality category)                                  |
| MMBF   | Million Board Feet                                                              |
| MOU    | Memorandum of Understanding                                                     |
| MPC    | Management Prescription Category                                                |
| NAAQS  | National Ambient Air Quality Standards                                          |
| NEPA   | National Environmental Policy Act                                               |
| NF     | National Forest                                                                 |
| NFMA   | National Forest Management Act                                                  |
| NFS    | National Forest System                                                          |
| NHPA   | National Historic Preservation Act                                              |
| NMFS   | National Marine Fisheries Service                                               |
| NOAA   | National Oceanic and Atmospheric Administration                                 |
| NOI    | Notice of Intent                                                                |
| NRI    | Nationwide Rivers Inventory                                                     |
| NWPPC  | Northwest Power Planning Council                                                |
| OHV    | Off Highway Vehicle                                                             |
| ORV    | Outstandingly Remarkable Value (for Wild and Scenic Rivers)                     |
| P      | Preservation (visual quality category)                                          |
| PAOT   | Persons At One Time                                                             |
| PFC    | Properly Functioning Condition                                                  |
| PILT   | Payment in Lieu of Taxes                                                        |
| PNWRS  | Pacific Northwest Rivers Study                                                  |
| PR     | Partial Retention (visual quality category)                                     |
| PVG    | Potential Vegetation Group                                                      |
| PVT    | Potential Vegetation Type                                                       |
| R      | Retention (visual quality category)                                             |
| RAP    | Roads Analysis Process                                                          |
| RARE   | Roadless Area Review and Evaluation                                             |
| RCA    | Riparian Conservation Area (from ICBEMP)                                        |
| RHCA   | Riparian Habitat Conservation Area (from Pacfish/Infish)                        |
| RMO    | Riparian Management Objective                                                   |
| RNA    | Research Natural Area                                                           |
| ROD    | Record of Decision                                                              |
| ROS    | Recreation Opportunity Spectrum                                                 |
| RPA    | Forest and Rangeland Renewable Resources Planning Act of 1974                   |
| RVD    | Recreation Visitor Day                                                          |
| SFSR   | South Fork Salmon River                                                         |
| SMS    | Scenery Management System                                                       |
| SINMAP | Stability Index Mapping                                                         |
| SNRA   | Sawtooth National Recreation Area                                               |
| SST    | Sweet Smelling Toilet                                                           |
| TEPC   | Threatened, endangered, proposed/petitioned, and candidate (species)            |
| TEPCS  | Threatened, endangered, proposed/petitioned, candidate, and sensitive (species) |
| TES    | Threatened, endangered, and sensitive (species)                                 |

|       |                                         |
|-------|-----------------------------------------|
| TMDL  | Total Maximum Daily Load                |
| TOC   | Threshold Of Concern                    |
| TSPQ  | Total Sale Program Quantity             |
| TSRC  | Total Soil Resource Commitment          |
| UCRB  | Upper Columbia River Basin              |
| USDA  | United States Department of Agriculture |
| USDI  | United States Department of Interior    |
| USFWS | United States Fish and Wildlife Service |
| VMS   | Visual Management System                |
| VQO   | Visual Quality Objective                |
| WARS  | Watershed and Aquatic Recovery Strategy |
| WCI   | Watershed Condition Indicator           |
| WQI   | Water Quality Integrity                 |
| WQLWB | Water Quality Limited Water Body        |
| WSR   | Wild and Scenic River                   |
| ZOI   | Zone of Influence                       |
| >     | Greater than                            |
| <     | Less than                               |

# References

## **Changes to References between Draft and Final**

The References section has been updated to reflect changes in citations between Draft and Final.

## **Changes to Chapter I between Draft and Final Plans**

Tables I-1 through I-4 have been updated to incorporate the latest information available for population demographics and payments.

Table I-5 has been changed to reflect the MPC allocations in Alternative 1B, the No Action Alternative, and Alternative 7 in the FEIS, the selected alternative for Forest Plan Revision.

## **Changes to References between Draft and Final**

The References section has been updated to reflect changes in citations between Draft and Final.

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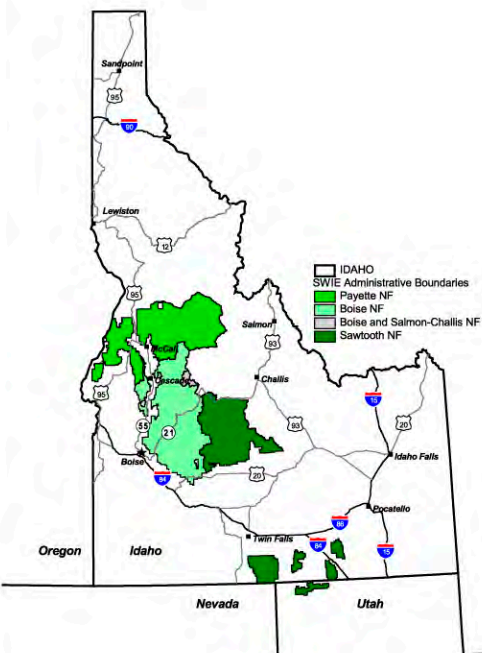
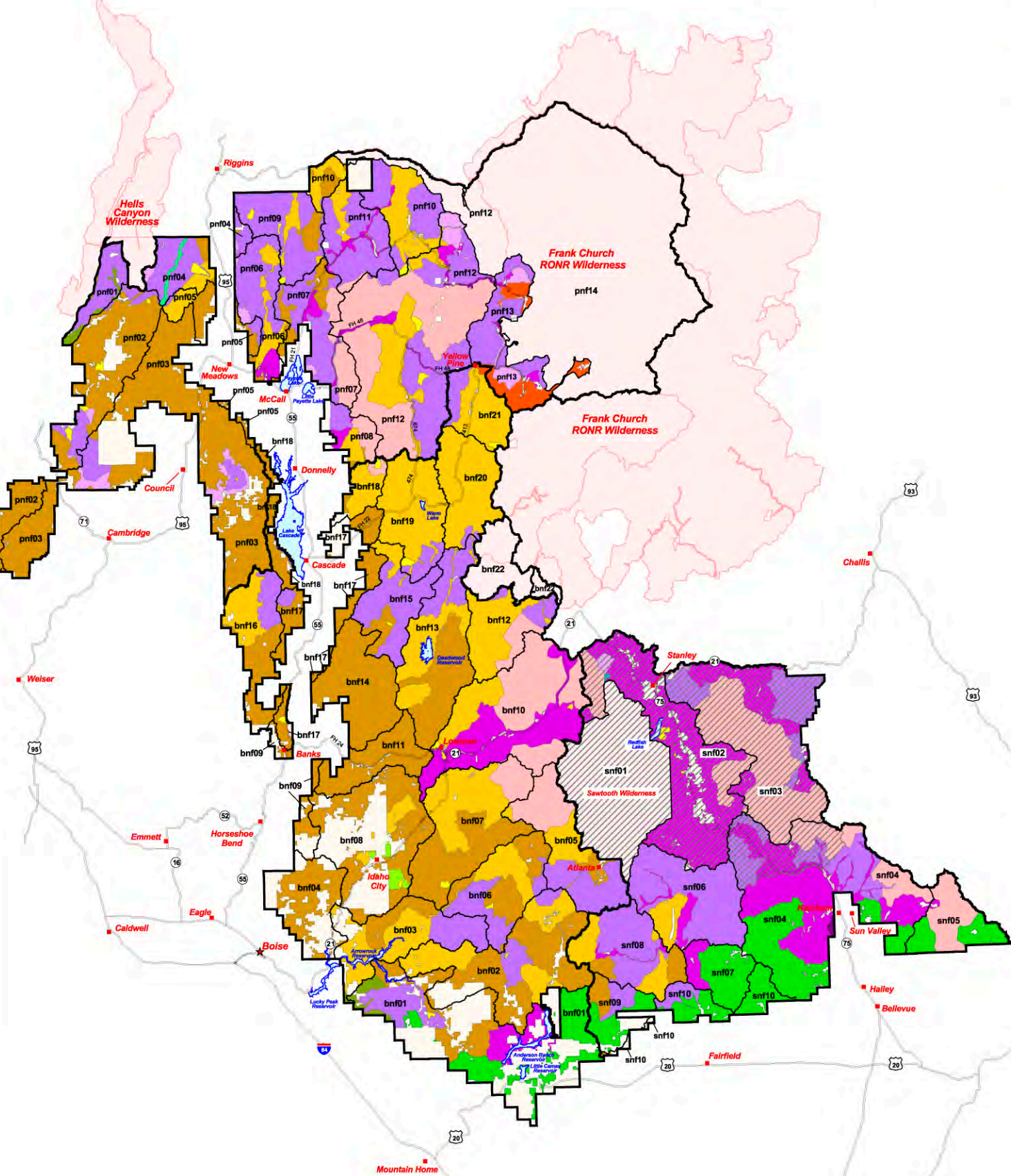


