

United States
Department of
Agriculture

Forest Service

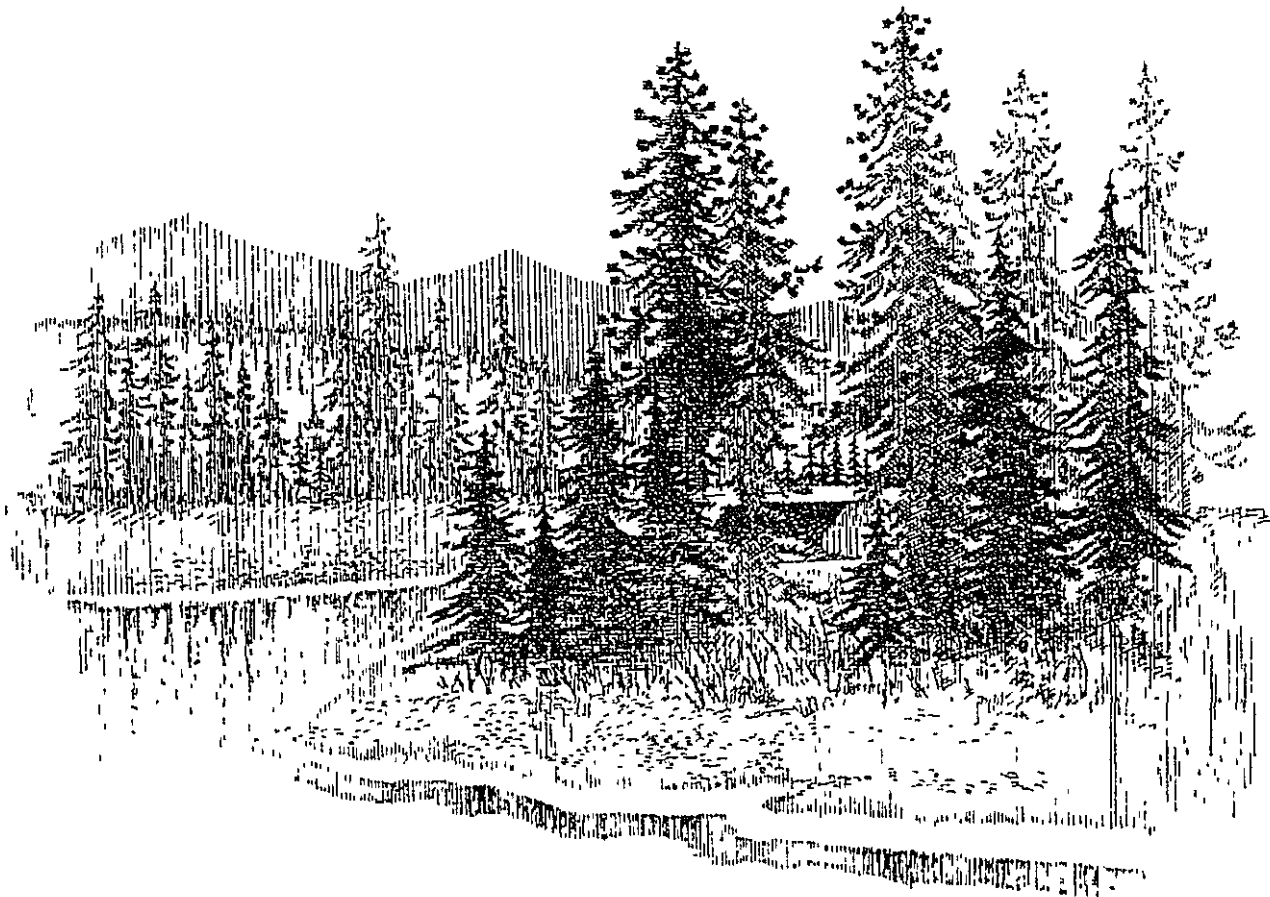
Intermountain
Region

Targhee
National
Forest



1997 Revised Forest Plan

Targhee National Forest



LIST OF ACRONYMS USED IN THE REVISED FOREST PLAN

AMP	Allotment Management Plan
AMS	Analysis of The Management Situation
AOP	Annual Operating Plan (Annual Plan of Operations)
ASQ	Allowable Sale Quantity
ATV	All Terrain Vehicle
AUM	Animal Unit Month
BLM	Bureau of Land Management
C&H	Cattle and Horse (Allotment)
DFC	Desired Future Condition
EM	Ecosystem Management
GIS	Geographic Information System
GYCC	Greater Yellowstone Coordinating Committee
IDT	Interdisciplinary Team
IGBC	Interagency Grizzly Bear Committee
IGBG	Interagency Grizzly Bear Guidelines
INFISH	Inland Native Fish Strategy
MBF	Thousand Board Feet
MIS	Management Indicator Species
MIST	Minimum Impact Suppression Tactics
MMBF	Million Board Feet
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NRCS	Natural Resources Conservation Service
OHV	Off-Highway Vehicle
PACFISH	Anadromous Fish Habitat and Watershed Conservation Strategy
PAOT	Persons At One Time
PFC	Properly Functioning Condition
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
RPD	Rangeland Project Decision
RVD	Recreation Visitor Day
S&G	Sheep and Goat (Allotment)
T&E	Threatened and Endangered
VQO	Visual Quality Objective
WFUD	Wildlife and Fish User Day

REVISED FOREST PLAN
for the
TARGHEE NATIONAL FOREST
Intermountain Region R-4
April 1997

Lead Agency

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This Revised Forest Plan was prepared according to Secretary of Agriculture regulations (36 CFR 219), which are based on the Forest and Rangeland Renewable Resources Planning Act (RPA) as amended by the National Forest Management Act of 1976 (NFMA). This Revised Forest Plan was developed in accordance with regulations (40 CFR 1500) for implementing the National Environmental Policy Act (NEPA). A detailed Environmental Impact Statement (EIS) has been prepared as required by NEPA and 36 CFR 219.

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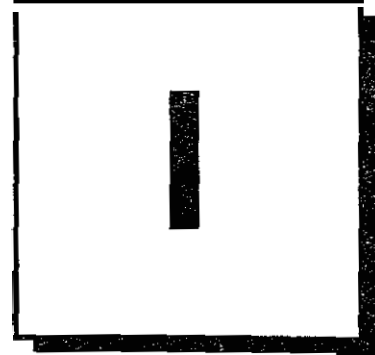
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Chapter



**Revised Forest Plan
Introduction**



CHAPTER I

FOREST PLAN REVISION INTRODUCTION

PURPOSE OF THE LAND AND RESOURCE MANAGEMENT PLAN (FOREST PLAN REVISION)

This Revised Forest Plan (Revision, or Plan) guides all natural resource management activities and establishes management standards for the Targhee National Forest (hereinafter referred to as "the Forest") The Revision embodies the provisions of the Forest and Rangeland Renewable Resources Planning Act (RPA) as amended by the National Forest Management Act (NFMA), Endangered Species Act (ESA), and other guiding documents The forestwide standards and guidelines, subsection direction and management prescriptions state the Revision's management direction, however, the project outputs, services, and rates of implementation are dependent on the annual budgeting process

The Forest Plan will be revised every 10-15 years, or sooner should conditions or demands significantly change

Development of the Revision occurs within the overall framework of both National and Regional Planning The Revision and accompanying Environmental Impact Statement (EIS) are "tiered to the Inter-mountain Regional Guide Regional planning is a two-way street that helps convey direction from National to the Forest level, and helps transmit information from the Forest to the National level The Regional Guide establishes standards and guidelines, and resolves Regional issues

During the Revision process, alternatives were developed, analyzed, compared, and a preferred alternative selected This Revision is based on the "selected alternative" displayed in the accompanying Environmental Impact Statement (EIS) The planning process and analysis procedures used in developing this Revised Plan, as well as the other management alternatives that were considered, are described or referenced in the EIS In the development of the alternatives, estimates were made based on broad averages, as to the various activities and resulting outputs of implementing that alternative These estimates were used to compare alternatives and to arrive at the preferred alternative Actual outputs may vary slightly from those displayed in the preferred alternative, however, the intent of the preferred alternative will be met

Revised Forest Plan direction serves as an "umbrella" for the environmental analysis for proposed projects at the Forest and Ranger District levels Future environmental analyses for those projects will refer to this Plan, the accompanying EIS, and related documents wherever possible (the travel plan will be implemented by a separate decision based on the EIS associated with this Plan) Analysis and decision documents will be developed for project level activities not specifically described in this Plan and will concentrate on issues unique to the project

Landscape or watershed analysis is one means of implementing Revised Forest Plan direction It is not a process independent of the Plan, but fits under the Plan "umbrella" This process evaluates ecological, social, and economic conditions—present and historical—at a geographic scale between the entire Targhee National Forest and a much smaller individual project area It generally assesses conditions at a watershed (such as Camas Creek) or subsection (such as Centennial Mountains) scale This assessment precedes analysis and decision-making on individual project proposals in the landscape analysis area Subsequent site-specific project analyses use the broader scale analysis to set the context for the proposed activities and their anticipated results

Most projects will not be preceded by a landscape analysis because it is an intense analysis process. However, landscape analysis may be helpful for

- identifying and evaluating ecosystems in properly functioning condition and systems at risk,
- providing baseline data and information for project planning,
- understanding the role of historical processes and patterns within which current management actions can take place,
- identifying priorities for project proposals,
- predicting cumulative environmental effects beyond the project area, and,
- integrating individual project outcomes into the larger ecological landscape

The Revision does not give specific "how-to's" for project implementation. Many implementation plans will be developed during the life of the plan that will provide this operational direction. These plans will be adapted as new scientific principles and methods become available to improve resource management activities. The Revision contains detailed guidance for implementing travel management plan maps for all Districts on the Forest. A fire management plan for the Jedediah Smith Wilderness will be completed shortly which outlines operational direction for that portion of the Forest.

The Revision replaces previous resource management plans. Upon final approval of the Revision, all Forest activities, including budget proposals, will conform to it. All permits, contracts, and other uses of Forest lands must also conform with the Revision. Some existing permits and leases are already committed. In this case, existing contracts will remain in effect until they can be adjusted to accommodate Revision direction.

REVISION STRUCTURE

The Revision provides the long-term direction for managing the Forest. When implemented it will achieve the desired condition for the Forest.

The Revised Forest Plan is organized into five chapters and one appendix.

Chapter I Forest Plan Revision Introduction

Discusses the general purpose of the Plan, the relationship of the Plan to other documents, and the Plan structure. Includes a brief description of the Forest.

Chapter II Summary of the Analysis of the Management Situation (AMS)

Summarizes the key information contained in the AMS and describes the need to revise the original Targhee National Forest Land Management Plan. Presents the Desired Future Condition for the Forest.

Chapter III Management Direction

Presents the forestwide management direction, descriptions and direction for ecological subsections, and lists the management prescriptions. Collectively these represent direction for management of the Forest.

Chapter IV Implementation of the Plan

Displays the timber activity schedule contemplated to meet the Desired Future Conditions (DFC) set forth in the EIS.

Chapter V Monitoring and Evaluation

Shows how the Forest will monitor compliance with, and performance of, critical standards and guidelines in the Revision. In this sense it is a part of a larger range of project level monitoring activities which take place on the Forest

Appendix A

National Direction Relevant to Land and Resource Management

Appendix B

U S Fish and Wildlife Service Biological Opinion

Literature Cited, References

Glossary

Defines technical terms used throughout the document

LOCATION OF THE FOREST

The Forest contains approximately 1,789,000 acres of National Forest System land located in south-east Idaho and western Wyoming. Parts of the Forest lie in the Idaho counties of Bonneville, Butte, Clark, Fremont, Jefferson, Lemhi, Madison, Teton, and the Wyoming counties of Lincoln and Teton. The Forest is bordered on the east by Yellowstone and Grand Teton National Parks and the Bridger-Teton National Forest, on the south by the Caribou National Forest, on the west by the Challis and Salmon National Forests, and on the north by the Beaverhead and Gallatin National Forests. Figures I-1 and I-2 display the location of the Forest on a National and local scale.

The Forest has five administrative Districts

District	Net Acres
Dubois D-1	449,416
Island Park D-2	285,712
Ashton D-3	347,130
Palisades D-4	442,447
Teton Basin D-5	264,341

The Forest Supervisor's office is located in St. Anthony, Idaho

Vicinity Map of Targhee National Forest on a National Scale

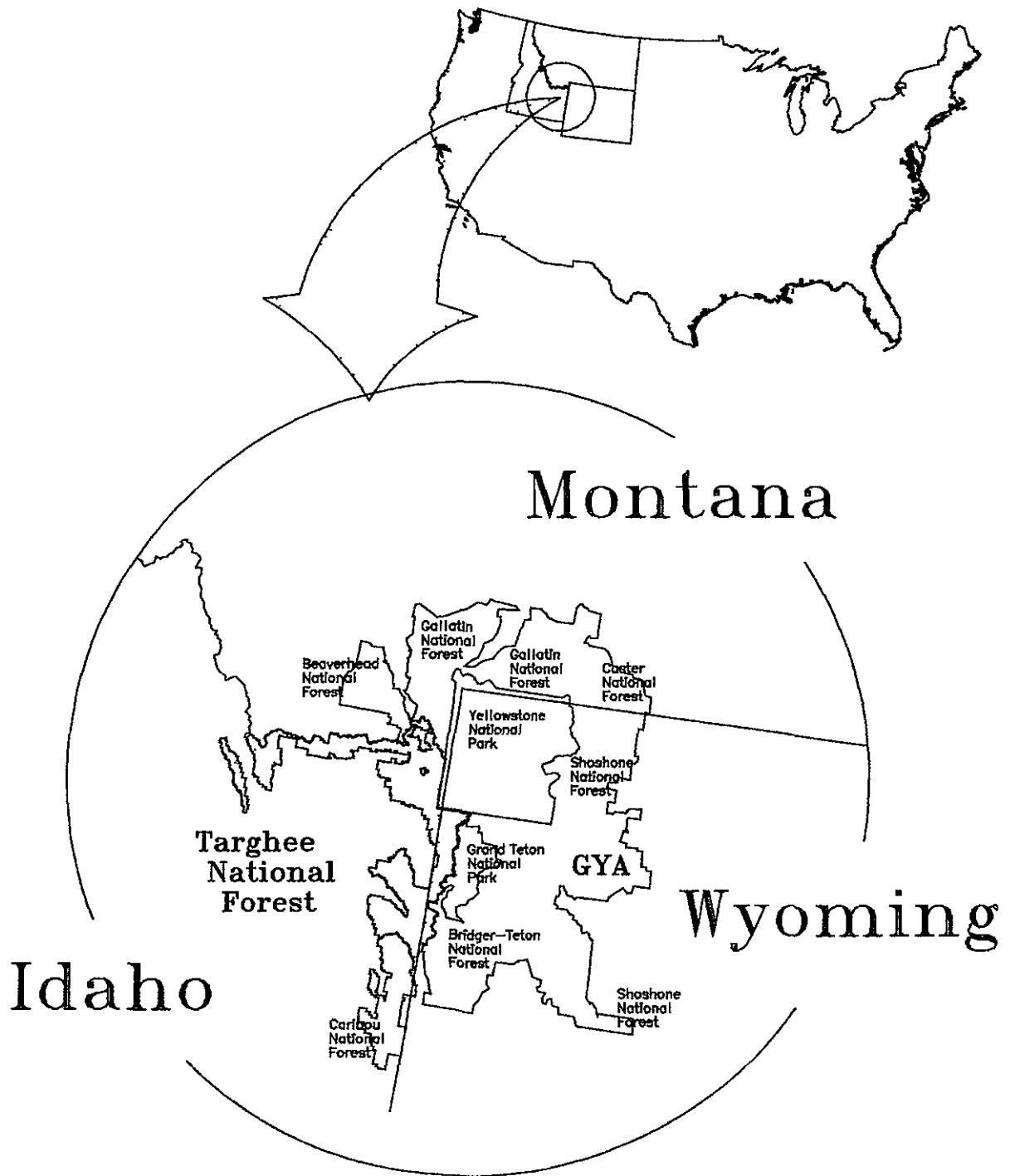
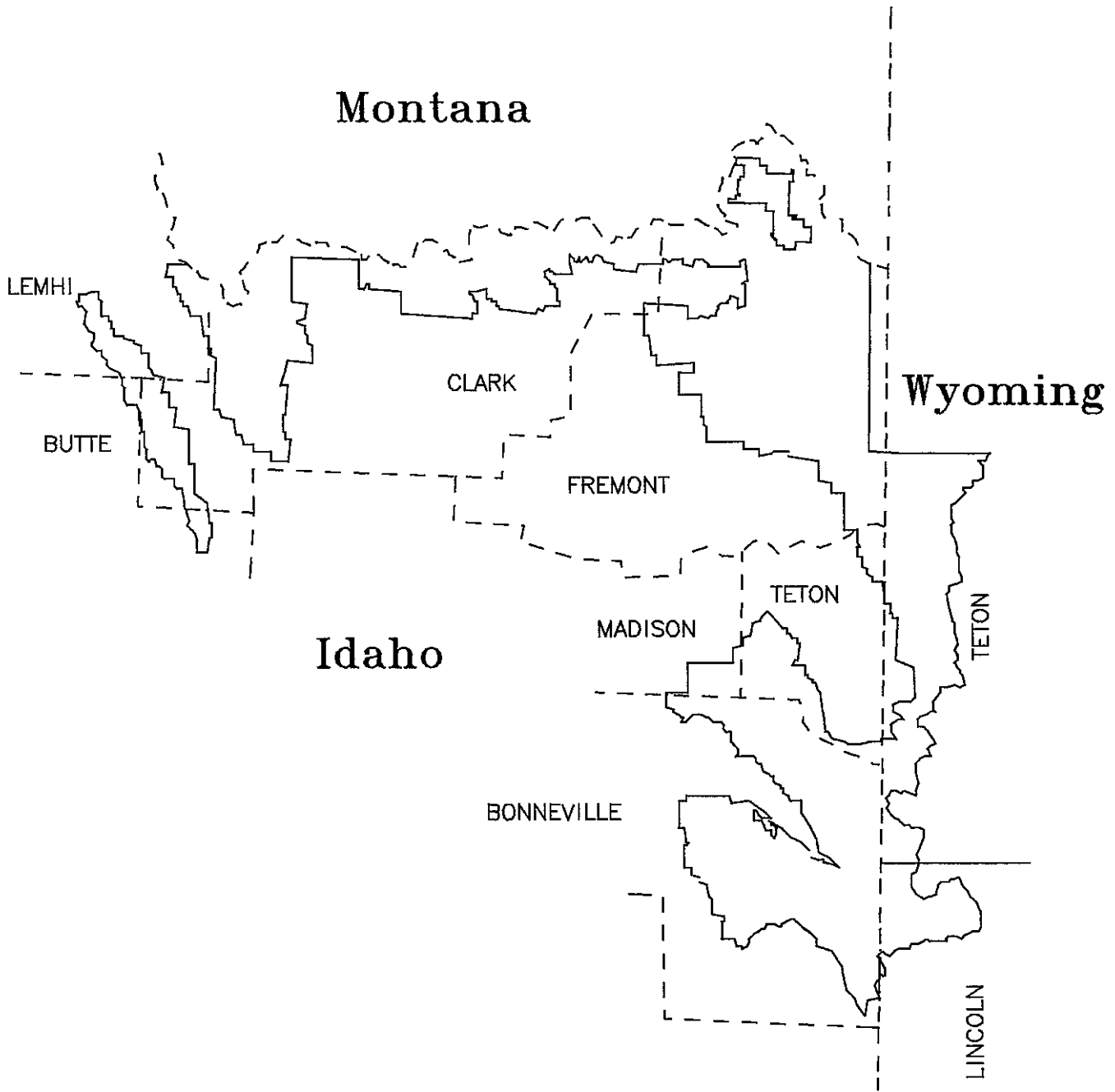


Figure I-1

Vicinity Map of the Targhee National Forest and the Surrounding Area



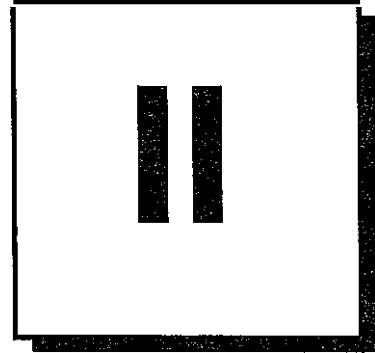
- Forest Boundary
- - - State Lines
- - - - County Lines