# Management Prescription Categories Alternative 1b Southwest Idaho Ecogroup 2003

**Legend**

- Administrative Boundaries
- Sawtooth National Recreation Area (SNRA)
- Management Prescription Categories**
  - 1. Existing Wilderness
  - 1.2 Recommended Wilderness
  - 2.1 Designated Wild & Scenic Rivers and Their Corridors
  - 2.2 Research Natural Areas
  - 2.4 Boise Basin Experimental Forest
  - 3.1 Passive Restoration and Maintenance of Aquatic, Terrestrial, and Hydrologic Resources
  - 3.2 Active Restoration and Maintenance of Aquatic, Terrestrial, and Hydrologic Resources
  - 4.1a Undeveloped Recreation: Maintain Inventoried Roadless Area
  - 4.1b Undeveloped Recreation: Maintain Undeveloped Character with Allowance for Salvage Harvest
  - 4.1c Undeveloped Recreation: Maintain Unroaded Character with Allowance for Restoration Activities
  - 4.2 Roaded Recreation
  - 4.3 Concentrated Recreation
  - 5.1 Restoration and Maintenance Emphasis within Forested Landscapes
  - 5.2 Commodity Production Emphasis within Forested Landscapes
  - 6.1 Restoration and Maintenance Emphasis within Shrubland and Grassland Landscapes
  - 6.2 Commodity Production Emphasis within Shrubland and Grassland Landscapes
  - 8.0 Concentrated Development
  - Non-Forest System Lands
- Management Areas Key**
  - bnf01 Lower SF Boise River
  - bnf02 Rattlesnake Creek/Feather River
  - bnf03 Arrowrock Reservoir
  - bnf04 Boise Front/Bogus Basin
  - bnf05 Upper Boise River
  - bnf06 Middle Fork Boise River
  - bnf07 North Fork Boise River
  - bnf08 Mores Creek
  - bnf09 Harris Creek/Porter Creek
  - bnf10 Upper South Fork Payette River
  - bnf11 Lower South Fork Payette River
  - bnf12 Bear Valley Creek
  - bnf13 Deadwood River
  - bnf14 Lower Middle Fork Payette River
  - bnf15 Upper Middle Fork Payette River
  - bnf16 Sagehen Reservoir
  - bnf17 North Fork Payette River
  - bnf18 Cascade Reservoir
  - bnf19 Warm Lake
  - bnf20 Upper Johnson Creek
  - bnf21 Lower Johnson Creek
  - bnf22 FC-RONR Wilderness
  - snf01 Hells Canyon
  - snf02 Snake River
  - snf03 Weiser River
  - snf04 Rapid River
  - snf05 Middle Little Salmon River
  - snf06 Goose Creek/Hazard Creek
  - snf07 Payette Lakes
  - snf08 Kennally Creek
  - snf09 Lake Creek/French Creek
  - snf10 Fall Creek/Warren Creek
  - snf11 Upper Secesh River
  - snf12 South Fork Salmon River
  - snf13 Big Creek/Stibnite
  - snf14 FC-RONR Wilderness
  - snf01 Sawtooth Wilderness SNRA
  - snf02 Upper Salmon River Valley SNRA
  - snf03 EF Salmon River/White Clouds SNRA
  - snf04 Big Wood River
  - snf05 Little Wood River
  - snf06 Upper SF Boise River
  - snf07 Little Smoky Creek
  - snf08 Middle SF Boise River
  - snf09 Lime Creek
  - snf10 Soldier Creek/Willow Creek
  - snf11 Rock Creek
  - snf12 Cottonwood Creek
  - snf13 Trapper Creek/Goose Creek
  - snf14 Shoshone Creek
  - snf15 Albion Mountains
  - snf16 Howell Creek
  - snf17 Independence Lakes
  - snf18 Raft River
  - snf19 Black Pine
  - snf20 Sublett

Note: Forest and Management Area Numbers:  
bnf01 (Boise National Forest)  
pnf01 (Payette National Forest)  
snf01 (Sawtooth National Forest)



The Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. Using GIS products for purposes other than those intended may yield inaccurate or misleading results.

For specific source data and information contact the Forest Supervisor at:  
Payette National Forest [208] 634-0700  
Boise National Forest [208] 373-4100  
Sawtooth National Forest [208] 737-3200

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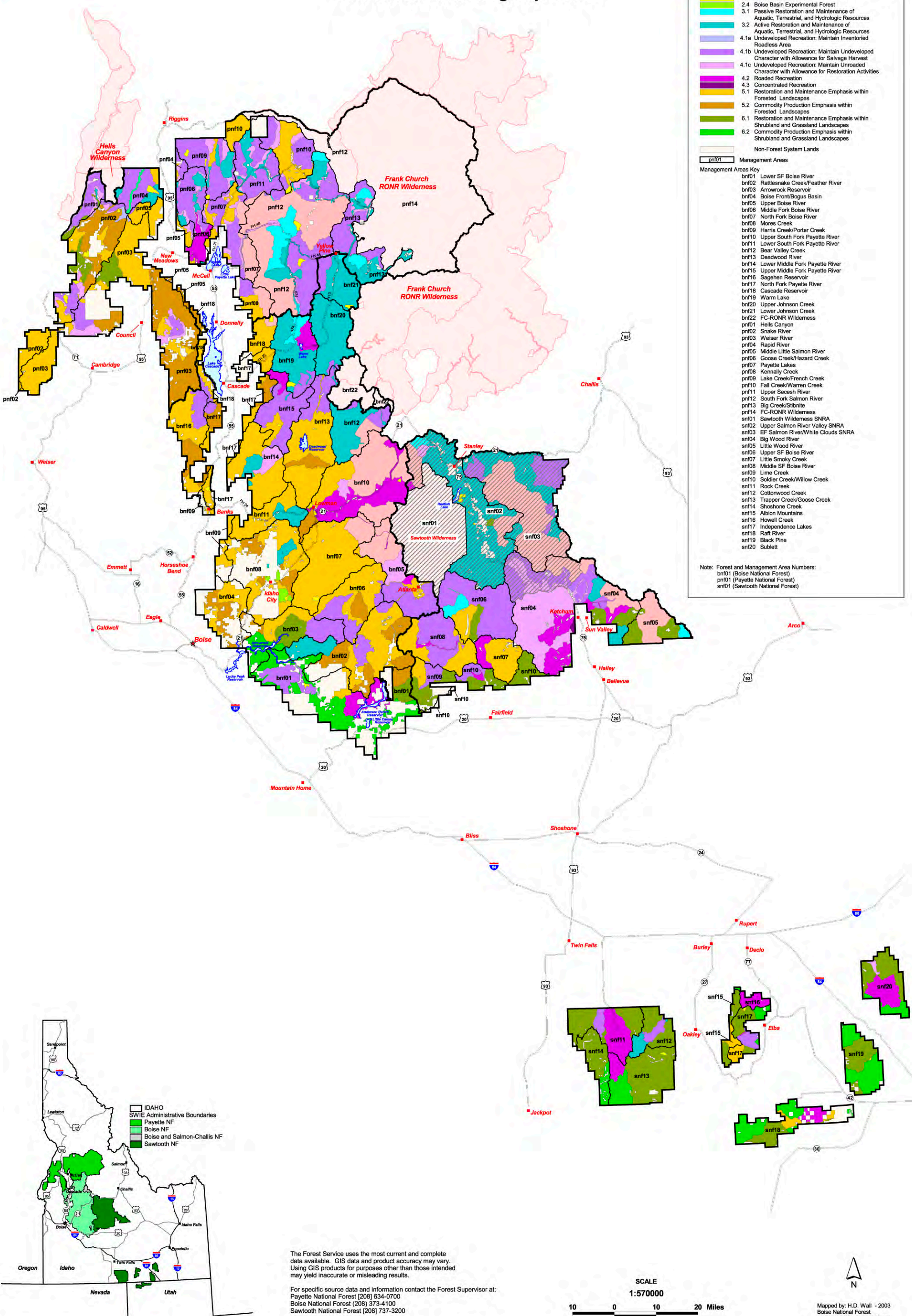