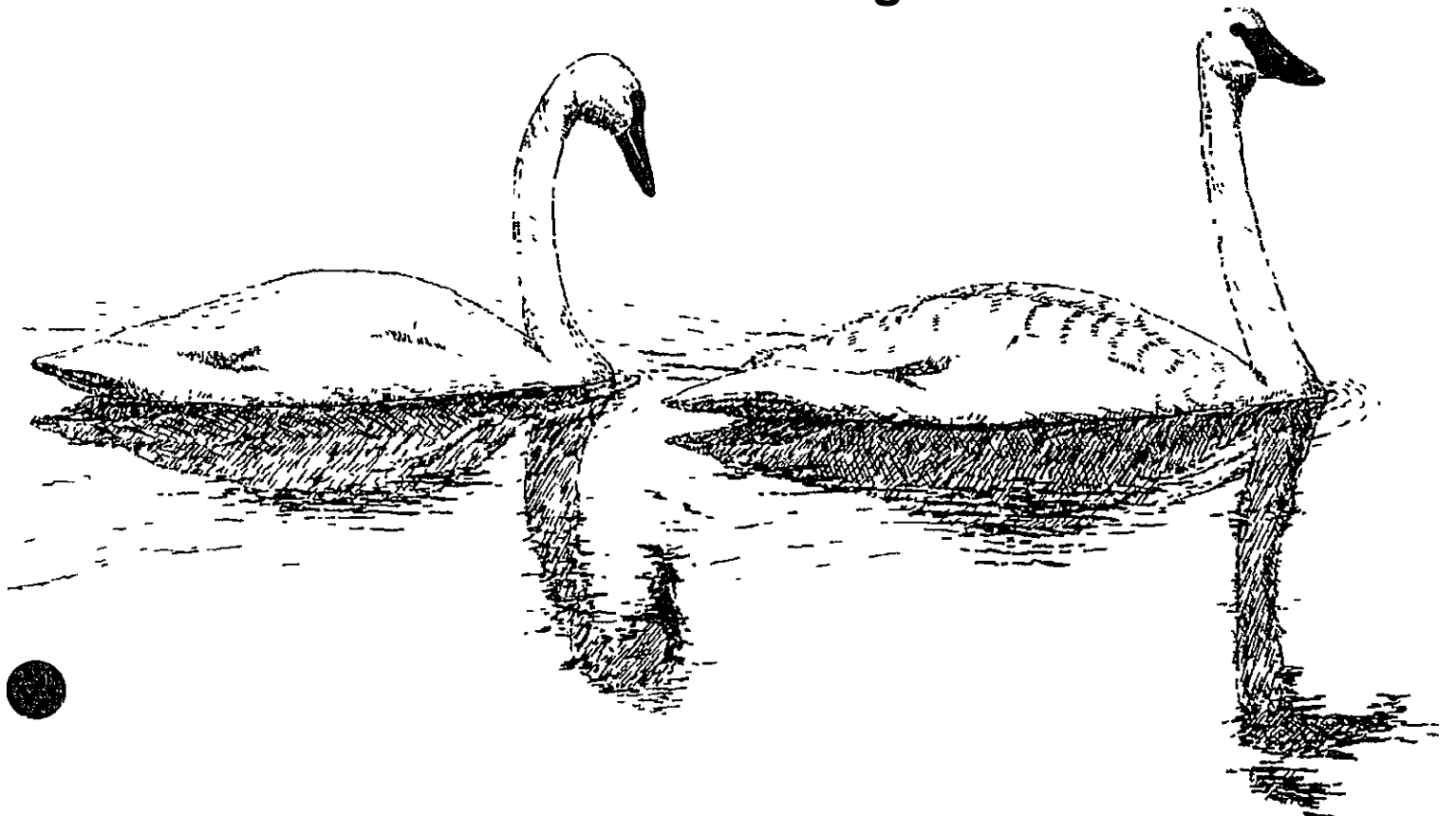
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Figure I-2

Chapter



Summary of the Analysis of the Management Situation



CHAPTER II

SUMMARY OF THE ANALYSIS OF THE MANAGEMENT SITUATION

Introduction

This chapter summarizes the key information contained in the Analysis of the Management Situation (AMS) and describes the need to revise the Targhee National Forest Land Management Plan

Purpose of Preparing an AMS

As part of the Revision process an AMS was completed in 1992 (USDA Forest Service, Targhee National Forest, 1992) A comprehensive review of the existing Plan identified changed conditions and new information, including new public issues and changed public attitudes and awareness, which affected the appropriateness of continuing with the management direction in the Plan The AMS is on file at the Targhee Supervisor's Office This analysis 1) described the present Forest condition, 2) defined the progress that has been made in implementing the Plan with respect to accomplishment of goals and objectives set forth in the Plan, and 3) showed how effective standards and guides were in achieving the desired future conditions described in the Plan Process papers provide additional information These are listed in the literature cited section of this document

Primary Emphasis of the Plan

A primary goal of the existing Plan was to harvest and reforest the thousands of acres of lodgepole pine that had been killed or damaged by the mountain pine beetle To achieve this goal, species/product mix objectives were established Concerning species mix, about ten percent of the acres harvested were to be Douglas-fir and about 90 percent lodgepole pine Another objective was to provide a product mix that was 40 percent sawtimber and 60 percent other products, such as posts, poles and firewood A third objective limited the percent or number of acres within each Management Area that would be harvested

Results of Monitoring

Monitoring indicated the volume of timber actually harvested, for both lodgepole pine and Douglas-fir, was near planned levels This volume was taken from 58 percent of the acres originally considered for harvest

It was expected that the Allowable Sale Quantity (ASQ) would be reached while operating within standards and guidelines The Forest began to experience difficulty in achieving this level of outputs within these constraints Agency direction states that ASQ will be adjusted if standards and guidelines cannot be met

The species mix objective was achieved, with the total harvest consisting of 11 percent Douglas-fir and 89 percent lodgepole pine The product mix objective was not met The product mix was 76 percent sawtimber and 24 percent other products This exceeded the 20 percent variance set forth in the Plan

Habitat effectiveness for big game and grizzly bear was reduced through increases in road density and reduction of forest cover Some degraded riparian habitats showed improvement as a result of implementing the standards and guidelines in the original Plan

The number of plant and animal species on the Forest listed as threatened or endangered has increased by one with the recent discovery on the Forest of the Ute ladies'-tresses, a threatened species of orchid. Bald eagles (threatened) and peregrine falcons (endangered) have reached recovery levels on the Forest and there is a need to address long-term management needs for these species. The number of plant and animal species on the Forest which are listed as sensitive by the Intermountain Region of the Forest Service has increased as more information on occurrence and habitat needs has become available.

Public Interaction and DFC

Social needs and desires have changed. This is evidenced by the comments received in scoping for individual projects, public meetings, and the number of administrative appeals and lawsuits that challenged the application of Forest management. The proposals most frequently challenged after 1991 were timber harvests. Issues centered on impacts to wildlife and, to a lesser extent, recreation and scenic values.

The original Forest Plan was designed by focusing primarily on capabilities of the land to produce commodities such as timber or livestock forage. The advent of ecosystem management (EM) requires that the Forest be managed for sustainability of all ecosystem components, some of which were not adequately addressed in the original Plan.

Public comments and ideas received through scoping identified new public expectations as to what uses and benefits the Forest should provide. The new Desired Future Condition (DFC) which emerged could not be achieved under the original Plan direction. It is described below.

Desired Future Condition for Ecosystem Processes and Patterns

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

Desired Future Condition for Biological and Physical Resources

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

Desired Future Condition for Forest Use and Occupation

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

Desired Future Condition for Production of Commodity Resources

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

New Information

Another reason for embarking on the Revision was the need to review and incorporate new knowledge and techniques to improve sustainability of ecosystems. Recent studies and publications indicate, for example, that road density plays a more crucial role in habitat management for elk and grizzly bears than was assumed in the original Plan. Much work has been done to develop standards for nesting and foraging habitat for goshawks and other raptors. EM efforts analyzing fish habitat in the Upper Columbia River Basin have suggested new ways of managing fisheries and aquatic ecosystems. These findings and other information have been reviewed for their applicability to habitat management on the Forest and incorporated where appropriate.

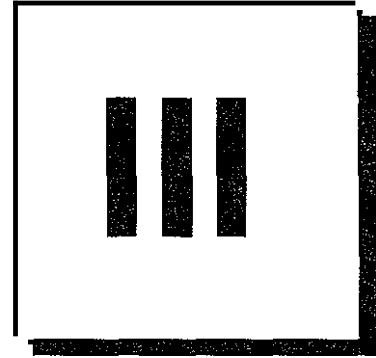
Need for Change

The original Targhee Forest Plan, approved in 1985, emphasized an extensive salvage and reforestation program of dead lodgepole killed by a massive mountain pine beetle epidemic over the previous 30 years. This rate of salvage caused, in effect, a departure from a sustained yield of timber harvest and could not be continued beyond the first decade (1985-1995) in an environmentally sound manner. Monitoring of activities during this time showed it was increasingly difficult to meet the standards and guidelines in the 1985 Plan. New information on resource needs and various management practices became evident during this time, and by 1990 it was apparent that a full revision was needed. More specific needs for change are as follows:

- The salvage program has ended. Use of the many roads built during salvage operations by increasing numbers of people is causing unwanted effects to wildlife, riparian areas, and soil productivity.
- The need to review and incorporate new knowledge and techniques continues, especially in wildlife habitat management. For example, recent studies indicate motorized road and trail densities play a crucial role in availability of suitable habitat for elk and grizzly bears. Standards for management activities near nesting and foraging habitat for goshawks and other raptors are needed to protect these crucial areas. Results of studies analyzing fish habitat in the Upper Columbia River Basin are pointing out new ways to manage fisheries. Some of these findings have widespread implications that the revision process was intended to address.
- Although much of the lodgepole pine component on the Forest has been salvaged, there is still a need to use timber harvest as a tool to reach ecosystem objectives, supply a variety of timber products for local use, deter other epidemics like the mountain pine beetle outbreak, and manage the potential for a devastating wildfire, like the Yellowstone Wildfires of 1988.



Chapter



Forestwide Standards and Guidelines, Subsection Direction, and Management Prescriptions



**CHAPTER III
FORESTWIDE STANDARDS AND GUIDELINES,
SUBSECTION DIRECTION, AND PRESCRIPTIONS FOR
IMPLEMENTING THE SELECTED ALTERNATIVE.**

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CHAPTER III - INTRODUCTION

This chapter provides management direction for the Forest for the next 10 to 15 years. This direction takes several forms and is applied at three geographic levels.

Desired Future Conditions (DFCs) are broad target conditions envisioned for the Forest or various resources at some point in the future. They may or may not be totally achieved during the life of the Revised Plan, but they serve to indicate the direction in which management should proceed.

Goal - a concise statement that describes a DFC which normally is expressed in broad, general terms that are timeless, in that there is no specific date by which each goal is to be achieved.

Objective - a concise, typically time-specific statement of a condition, outcome, or purpose. Objectives are often measurable planned results that respond to goals.

Standard - a condition of land, normally a maximum or minimum condition, that is measurable. A standard can also be expressed as a constraint on management activities or practices. Standards are established on a forestwide, subsection, and management prescription area basis to promote achievement of the DFC and objectives. Deviation from compliance with a standard requires a Forest Plan amendment (except for emergency situations as explained below). (USDA Forest Service, 1993)

Guideline - a preferred or advisable course of action that is generally expected to be carried out. Deviation from compliance with a guideline does not require a Forest Plan amendment, but the rationale for such a deviation shall be documented in the project decision document. Guidelines are established on a forestwide, subsection, and management prescription area basis to promote achievement of the desired future condition and objectives in an operationally flexible manner that responds to such variations as changing site conditions or changed management circumstances. (USDA Forest Service, 1993)

If the wording of an item appears to conflict with its label, the label shall prevail ("S" for standard, "G" for guideline).

Direction in the form of goals, objectives, standards and guidelines is prescribed at three different geographic levels in the Revised Plan. This direction is described in the following three parts of this chapter.

Part 1 -- Forestwide Standards and Guidelines. Direction is provided for individual and collective resources. This applies forestwide unless otherwise stated in subsequent parts of the chapter. Forestwide direction is organized into five components which are consistent with descriptions in the Final EIS for this Revised Plan. These components are Ecological Processes and Patterns, Biological Elements, Physical Elements, Forest Use and Occupation, and Production of Commodity Resources.

Part 2 -- Subsection Direction. This part of the chapter describes the Forest in terms of seven large geographic units, or ecological subsections. This provides a locational perspective to overall management direction. Conditions in each subsection are briefly described and broad DFCs are presented. These are followed by goals, objectives, standards and guidelines as applicable.

Part 3 -- Management Prescriptions. An array of different management regimes are presented here which have been applied to various parts of the Forest to address specific management needs or public desires. The 45 prescriptions are organized in categories and presented in a sequence allowing progressively more active management. Prescriptions beginning with a "1" provide direction

for areas managed as wilderness, wilderness study areas or recommended wilderness, while series "8" prescriptions give direction for areas managed for concentrated development such as ski areas or utility corridors. All prescriptions are organized according to the five components used in the Final EIS and forestwide direction.

In the event of conflicting direction for a given area of the Forest, the direction stated under the applicable prescription shall prevail, with few exceptions. Where prescription direction is superseded by Forestwide or subsection direction, this is explicitly stated in those parts of the chapter.



CHAPTER III - PART 1 FORESTWIDE STANDARDS AND GUIDELINES

FORESTWIDE STANDARDS AND GUIDELINES

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INTRODUCTION

The forestwide standards and guidelines are organized by ecological groupings, as shown in the table of contents. The standards and guidelines in this section of the document are common to the entire Forest. Forestwide goals and (in some cases) objectives are provided for each resource area and/or activity. Following the goals and objectives, the specific standards and guidelines are presented. A standard is identified with an (S), and a guideline is identified with a (G). A diligent effort has been made to make these goals and objectives, and standards and guidelines specific to the Forest. This set of standards and guidelines is the result of many suggested changes made by our publics and employees.

The existing body of national direction for managing a National Forest remains in effect. The standards and guidelines presented herein provide direction more specific to the needs of the Targhee. A summary of national program and regional policy and goals can be found in Appendix A. The direction from the references cited in Appendix A is incorporated herein as additional forestwide direction.

If an emergency event occurs on the Forest, deviation from these standards and guidelines may occur in order to protect human life, property values and structures, and forest resources. Activities in response to emergency events include such things as law enforcement, search and rescue, and fire.

ECOLOGICAL PROCESSES AND PATTERNS

Properly Functioning Condition (PFC)

✓ Goals - PFC

1 Ecosystems and their components are maintained in properly functioning condition: dynamic and resilient to disturbances to structure, composition, and processes at appropriate landscape scales. Ecosystems are not at risk for disturbances that have the potential to degrade them beyond the point of resiliency and sustainability.

2 Ecological systems at risk are identified and prioritized for management action.

3 In assessing properly functioning condition, the biological and physical, social, and economic components of ecosystems are considered.

4 Management strategies are used to maintain or restore ecological integrity, productivity and sustainability over time.

~~5~~ Biodiversity is maintained or enhanced by managing as much as possible for a diverse array of habitats tied to natural occurrence and distribution of plant communities.

6 Adaptive management strategies are used to gain understanding during project implementation and make adjustments to maintain and restore properly functioning condition.

/Objective - PFC

1 Within three years, complete a PFC assessment within a selected subsection.

Standards and Guidelines - PFC

1 During landscape or watershed analyses, identify ecosystems in properly functioning condition and those at risk (G).

2 Where appropriate, during project planning and implementation, identify and prioritize systems at risk for corrective treatment or action (G)

Insects and Disease

Goal

Insects and disease are allowed to play their natural role in ecosystem dynamics to the extent compatible with other resource objectives

Fire

Goals

- 1 Identify the historic role of fire and restore fire as an ecological process, where appropriate to achieve multiple-use and ecosystem management objectives
2. Prescribed fire and managed natural fire is used to achieve desirable soil and habitat characteristics, improve forest health, and create or maintain diversity in vegetative structure, composition, and patterns as described in PFC analysis
- 3 Suppress fire in a safe, cost effective manner where necessary to protect human life and safety, developments, structures, and sensitive resource values
- 4 Fuel accumulations are reduced and managed within their historic range

Objectives

- 1 By 2007, develop at least one fire management plan for a priority area within each of the seven subsections
- 2 By 2005, initiate a program to burn a minimum 2,000 acres annually for habitat improvement, fuels management, and forest health, consistent with approved fire management plans

Standards and Guidelines

When feasible and appropriate, use prescribed burning to dispose of slash in order to return the inorganic and organic chemicals in the foliage and small woody material to the soil, to reduce fire hazard and to provide seed beds for natural regeneration (G)

PHYSICAL ELEMENTS

Soils

Goal

Long-term soil productivity is sustained by retaining fine organic matter and woody residue on activity areas

Standards and Guidelines - Soil Quality (applicable only to current activity areas)/Forested Ecosystems

- 1 Fine Organic Matter Generally strive to maintain fine organic matter over at least 50 percent of

the area. The preference is for fine organic matter to be undisturbed, but if disturbed, it should be of sufficient quantity and quality to avoid detrimental nutrient cycle deficits. If the soil and potential natural community are not capable of producing fine organic matter over 50 percent of the area, adjust minimum amounts to reflect potential soil and vegetation capability (G)

2 Woody Residue Requirements for Materials three inches in Diameter or larger. Sustain site productivity by providing the following minimum amounts of woody residue dispersed on the site (G)

WOODY RESIDUE REQUIREMENT FOR WOODY MATERIALS >= 3 INCHES IN DIAMETER		
Woody Residue Minimum Requirement (tons/acre) 1/	Forest Habitat Type	
3-5	Limber pine/curl-leaf mountain mahogany (Pifi/Cele) Douglas-fir/common juniper (Psme/Juco)	Douglas-fir/mountain snowberry (Psme/Syor) Lodgepole pine/heartleaf arnica (Pinc/Arco)
5-10	Douglas-fir/ninebark (Psme/Phma) Douglas-fir/mountain maple (Psme/Acgl) Douglas-fir/blue huckleberry (Psme/Vagl) Douglas-fir/grouse whorileberry (Psme/Vasc) Douglas-fir/common snowberry (Psme/Syal) Douglas-fir/white spirea (Psme/Spbe) Douglas-fir/pine grass (Psme/Caru) Alpine fir/white spirea (Abla/Spbe)	Alpine fir/pine grass (Abla/Caru) Alpine fir/heartleaf arnica (Abla/Arco) Whitebark pine/ross sedge (Pial/Caro) Lodgepole pine/blue huckleberry (Pico/Vagl) Lodgepole pine/grouse whorileberry (Pico/Vasc) Lodgepole pine/white spirea (Pico/Spbe) Lodgepole pine/pine grass (Pico/Caru) Lodgepole pine/elk sedge (Pico/Cage)
10-15	Douglas-fir/mountain sweetroot (Psme/Osch) Engelman spruce/softleaved sedge (Pien/Cadi) Alpine fir/ninebark (Abla/Phma) Alpine fir/blue huckleberry (Abla/Vagl) Alpine fir/grouse whortleberry (Abla/Vasc)	Alpine fir/mountain arnica (Abla/Arta) Alpine fir/common snowberry (Abla/Syal) Alpine fir/western meadow-rue (Abla/Thoc) Alpine fir/oregon grape (Abla/Bere)
15-20	Engelman spruce/sweetscented bedstraw (Pien/Gatr)	Alpine fir/baneberry (Alba/Acru) Alpine fir/mountain sweetroot (Abla/Osch)

3 During site preparation treatments, strive to avoid disturbing concentrated areas of soil wood (G)

Standards and Guidelines - Slope Stability for Mineral Activities

1 In areas of high mass instability, that have been ground verified, occupancy shall not be allowed (S)

2 In areas identified as having moderate instability, and that are ground verified, occupancy may be allowed provided it can be shown the project design can prevent unacceptable resource damage (G)

Caves

Standards and Guidelines

1 Restrict logging, road construction, and other uses of heavy equipment above or in the vicinity of a cave with a thin roof, or the course of such a cave, if there is a potential for damage (G)

2 Retain vegetation in the vicinity of a cave or cave course if it is required to protect the cave's microenvironment (habitat, climate, vegetation, etc) (G)

3 Fell trees away from the cave and its course if timber harvesting is permitted in the vicinity of a cave (G)

4 Cave entrances will not be altered or used as disposal sites for slash or other refuse and no action will be taken to prevent or hinder ingress or egress of cave-dependent wildlife Gating of cave entrances will be allowed as long as physical alteration of the entrance is not needed to construct the gate Wilderness values will also be considered prior to installing such structures (S)

5 Management activities will not be permitted within any area draining into a cave if they are likely to affect the cave ecosystem through sedimentation, soil sterilization, the addition of nutrients or other chemicals (including pesticides, herbicides, and fertilizers) or by changing the cave's natural hydrology (S)

6 Do not allow alteration of natural surface drainage into or away from caves (S)

Lands

Goals

1 A well planned system of reliable and technically feasible energy corridors are provided to serve existing and future regional and local energy needs, compatible with other resource needs and objectives These corridors may be either designated (prescription 8 1) or nondesignated (other prescriptions)

2 The National Forest System lands set aside for utility corridors are minimized to reduce fragmentation and minimize acres allocated for that use

Objective

Remove utility facilities located in avoidance or exclusion areas as it becomes practical to do so

Standards and Guidelines

Allow for essential access for repair and maintenance of facilities within energy corridors (S)

Avoid parallel corridors Consolidate facilities within existing energy corridors where feasible (G)

Bury new lines and upgrades/replacements when feasible (G)

Proponents of new facilities within existing corridors, and new corridor routes, must demonstrate clearly that the proposal is in the public interest, and that no other reasonable alternative exists to public land routing (G)

Minerals

Goal

Implement leasing decisions including identification of lands available for leasing made in the Forest Oil and Gas Leasing EIS and its associated Record of Decision

Standards and Guidelines - Locatable and Mineral Materials

1 Common Minerals Give priority to use of currently developed common mineral (natural gravel and hard rock) material sources over undeveloped sources Exceptions should be made when existing

sources are unable to economically supply the quality and quantity of material needed or when conflicts with other resource uses are found to be unacceptable (G)

2 The Forest is open to exploration and development and production of locatable, leasable, and mineral material resources unless otherwise specified in the management prescriptions (S)

3 Oil and gas pipelines and other related utilities should share utility corridors except as needed to meet other resource objectives (G)

BIOLOGICAL ELEMENTS

Fisheries, Water, and Riparian Resources

Goals

1 Maintain or improve water quality to meet water quality standards for the States of Idaho and Wyoming

2 Water quality will improve on stream segments on the Forest identified by the States of Idaho and Wyoming as having water quality concerns and they are removed from the Water Quality Limited list

3 Maintain or restore water quality, to a degree that provides for stable and productive riparian and aquatic ecosystems

4 Maintain or restore stream channel integrity, channel processes, and the sediment regime (including the elements of timing, volume, and character of sediment input and transport) under which the riparian and aquatic ecosystems naturally developed

5 Maintain or restore instream flows to support healthy riparian and aquatic habitats, the stability and effective function of stream channels, and the ability to route discharges

6 Maintain or restore the natural timing and variability of the water table elevation in meadows and wetlands

7 Maintain or restore the diversity and productivity of native and desirable nonnative plant communities in riparian zones.

8 Maintain or restore riparian vegetation to

A Provide an amount and distribution of large woody debris characteristic of natural aquatic and riparian ecosystems,

B Provide adequate summer and winter thermal regulation within the riparian and aquatic zones,

C Help achieve rates of surface erosion, bank erosion, and channel migration characteristic of those under which the communities developed naturally

9 Maintain or restore aquatic habitats necessary to support overall biodiversity, including unique genetic fish stocks such as native cutthroat trout that evolved within the specific geo-climatic regions

10 Maintain or restore habitat to support populations of well-distributed native and desired nonnative plant, vertebrate, and invertebrate populations that contribute to the viability of riparian-dependent communities

11 Wherever possible, secure water rights for maintenance of riparian and aquatic habitat, under State appropriative law, State reserved rights (in Wyoming), and Federal reserved rights

12 Focus maintenance and restoration efforts, where needed, within inventoried hydrologically disturbed watersheds

13 Participate in cooperative river basin planning efforts. Coordinate management activities to be consistent with the results of these efforts including the Henry's Fork Basin Plan and the South Fork Snake Basin Plan

Objectives

1 By 2007, complete watershed improvement needs backlog in the Lemhi/Medicine Lodge, Big Hole Mountains, and Caribou Range Mountains Subsections. Verify watershed improvement needs identified in the Teton Basin Study. Inventory watershed improvement needs on the Centennial Mountains, Madison-Pitchstone Plateaus, and Teton Range Subsections

2 Within two years after the ROD is signed, coordinate with the States of Idaho and Wyoming to 1) reassess the health of native cutthroat trout populations within the Lemhi/Medicine Lodge, Centennial Mountains, Island Park, Madison-Pitchstone Plateaus, and Teton Range Subsections, 2) use this information to further define species recovery needs and opportunities and to evaluate the effectiveness of the Native Trout Watersheds, and 3) determine which subwatersheds (drainages) within Native Trout Watersheds are vital to native cutthroat trout recovery. The designated Native Trout Watersheds on the Forest are Elk Creek (003), Palisades Creek (004), Rainey Creek (005), Pine Creek (006), Heise (007), Henry's Fork Headwaters (008), Robinson Creek (013), Trail Creek (017), Mahogany Creek (022), Moody Creek (024), Bitch Creek (032), Burns-Pat Canyon (035), McCoy-Jensen Creeks (036), Elk-Bear Creeks (037), Fall Creek (038), Prichard Creek (039), and Brockman Creek (040)

3 Within four years after the ROD is signed, coordinate with the States of Idaho and Wyoming to 1) reassess the health of native cutthroat trout populations within the Big Hole Mountains and Caribou Range Mountains Subsections, 2) use this information to further define species recovery needs and opportunities, and 3) determine which subwatersheds (drainages) within designated Native Trout Watersheds are nonessential to native cutthroat trout recovery

4 Coordinate with sub-basin assessments for implementation of State water quality standards (Total Maximum Daily Loads, TMDLs)

Standard and Guideline - Watershed, General

Not more than 30 percent of any of the principal watersheds and their subwatersheds should be in a hydrologically disturbed condition at any one time (G)

Standards and Guidelines - Fisheries and Other Aquatic Resources

1 New special use permits or new Forest Service projects involving instream facilities (exclusive of facilities retrofitted to existing dams) must maintain minimum instream flows as specified by the Forest or State and, on fish-bearing streams provide for fish passage and include screening devices to prevent accidental loss of fish (S)

2 When reauthorizing existing special use permits or existing Forest Service projects involving instream facilities (exclusive of facilities retrofitted to existing dams), where feasible, provide for minimum instream flows as specified by the Forest or State and, on fish-bearing streams, where feasible, provide for fish passage and include screening devices to prevent accidental loss of fish (G)

For guidelines 3, 4, and 5, refer to the following discussion and Table

The following table describes expected values for specific habitat features which are reflective of good fisheries habitat conditions and are also indicators of ecosystem health. It is intended to guide management of native cutthroat trout habitats. Although individual habitat features will be measured at the stream reach scale, the criteria for meeting the expected values apply at the watershed scale, generally for third- to sixth-order streams. These expected values are based on the best available information including INFISH. They are intended as a starting point and can be refined later, based on field analysis or literature review, to better reflect conditions that are attainable in a particular watershed or stream reach.

EXPECTED VALUES FOR HEALTHY NATIVE FISH HABITAT CONDITIONS AT THE WATERSHED SCALE	
Habitat Feature	Expected Value
Pool Frequency (all systems)	At least 1 pool per length of stream equal to 5-7 times the channel width
Water Temperature	Within spawning habitats 13 C or less with a maximum daily average no greater than 9 C 1/ Within adult holding habitat 16 C with a maximum daily average no greater than 12 C
Large Woody Debris (forested systems)	> 20 pieces per mile 2/
Bank Stability (nonforested systems)	> 80 percent
Lower Bank Angle (nonforested systems)	> 75 percent of banks with < 90 degree angle
Width/Depth Ratio (all systems)	Must be suitable for the Rosgen type of the given stream reach 3/
<p>1/ This criterion applies to the period of time from spawning to emergence. In lieu of site-specific information, use March 1 to September 15</p> <p>2/ Criteria must meet R1/R4 stream inventory procedures</p> <p>3/ Rosgen type refers to a stream classification system which categorizes streams based on entrenchment, gradient, width to depth ratio, sinuosity, and channel materials</p>	

3 Within subwatersheds occupied by native cutthroat trout or designated as vital to meeting recovery goals, avoid management activities that are found, through interdisciplinary site-specific analysis, to either reduce habitat features below the expected values described above or retard the rate of recovery of degraded habitat features (G)

4 Emphasize watershed analysis or site-specific analysis to more accurately define fisheries habitat features when planning or conducting management activities within Native Trout Watersheds (G)

5 Values for fish habitat features may be adjusted based on field analysis or literature review. A clear rationale supporting the adjustment must be documented (G)

Vegetation

Goals

- 1 Maintain and restore healthy, diverse forested and nonforested ecosystems through time, including appropriate components of dead and down woody material
- 2 Use vegetation management to achieve a broad array of multiple-use and ecosystem management objectives, including maintenance, improvement, and restoration of
 - forest health,
 - scenic viewsheds and corridors,
 - wildlife habitat effectiveness and quality,
 - hazardous fuels reduction,
 - biological diversity of plant and animal communities,
 - riparian and watershed health and function,
 - vegetation structure, composition, and distribution in larger landscapes

Objectives

- 1 By 2007, identify properly functioning condition (PFC) and systems at risk for forested landscapes
- 2 Within five years, complete a properly functioning condition assessment for the lodgepole pine community type and develop long term vegetation and density management strategies to reduce the risk of a future catastrophic bark beetle epidemic

Standards and Guidelines

- 1 Where appropriate, use methods of vegetation treatment that emulate natural ecological processes to maintain or restore properly functioning ecosystems (G)
- 2 Forest vegetation manipulation on lands not included in the ASQ will be accomplished to meet the individual management prescription direction. Production of wood products will not be the primary consideration. Harvest will be accomplished with sufficient mitigation to protect and maintain soil, wildlife, visual, and aquatic resources (S)
- 3 Vegetation manipulation may include mechanical treatments, commercial or noncommercial timber harvest of wood products, prescribed fire, or other appropriate methods (G)
- 4 Vegetation manipulation through timber harvest on lands not included in the ASQ will not exceed 20 million board feet (MMBF) per decade (S)
- 5 Treat aspen plant communities to reduce encroaching conifers and maintain a balance of age classes for these communities (G)
- 6 Old Growth and Late Seral Forest Stages
 - A In each principal watershed, the combination of old growth and late seral forest stage acres will be 20 percent or more of the forested acres. Where it exists, at least half of this (ten percent of the forested acres) should meet old growth characteristics (G)
 - 1 For aspen and conifer forest types, acres classified as old growth and late seral should be in blocks over 300 acres in size (a block can consist of a combination of old growth and late successional forest types) (G)

Within these blocks

- a Maintain 80 percent or greater primary cavity nesting species habitat capability (see Wildlife Standards and Guidelines - Snag/Cavity Nesting Habitat) (G)
 - b Maintain the wildlife dead and down woody material guidelines (see Wildlife Standards and Guidelines - 1 Dead and Down Material) (G)
 - c Silvicultural techniques may be used to maintain or improve old growth and late successional characteristics (G)
- 2 If a catastrophic event (such as fire) reduces the acres of old growth and late seral forest below 20 percent of the forested acres in a principal watershed, identify replacement forested acres to achieve the 20 percent. When necessary, use silvicultural techniques to promote old growth and late seral characteristics in the replacement acres (G)
- 3 Use the definition of old growth characteristics by forest type found in "Characteristics of Old-Growth Forests in the Intermountain Region" (USDA Forest Service 1993) (S)
- 4 Use the definition of late seral stages by forest type in the table below (G)

LATE SERAL (SUCCESSIONAL) STAGES					
		Dominant	Live	Overstory	Trees
Forest	Type	Age	Trees/Acre	DBH(IN)	
Lodgepole	Pine	100+	40+	9+	
Douglas-fir		140+	25+	14+	
Mixed	Conifer	100+	40+	12+	
Spruce/Fir		110+	20+	12+	
Aspen		60+	20+	10+	
Cottonwood		50+	--	--	

- 7 Conduct vegetation manipulations in a cost effective manner. Manipulations should emphasize desired ecological and multiple-use outcomes over being above cost (G)
- 8 Maintain, and where possible, increase unique or difficult-to-replace elements or habitats such as whitebark pine, and areas of high species diversity, such as aspen, riparian zones, etc (G)
- 9 Do not conduct management activities which alter canopy vegetation within 400 feet of a Natural Resources Conservation Service (NRCS) snow measuring site without first contacting NRCS. Legal locations of these sites are in the Forest Geographic Information System (GIS) (S)
- 10 Sagebrush/grassland habitats. Within big sagebrush (*Artemisia tridentata* & varieties)/grassland habitats strive for canopy coverage distributions on a subwatershed basis (generally 2,000 to 6,000 acres in size) of (G)
- Less than five percent of a subwatershed in a less than five percent canopy coverage class
 - Seventy-five percent of a subwatershed in a well distributed mosaic of canopy coverage ranging from 5-30 percent
 - Twenty percent of a subwatershed in a greater than 30 percent canopy coverage class

Goals - Plant Species Diversity

- 1 Preserve unique formations within a landscape (such as cliffs, bogs, seeps, talus slopes, warm or alkaline springs, pot holes, and rock outcroppings) that provide habitat to plant species not common to the overall landscape and contribute to the species diversity within the landscape
- 2 Provide necessary protection and management to conserve listed threatened, endangered and sensitive plant species.

Standards and Guidelines - Plant Species Diversity

- 1 Native plant species from genetically local sources will be used to the extent practicable for erosion control, fire rehabilitation, riparian restoration, forage enhancement, road right-of-way seeding, and other revegetation projects (G)
2. Areas planned for nonnative seedings or plantings of nonnative woody species need to be evaluated to determine the impacts to the native flora within the analysis area and habitats adjacent to it (G)
- 3 Introduced species should be utilized in project seedings where native species would not meet the objectives of erosion control, such as in high **use** or impact areas, and where the effects on local, native flora is minimal, sites that are currently dominated by introduced species and **use** of nonnative species has not degraded the adjacent native flora; and sites where the management objective is to utilize nonnative species in one area to prevent degradation of other natural areas. (G)
- 4 Information on the presence of listed threatened, endangered or sensitive plant species will be included in all assessments for vegetation and/or ground disturbing management activities. Appropriate protection and mitigation measures will be applied to the management activities (S)

Objectives - Ute Ladies' Tresses (*Spiranthes diluvialis*)

- 1 Map suitable habitat (generally within wetland/riparian/floodplain areas below 7,000 feet elevation) on the Forest within three years of implementation of the ROD
- 2 Complete intensive surveys of suitable habitat to document presence of plants within five years of implementation of the ROD

Standards and Guidelines - Ute Ladies' Tresses (*Spiranthes diluvialis*)

- 1 For known populations within livestock grazing allotments, provide appropriate protection, particularly during the flowering and seed-set periods (generally August and September) (S)
- 2 Allow no ground disturbing activities or changes in hydrology within occupied habitat without review by botanist and interdisciplinary team (S)

Goals - Special Forest Products

- 1 Establish guidelines for commercial harvesting of special forest product species
- 2 Provide for the historical, cultural, and recreational **uses**, as well as rights and privileges afforded Native Americans under treaties and agreements, before commercial **uses** of special forest products are allowed

Wildlife ✓

Goals

- 1 Wildlife biodiversity is maintained or enhanced by managing for a diverse array of habitats and distribution of plant communities
- 2 Provide habitat to support the wildlife and hunting goals of the States of Idaho and Wyoming

Standards and Guidelines - General Habitat

1 Dead and Down Material

(Note These requirements are interrelated with the woody residue requirements and are not cumulative to those requirements)

A On at least 60 percent of the forested acres of each analysis area an average of 21 logs per acre should be left consisting of logs in decomposition classes 1, 2 and 3 where they exist (USFS, 1979) (G) (Note unmanaged stands or stands where management did not include the removal or piling of down material, meet forestwide standards and guidelines for down woody material)

When this amount of down material is not present on at least 60 percent of the forested acres in an analysis area, an average of **42** logs per acre should be left in all activity areas (harvest units) consisting of logs in all decomposition classes where they exist Fewer logs may be left if fuel loading would exceed 25 tons per acre (G)

- 1 Logs should be at least seven inches in diameter at the small end, be at least 20 feet long, and have a volume of at least ten cubic feet (e.g., a log averaging 9.5 inches in diameter and 20 feet long) (G)

- a Smaller size logs may only be used in meeting this volume criteria if the area is incapable of producing larger trees, or the stand is too young to produce these trees In these cases, logs representing the largest tree diameter class present in the stand should be retained and at least 200 cubic feet (approximately 2.3 tons) per acre of down logs shall be retained

- b For every area two-acre area in an activity area, a minimum of two logs should be left, where they exist, to maintain distribution of down woody material

- 2 Winter Feeding of Big Game Allow no new permanent feed grounds for wintering big game animals (S)

- 3 Animal Damage management will be conducted in compliance with the 1996 "APHIS-ADC Predator Damage Management in Southern Idaho" Decision Notice and FONSI, selected alternative "Current Program with Livestock Protection Collar" (S)

- a Annual ADC work plans will be prepared using the 1990 Targhee National Forest "Forest-Wide Predator Control Environmental Assessment" as a framework for conducting predator control activities on the Forest Deviations from the direction in the 1990 EA will be considered when necessary to deal with particular problem animals (G)

- b Problem wolves will be managed according to the Nonessential Experimental Population for Gray Wolves Final Rule (USDI, 1994b) (S)

c Problem grizzly bears will be addressed according to the Interagency Grizzly Bear Committee nuisance bear guidelines (IGBC, 1994) (S)

d Use of toxicants will not be allowed on the Forest (S)

Objective - Snag/Cavity Nesting Habitat

Determine the biological potential for cavity nesting habitat on a watershed basis to enable management of some areas at higher levels of biological potential and some at lower levels of biological potential and meet the overall management prescription objectives

Standards and Guidelines - Snag/Cavity Nesting Habitat

1 Retain snags within all management prescription areas allowing timber harvest (refer to the following Tables 1 & 2 for snag requirements of cavity nesting species, refer to the wildlife standards and guidelines in each management prescription for the specific biological potential to be achieved) (G)

Table 1 Snag requirements for 100 percent biological potential for woodpecker populations

Species	Range in Snag DBH (inches)	Range in Snag Height (feet)	No of Snags per 100 Forested Acres for 100 Percent Biological Potential			
			Aspen	Cottonwood	Doug-fir Spruce/Fir	Lodgepole
Lewis's Woodpecker	12 to 27	5 to 170	101	101	101	NA
Yellow-bellied Sapsucker	9 to 47	15+	150	150	150	150
Williamson's Sapsucker	12 to 37	15+	NA	NA	150	150
Downy Woodpecker	6 to 14	6 to 50	300	300	300	300
Hairy Woodpecker	9 to 29	15+	180	180	180	180
Three-toed Woodpecker	7 to 19	15+	59	NA	59	59
Black-backed Woodpecker	8 to 17	6+	NA	NA	59	59
Northern Flicker	10 to 51	6+	38	38	38	38
Total Hard Snags per 100 acres			828	769	1037	936
NA indicates the species does not use this forest type						

Table 2 Snag requirements for maintaining various percentages of biological potential for woodpecker populations (refer to Table 1 for snag dbh, snag height, and individual species requirements)

Percent of Biological Potential	Number of Hard Snags per 100 Forested Acres			
	Aspen	Cottonwood	Doug-fir Spruce/Fir	Lodgepole
100	828	769	1037	936
80	662	615	830	749
60	497	461	622	562
40	331	308	415	374
20	166	154	207	187

2 Retain live trees for future snag recruitment using the following guidelines to achieve various percentages of biological potential (G)

Percent of Biological Potential	Number of Live Trees per Forested Acre				
	>= 10 in dbh	>= 7 0-9 9 in dbh	>= 5 0-6 9 in dbh	< 5 0 in dbh	Total Tree/Acre
100	8	5	5	7	25
80	6	4	4	6	20
60	5	3	3	4	15
40	3	2	2	3	10
20	2	1	1	1	5

3 In analysis areas where snag numbers are low (at or approaching management minimums), no dead standing trees should be harvested (G)

4 Public workforce and contractor safety will be considered and provided for in selecting the arrangement of retained snags and trees (S)

Goals - Grizzly Bear Habitat

- 1 Habitat conditions will be sufficient to sustain a recovered population of grizzly bears
- 2 Allow for unhindered movement of bears (continuity with Yellowstone National Park and adjacent bear management units)