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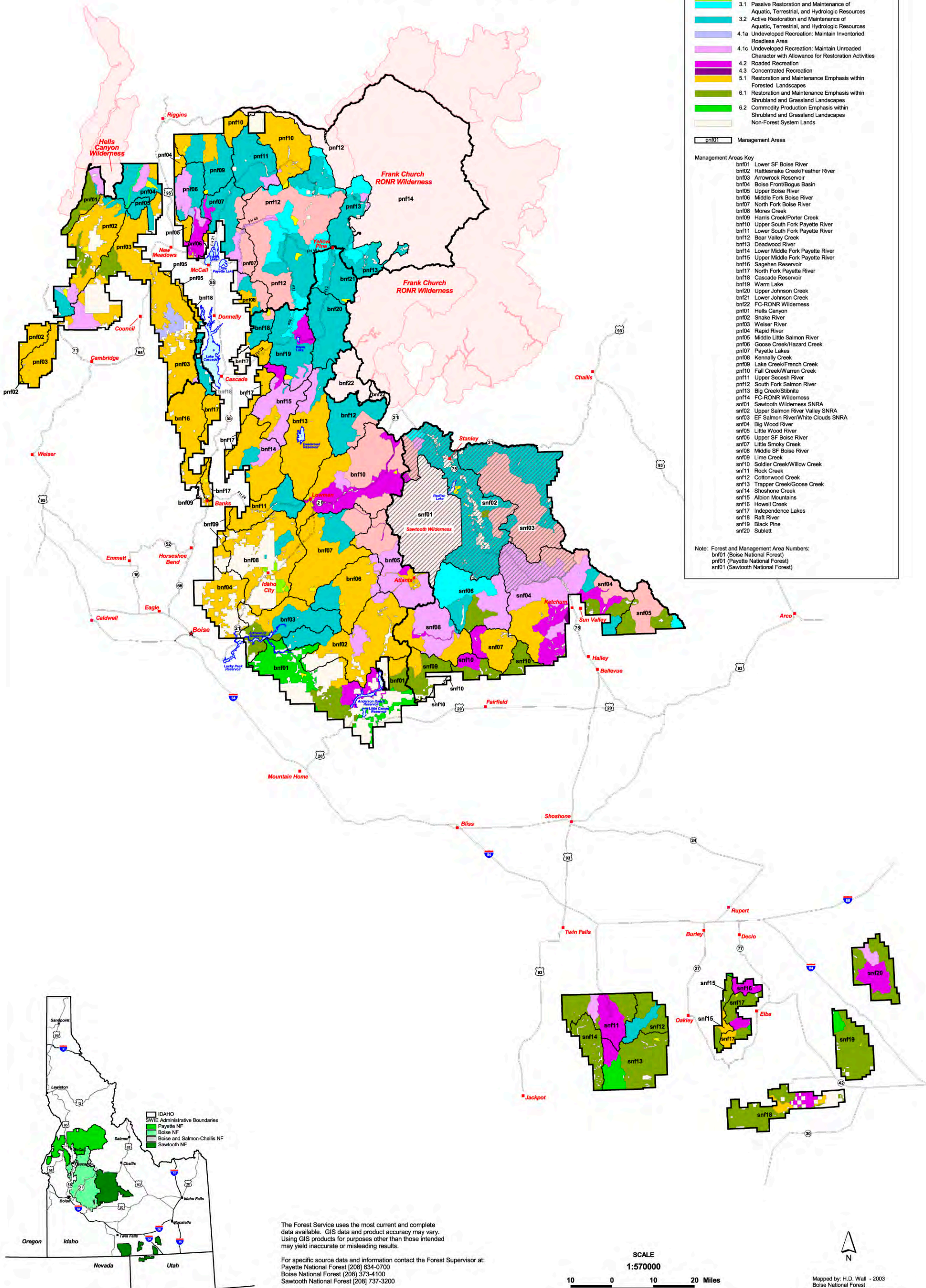
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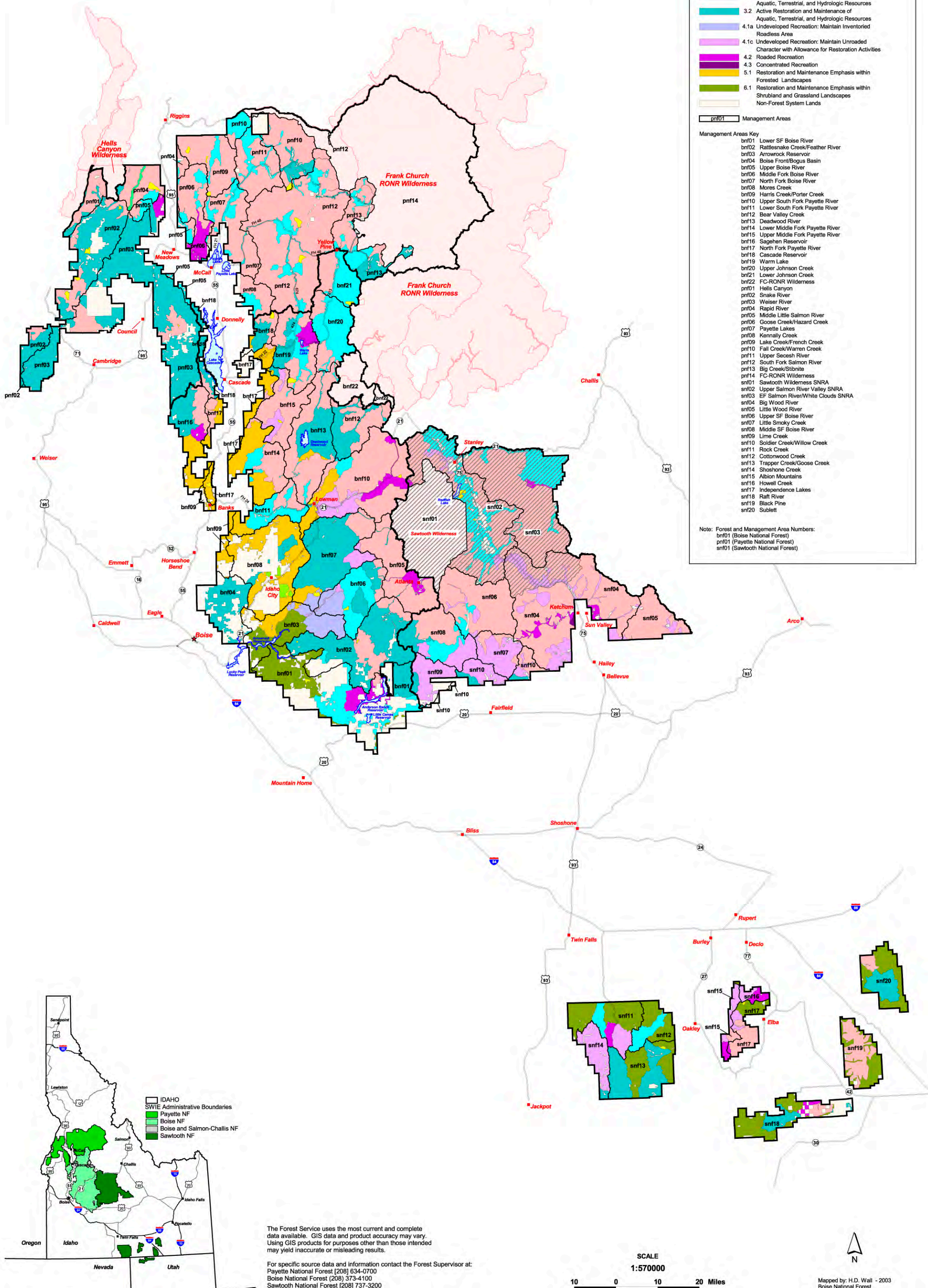
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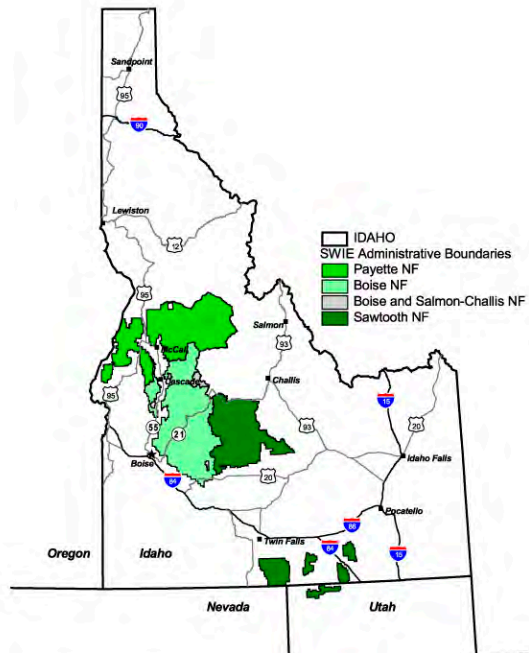