Objectives - Grizzly Bear Habitat

- 1 Meet recovery criteria in the current Grizzly Bear Recovery Plan
- 2 Implement guidelines developed by the Interagency Grizzly Bear Committee
- 3 Provide safe, secure sites for nuisance bears as defined by Interagency Grizzly Bear Guidelines

4 Achieve the road density standards in the Bear Management Units (BMUs) within three years of the implementation of the ROD in coordination with USFWS and State Wildlife agencies

5 Develop fire management plans for each of the Bear Management Units (BMUs) to address wildfires and prescribed fires, as follows

- Bechler-Teton BMU -- within two years of the Record of Decision (ROD) for the Revised Plan,
- Plateau BMU -- within four years of the ROD,
- Henrys Lake BMU -- by 2003

Standards and Guidelines - Grizzly Bear Habitat

1 The grizzly bear education program will focus on residents in residential and summer home areas, developed recreation site users, wilderness users, hunters, outfitters and guides, and permittees (G)

2 Those areas shown as Management Situation 3 (MS3) habitat on Map #5 of the 1985 Forest Plan will continue to be managed as MS3 habitat (S)

Goals - Bald Eagle Habitat

Habitat conditions will be sufficient to sustain a recovered bald eagle population

Objectives - Bald Eagle Habitat

- 1 Continue current nest location and productivity monitoring
- 2 Identify bald eagle wintering and migration habitat and identify appropriate management needs
 - For the Henry's Fork watershed, within three years of the ROD for the Revision
 - For the South Fork of the Snake, by the year 2003

Standards and Guidelines - Bald Eagle Habitat

1 In Occupied Nesting Zones (Zone I) and Primary Use Areas (Zone II) apply the following

A Minimize all human activities from February 1 to August 1 (G)

B No new roads in Zone I (S) Avoid building new roads in Zone II (G)

C Manage human use on existing roads at levels which do not adversely affect use and productivity of the nest site (G)

D No new developed recreation sites or facilities in Zone I (S) Avoid building new recreation sites or facilities in Zone II (G)

E Manage existing recreation use at levels which do not adversely affect use and productivity of the nest site (S)

F Use the "No Surface Occupancy" stipulation for all minerals activities (S)

G If eagles choose to establish new nest sites and use areas in an area already receiving human use, the human activities may be restricted or modified Expanded human activity, however, should be discouraged (G)

H Use silvicultural techniques which maintain or promote mature and old growth timber stand characteristics in both the short and long term, but reduce the risks of insects and disease epidemics (S)

I Vegetation management can only occur between September 1 and January 31 (S)

J Use "control" as the appropriate suppression response for wildfires to minimize loss of habitat (G)

K Prohibit new structures that have the potential to cause direct mortality to bald eagles (e.g. power lines) (S)

L Permit historic levels of livestock use as long as no adverse impacts (such as abandonment of nest territory or reproduction failures) occur related to this activity. Manage livestock to allow successful reproduction of cottonwood where applicable (G)

M Prohibit wildlife management or predator control activity with the potential to cause mortality to bald eagles (such as exposed traps) (S)

2 Within Home Ranges (Zone III) follow existing site-specific management plans (when they exist) for each bald eagle territory, or Zone III management direction in the Bald Eagle Management Plan for the Greater Yellowstone Area when site-specific management plans do not exist (S)

3 Within Zones I, II, and III, prohibit all **use** of herbicides and pesticides which cause egg shell thinning as determined by EPA labeling (S)

4 Recreation activities and developments will be designed to minimize conflicts with bald eagle wintering and migration habitat (G)

5 New roads and trails will be located to avoid bald eagle wintering and migration habitat. Where these areas cannot be avoided the roads and trails will be designed and located to minimize impacts to eagles (G)

Objective - Gray Wolf Habitat

All wolves found in the wild on the Forest will be considered nonessential experimental animals as defined in the FEIS for The Reintroduction of Gray Wolves to Yellowstone National Park and Central Idaho (USDI Fish and Wildlife Service 1994 a and b)

Standards and Guidelines - Gray Wolf Habitat

1 Restrict intrusive human disturbances (motorized access, vegetation management, livestock grazing, etc.) within one mile around active den sites and rendezvous sites between April 1 and June 30, when there are five or fewer breeding pairs of wolves in the Yellowstone Nonessential Experimental Population Area (applies to the portion of the Forest east of Interstate 15) or the Central Idaho Nonessential Experimental Population Area (applies to the portion of the Forest west of Interstate 15). After six or more breeding pairs become established in each experimented population Area, land-use restrictions will not be needed (USDI Fish and Wildlife Service 1994 a and b) (S)

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

3 The following conditions and criteria will apply in determining the problem status of wolves (USDI Fish and Wildlife Service 1994 a and b) (S)

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

B Artificial or intentional feeding of wolves must not have occurred. Livestock carcasses not properly disposed of in an area where depredations have occurred will be considered attractants. Removal or resolution of such attractants must accompany any control action. Livestock carrion or carcasses not being used as bait in an authorized control action (by agencies) must be removed, burned, treated with an acceptable chemical repellent, or otherwise rendered such that the carcass(es) will not attract wolves using methods approved by the District Ranger.

C Animal husbandry practices previously identified in existing approved Allotment Management Plans and annual operating plans for allotments must have been followed.

4 If additional livestock depredations are likely, proper animal husbandry practices are employed (proper disposal of livestock carcasses, etc.), artificial feeding does not take place, and AMPs are followed, the Forest may implement procedures to harass, capture, move, or kill wolves that attacked livestock (defined as cattle, sheep, horses, or mules only) on National Forest land (G). Prior to the establishment of six breeding pairs, depredating females and their pups will be captured and released at or near the site of capture, one time prior to October 1. If depredations continue, or if six packs are present, females and their pups will be removed (USDI Fish and Wildlife Service 1994 a and b) (S)

Goal - Peregrine Falcon Habitat

Plan project activities to avoid adverse impacts to falcons and their habitats.

Standards and Guidelines - Peregrine Falcon Habitat

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

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

3 Restrict climbing and other human disturbances from March 15 through July 31 to avoid adverse impacts at known falcon nest sites (S)

Objective - Wolverine Habitat

Within two years of the ROD complete a GIS inventory to identify potential wolverine natal den sites. Within 4 years of the ROD, survey all potential wolverine natal den sites to document wolverine presence.

Goal - Goshawk Habitat

Provide suitable habitat conditions for known active and historic goshawk nesting territories.

Standard and Guideline - Goshawk Habitat

Management standards and guidelines for all forest types within active and historic goshawk nesting territories follow

Attribute	Nest Area	Post-Fledging Family Area	Foraging Area
Number of areas (S)	1	1	1
Size of each area (acres) (S)	>= 200 acres	>= 400	>= 5,400
Size-Class Distribution for forested acres (%) (G)			
nonstocked seedling	0	<= 20	<= 20
sapling	0	<= 20	<= 20
pole	0	<= 20	<= 20
mature/old growth 1/	100	>= 40	>= 40
Rotation age (years) (G)	--	60 to 240	60 to 240
Maximum created opening (acres) (G)	0	<= 40	<= 40
Snags and Reserve Trees 2/ (G)	>= 60% unless specified higher in prescription	>= 60% unless specified higher in prescription	>= 60% unless specified higher in prescription
Downed logs (average/acre)(G)	Forestwide S&Gs	Forestwide S&Gs	Forestwide S&Gs
Management Season (S)	Oct-Feb	Oct-Feb	Year-long
Thinning (G)	Non-uniform 3/	Non-uniform	by silvicultural prescription
Open Road Density 4/ (G)	No new system roads	No new system roads	<= Management Rx Density
1/ Mature and old growth canopy closure for nest sites and post-fledging family areas should range between 75-100 percent (G) 2/ Refer to previous section on snag/cavity nesting habitat for explanation of biological potential 3/ Maximize diversity of structure 4/ Open roads in goshawk territories will be given priority for closure to meet management prescription road density standards. First priority will be to close roads in nest areas, second priority in post-fledging family areas, third priority in foraging areas. Where possible, open road density should be zero in the nest areas and the post-fledging family areas			

Standard and Guideline - **Flammulated** Owl Habitat

Do not allow timber or firewood harvest activities within a 30-acre area around all known flammulated owl active and historic nest sites (S)

Standards and Guidelines - Boreal Owl Habitat

1 Do not allow timber or firewood harvest activities within a 30-acre area around all known boreal owl active and historic nest sites (S)

- 2 Maintain over 40 percent of the forested acres in late seral age classes within a 3,600-acre area around all known boreal owl nest sites (G)

Standards and Guidelines - Great Gray Owl Habitat

- 1 Do not allow timber or firewood harvest activities within a 20-acre area around all known great gray owl active and historic nest sites. Vegetation manipulation does not include tree planting (S)
- 2 Maintain over 40 percent of the forested acres in late seral age classes within a 1,600-acre area around all known great gray owl nest sites (S)
- 3 Restrict the use of strychnine poison to control pocket gophers within a 1/2-mile buffer around all known active great gray owl nest sites (G)

Goals - Trumpeter Swan Habitat

- 1 Maintain habitat to support ten breeding pairs or more on the Forest
- 2 Protect emergent vegetation along shorelines. Maintain riparian vegetation in desired vegetative condition

Standards and Guidelines - Trumpeter Swan Habitat

- 1 Maintain suitable trumpeter swan nesting habitat conditions including (but not limited to) the following lakes and ponds: Boundary Pond, Swan Lake, Lily Pond, Hatchery Butte, Railroad Pond, Mesa Marsh, Bear Lake, Upper Goose Lake, Long Meadows, Thompson Hole, Twin Lakes, Chain Lakes, Widgit Lake, Rock Lake, Indian Lake, Putney Meadows, Unnamed Pond (Sec 19, T9N, R46E) (S)
- 2 Change livestock grazing through management or fencing when grazing is adversely affecting trumpeter swan use or productivity (G)
- 3 No vegetation management will occur within 300 feet of the lake or pond shoreline unless necessary to improve riparian habitat conditions favorable for trumpeter swans. Management may occur after the swans have left the lake or pond (S)
- 4 Maintain constant water levels, allow no drawdowns from May 1 to September 30 when not in conflict with preexisting water rights (G)
- 5 Do not take any recreation management actions that would encourage dispersed recreation activity at these lakes and ponds. Close these areas to recreation activity if this activity is adversely affecting trumpeter swan use or productivity (G)
- 6 Implement habitat improvement projects at these lakes and ponds, such as dredging to maintain proper water depths and aquatic vegetation control (G)

Goal - Spotted Frog Habitat

Maintain riparian vegetation in desired vegetation condition

Goals - Common Loon Habitat

- 1 Evaluate the potential to provide and maintain suitable breeding habitat for common loons at these sites: Indian Lake, Thompson Hole, Bergman Reservoir, Junco lake, Fish Lake, Loon Lake, Moose Lake, unnamed pond (Sec 9, T47N, R118W)

2 Develop common loon management plans for the above sites if the evaluation indicates there is potential to provide and maintain suitable breeding habitat

Standard and Guideline - Harlequin Duck Habitat

Avoid establishing new trails, new roads, or new recreation facilities within 300 feet (on each side) of any stream reach with documented harlequin duck breeding activity (G)

Objective - Spotted Bat and Western Big-eared Bat Habitat

Develop management plans for any caves, mine shafts, and other suitable habitats where these bat species are known to be present

FOREST USE AND OCCUPATION

~~Access~~

Goals

- 1 The Forest road and trail system is cost effective and integrates human needs with those of other resource values, particularly grizzly bear, elk, and native cutthroat trout
- 2 Elk vulnerability is decreased and grizzly bear security is increased
- 3 Native cutthroat trout habitat is restored through effective road closures, obliterations, reclamations, redesign, and improved maintenance practices

Objective

Motorized access standards in each management prescription will be achieved as soon as practicable

- 1 Within three years of the ROD for BMUs
- 2 By the year 2007 for all other areas

Standards and Guidelines

1 Road Closure

A Road closures will be located and designed to effectively control motorized use (S)

B Restrict or reclaim roads not needed for future management as determined in site-specific analysis, at the end of project use Consider historic recreation use before closure (G)

2 Administrative Use on Restricted Roads and Trails and in Restricted Areas

A The Open Road and Open Motorized Trail Route Density (OROMTRD) Standards prescribed for each prescription area do not restrict responses to emergency events to protect human life, property values and structures, and forest resources Responses to emergency events include law enforcement, search and rescue, and fire suppression (S)

B Prudent cross-country motorized access is allowed to implement projects consistent with prescription objectives, in all prescription areas except for grizzly bear core areas and designated

wilderness Administrative uses including but not limited to planned project work such as firewood harvest, timber sales, tree planting, prescribed burns, wildland survey or fish and wildlife habitat improvements on restricted roads, trails or areas will only be allowed under the following conditions

- 1 Any motorized vehicle access on a restricted road or trail or in a restricted area will be for official administrative business only and must be approved by the District Ranger
- 2 When motorized vehicle access on a restricted road or trail or area is necessary, a sign will be posted while project work is being accomplished
- 3 Motorized vehicle access on a restricted road or trail or area will be allowed by permit under the following conditions when approved by the Forest Supervisor or District Ranger
 - a Project work is one mile or 30 minutes walk or greater
 - b Equipment is being used that is unreasonable to carry to the project work site
 - c Contract inspectors working with contractors who have motorized equipment and vehicles which are necessary for the contract work

This direction (in item 2 B above) supersedes direction in access tables for individual prescriptions (S)

C Needs for motorized cross-country administrative access will be presented and considered in analysis documents for proposals including, but not limited to prescribed burning, fish and wildlife habitat improvement, timber sales, and personal use firewood harvest The proposal will limit access to that reasonably needed to conduct the project Prudent cross-country access to implement these projects may be allowed consistent with project-level NEPA decisions and prescription objectives in all prescription areas except for grizzly bear core areas and designated wilderness This direction supersedes direction in access tables for individual prescriptions (S)

D During the big game hunting seasons, persons with disabilities may be permitted to use motorized vehicles, if needed for mobility, on restricted roads and trails which are designated for such use, with an authorized motor vehicle hunting permit issued by the district ranger These persons must have a Disabled Hunting Permit issued from the State Fish and Game Departments (G)

3 Figures appearing in the access tables for individual prescriptions represent direction for those prescription areas If no figure appears refer to the following direction (S)

	Henry's Lake BMU Subunit 1	Henry's Lake BMU Subunit 2	Plateau BMU	Bechler-Teton BMU
TMARD	1.0 MI/SQ MI	1	1	1
OROMTRD	0.6 MI/SQ MI	0.6	0.6	0.6
Henry's Lake 1 - The Targhee National Forest portion of the Henry's Lake 1 subunit, excluding Management Situation 3 (MS3) habitat Henry's Lake 2 - The Targhee NF portion of the Henry's Lake 2 subunit Plateau BMU - The Targhee NF portion of this Bear Management Unit (BMU), excluding MS3 habitat Bechler/Teton BMU - The Targhee NF portion of this BMU				

The access density measurements TMARD and OROMTRD are defined in the Glossary Access densities are based on open and restricted roads and trails

4 Travel Plan

The Forest travel plan was developed from individual prescription access tables and the elk and deer winter range map. The following application dates were developed to respond to local resource and travel conditions. This direction supplements and is to be used in conjunction with the applicable direction in individual prescription access tables.

A Snow-Free Season - The snow-free season direction takes effect yearly in the spring as local conditions become suitable to support wheeled vehicle traffic on roads and trails without damage. Where legally permitted, snowmachines may use designated roads and trails shown on the travel plan as open to motorized use. Cross-country snowmachine travel is allowed only where the snow-free season direction allows cross-country motorized travel after June 1 except in Prescription 5 1 4 (c) (S).

B Snow Season - The snow season direction takes effect yearly on Thanksgiving Day. Where legally permitted, snowmachine travel is allowed consistent with the travel plan map. Cross-country snowmachine travel is permitted from Thanksgiving Day through June 1 except on the Palisades Ranger District which permits said usage from December 15 through June 1 and except in (inventoried) winter range as shown on Forest Plan Map #24. Cross-country snowmachine travel is allowed in Prescription area 5 1 4 (c) (Big Bend Ridge) from January 1 until April 30 (S).

Recreation

Goals - Winter Recreation

- 1 Provide a quality winter recreation experience while minimizing conflicts between motorized and nonmotorized use and wintering big game
- 2 Establish a linear capacity for two-way snowmachine trails for purposes of safety and quality of the recreation experience
- 3 Provide networks of marked, designated, and groomed snowmachine, cross-country ski, and other winter travel routes and trailhead facilities
- 4 Provide winter recreation user information to educate users of wildlife needs and promote backcountry safety
- 5 Promote opportunities for backcountry winter recreation

Objective - Winter Recreation

Within three years, establish by prescription, travel plan designation or other method a few nonmotorized winter recreation activity areas with easy access for users such as telemark skiers, snowshoers, and snowboarders. Conform to results anticipated from the Greater Yellowstone Winter Visitor Use Management (GYWNUM) Assessment currently underway.

Standards and Guidelines - Winter Recreation

- 1 Develop or provide trailhead facilities to match the desired trail capacity. These facilities may be public or private depending on location (G)
- 2 Management of winter trails should be done where feasible by cooperative agreements with agencies and groups (G)

a 3 Snowmachine, snowshoes, and dogsleds are prohibited within designated groomed cross-country ski trails. Snowmachines and dogsleds are prohibited within designated cross-country ski areas. (S)

4 Those areas mapped as winter range on the Revised Forest Plan elk and deer winter range map are closed to cross-country snowmachine travel. This direction supersedes direction in access tables for individual prescriptions. (S)

Goal - Visual Quality

Manage the visual landscape in accordance with the planned visual quality objective, as mapped in the Geographic Information System.

Standards and Guidelines - Visual Quality

1 Following timber harvest in lodgepole pine, dispose of slash not needed to meet other resource objectives by a combination of piling, firewood gathering, and burning in areas up to 200-250 feet on either side of primary travelways, trails, and use areas which have high public concern for scenic quality as soon after harvest as possible. (G)

2 Following timber harvest in lodgepole pine, dispose of slash not needed to meet other resource objectives by piling, firewood gathering, or burning for 150-200 feet on either side of roads, trails, and areas which have moderate public concern for scenic quality. (G)

Goal - OHV

Provide a network of OHV trails while minimizing the effects of OHV use on soils, wildlife and other users.

Standards and Guidelines - OHV

1 Discourage OHV use on slopes greater than 40 percent, except on designated routes and except for snowmachine use. Roads and trails, however, may cross slopes that exceed 40 percent. (G)

2 Areas with slopes of 25-40 percent may require travel restrictions if soil erosion factors warrant them. (G)

3 Restrict OHV use on identified areas of unstable soils (except for snowmobiles). (G)

4 No motorized vehicles over 50 inches wide are allowed on trails unless the trails are specifically designed for such vehicles. (S)

Goal - Developed Facilities

Maintain or slightly increase the Forest's developed site capacity in accordance with the CIP (Capital Improvement Projects) Implementation Schedule.

Standards and Guidelines - Developed Facilities

1 Expand existing developed facilities to meet public needs. (G)

2 Phase out low use developments that have high operation and maintenance (O&M) costs consistently exceeding \$1.50 per persons-at-one-time (PAOT) per day. (G)

3 Rehabilitate or provide heavy maintenance to facilities in Maintenance Class Two (MC 2) and Maintenance Class Three (MC 3) which cannot be brought up to Maintenance Class One (MC 1) through general maintenance (G)

4 Developed facilities receiving heaviest use should receive first priority for maintenance (G)

5 Facilities that cannot be maintained to acceptable health and safety requirements will be closed until they can be brought up to standard (S)

Objective - Dispersed Recreation Use

By 2007, address soil, water, and vegetation impacts to maintain the desirable recreation setting on approximately 100 campsite areas of the 300 identified dispersed recreation sites on the Forest, which are in greatest need of monitoring. These sites would have limited developed facilities.

Standards and Guidelines - Dispersed Recreation Use

1 Unless otherwise posted, motorized access is allowed for parking and dispersed camping within 300 feet of roads and trails which are open for motorized use. This direction supersedes direction in individual prescriptions, except no motorized use is permitted within designated wilderness. (S)

2 Wilderness, recommended wilderness, and roadless areas dispersed campsites should be managed according to the Frissell Condition Classification System. Actions (close, protect, or restore) should be taken to restore campsites that do not meet Class three or better. (G)

3 Dispersed campsite conditions on the remainder of the Forest should have no more than 15 percent of an activity area in a detrimentally disturbed soil condition, as described in the Dispersed Camping Protocol (Process Paper X). (G)

4 Low-development-level facilities should be provided at undeveloped concentrated-use areas to prevent resource damage and protect public health and safety. (G)

Goal - Trails

1 Trails for motorized/mechanized use would be sufficient to sustain use over long periods of time and minimize requirements for maintenance or reconstruction. These conditions would be achieved within subsections in the following sequence: Big Hole Mountains, Caribou Range Mountains, Lemhi-Medicine Lodge, Centennial Mountains, Madison-Pitchstone Plateaus, Island Park, and Teton Range.

2 Trails for nonmotorized/mechanized use would be sufficient to sustain use over long periods of time with minimal requirements for maintenance or reconstruction. These conditions would be achieved within subsections in the following sequence: Teton Range, Big Hole Mountains, Centennial Mountains, and Caribou Range Mountains.

Objective - Trails

Complete an interdisciplinary review of five-ten percent of the system trails each year to determine rehabilitation needs.

Objective - Outfitters and Guides

Establish use capacities using the process outlined in the AMS for outfitter and guide recreation opportunities prior to issuing new permits.

Standard and Guideline - Outfitters and Guides

Outfitter and guide facilities in dispersed nonwilderness areas should be built in less-frequented areas and be temporary. To prevent unacceptable resource damage or sanitation problems, facilities may be allowed at more heavily used locations. Only essential facilities should be provided at commercial outfitter camps in accordance with Greater Yellowstone Area Outfitter Policy camp standards (G)

Wilderness

The following goals, standards and guidelines apply to all congressionally designated wilderness on the Forest Presently that includes the Jedediah Smith and Winegar Hole Wildernesses

Goal

Achieve desirable wilderness conditions for the Jedediah Smith and Winegar Hole Wildernesses as specified in the management prescriptions. The Wilderness Implementation Schedules and a Monitoring Action Plan will guide implementation using the Limits of Acceptable Change (LAC) process

Standards and Guidelines

- 1 Outfitter/Guide - Allow no new outfitter camps (for hunters, anglers, etc) until studies have been completed to determine site suitability and carrying capacity (S)
- 2 Recreation - ROS Manage for a primitive to semi-primitive nonmotorized classification (G)
- 3 Recreation - VQO Manage for preservation (S)

Tribal Coordination

Standard

Forest consultation procedures and intergovernment agreements with the tribes to guide future cooperative efforts will comply with the protocols set forth in the National Resource Book on American Indian and Alaska Native Relations Working Draft 1995 or its successor (S)

PRODUCTION OF COMMODITY RESOURCES

Range ✓

Goals

- 1 Upland and riparian plant communities meet Desired Vegetation Conditions (DVCs) for site-specific areas
- 2 Domestic livestock grazing is managed to promote the desired conditions of various resources including maintenance of adequate plant and litter ground cover, nutrient recycling, forage for wildlife species, seed production, and the restoration and maintenance of riparian communities

Objectives

- 1 By 2007, improve the ecological status of 1,200 acres of riparian habitat currently reported as not meeting Desired Vegetation Condition (DVC) to meeting or moving toward DVC
- 2 By 2007, improve 26,400 acres of uplands (nonriparian and nontimber plant communities) currently reported as not meeting Desired Vegetation Condition (DVC) to meeting or moving toward DVC
- 3 By 2007, implement grazing systems or Allotment Management Plans (AMPs) designed to meet Range Goals 1 and 2 above on all grazing allotments
- 4 Establish utilization levels for key browse and grass species in either the Allotment Management Plan or the Annual Operating Plan for allotments within elk and deer winter ranges

Standards and Guidelines

1 Upland Forage Utilization

Apply upland forage utilization levels to all allotments and/or management areas as shown in Table 1, unless determined otherwise through the interdisciplinary team process. These figures provide for maximum utilization levels regardless of which species of animal uses the forage or browse. These utilization guidelines apply to native and desirable nonnative vegetation as recorded at the end of the grazing period (G)

	Season-long Grazing		Rotation Grazing	
	Unsatisfactory Range Condition	Satisfactory Range Condition	Unsatisfactory Range Condition	Satisfactory Range Condition
Grasses and Herbaceous Species	35%	45%	45%	55%
Shrubs	25%	35%	35%	35%

1/ The figures shown represent the best estimate of acceptable use levels which will provide for maintenance or improvement of these ecosystems. They shall be used as maximum use levels unless there is site-specific information to show that these levels are incorrect. Percent use is based on a dry weight percentage.

2 Riparian Forage Utilization

A Riparian Woody Plant Utilization No more than 30 percent use on riparian woody plant species (current year's growth) is allowed. Thirty percent is the maximum allowed use as recorded at the end of the grazing period (S)

B Riparian Vegetation Stubble Height Standard (these apply to all grazing systems) (S)

1 At the HGL, there will be at least four inches of stubble height remaining on key species at the end of the grazing period, unless determined otherwise through the interdisciplinary team process. This standard applies to key species of native and desirable nonnative hydric vegetation.

2 Away from the HGL, at least three inches of stubble will be left on the remainder of the key riparian species at the end of the grazing period, unless determined otherwise through the interdisciplinary team process

3 Allotment Management Planning (AMP)

A Salt should be placed greater than **1/4** mile from water, or as far from water as practicable Salting should be designed to avoid conflicts with aspen regeneration, conifer plantations, and system trails (G)

B Allow no livestock grazing before seed set of the second growing season after prescribed or natural fires and rangeland planting or seeding (G)

C Allow livestock conversions based only on resource capability (such as topography, water distribution, vegetation, wildlife, and recreation), and management objectives and not solely based on the desires of the permittee (G)

1 Conversions may be made in accordance with an AMP, and current range analysis, only after all necessary range improvements structures are in place (G)

2 All range improvements necessary for the conversion will be financed and constructed by the permittee Construction will be in accordance with Forest Service standards (S)

3 Do not convert from a cattle allotment to a sheep allotment within bighorn sheep habitat or in grizzly bear management prescriptions (S)

4 All proposed livestock conversions will be evaluated through the interdisciplinary process Only those conversions meeting Forest Plan objectives and desired vegetation conditions will be approved (S)

D Forest Service administrative site livestock pastures will comply with the forestwide standards and guidelines for forage utilization and riparian management (S)

E All structural improvements directly required to implement the AMP will be installed and financed whereby the Forest Service provides approximately 50 percent of the cost and the permittee provides the remaining 50 percent (G)

F Permittees are allowed motorized access to maintain facilities AMPs and Annual Operating Plans will include direction that motorized access must be less than two vehicles per week (This permitted access is not included in the OROMTRD) (S)

G In Idaho, follow the "Memorandum of Understanding Between the National Forests in Southern Idaho and the Idaho State Historic Preservation Officer Regarding Rangeland Management Activities" (February 1996) In Wyoming, follow the process outlined in the National Programmatic Agreement, Option 2 (Criteria and standards for independent management) until a memorandum of agreement is developed between southern Idaho Forests and the Wyoming State Historic Preservation Office (S)

H Monitor heritage resource sites on grazing allotments in Wyoming, and in Idaho consistent with the Heritage Resource Monitoring Plan for Southern Idaho Forests (S)

I Within subwatersheds occupied by native cutthroat trout or designated as vital to meeting recovery goals, identify areas where livestock grazing is causing fisheries habitat conditions to fall below or retard the rate of recovery toward the values described in the table, "Expected Values for Healthy Fish Habitat Conditions" in standards and guidelines for Fisheries and Other Aquatic Resources Include specific remedial actions in the AMP or Annual Operating Plan Progress toward meeting these expected values should be monitored and grazing systems adjusted, as necessary (G)

J All grazing allotments will be managed at FRES (Forest Range Environmental Study) management strategies A, B, C, or D with exceptions as noted in individual prescriptions (1 1 6, 1 1 7, 1 1 8, 2 2, 2 4, 2 5, 4 2) (G)

Timber Management

Goal - General

Silvicultural techniques will be used as a tool to manage or manipulate vegetation for the purpose of achieving Forest Plan resource objectives Emphasis will be placed on restoration of ecological function, structure and composition

Standards and Guidelines

1 ASQ (Allowable Sale Quantity)

A Estimates of ASQ and long-term sustained yield timber supply capacity are themselves based on estimates of volume available on timbered acres scheduled for harvest Total harvested acres for the decade may vary and will depend on site-specific project implementation to meet plan goals and objectives (G)

B ASQ will not exceed 80 million board feet (MMBF) for the plan decade (S)

C ASQ will not exceed 80 million board feet for outyear decades until this Plan is revised or amended (S)

D On suited lands within five-series prescriptions, roadless areas and areas with slopes between 40 and 60 percent are in a noninterchangeable component (NIC) (S)

2 Rotation Age Guideline Following are the earliest rotation ages of each species group beginning at culmination of mean annual increment (G)

Species	Earliest Rotation Age (years)
Douglas-fir	100
Mixed Conifer 1/	80
Spruce-fir	100
Aspen	60

1/ Includes both MX (DF/LP) and MX3 (DF/LP with ES/AF)

3 Minimum Stocking Guideline Following is the minimum stocking which should occur before an area can be certified as stocked (G)

Species	Minimum Stocking	Percent of Area Meeting Minimum Stocking
Lodgepole Pine	170	70
Douglas-fir	140	70
Mixed Conifer 2/	200	70
Spruce-fir	200	70
Aspen	300	70

1/ Aspen counts toward stocking
 2/ Includes both MX (DF/LP) and MX3 (DF/LP with ES/AF)

Goal - Slash Treatment

1 Fuel loading on activity areas meets site productivity objectives for wildlife and fire

Guideline- Slash Treatment

SLASH TREATMENT FOR FUELS < 3 INCHES IN DIAMETER (G)		
redicted and existing fuel loading under 3 inches diameter 1/	Minimum Treatment 2/	Maximum Fuel Patch size
Under 5 Tons/Acre	No treatment necessary for fire hazard reduction	160 ac under 40% slope 100 ac over 40% slope
to 10 Tons/Acre	Lop or crush to Regional Lopping Specifications	80 ac ≤ 40% 40 ac > 40%
11 - 25 Tons/Acre	Alternatives	
	1 Reduce single entry loading to 10 tons/ac or less by multiple entry thinnings Follow lopping stds above according to loading	Single entry loading ≤ 5 Ton/Ac , use above stds for < 5 tons Loading 5-10 use above std for 5-10 T/Ac
	2 Reduce slash < 3 in to ≤ 5 tons per ac by burning or chipping	160 Ac < 40% 100 Ac > 40%
	3 Reduce loading of lopped or crushed fuel < 3 in to 5 - 10 ton per acre by burning or chipping	80 Ac < 40% 40 Ac > 40%
	4 Rehabilitate by piling, burning, and reforestation	160 Ac < 40% 100 Ac > 40%
	5 No treatment	N/A
/ When down woody fuels constitute 30% or more of the total loading under 3 inches, the values in this column may be increased by 3 tons per acre		
/ Make sure mechanical treatments meet forestwide soils standards		

Objective - Size of Harvest Units and Adjacent Leave Blocks/Strips

Design timber management projects to simulate natural patch sizes, patch shapes, connectivity, and species composition and age class diversity

Standard and Guideline

Created Opening. A harvested area of commercial forest land will not be considered a created opening for silvicultural purposes when stocking surveys indicate that minimum stocking is achieved and at least seven feet high. When other resource management considerations (such as wildlife habitat, watershed needs, or visual requirements) prevail, a created opening will no longer be considered an opening when the vegetation in it meets a particular management objective stated in the applicable management prescription (S)

Standards and Guidelines - Logging Systems

- 1 Slopes 40 percent or less will normally be harvested using ground-based logging equipment (tractors, rubber-tired skidders, low ground pressure equipment, etc.) Slopes greater than 40 percent, but less than 60 percent, will normally be harvested using advanced logging systems like shortspan cable systems, longspan cable systems, or aerial systems (G)
- 2 Rutting in skid trails should not exceed six to eight inches in depth (wet condition) over more than ten percent of a designated skid trail system. No yarding operations should take place when ground conditions are wet enough that there is a risk of such rutting (G)

Goals - Fuelwood

- 1 A sustainable level of fuelwood is made available
- 2 Conduct inventory for better determining the sustainable level of fuelwood

Standards and Guidelines - Fuelwood

- 1 Allow permitted fuelwood gathering in designated areas only (S)
- 2 Select designated fuelwood areas that have an excess of dead and down woody material which is in excess of that required for ecological function, structure and composition (G)

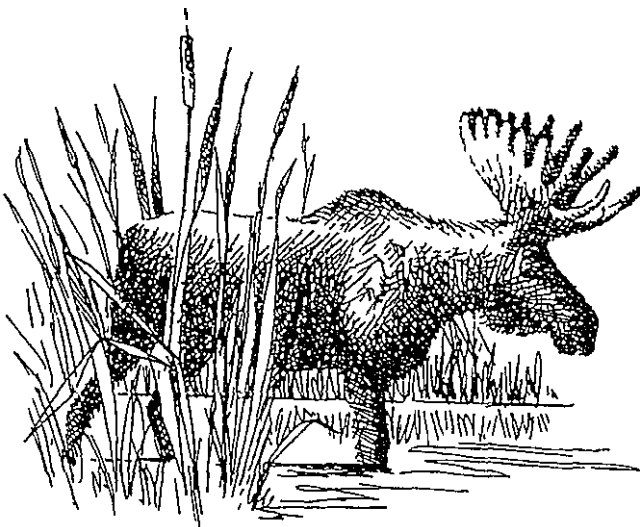
Goals - Precommercial Thinning

- 1 Thinning results in restoration of ecological structure, function and composition
- 2 Mimic tree densities and patch sizes occurring under natural conditions over a landscape
- 3 Provide for a variety of future resource products



Chapter III - Part 2

Subsection Descriptions and Direction



CHAPTER III - PART 2

SUBSECTION DESCRIPTIONS AND DIRECTION

About This Part

Working guidelines for ecosystem management state that effects of proposed actions should be considered at several geographic scales including one scale larger and one smaller than that at which the action is proposed (USDA Forest Service, June 1994). Based on a larger national mapping effort it was determined that the Forest wholly or partially overlays seven large ecological units, or subsections, which were delineated using physiographic parameters. Using this approach resource conditions can be viewed at a scale between the larger forest and the smaller prescription area levels. These subsections are numbered and named as follows:

- M332Ek - Lemhi/Medicine Lodge (subsection comprising two noncontiguous parts)
- M332Ea - Centennial Mountains
- M331Aa - Island Park
- M331Ab - Madison-Pitchstone Plateaus
- M331Db - Teton Range
- M331Dk - Big Hole Mountains
- M331Di - Caribou Range Mountains

In this part of the Revised Plan lands in each of these subsections are described. Desired Future Conditions (DFCs), goals, objectives and standards and guidelines for management in each subsection may also be presented.

Figure III-1 displays the locations of these seven subsections. Figure 1112 shows the boundaries of the principal watersheds on the Forest and their relation to the subsections. Figures III-3 through III-9 display the individual subsections. A listing shows the management prescriptions applied within each, and the total acres of each prescription area. More information on these prescriptions including the management direction they provide is given in the third part of this chapter.

Further Information

The ECOMAP unit of the Forest Service has developed a National Hierarchical Framework of Ecological Units to improve consistency in developing and sharing resource data and information at multiple geographic scales and across administrative and jurisdictional boundaries.

An Ecological Unit is defined as "A mapped landscape unit designed to meet management objectives, comprised of one or more ecological types" (FSM 2060 05). These ecological units are designed to exhibit similar patterns in potential natural communities, soils, hydrologic function, landform and topography, lithology, climate, air quality, and natural processes for cycling plant biomass and nutrients.

As of this writing, ECOMAP has described four levels in the National Hierarchy of Ecological Units: Domains, Divisions, Provinces, and Sections. A map of the United States (1:7,500,000 scale) displays these four levels. The land area of the Forest falls within three of those sections. The National Hierarchical Framework of Ecological Units is shown in Figure III-1 in its particular application to the Forest, as adjusted by Revision and Ecological Unit Inventory personnel.

Domain - Described by broad climatic zones or groups. The Forest is within the Dry Domain (which covers most of the Intermountain Region). This is an area of water deficit where the potential annual water losses through evaporation exceed annual water gains through precipitation.

Division - Described by regional climatic types, vegetation affinities, and soil order The Forest is within the Temperate Steppe Regime Mountains Division (M330)

Province - Described by potential natural vegetation, highlands or mountains with complex vertical climate-vegetation-soilzonation The Forest is within two Provinces

M331 - Southern Rocky Mtn Steppe - Open Woodland - Coniferous Forest - Alpine Meadow

M332 - Middle Rocky Mtn Steppe - Coniferous Forest - Alpine Meadow

Sections - Described by geomorphic province, geologic age, stratigraphy, lithology, regional climatic data, phases of soil orders, suborders or great groups, potential natural vegetation (PNV), potential natural communities (PNC) The Forest lies within three Sections

M331A - Yellowstone Highlands Section

M331D - Overthrust Mountains Section

M332E - Beaverhead Mountains Section

Delineation of ecological subsections was done by Targhee National Forest personnel under direction provided by ECOMAP Subsections are described by geomorphic process, surficial geology, lithology, phases of soil orders, suborders or great groups, subregional climatic data, PNC - formation or series The Forest lies within seven subsections