# Management Prescription Categories Alternative 4 Southwest Idaho Ecogroup 2003



- Administrative Boundaries**
- Sawtooth National Recreation Area (SNRA)
- Management Prescription Categories**
- 1.1 Existing Wilderness
  - 1.2 Recommended Wilderness
  - 2.1a Designated Wild & Scenic Rivers and Their Corridors
  - 2.2 Research Natural Areas
  - 2.4 Boise Basin Experimental Forest
  - 3.1 Passive Restoration and Maintenance of Aquatic, Terrestrial, and Hydrologic Resources
  - 3.2 Active Restoration and Maintenance of Aquatic, Terrestrial, and Hydrologic Resources
  - 4.1a Undeveloped Recreation: Maintain Inventoried Roadless Area
  - 4.1c Undeveloped Recreation: Maintain Unroaded Character with Allowance for Restoration Activities
  - 4.2 Roaded Recreation
  - 4.3 Concentrated Recreation
  - 5.1 Restoration and Maintenance Emphasis within Forested Landscapes
  - 6.1 Restoration and Maintenance Emphasis within Shrubland and Grassland Landscapes
  - Non-Forest System Lands
- Management Areas**
- pnf01 Management Areas

- Management Areas Key**
- bnf01 Lower SF Boise River
  - bnf02 Rattlesnake Creek/Feather River
  - bnf03 Arrowrock Reservoir
  - bnf04 Boise Front/Bogus Basin
  - bnf05 Upper Boise River
  - bnf06 Middle Fork Boise River
  - bnf07 North Fork Boise River
  - bnf08 Mores Creek
  - bnf09 Harris Creek/Porter Creek
  - bnf10 Upper South Fork Payette River
  - bnf11 Lower South Fork Payette River
  - bnf12 Bear Valley Creek
  - bnf13 Deadwood River
  - bnf14 Lower Middle Fork Payette River
  - bnf15 Upper Middle Fork Payette River
  - bnf16 Sagehen Reservoir
  - bnf17 North Fork Payette River
  - bnf18 Cascade Reservoir
  - bnf19 Warm Lake
  - bnf20 Upper Johnson Creek
  - bnf21 Lower Johnson Creek
  - bnf22 FC-RONR Wilderness
  - snf01 Hells Canyon
  - snf02 Snake River
  - snf03 Weiser River
  - snf04 Rapid River
  - snf05 Middle Little Salmon River
  - snf06 Goose Creek/Hazard Creek
  - snf07 Payette Lakes
  - snf08 Kennally Creek
  - snf09 Lake Creek/French Creek
  - snf10 Fall Creek/Warren Creek
  - snf11 Upper Secesh River
  - snf12 South Fork Salmon River
  - snf13 Big Creek/Stibnite
  - snf14 FC-RONR Wilderness
  - snf01 Sawtooth Wilderness SNRA
  - snf02 Upper Salmon River Valley SNRA
  - snf03 EF Salmon River/White Clouds SNRA
  - snf04 Big Wood River
  - snf05 Little Wood River
  - snf06 Upper SF Boise River
  - snf07 Little Smoky Creek
  - snf08 Middle SF Boise River
  - snf09 Lime Creek
  - snf10 Soldier Creek/Willow Creek
  - snf11 Rock Creek
  - snf12 Cottonwood Creek
  - snf13 Trapper Creek/Goose Creek
  - snf14 Shoshone Creek
  - snf15 Albion Mountains
  - snf16 Howell Creek
  - snf17 Independence Lakes
  - snf18 Raft River
  - snf19 Black Pine
  - snf20 Sublett
- Note: Forest and Management Area Numbers:**
- bnf01 (Boise National Forest)
  - pnf01 (Payette National Forest)
  - snf01 (Sawtooth National Forest)