Subsection Overlay on the Targhee National Forest and the Surrounding Area

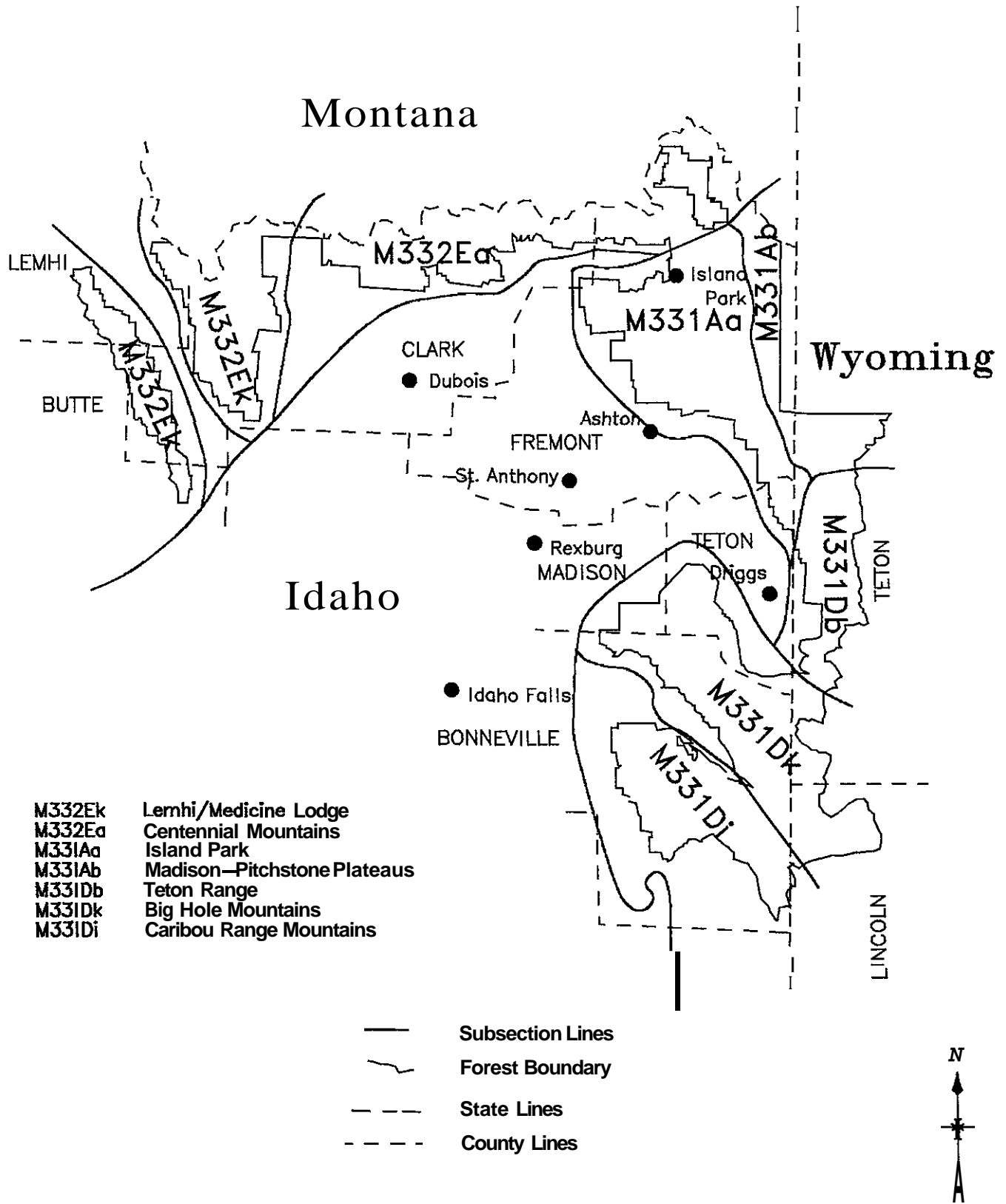
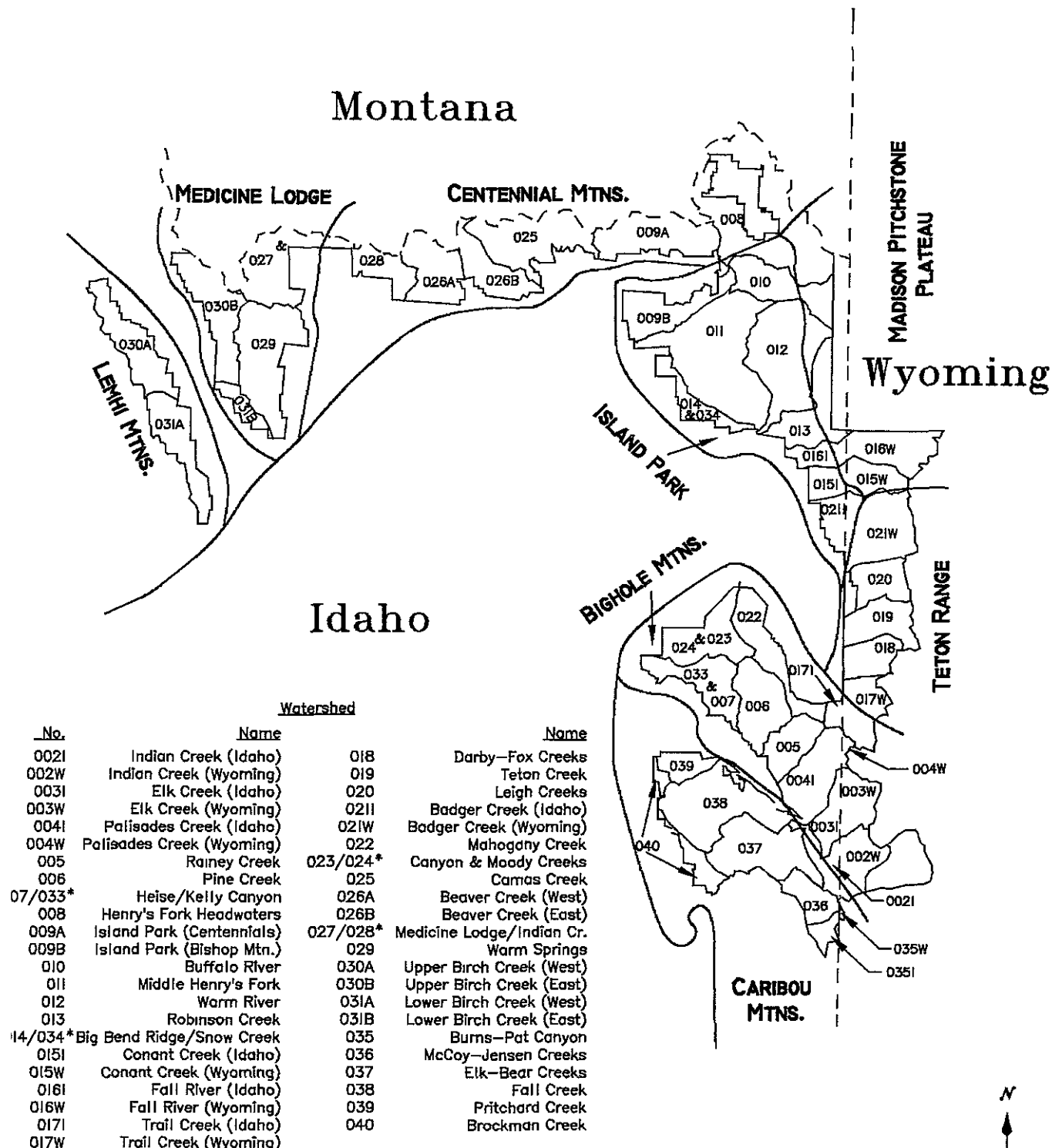


Figure III-1

Targhee National Forest Principal Watersheds



Watershed

<u>No.</u>	<u>Name</u>	<u>No.</u>	<u>Name</u>
002I	Indian Creek (Idaho)	018	Darby-Fox Creeks
002W	Indian Creek (Wyoming)	019	Teton Creek
003I	Elk Creek (Idaho)	020	Leigh Creeks
003W	Elk Creek (Wyoming)	021I	Badger Creek (Idaho)
004I	Palisades Creek (Idaho)	021W	Badger Creek (Wyoming)
004W	Palisades Creek (Wyoming)	022	Mahogany Creek
005	Rainey Creek	023/024*	Canyon & Moody Creeks
006	Pine Creek	025	Camas Creek
07/033*	Heise/Kelly Canyon	026A	Beaver Creek (West)
008	Henry's Fork Headwaters	026B	Beaver Creek (East)
009A	Island Park (Centennials)	027/028*	Medicine Lodge/Indian Cr.
009B	Island Park (Bishop Mtn.)	029	Warm Springs
010	Buffalo River	030A	Upper Birch Creek (West)
011	Middle Henry's Fork	030B	Upper Birch Creek (East)
012	Warm River	031A	Lower Birch Creek (West)
013	Robinson Creek	031B	Lower Birch Creek (East)
14/034*	Big Bend Ridge/Snow Creek	035	Burns-Pat Canyon
015I	Conant Creek (Idaho)	036	McCoy-Jensen Creeks
015W	Conant Creek (Wyoming)	037	Elk-Bear Creeks
016I	Fall River (Idaho)	038	Fall Creek
016W	Fall River (Wyoming)	039	Pritchard Creek
017I	Trail Creek (Idaho)	040	Brockman Creek
017W	Trail Creek (Wyoming)		

Note.

* Both used for watershed analysis in EIS, combined for elk habitat analysis as shown on Forest Plan Map 22.



Not To Scale

Figure III-2

LEMHI/MEDICINE LODGE SUBSECTION (M332Ek)

SETTING

This subsection includes the Lemhi Mountains and the Medicine Lodge/Beaverhead Mountains. A variety of vegetation exists with forested communities dominated by Douglas-fir and limber pine. Sagebrush/bunchgrass and mountain mahogany communities are common at lower elevations and on strong southerly exposures. Limber pine communities and alpine meadows exist at the high elevations. This subsection is rich in mining history with old mining sites and remnants of town sites. In the Birch Creek Valley four preserved brick adobe charcoal kilns remain of sixteen originally built to furnish charcoal to the Nicholia Mine. This area contains some of the most significant Native American sites on the Forest, as well as a segment of the Continental Divide National Scenic Trail, two recommended wildernesses (Diamond Peak and Italian Peaks) and most big game species found on the Forest.

About 37 percent of this subsection is forested, this is more forest land than occurred historically. Information from the early 1900s indicates that in some areas Douglas-fir has recently established itself on lands formerly dominated by grasses and sagebrush. Some riparian communities also appear to have more conifers than they did historically.

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

Aspen forest acreage in this subsection has declined since the early twentieth century due to fire suppression. This is of concern since aspen provides important habitat for many wildlife species. It is also an important factor in the scenic beauty of the Forest.

Existing biological potential for woodpeckers is 26 to 34 percent. This indicates that larger size snags are not abundant or well distributed in this subsection at this time, even though a very high percentage of the forests are in mature and older successional stages.

Figure III-3 displays this subsection along with the major prescription areas.

DESIRED FUTURE CONDITION

This area provides quality motorized and nonmotorized dispersed recreation, livestock forage, and elk and deer winter range. Big game hunting is an important recreational activity.

Italian Peaks is managed as a recommended wilderness. Diamond Peak Roadless Area is also managed as a recommended wilderness. Except for the Eightmile-Pass Creek corridor, the rest of this roadless area would remain roadless.

GOALS AND OBJECTIVES

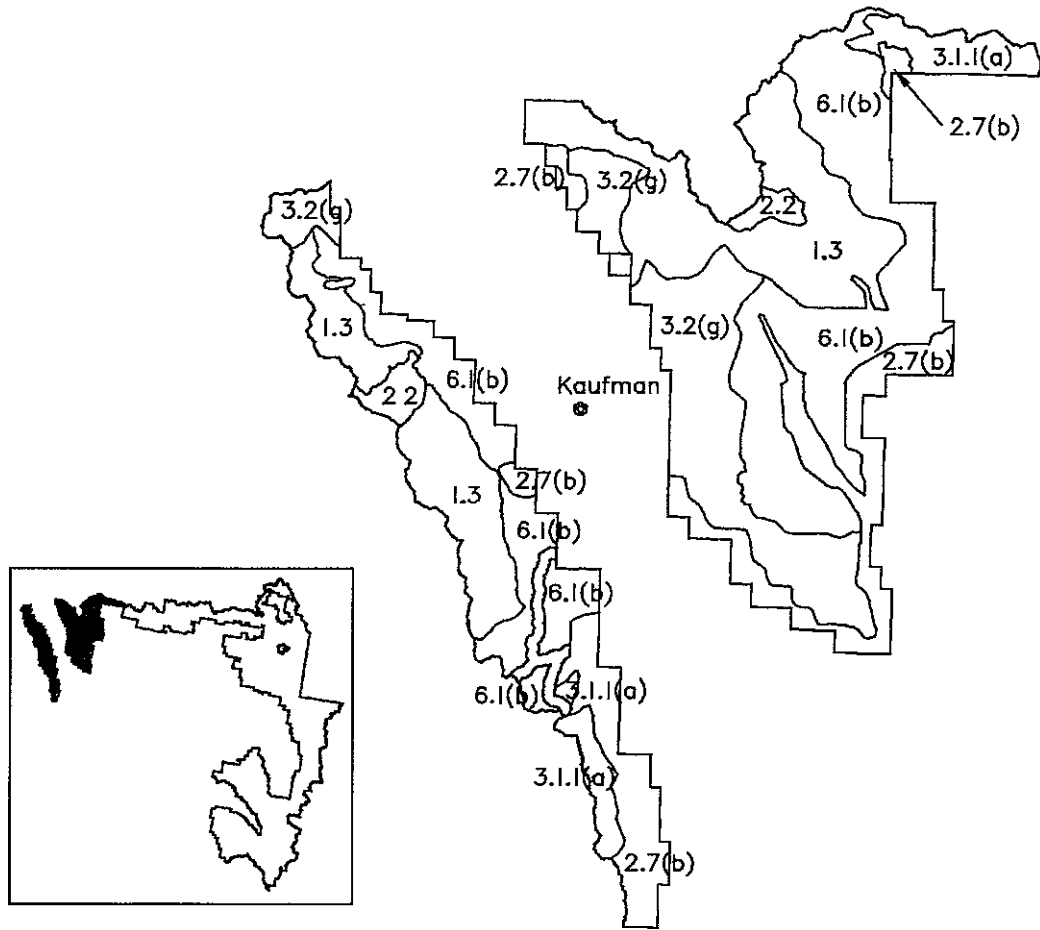
Goal - Properly Functioning Condition

Manage where possible for a diverse array of habitats tied to the natural occurrence and distribution of plant communities. Regenerate and maintain plant associations in properly functioning condition.

Objectives - Fisheries, Water and Riparian Resources

1. Improve stream channel stability ratings to good or excellent by 2007 on Divide Creek.

Lemhi/Medicine Lodge Subsection (M332Ek)



RX	Lemhi Mtns. acres	Med. Lodge acres	TOTAL acres
1.3	29,521	49,406	78,927
2.1.1	302	0	302
2.2	3,722	3,011	6,733
2.7(b)	12,669	22,986	35,649
2.8.3	5,431	15,206	20,637
3.1.1(a)	8,255	7,149	15,404
3.2(g)	7,027	38,264	45,291
4.1	6	13	19
4.3	0	0	6
6.1(b)	24,313	52,150	76,463
8.1	7	196	203
PRV	329	1,553	1,882
STA	0	640	5,869
Total	91,596	190,584	282,180

N

 Not To Scale

Figure 111-3

2 By 2007, reassess conditions on Webber Creek to determine needs for channel stability improvement

Goal - Recreation

Provide increased designated motorized road and trail access in a managed low impact method

Goal - Heritage Resources

Provide opportunities for scientific studies of significant archaeological sites

Objective - Range

Within three years of signing the ROD, assess opportunities to modify grazing allotment boundaries and permits to more effectively use natural barriers, change grazing patterns, adjust seasons of use, administratively close some additional areas, etc , to further separate winter domestic sheep grazing in the Medicine Lodge portion of the subsection from bighorn sheep

STANDARDS AND GUIDELINES

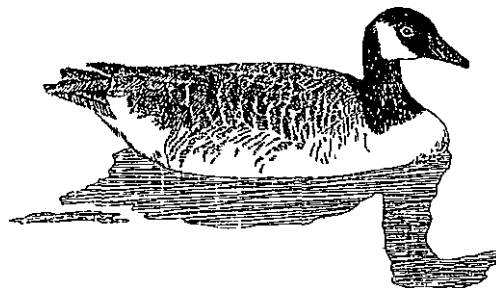
Recreation

Restrict motorized use to designated routes only, except for snowmobiles (G)

Range ✓

1 To better manage bighorn sheep habitat, the Kelly Canyon and Snakey Canyon winter sheep allotments in the Medicine Lodge portion of the subsection, on the Dubois Ranger District, will be phased out on an opportunity basis (Process Papers L and N) In addition, the winter sheep grazing permit will be phased out on the Nicholia-Chandler S&G allotment An opportunity is defined as a suitable or favorable time to abolish or close an allotment because of nonuse violations, term permit waivers where the permit is waived back to the government, resource protection, or permit actions resulting in cancellation of the permit If opportunities do not arise, then efforts will be made to relocate or accommodate sheep to other areas When all winter sheep allotments in that portion of the subsection have been vacated, they will be closed The intent of not closing these individual allotments as they become vacated is to provide an opportunity to minimize conflicts between domestic and bighorn sheep (S)

2 On the Medicine Lodge portion of the Dubois Ranger District, the sheep grazing permit on the Willow Creek S&G allotment will be closed immediately to grazing for watershed protection (S)





CENTENNIAL MOUNTAINS SUBSECTION (M332Ea)

SETTING

This subsection covers the Centennial Mountains between the east fork of Irving Creek on the west and Reas Pass to the east. The Centennials, which form part of the Continental Divide, are a scenic mountain range with high mountain meadows scattered among spruce/fir and Douglas-fir forests. At lower elevations sagebrush/grasslands grade into Douglas-fir and lodgepole pine forests. The recommended Lionhead wilderness, in the northeast portion of the subsection, abuts existing and recommended wilderness in Montana. The major travel corridors are Highways 20 and 87, and a portion of Interstate 15. The Yale-Kilgore road is a secondary travel route connecting Island Park to Kilgore and Dubois. In the northeast portion of the subsection is Henry's Lake, a world-renowned fishery. Segments of the Continental Divide National Scenic Trail, the Nez Perce National Historic Trail and the Two Top National Recreation (snowmobile) Trail lie within this subsection.

This subsection is dominated by sagebrush/grasslands and Douglas-fir communities, some of which have seen substantial timber management activities. Forested communities cover 71 percent of the subsection. Approximately 51 percent of the forested acres are Douglas-fir. Lodgepole pine (21 percent) is found in pockets on low productivity soils. Mixed lodgepole pine/Douglas-fir (13 percent) and other mixed conifers (ten percent) are also well represented. Species such as Douglas-fir and subalpine fir are becoming established as stands move toward later seral stages through succession. Aspen comprises four percent of the forested acres, which is less than was historically present. Fire suppression has allowed conifers to take over areas that were previously rangeland, tall forb communities, and aspen. Conifers have also encroached into riparian areas.

Mature forests make up 79 percent of the forested acres, indicating a lack of diversity in age classes. Existing biological potential for larger woodpeckers is 33 to 52 percent. Larger size snags are not abundant or well distributed in this subsection. Severe fires, insects and diseases are concerns in this subsection, mainly because of the large component of mature forests. The wildland/urban interface has significantly increased due to the development of the private lands within the forest protection boundary. This increases the risk of a fire spreading between the forest and private lands.

The subsection contains portions of two subunits within the Henry's Lake Bear Management Unit.

Figure III-4 displays this subsection along with the major prescription areas.

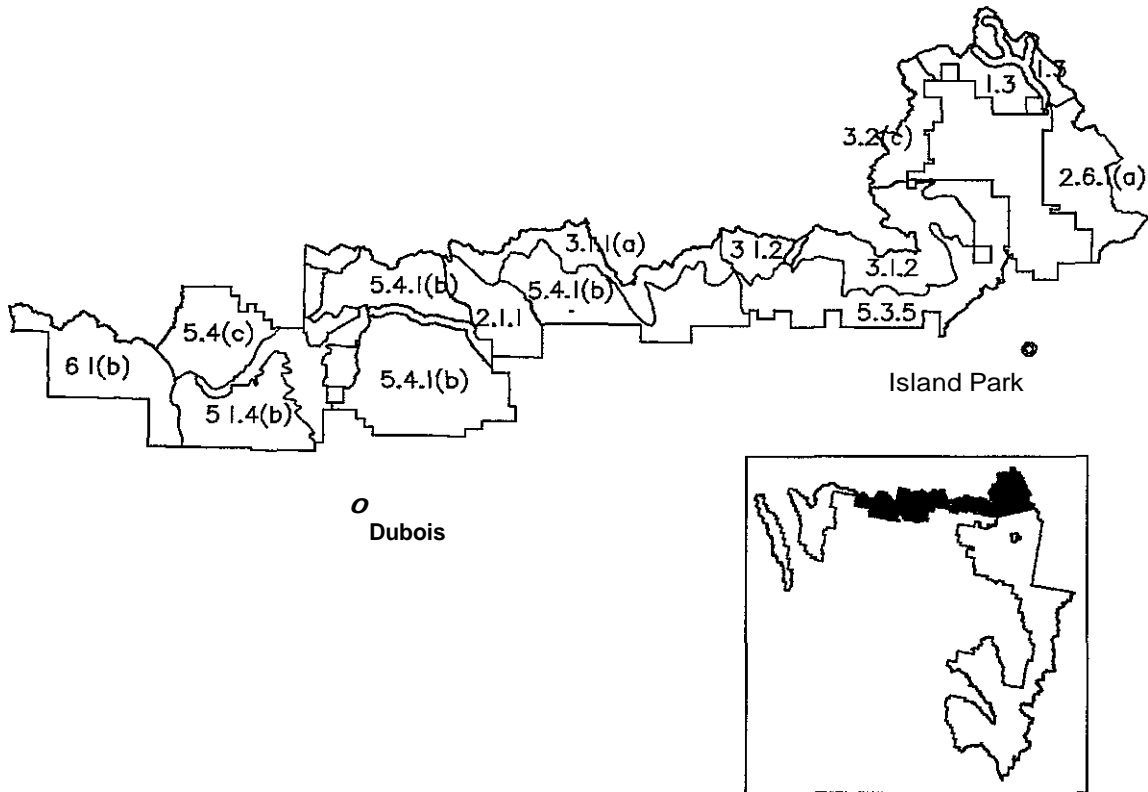
DESIRED FUTURE CONDITION

This subsection is one of the most diverse and complex subsections on the Forest. It offers the greatest opportunity to move the landscape toward properly functioning condition while reducing the risk of catastrophic events.

The Lionhead Roadless Area will provide access for snowmobiles. Its core area is recommended for wilderness designation.

Any activities will need to address concerns associated with grizzly bear and big game habitat management as well as reducing the risks of insects, disease and fire to Forest resource values and adjacent lands.

Centennial Mountains Subsection (M332Ea)



RX	TOTAL	RX	TOTAL acres
1.3	11,314	4.3	198
2.1.1	12,417	5.1.3(a)	14,533
2.2	2,711	5.1.4(b)	85,177
2.3	2,536	5.2.1	925
2.4	1,076	5.2.2	10,875
2.5	2,560	5.3.5	29,613
2.6.1(a)	17,047	5.4(b)	1
2.7(b)	1,930	5.4(c)	15,044
2.8.3	31,428	6.1(b)	26,324
3.1.1(a)	13,934	8.1	1,066
3.1.2	26,757	NFS	2
3.2(c)	9,309	PRV	7,413
3.2(g)	1,187	STA	5,869
4.1	273	Water	1,051
4.2	107	Total	332,692



Figure III-4

GOALS AND OBJECTIVES

Goal - Properly Functioning Condition

Move the spatial distribution patterns and ages of vegetation toward sustainable conditions

Objective - Properly Functioning Condition

By 2007, develop a fire plan which allows for prescribed natural and management ignited fire, where compatible with other resource objectives

Objective - Fisheries, Water and Riparian Resources

Improve stream channel stability ratings to good or excellent by 2007 on Allan Canyon Creek, McGarry Canyon Creek, Moose Creek, Dairy Creek, Long Creek, E Rattlesnake Creek, E Three-mile Creek and W Dry Creek

STANDARDS AND GUIDELINES

Lands (Special Uses)

The Leon Petersen cabin and associated facilities will be managed as an isolated cabin. Follow provisions in Special Use Permit (11/25/96) that allow continued use as an isolated cabin until December 31, 2017. The permit will not be renewed or extended beyond December 31, 2017, at which time the cabin and associated facilities will be removed from National Forest System lands and the site restored to Forest Service specification. All costs for facility removal and site restoration will be the responsibility of the permit holder (S)

Range

1 To better manage grizzly bear habitat, all sheep allotments on the Island Park Ranger District will be phased out on an opportunity basis (Process Papers L and N). These allotments are the Blue Creek, Carrot-Taylor, Coffee Pot, Hotel Creek, Icehouse-Willow, Myers Creek, Sawtell Creek, Snyder Creek, and West Lake S&G allotments. Domestic sheep grazing within the grizzly bear recovery area will be managed according to Management Situation 2 guidelines and will be phased out on an opportunity basis. When all sheep allotments in the portion of the subsection within the grizzly bear recovery area have been vacated, all of the allotments will be closed in that portion of the subsection. The intent of not closing these individual allotments as they are vacated is to provide an opportunity to minimize conflicts between grizzly bears and domestic sheep in the event of an encounter with grizzlies on sheep allotments (S)

A Opportunities to vacate an allotment include such events as nonuse violations, term permit waivers where the permit is waived back to the government, resource protection, or permit actions resulting in cancellation of the permit. If opportunities do not arise, then efforts will be made to relocate or accommodate sheep to other areas

B Vacated allotments in these areas will be made available as needed to resolve grizzly bear/sheep conflicts in other sheep allotments in Situation 2 habitat

2 On the Dubois Ranger District portion of this subsection, the Huntley Canyon S&G allotment will be closed immediately for watershed protection (S)

3 On the Island Park Ranger District portion of this subsection, the Reas Pass, Dry Creek and Jesse Creek S&G allotments will be closed immediately to better manage grizzly bear habitat (S)

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ISLAND PARK SUBSECTION (M331Aa)

SETTING

This subsection includes the west half of Island Park, Ashton, and the north dissected tablelands portion of Teton Basin Ranger Districts (Jackpine Loop). The dominant landscape feature of this subsection is a large volcanic caldera. Highway 20 is the only major highway that travels through this subsection. Among the many scenic attractions are Upper and Lower Mesa Falls, the last major undisturbed falls on the Columbia River system. The Mesa Falls Scenic Byway, established in 1989, provides motorists with an impressive view of the Teton Mountain Range and accesses a summer interpretive site along the two falls.

The Island Park subsection offers excellent trout fishing at Island Park Reservoir and along the Henry's Fork, Buffalo River, Warm River, Fall River and Bitch Creek. The Island Park subsection is also known nationally for its many snowmobile and cross-country ski trails. The significant influx of summer and year-round residents to private lands adjacent to the Forest in recent years is expected to continue. This urban interface is a growing concern for the Forest. The area shows signs of large scale timber harvesting due to salvage efforts following the mountain pine beetle epidemics in the 1960s and 1970s. Harriman State Park lies in the heart of the Harriman Wildlife Refuge, with 16,000 acres of forest, meadows, lakes and streams.

A small portion of the Winegar Hole recommended wilderness lies along the eastern border of this subsection. The Big Springs National Recreation (water) Trail and segments of the Nez Perce National Historic Trail lie within this subsection.

The landscape is dominated by forested cover types, which blanket 93 percent of the area. Forested areas are primarily lodgepole pine types (70 percent) that contain small pockets of aspen, sagebrush/grass, grass meadows and mountain brush. Douglas-fir (ten percent) and mixed lodgepole pine/Douglas-fir (15 percent) cover types provide some diversity in the area. Lodgepole pine occupies the floor of the Island Park Caldera and Douglas-fir cover types are concentrated on the caldera rim. On the caldera rim, aspen and sagebrush areas are being encroached upon by Douglas-fir as the process of succession continues.

Currently 61 percent of the forests are in a mature or older age class which provide suitable nesting sites for a variety of bird species. Since 93 percent of this subsection is forested, creation of young forest age classes probably increases the amount of suitable foraging habitat. Currently 26 percent of the forested acres are in nonstocked and seedling conditions which provide foraging habitat.

Salvage harvesting has shifted 35 percent of the forested acres into the nonstocked, seedling and sapling classes. Active management of aspen, as well as aspen sprouting in lodgepole pine clearcuts, has moved 34 percent of the aspen into these young classes. Other cover types are concentrated in the mature age group.

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

Figure III-5 displays this subsection along with the major prescription areas.

Island Park Subsection (M331Aa)

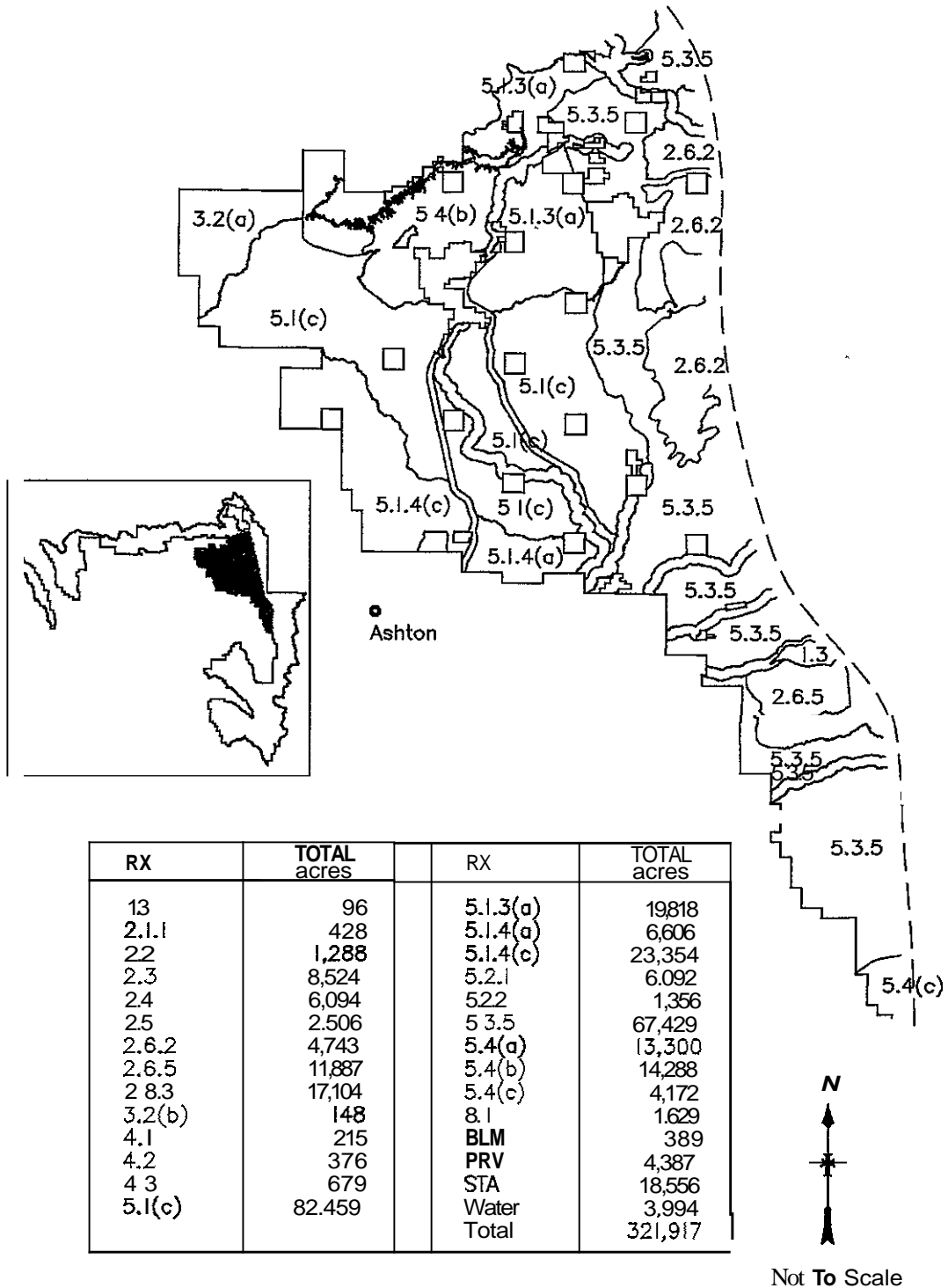


Figure 111-5

DESIRED FUTURE CONDITION

Important Forestwide objectives in this subsection focus on grizzly bear habitat management and elk. Road closures and vegetation treatments aimed at improving cover and maintaining forest health are opportunities to achieve these objectives.

This area will have improved recreation access and quality, particularly on the Highway 47-Mesa Falls Scenic Byway and for snowmobile use linked to West Yellowstone.

GOALS AND OBJECTIVES

Goal - Properly Functioning Condition

Move toward patch sizes that better reflect historical patterns and frequencies of disturbance. Manage forest structure to reflect historic patterns as they are determined.

Goal - Fire

Use management-ignited fire where possible to meet resource objectives.

Goal - Recreation

Maintain visual quality and visitor interpretation facilities along the Highway 47 Mesa Falls Scenic Byway.

STANDARDS AND GUIDELINES

Waterfowl Nesting Areas^S

The Goose Neck Bay area on Island Park Reservoir is closed to motorized vehicle use April 1 to June 15, and open to motorized vehicle use the remainder of the year. (S)

Range

On the Ashton Ranger District portion of this subsection, the Fish Creek, Partridge Creek, Trail Canyon and Black Mountain S&G allotments will be closed immediately to grazing to better manage grizzly bear habitat. (S)



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MADISON-PITCHSTONE PLATEAUS SUBSECTION (M331Ab)

SETTING

The largest portion of the Madison Plateau subsection lies within Yellowstone National Park. The portion on the Forest is managed by the Island Park and Ashton Ranger Districts next to Yellowstone National Park. The Ashton-Flagg Ranch Road and Fish Creek Road are the major access routes through the area. Grassy Lake, a 320-acre artificial lake, as well as other lakes and streams in the area, are popular fishing areas and are accessed by the Ashton-Flagg Ranch road. Several organized youth camps fall within this subsection. The Cave Falls road is the only motorized access to the southwest portion of Yellowstone Park. Segments of the Continental Divide National Scenic Trail and the Two Top National Recreation (snowmobile) Trail lie within this subsection.

Forests comprise 97 percent of the area. Lodgepole pine is the most common forest cover type (76 percent), with mixed stands of lodgepole pine and Douglas-fir making up the remaining forested area (24 percent). Relatively minor amounts of aspen and various mixed conifers provide some diversity. The southern portion of the subsection is unique in that there are many wet meadows and small lakes intermingled with the forests.

The 1988 North Fork Fire scorched 17,700 acres in the northern part of this subsection, stimulating aspen suckering in numerous locations. This fire event and past timber harvesting primarily in the north half of the subsection have shifted 39 percent of the lodgepole pine into the nonstocked, seedling and sapling age classes. Active management of aspen has also provided some age class diversity. Due to fuel reductions and young age classes resulting from these disturbances, fire is less of a concern here than in many other areas. However, conditions in the southern portion of the Madison subsection are presenting some fire risks as aspen and lodgepole pine stands convert to Douglas-fir through succession. Mature subalpine fir and Douglas-fir in this southern area experienced outbreaks of western balsam bark beetle and Douglas-fir beetle in the past decade. These conditions have subsided, but could easily recur since vegetation conditions have not changed.

Currently 63 percent of the forests are in a mature or older age classes and provide suitable nesting sites for various bird species. Currently 23 percent of the forested acres are in nonstocked and seedling conditions which provide foraging habitat.

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

Figure III-6 displays this subsection along with the major prescription areas.

DESIRED FUTURE CONDITION

This subsection will contribute toward grizzly bear and elk habitat management objectives, and provide primitive to semi-primitive recreation opportunities. Vegetation management may be used to reduce threats to remaining habitat from fire, insects and disease. Roads will be closed to improve security for grizzly bears and other wildlife.

Madison–Pitchstone Plateaus Subsection (M331Ab)

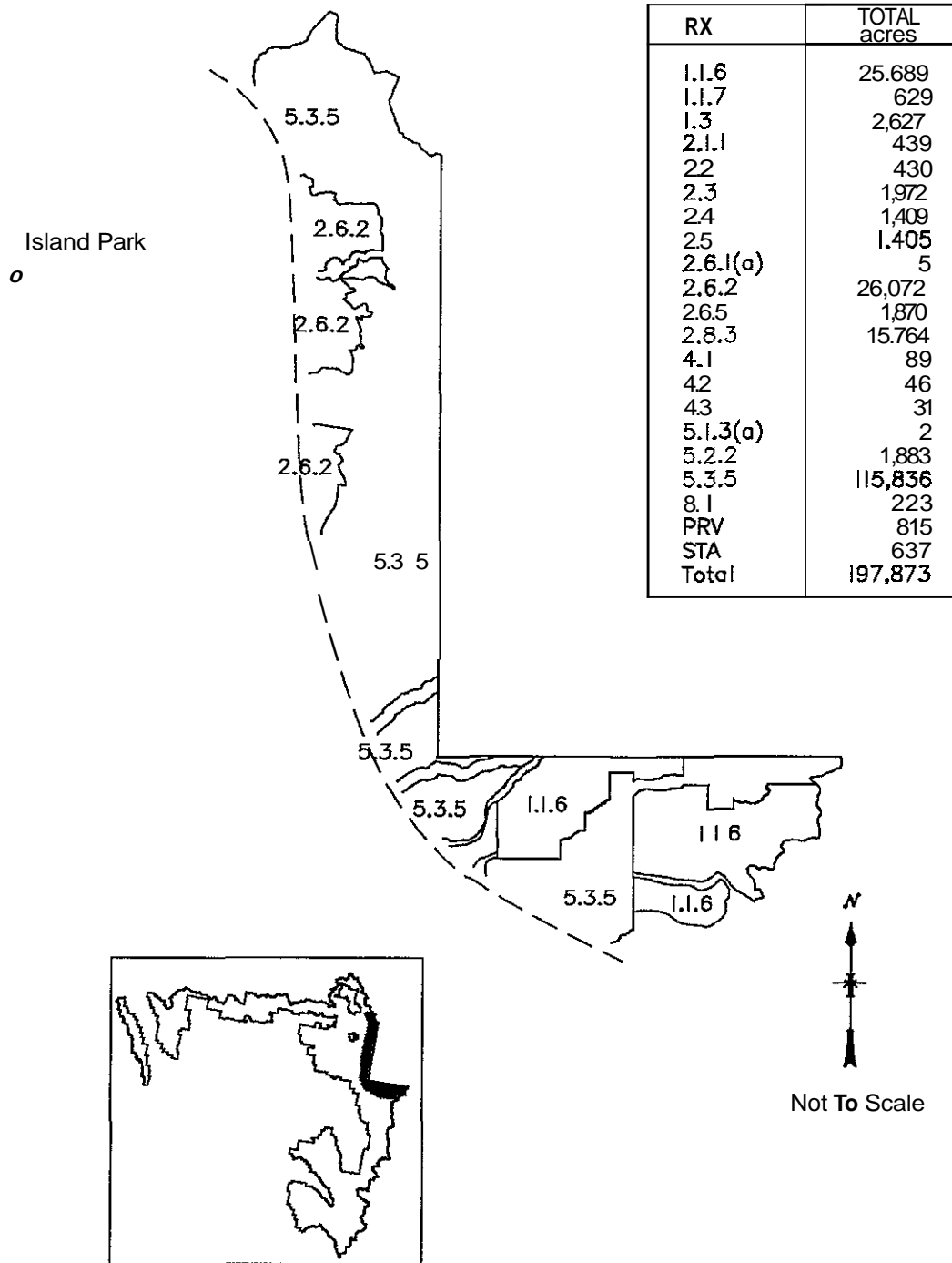


Figure 111-6

GOALS AND OBJECTIVES

Goal - Properly Functioning Condition

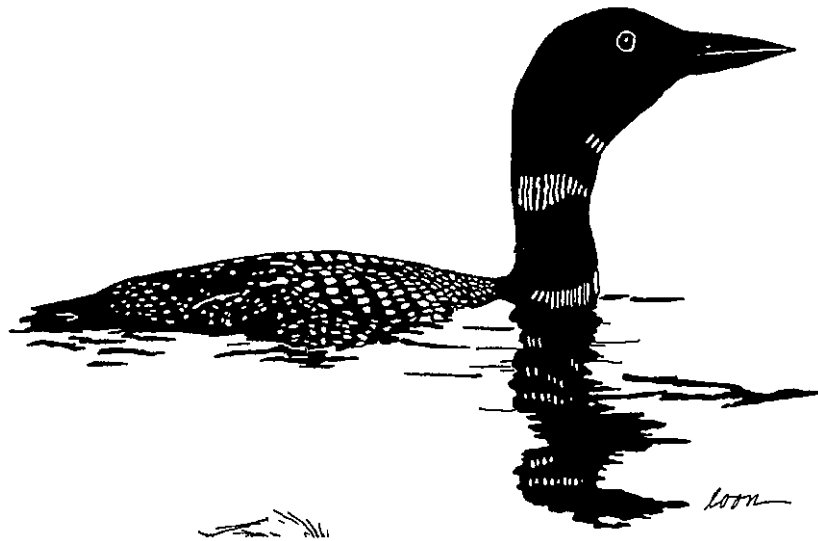
Move the area toward its properly functioning condition with a full mix of age classes, larger patch sizes and connectivity between stands

Goal - Fire

Use management-ignited and natural fire to meet resource objectives. Comply with the Jedediah Smith Wilderness Fire Management Plan

Goal - Fisheries, Water and Riparian Resources

Effective rehabilitation of the North Fork Fire burn area to stabilize slopes and reduce sediment delivery to streams



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TETON RANGE SUBSECTION (M331Db)

SETTING

This area encompasses the Teton Mountains, bounded on the north by South Boone Creek, on the south by Highway 22, on the west by the Teton Basin and on the east by Jackson Hole in Wyoming. The Teton Range is a spectacular line of high peaks rising abruptly along the east side of the Teton Basin. The landscape is a diverse mix of forested and open vegetation. The Jedediah Smith Wilderness traverses the upper portions of the west slopes of the Teton Mountains. The Grand Targhee Ski and Summer Resort is a major tourist destination. Two permitted organized youth camps operate within the subsection. This area is known for its many backcountry trail systems, which are accessible by horse or foot.

The landscape is a diverse mix of forested (57 percent) and open (43 percent) community types. Forest tree species include Douglas-fir, lodgepole pine and mixed conifers. Lodgepole is mixed with Douglas-fir in 31 percent of the forested area, indicating that the pine is converting to Douglas-fir through succession. Open Douglas-fir forests, mountain brush, aspen, and sagebrush pockets are found predominantly on south and west aspects. Aspen is being encroached upon by conifers as succession proceeds, and the amount of aspen has declined compared with historic levels due to fire suppression. Upper elevations are characterized by dense mixed conifer forests, open grass/forb meadows, and talus slopes. Conifers are moving into riparian areas and mountain meadows due to fire suppression.

Since much of the Teton Range subsection is designated wilderness, timber harvest has been limited. Due to this fact and long-term fire suppression only one percent of the forested acres is in the nonstocked, seedling or sapling age classes. The preponderance of mature and older forests (97 percent of total) make this area suitable habitat for species such as marten and owls that prefer late-seral-stage forests. Conversely the lack of fire has contributed to a decline in habitat for bighorn sheep and promoted susceptibility of the forested lands to insect infestations, diseases and large-scale fires. In recent years the western balsam bark beetle has been active in the subalpine fir. The Douglas-fir beetle has killed pockets of Douglas-fir in the past decade, but beetle populations have declined since 1992.

The Jedediah Smith Wilderness (123,451 acres) is mostly in the Teton Range subsection with the balance in the Madison Plateau subsection. The Jedediah Smith is intensively used yearlong with approximately 60,000 visits per year. Some of this use is shared with Grand Teton National Park, lying immediately to the east across the Teton Crest.