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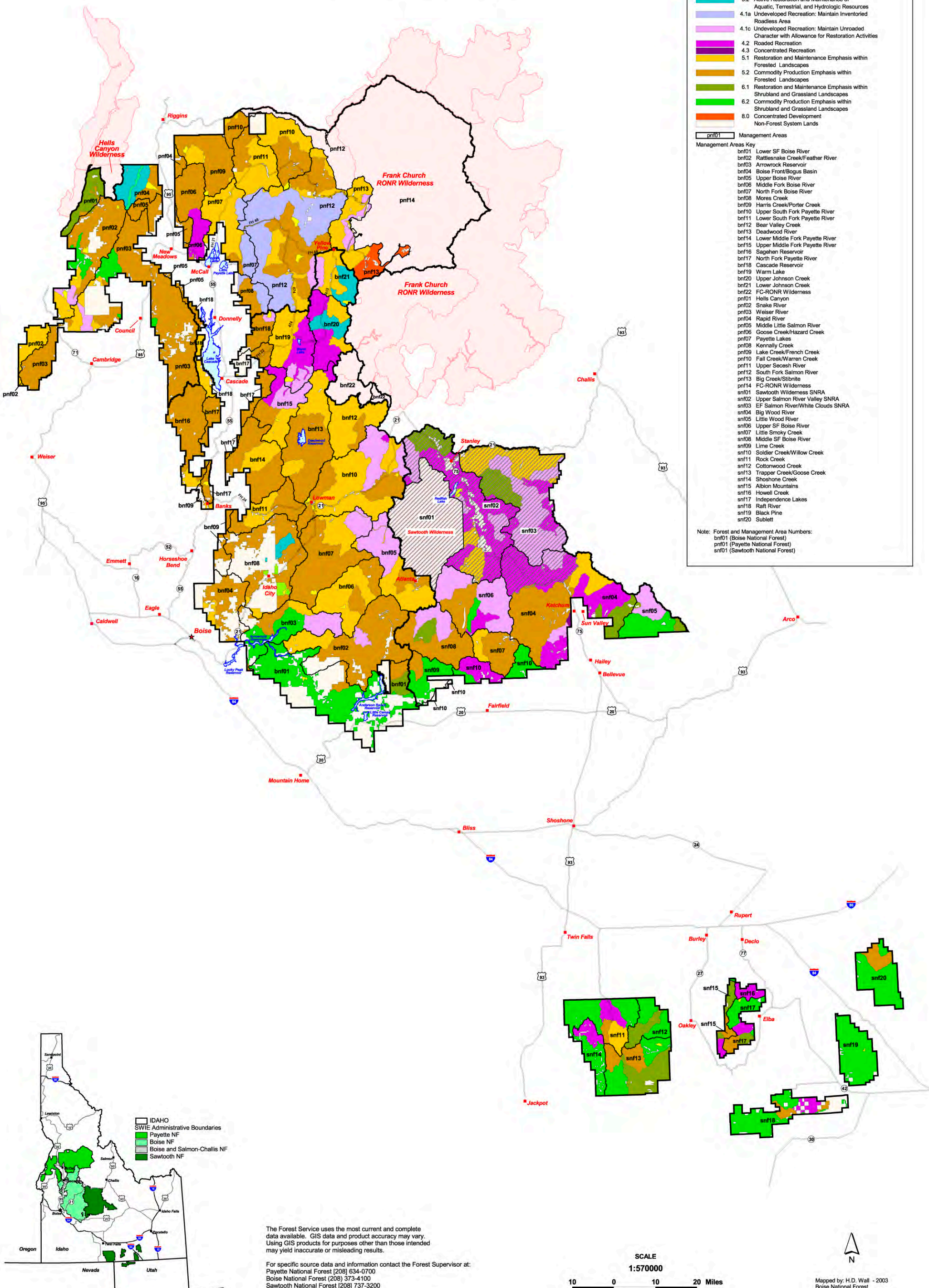
For specific source data and information contact the Forest Supervisor at:  
Payette National Forest (208) 634-0700  
Boise National Forest (208) 373-4100  
Sawtooth National Forest (208) 737-3200







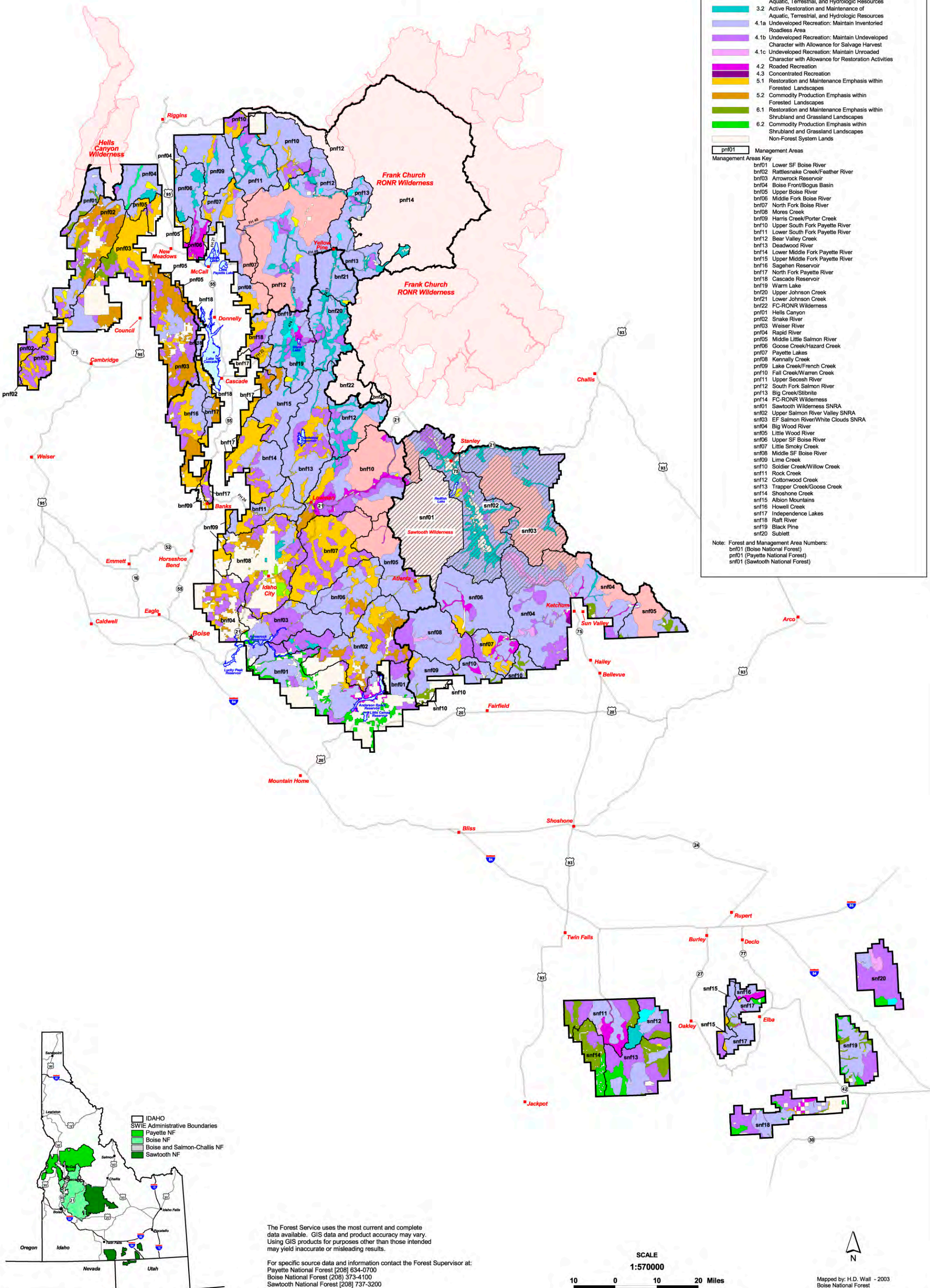
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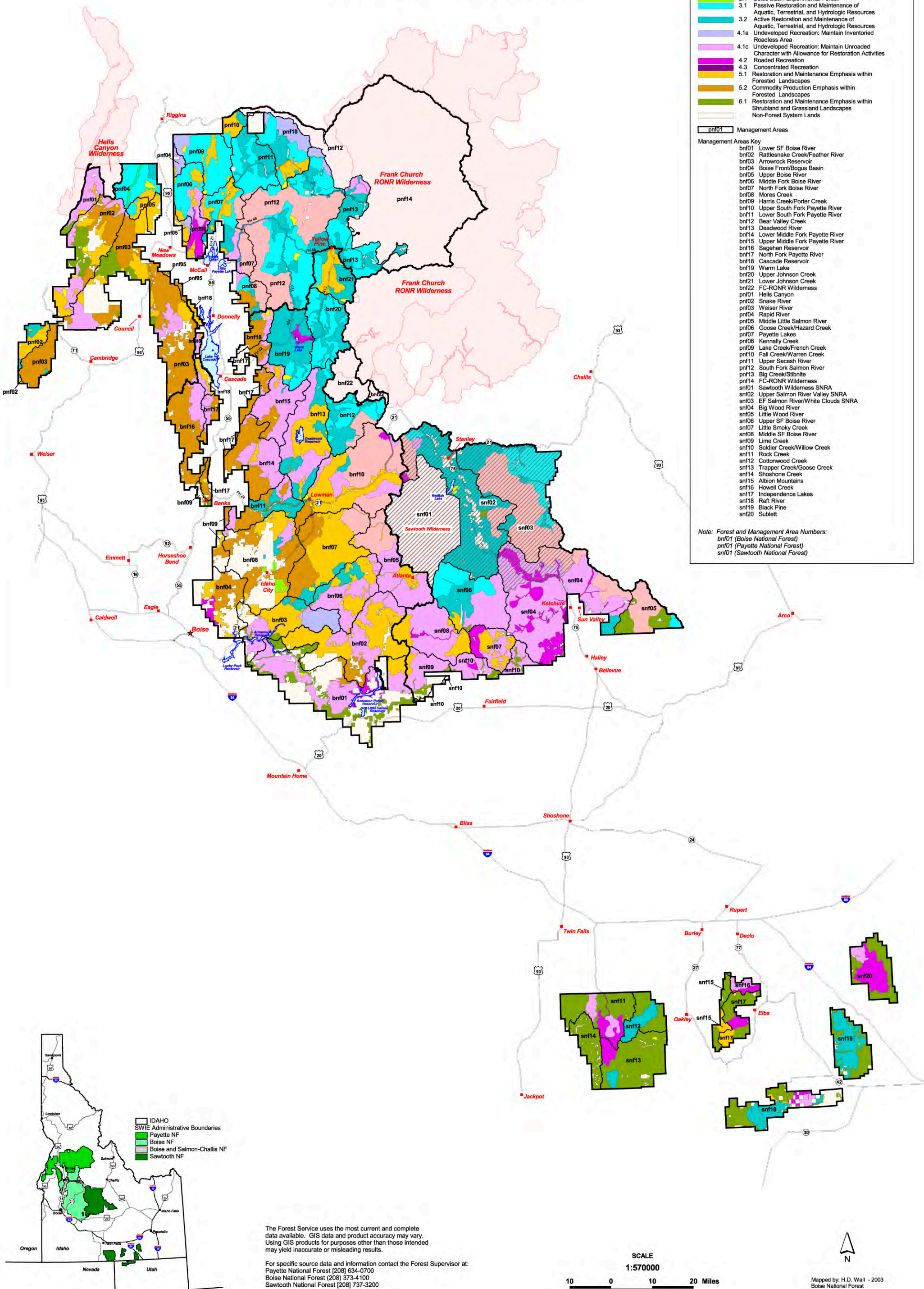
# Management Prescription Categories Alternative 6 Southwest Idaho Ecogroup 2003







# Management Prescription Categories Alternative 7 Southwest Idaho Ecogroup 2003





# Payette National Forest Alternative 7 2003



- Town
- Forest Service Facility
- Administrative Boundary
- Management Prescription Categories
  - 1.1 Existing Wilderness
  - 1.2 Recommended Wilderness
  - 2.1 Wild & Scenic Rivers and Their Corridors
  - 2.1a Designated Wild & Scenic Rivers and Their Corridors
  - 2.2 Research Natural Areas
  - 3.1 Passive Restoration and Maintenance of Aquatic, Terrestrial, and Hydrologic Resources
  - 3.2 Active Restoration and Maintenance of Aquatic, Terrestrial, and Hydrologic Resources
  - 4.1a Undeveloped Recreation: Mountain Invertebrate Roadless Area
  - 4.1c Undeveloped Recreation: Mountain Unsettled Character with Allowance for Restoration Activities
  - 4.2 Rodeo Recreation
  - 5.1 Restoration and Maintenance Emphasis within Forested Landscapes
  - 5.2 Commodity Production Emphasis within Forested Landscapes
  - 6.1 Restoration and Maintenance Emphasis within Broadleaf and Grassland Landscapes
  - Non-Forest System Lands
- Management Areas
  - pnf01
  - pnf02
  - pnf03
  - pnf04
  - pnf05
  - pnf06
  - pnf07
  - pnf08
  - pnf09
  - pnf10
  - pnf11
  - pnf12
  - pnf13
  - pnf14
- Management Area Key
  - pnf01 Hells Canyon
  - pnf02 Snake River
  - pnf03 Weiser River
  - pnf04 Rapid River
  - pnf05 Middle Little Salmon River
  - pnf06 Goose Creek/Hazard Creek
  - pnf07 Payette Lakes
  - pnf08 Kennedy Creek
  - pnf09 Lake Creek/French Creek
  - pnf10 Fall Creek/Warren Creek
  - pnf11 Upper Snake River
  - pnf12 South Fork Salmon River
  - pnf13 Big Creek/Slonine
  - pnf14 FC-RONS Wilderness
- Wild and Scenic River Categories
  - Recreation (R)
  - Scenic (S)
  - Wild (W)
  - County Boundaries

The Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. Using GIS products for purposes other than those intended may yield inaccurate or misleading results.

For specific source data and information contact the Forest Supervisor at Payette National Forest (208) 634-0700

Map by: H.D. Wall - 2003  
Bonne National Forest  
© Idaho, © 2003/2004/2005/2006/2007/2008/2009/2010/2011/2012/2013/2014/2015/2016/2017/2018/2019/2020/2021/2022/2023/2024/2025/2026/2027/2028/2029/2030/2031/2032/2033/2034/2035/2036/2037/2038/2039/2040/2041/2042/2043/2044/2045/2046/2047/2048/2049/2050/2051/2052/2053/2054/2055/2056/2057/2058/2059/2060/2061/2062/2063/2064/2065/2066/2067/2068/2069/2070/2071/2072/2073/2074/2075/2076/2077/2078/2079/2080/2081/2082/2083/2084/2085/2086/2087/2088/2089/2090/2091/2092/2093/2094/2095/2096/2097/2098/2099/2100/2101/2102/2103/2104/2105/2106/2107/2108/2109/2110/2111/2112/2113/2114/2115/2116/2117/2118/2119/2120/2121/2122/2123/2124/2125/2126/2127/2128/2129/2130/2131/2132/2133/2134/2135/2136/2137/2138/2139/2140/2141/2142/2143/2144/2145/2146/2147/2148/2149/2150/2151/2152/2153/2154/2155/2156/2157/2158/2159/2160/2161/2162/2163/2164/2165/2166/2167/2168/2169/2170/2171/2172/2173/2174/2175/2176/2177/2178/2179/2180/2181/2182/2183/2184/2185/2186/2187/2188/2189/2190/2191/2192/2193/2194/2195/2196/2197/2198/2199/2200/2201/2202/2203/2204/2205/2206/2207/2208/2209/2210/2211/2212/2213/2214/2215/2216/2217/2218/2219/2220/2221/2222/2223/2224/2225/2226/2227/2228/2229/2230/2231/2232/2233/2234/2235/2236/2237/2238/2239/2240/2241/2242/2243/2244/2245/2246/2247/2248/2249/2250/2251/2252/2253/2254/2255/2256/2257/2258/2259/2260/2261/2262/2263/2264/2265/2266/2267/2268/2269/2270/2271/2272/2273/2274/2275/2276/2277/2278/2279/2280/2281/2282/2283/2284/2285/2286/2287/2288/2289/2290/2291/2292/2293/2294/2295/2296/2297/2298/2299/2300/2301/2302/2303/2304/2305/2306/2307/2308/2309/2310/2311/2312/2313/2314/2315/2316/2317/2318/2319/2320/2321/2322/2323/2324/2325/2326/2327/2328/2329/2330/2331/2332/2333/2334/2335/2336/2337/2338/2339/2340/2341/2342/2343/2344/2345/2346/2347/2348/2349/2350/2351/2352/2353/2354/2355/2356/2357/2358/2359/2360/2361/2362/2363/2364/2365/2366/2367/2368/2369/2370/2371/2372/2373/2374/2375/2376/2377/2378/2379/2380/2381/2382/2383/2384/2385/2386/2387/2388/2389/2390/2391/2392/2393/2394/2395/2396/2397/2398/2399/2400/2401/2402/2403/2404/2405/2406/2407/2408/2409/2410/2411/2412/2413/2414/2415/2416/2417/2418/2419/2420/2421/2422/2423/2424/2425/2426/2427/2428/2429/2430/2431/2432/2433/2434/2435/2436/2437/2438/2439/2440/2441/2442/2443/2444/2445/2446/2447/2448/2449/2450/2451/2452/2453/2454/2455/2456/2457/2458/2459/2460/2461/2462/2463/2464/2465/2466/2467/2468/2469/2470/2471/2472/2473/2474/2475/2476/2477/2478/2479/2480/2481/2482/2483/2484/2485/2486/2487/2488/2489/2490/2491/2492/2493/2494/2495/2496/2497/2498/2499/2500/2501/2502/2503/2504/2505/2506/2507/2508/2509/2510/2511/2512/2513/2514/2515/2516/2517/2518/2519/2520/2521/2522/2523/2524/2525/2526/2527/2528/2529/2530/2531/2532/2533/2534/2535/2536/2537/2538/2539/2540/2541/2542/2543/2544/2545/2546/2547/2548/2549/2550/2551/2552/2553/2554/2555/2556/2557/2558/2559/2560/2561/2562/2563/2564/2565/2566/2567/2568/2569/2570/2571/2572/2573/2574/2575/2576/2577/2578/2579/2580/2581/2582/2583/2584/2585/2586/2587/2588/2589/2590/2591/2592/2593/2594/2595/2596/2597/2598/2599/2600/2601/2602/2603/2604/2605/2606/2607/2608/2609/2610/2611/2612/2613/2614/2615/2616/2617/2618/2619/2620/2621/2622/2623/2624/2625/2626/2627/2628/2629/2630/2631/2632/2633/2634/2635/2636/2637/2638/2639/2640/2641/2642/2643/2644/2645/2646/2647/2648/2649/2650/2651/2652/2653/2654/2655/2656/2657/2658/2659/2660/2661/2662/2663/2664/2665/2666/2667/2668/2669/2670/2671/2672/2673/2674/2675/2676/2677/2678/2679/2680/2681/2682/2683/2684/2685/2686/2687/2688/2689/2690/2691/2692/2693/2694/2695/2696/2697/2698/2699/2700/2701/2702/2703/2704/2705/2706/2707/2708/2709/2710/2711/2712/2713/2714/2715/2716/2717/2718/2719/2720/2721/2722/2723/2724/2725/2726/2727/2728/2729/2730/2731/2732/2733/2734/2735/2736/2737/2738/2739/2740/2741/2742/2743/2744/2745/2746/2747/2748/2749/2750/2751/2752/2753/2754/2755/2756/2757/2758/2759/2760/2761/2762/2763/2764/2765/2766/2767/2768/2769/2770/2771/2772/2773/2774/2775/2776/2777/2778/2779/2780/2781/2782/2783/2784/2785/2786/2787/2788/2789/2790/2791/2792/2793/2794/2795/2796/2797/2798/2799/2800/2801/2802/2803/2804/2805/2806/2807/2808/2809/2810/2811/2812/2813/2814/2815/2816/2817/2818/2819/2820/2821/2822/2823/2824/2825/2826/2827/2828/2829/2830/2831/2832/2833/2834/2835/2836/2837/2838/2839/2840/2841/2842/2843/2844/2845/2846/2847/2848/2849/2850/2851/2852/2853/2854/2855/2856/2857/2858/2859/2860/2861/2862/2863/2864/2865/2866/2867/2868/2869/2870/2871/2872/2873/2874/2875/2876/2877/2878/2879/2880/2881/2882/2883/2884/2885/2886/2887/2888/2889/2890/2891/2892/2893/2894/2895/2896/2897/2898/2899/2900/2901/2902/2903/2904/2905/2906/2907/2908/2909/2910/2911/2912/2913/2914/2915/2916/2917/2918/2919/2920/2921/2922/2923/2924/2925/2926/2927/2928/2929/2930/2931/2932/2933/2934/2935/2936/2937/2938/2939/2940/2941/2942/2943/2944/2945/2946/2947/2948/2949/2950/2951/2952/2953/2954/2955/2956/2957/2958/2959/2960/2961/2962/2963/2964/2965/2966/2967/2968/2969/2970/2971/2972/2973/2974/2975/2976/2977/2978/2979/2980/2981/2982/2983/2984/2985/2986/2987/2988/2989/2990/2991/2992/2993/2994/2995/2996/2997/2998/2999/3000/3001/3002/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# Inventoried Roadless Areas Payette National Forest 2003



- Towns
- Forest Service Facility
- County Boundaries
- Administrative Boundary
- Management Areas
- Existing Wilderness
- Inventoried Roadless Areas
- Payette National Forest
- Outside of Inventoried Roadless
- Non-Payette-Forest System Lands

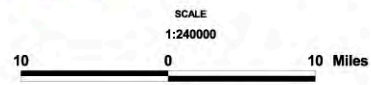
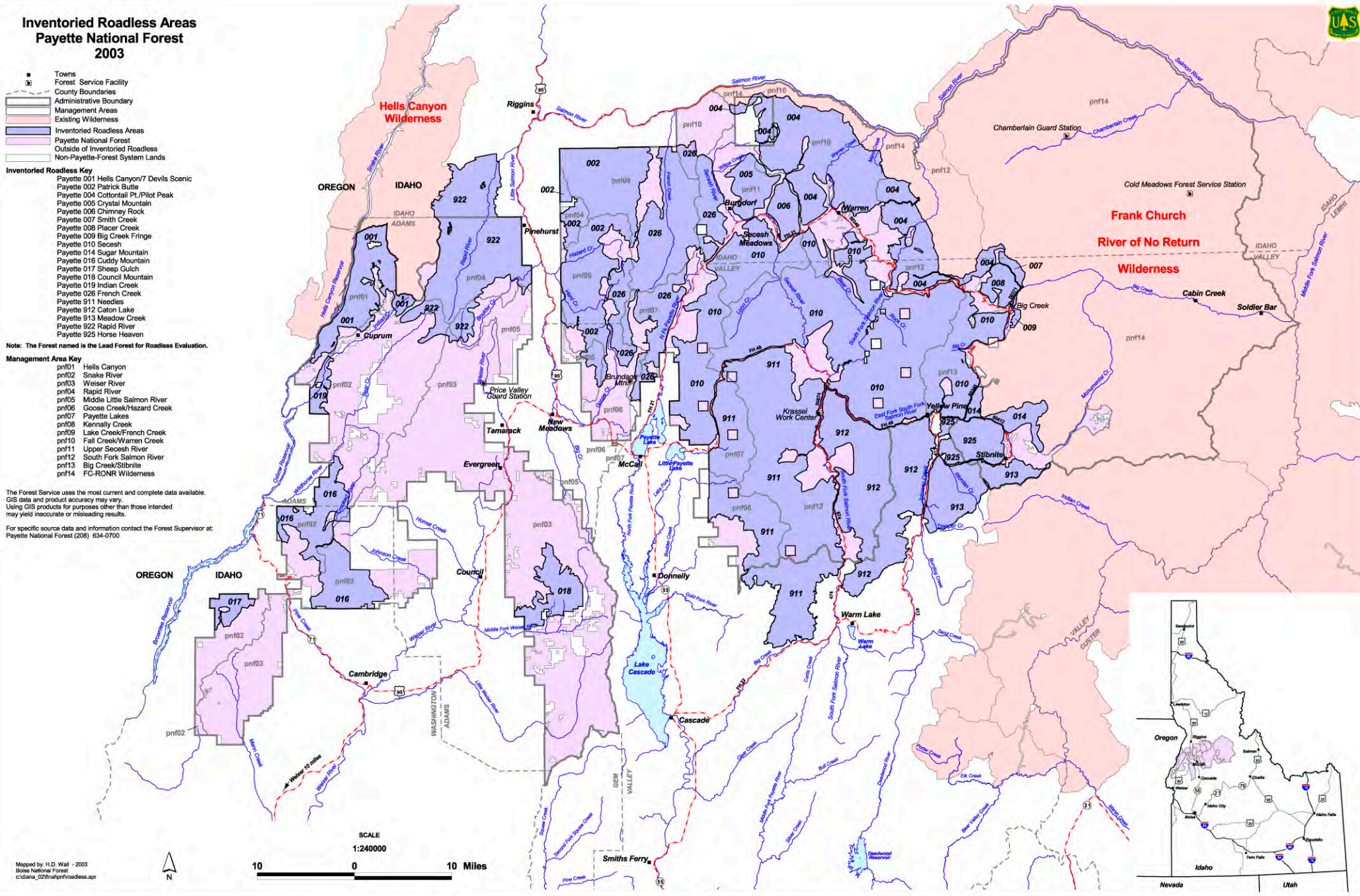
- Inventoried Roadless Key**
- Payette 001 Hells Canyon/7 Devils Scenic
  - Payette 002 Patrick Butte
  - Payette 004 Cottontail Pt./Pilot Peak
  - Payette 005 Crystal Mountain
  - Payette 006 Chimney Rock
  - Payette 007 Smith Creek
  - Payette 008 Placer Creek
  - Payette 009 Big Creek Fringe
  - Payette 010 Secesh
  - Payette 014 Sugar Mountain
  - Payette 015 Cuddy Mountain
  - Payette 017 Sheep Gulch
  - Payette 018 Council Mountain
  - Payette 019 Indian Creek
  - Payette 026 French Creek
  - Payette 011 Needles
  - Payette 912 Caton Lake
  - Payette 913 Meadow Creek
  - Payette 922 Rapid River
  - Payette 925 Horse Heaven

Note: The Forest named is the Lead Forest for Roadless Evaluation.

- Management Area Key**
- pnf01 Hells Canyon
  - pnf02 Snake River
  - pnf03 Weiser River
  - pnf04 Rapid River
  - pnf05 Middle Little Salmon River
  - pnf06 Goose Creek/Hazard Creek
  - pnf07 Payette Lakes
  - pnf08 Kennally Creek
  - pnf09 Lake Creek/French Creek
  - pnf10 Fall Creek/Warren Creek
  - pnf11 Upper Secesh River
  - pnf12 South Fork Salmon River
  - pnf13 Big Creek/Stibnite
  - pnf14 FC-RONR Wilderness

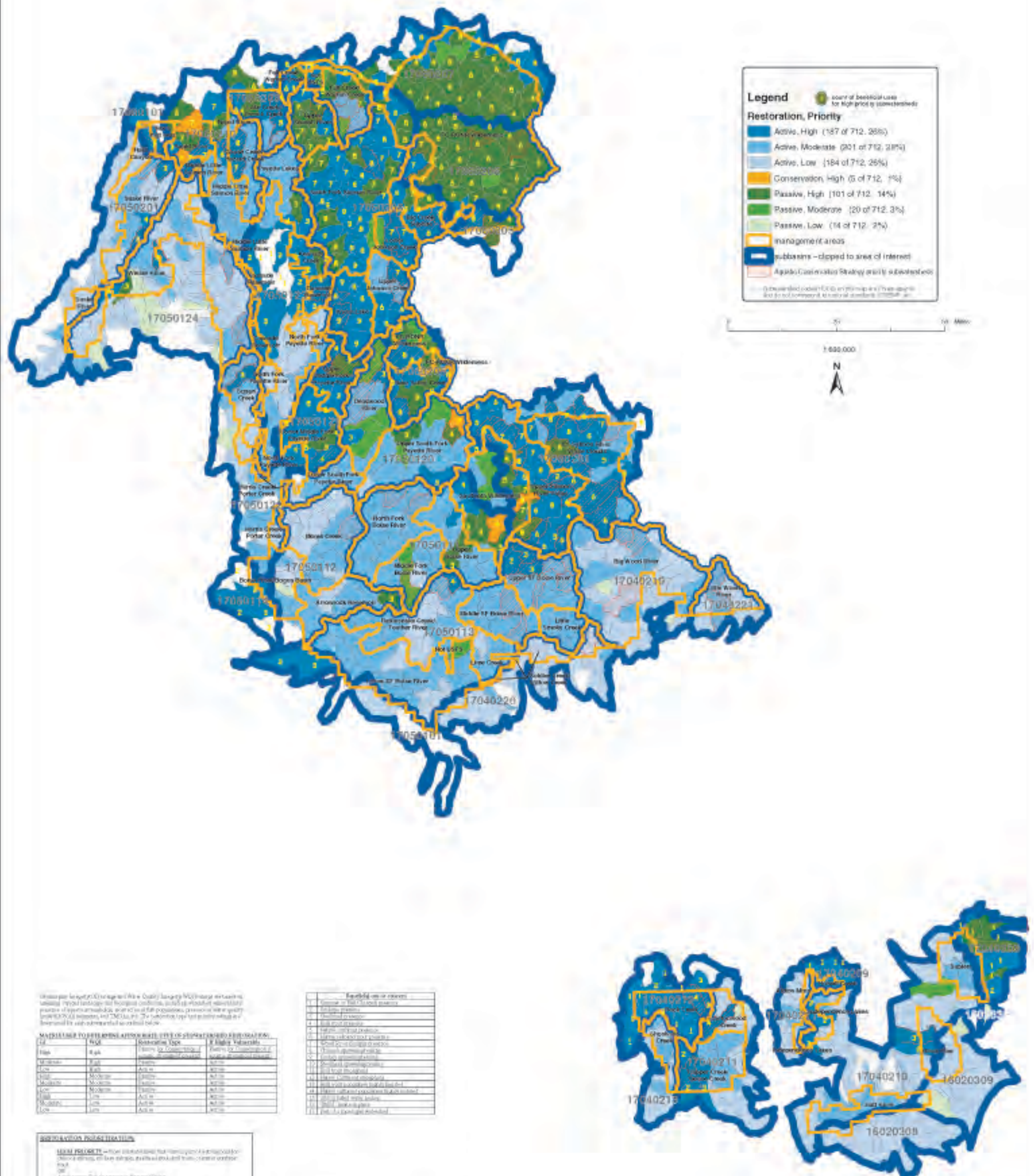
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For specific source data and information contact the Forest Supervisor at: Payette National Forest (208) 634-0700





Watershed and Aquatic Recovery Strategy  
SW Idaho Ecogroup  
2003



Chromopore large-pore RO (crg) and New Quality large-pore RO (nrg) are both in standard 4000-psi cartridge for frequent change, and are 100% efficient in removing particles of 1 micron and larger, and 99.99% of bacteria, protozoa, and cysts. The nrg RO is 100% efficient in removing 99.99% of bacteria, and 99.99% of protozoa, and 99.99% of cysts. The nrg RO is 100% efficient in removing 99.99% of bacteria, and 99.99% of protozoa, and 99.99% of cysts.

[illegible]

| Key-Word on concerns |                                      |
|----------------------|--------------------------------------|
| 1                    | Change in life/loss of meaning       |
| 2                    | Loneliness                           |
| 3                    | Disturbed in memory                  |
| 4                    | Loss of interest                     |
| 5                    | Worry, self-harm, problems           |
| 6                    | Worry, reduced mood, problems        |
| 7                    | Worry, loss of control, loss of self |
| 8                    | Worry, problems of care              |
| 9                    | Worry, problems of care              |
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| 100                  | Worry, problems of care              |

## AGGREGATION POLYMERIZATION

**LEARN PROJECTS**—Free downloadable mathematics materials for China, Hong Kong, Singapore, Malaysia and New Zealand, available online.

OK

**Additional Resources**—Free online.

OK

**Maths Based Learning Equator**—Mathematics education resources.

OK

**TMU**—Theoretical Mathematics Programme.

**POSSIBLE PRESENTS** – These subordinator(s) that include any "marked presence" of subordinate species and host tree, including migratory/territorial species, *Asplenium* spp. and *Polypodium* spp. (see *Asplenium* spp. and *Polypodium* spp. for "marked presence" of native subordinator tree species).

LIFE PLANTING is at [www.lifeplanting.org](http://www.lifeplanting.org)

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