The Bechler-Teton Bear Management Unit is also partially within the subsection. In addition to grizzly bears, peregrine falcon, bighorn sheep and many big game species inhabit the area.

Teton Valley has been experiencing a development boom recently and urban interface is a growing concern for the Forest.

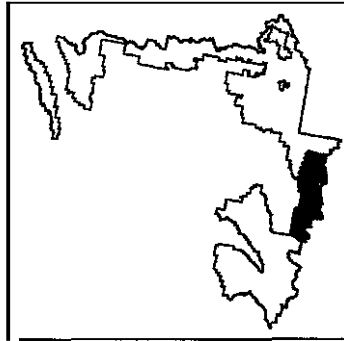
Figure III-7 displays this subsection along with the major prescription areas.

DESIRED FUTURE CONDITION

The Teton Range subsection is dominated by the lands inside the Jedediah Smith Wilderness. Over 73 percent of the subsection is wilderness where the focus is to provide quality wilderness experiences. The description of the potential experience is described in Prescriptions 1.1.6, 1.1.7 and 1.1.8.

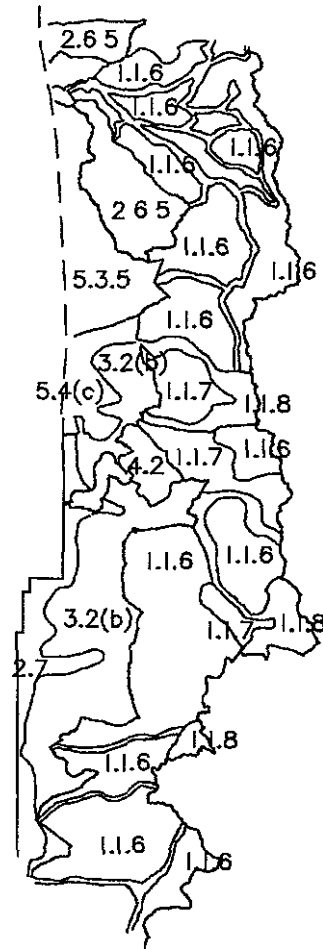
The subsection includes the Grand Targhee Ski and Summer Resort, which will be managed to provide a safe and enjoyable recreation experience.

Teton Range Subsection (M33 1Db)



RX	TOTAL acres
1.1.6	76,656
1.1.7	18,936
1.1.8	12,572
2.1.1	41
2.1.2	3,793
2.3	364
2.65	6,219
2.7(a)	7,064
2.8.3	7,442
3.2 b)	18,193
3.2(b)	13
3.2(j)	372
4.2(j)	57
4.2	2,517
4.3	626
5.3.5	3,602
5.4(c)	2,111
81	245
PRV	944
Total	161,767

Driggs
●



N
↑
+
↓
Not To Scale

Figure III-7

The subsection includes the Bechler - Teton Bear Management Unit. This area will experience little vegetation treatment in the near future while providing a high degree of security for grizzly bear.

The remaining lands in the subsection will provide for motorized recreation while improving big game winter range. These will be managed to reduce or eliminate conflicts with adjacent wilderness.

Of critical importance to this subsection is the high amount of mature and overmature vegetation. To achieve the desired vegetation conditions for all of the management prescriptions will require careful fire management since little of this area will be available for silviculture treatment.

GOALS AND OBJECTIVES

✓ Thru 57

Objective - Fire

By 2007 complete a fire management plan for the Teton Range subsection which will include opportunities for improving bighorn sheep habitat.

Objective - Fisheries, Water and Riparian Resources

Improve stream channel stability ratings to good or excellent by 2007 where natural conditions allow on Teton Creek, N Leigh, S Leigh, Moose Creek, Trail Creek, Fox Creek, and Kiln Creek where instability is management-caused.

Goals - Wildlife

- 1 Maintain or improve big game winter range
- 2 Coordinate with Grand Teton National Park and the Wyoming Game and Fish Department in the management of the bighorn sheep population and habitat
- 3 Provide for recreational activity while maintaining the integrity of crucial wildlife habitats
- 4 Work with the Intermountain Research Station to establish a research project to study the effects of recreation on bighorn sheep in the Teton Range subsection

Goal - Recreation

Provide for a variety of opportunities including motorized, nonmotorized, developed and dispersed recreation uses.

Goal - Roadless

Maintain remaining roadless areas in their roadless condition.

Objective - Range

Within three years of signing the ROD, assess opportunities to modify grazing allotment boundaries and permits to more effectively use natural barriers, change grazing patterns, adjust seasons of use, administratively close some additional areas, etc., to further separate domestic sheep from bighorn sheep.

STANDARDS AND GUIDELINES

Recreation

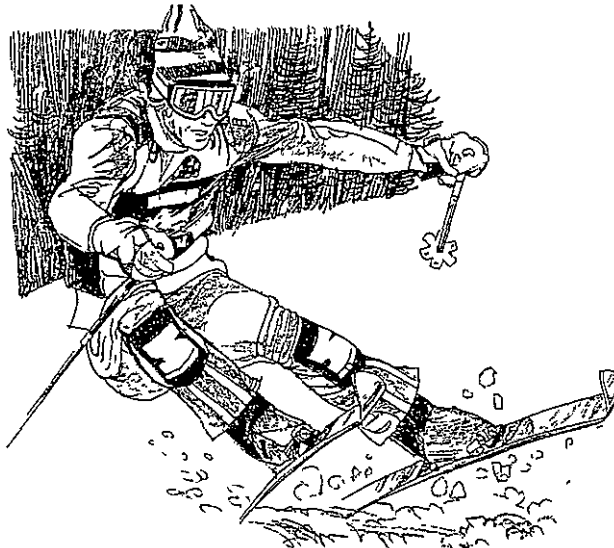
Manage the development of the Grand Targhee Ski and Summer Resort within the intent of the 1994 Master Development Plan Final Environmental Impact Statement and according to the Master Plan approved April 27, 1995 (G).

Wilderness

Implement the Jedediah Smith Wilderness Fire Management Plan (G)

Range

- 1 Domestic sheep grazing within the grizzly bear recovery area will be managed according to Management Situation 2 guidelines (S)
- 2 To better manage grizzly bear and bighorn sheep habitat, all sheep allotments in the Teton Range Subsection on the Teton Basin Ranger District will be phased out on an opportunity basis (Process Papers L and N) These allotments are the Moose Creek, Canyon Badlands, Dry Basin, Badger Twin, and Green Mountain S&G allotments Opportunities to vacate an allotment include such events as nonuse violations, term permit waivers where the permit is waived back to the government, resource protection, or permit actions resulting in cancellation of the permit If opportunities do not arise, then efforts will be made to relocate or accommodate sheep to other areas Vacated allotments in these areas will be made available as needed to resolve conflicts between grizzly bears and domestic sheep in other sheep allotments in Situation 2 habitat (S)
- 3 When all sheep allotments in the portion of the subsection within the grizzly bear recovery area have been vacated, they will be closed Likewise, when all sheep allotments in bighorn sheep habitat have been vacated, they will be closed The intent of not closing these individual allotments as they become vacated is to provide an opportunity to minimize conflicts between domestic sheep and bighorn sheep or grizzly bears (S)
- 4 The range direction in the Revised Forest Plan for the Targhee National Forest applies to the grazing activities (allotment/permit administration, forage utilization direction, AMP development, etc) for that portion of the Moose Creek S&G allotment on the Bridger-Teton National Forest (S)



BIG HOLE MOUNTAINS SUBSECTION (M331Dk)

SETTING

This subsection includes all National Forest System lands between Highway 33 in Idaho and Highway 22 in Wyoming on the north and the South Fork of the Snake River to the south. Several major highways provide access. Idaho Highways 26, 31 and 33, and Highway 22 in Wyoming. Highway 31 is a State Scenic Byway over Pine Creek Pass. Vegetation consists of mountain brush, grass/forb openings, aspen, and forests of Douglas-fir and lodgepole pine. The area has a variety of recreational opportunities including Kelly Canyon Ski Resort, Kelly Canyon Nordic Ski trails, Palisades backcountry, and trail motorbike riding. Palisades Reservoir and its many boat ramps are used by water sports enthusiasts. The Palisades Creek National Recreation Trail lies within this subsection.

Several utility corridors (electrical transmission lines) are located in this subsection. Most follow the highway system and are visible from the highway but do not dominate the landscape. Maintenance work and line upgrades can be seen along these highways. Additional power line needs have been identified and are expected in the near future within or next to these existing corridors.

There is increasing development of summer homes and year-round residences adjacent to the Forest boundary. It is possible that some inholdings within the Forest boundary may also see development in the near future.

The landscape is a mixture of vegetation community types. Some 65 percent of the landscape is forested and 35 percent is nonforested. The most common forest type is mixed lodgepole pine and Douglas-fir, comprising 47 percent of the forested acres. Aspen, pure Douglas-fir and pure lodgepole pine each account for roughly 15 percent of the forest. Mountain mahogany is found on south slopes and hawthorne, chokecherry, serviceberry, antelope bitterbrush and Rocky Mountain maple on various slopes and aspects depending on elevation. Grass/forb meadows and sagebrush are also common.

The northwestern boundary of the subsection extends into the cottonwood river bottom type along the Snake River. There is concern about the lack of cottonwood regeneration along the Snake River, due to a lack of historic river flood levels. A high-density bald eagle population inhabits this area.

Currently 95 percent of the subsection is in a mature age class which provides suitable habitat for a variety of interior wildlife species. This creates hazards for large fires, insect infestations and disease problems. In the north end of the subsection Douglas-fir beetle and western balsam bark beetle caused damage in the late 1980s and early 1990s; this tapered off in 1994. Insect information is not available for the southern portion. Due to fire suppression and lack of disturbance over the years, conifers have encroached into some sites that were historically nonforested. This has reduced overall vegetative diversity in the subsection. Only four percent of the forested stands are in the nonstocked, seedling or sapling age category. These are concentrated in the north end of the subsection where timber harvest has occurred. Most of the shrublands are also in late age classes or seral stages.

The Wyoming portion of the Palisades Roadless Area was designated by Congress as a Wilderness Study Area in 1984. The Study Area contains 132,000 acres, of which over 79,800 acres are administered by the Bridger-Teton National Forest. Some 110,520 acres of this roadless area in Idaho are recommended as wilderness but have had no congressional action taken on them.

Figure 1118 displays this subsection along with the major prescription areas.

Big Hole Mountains Subsection (M331Dk)

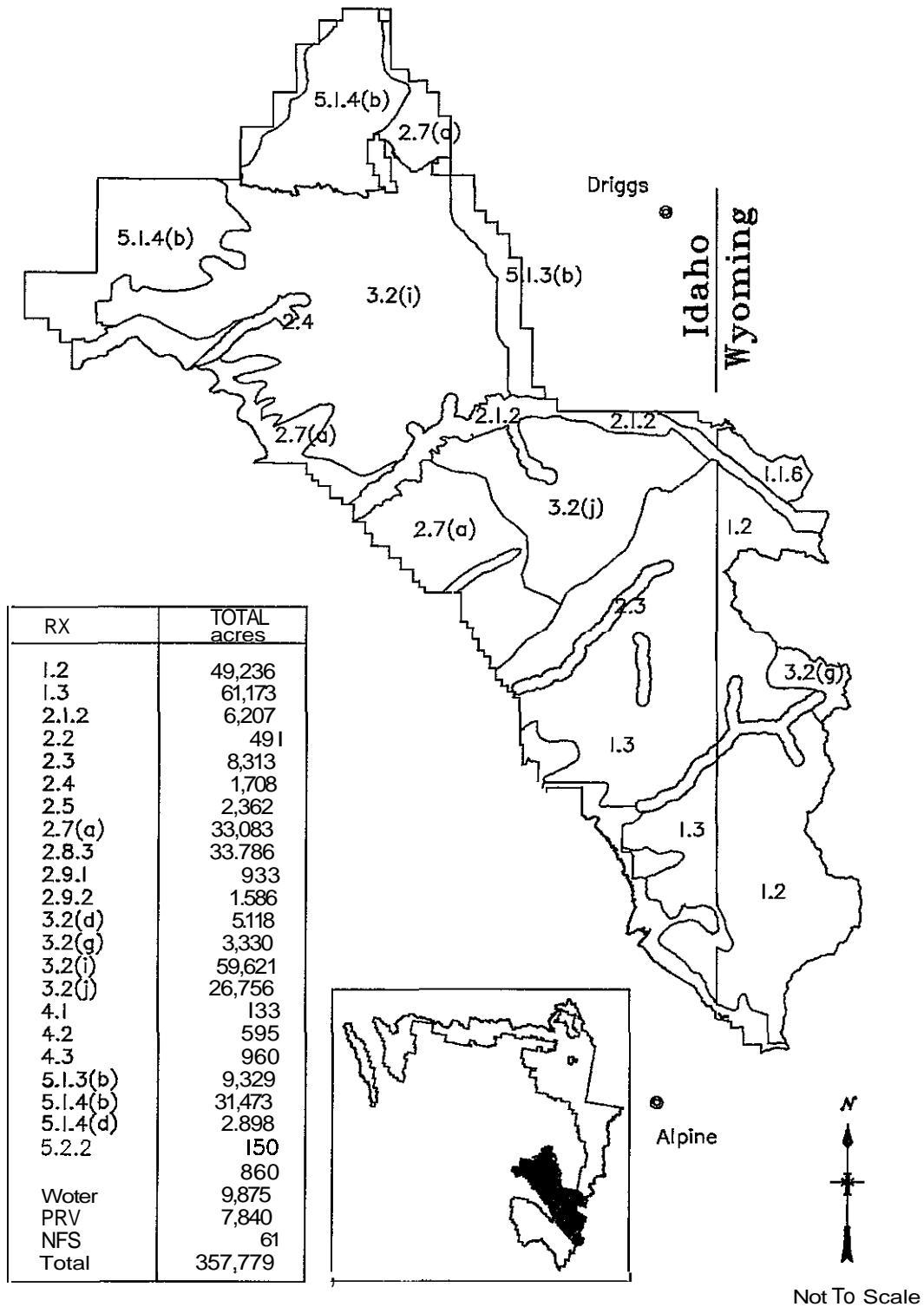


Figure 111-8

DESIRED FUTURE CONDITION

This subsection will provide a diverse range of recreation opportunities at different locations within the subsection

The Big Hole portion of the subsection will provide a wide variety of resources and recreation opportunities. This area will provide quality motorized recreation opportunity with a signed system of roads and trails for motorized use. Resource protection will be accomplished by restricting motorized use to designated routes and by locating routes along planned and selected routes.

The Palisades portion of the subsection will provide more primitive motorized and nonmotorized recreation opportunities. Emphasis will be placed on quality backcountry experience for these uses along appropriate designated trails. The Forest recommends the Idaho portion of the Palisades roadless area for wilderness designation. The Wyoming portion is managed as a wilderness study area according to existing legislation.

On lands suitable for timber harvest (mostly on the northern part of the Big Holes) the risks from insect and disease attack will be reduced using timber management while improving big game security and summer range. Prescribed fire will be used on the remainder of the subsection to improve ecosystem health and wildlife winter ranges.

The recreational use on the South Fork of the Snake River will continue but be balanced with the needs of wildlife. Management for bald eagle recovery will continue.

Much of this subsection is made up of inventoried roadless areas. With the exception of the north end of the Big Holes, most of that area is in the Garns Mountain and Palisades Roadless Areas. These areas are typified by steep mountain ranges where little development opportunity is expected.

GOALS AND OBJECTIVES

Goal - Properly Functioning Condition

Continue cooperation with other agencies in conducting research and implementing management actions to regenerate cottonwood along the South Fork of the Snake River.

Objective - Properly Functioning Condition

By 2007, develop a fire management plan which considers summer home development and risk around the Palisades Reservoir.

Goal - Fisheries, Water and Riparian Resources

Channel stability would be rated at good to excellent for individual streams.

Objective - Fisheries, Water and Riparian Resources

Improve stream channel stability ratings to good or excellent by 2007 where natural conditions allow on South Fork, Packsaddle, Horseshoe, Superior, North Fork Mahogany, Main Mahogany, Henderson, Patterson, and Murphy Creeks.

Goal - Wildlife

Provide for recreational activity while maintaining the integrity of crucial wildlife habitats such as winter range.

Goals - Recreation

1. Continue to place emphasis on winter recreation for the Big Hole portion of the subsection by continuing a grooming program for snowmachines, which is orientated towards family opportunities, continuing to work with user groups for cross-country skiing opportunities in the Kelly area.

2 Continue to improve the quality of the summer time OHV use in the Big Hole area and protect resource values by locating and maintaining trails on suitable locations

Goal - Visuals

Manage the Pine Creek Scenic Byway (Highway 31) and Highway 22 over Teton Pass for visual quality allowing needs of the utility corridor

Objective - Heritage Resources

Complete heritage resources inventory of this subsection by 2007

Goals - Roadless

1 In recommended wilderness, protect roadless area values to ensure wilderness characteristics are maintained

2 In all other areas, continue to protect resource values

Goal - Range

Continue to recognize the value of grazing on the Kelly Ski hill for forage control and fire protection. Grazing timing and duration will continue to be coordinated between grazing permittees, ski hill permittee and the Forest Service

STANDARDS AND GUIDELINES

Lands (Special Uses)

The Therold Buckland isolated cabin will continue as a life tenure permit and will not be transferred. Upon the expiration of the permit, the cabin will be evaluated and its historical qualifications determined. If the cabin is found to have historic value, it may be moved from the site, or the Forest may issue a special use permit to a Historical Association for maintenance of the cabin if warranted. If no historical value is found the cabin will be removed (S)

Old Growth Habitat

✓ Within one mile of the Palisades Reservoir and the South Fork of the Snake River, emphasis will be given to managing old growth Douglas-fir, spruce and cottonwood habitats for wildlife species (G)

Access

In the Table Rock area, the OROMTRD standard of < 2.0 mi/sq mi does not apply (S)

Range

The range direction in the Targhee Land Management Plan applies to the grazing activities (allotment/permit administration, forage utilization S&Gs, AMP development, etc) for that portion of Targhee National Forest lands administered by the Bridger-Teton National Forest, above Alpine Junction. Those lands are the Big Basin/South Elk S&G, South Indian/Cottonwood Creek S&G, Spencer/Wolf S&G, Grand Canyon S&G, and the Dog Creek S&G allotments (S)

CARIBOU RANGE MOUNTAINS SUBSECTION (M331D1)

SETTING

This subsection is the portion of the Caribou National Forest administered by the Targhee. It lies south of the South Fork of the Snake River. Steep mountain slopes and canyons dominate the landscape. The Palisades Reservoir is shared between this subsection and the Big Hole/Palisades subsection. Vegetation forms a patchwork of sagebrush/grass openings, aspen, and mixed Douglas-fir/lodgepole pine forests. Recreation use is very similar to that in the Big Hole/Palisades subsection with high mountain trails, motorized use on trails, and backcountry use as well as hunting, fishing and water sports on the reservoir and the Snake River. There are several summer home divisions and two organizational camps. Forest lands are visible from U.S. Highway 26, the major travel corridor between Idaho Falls, Idaho and Jackson, Wyoming. Very little logging has taken place in the past. Both cattle and sheep grazing occur.

One utility corridor (electrical transmission line) is located in this subsection. It is visible from the Fall Creek road but does not dominate the landscape. Maintenance work and line upgrades can be seen from travel routes.

The Caribou subsection is 60 percent forested and 40 percent nonforested. The primary forest types are aspen (31 percent) and mixed lodgepole and Douglas-fir (47 percent). The interspersed forests with sagebrush, grass/forb meadows and mountain brush provides for good diversity of plant species. The northeastern boundary area of the subsection includes cottonwood river bottom forests along the Snake River.

Age class diversity is limited. Some limited timber management has occurred in the lodgepole pine/Douglas-fir type. Almost no harvesting has taken place in the Engelmann spruce/subalpine fir type. Some 99 percent of the conifer forests are in mature or older seral stages. Douglas-fir is becoming more predominant as it encroaches on stands of lodgepole pine, aspen or shrubs. Evidence of insect attacks is readily visible in the Douglas-fir type and is increasing each year. It is likely that there is more Douglas-fir here now, and less aspen, lodgepole pine and shrubland, than existed historically. Fires have been suppressed for many years. Because stands are scattered and difficult to access, this condition is likely to persist. Treatment opportunities center around prescribed burns and limited vegetation treatment where access is more easily obtained.

Most of the shrublands are also in late seral stages. Consequently, risks of large fires, insects and disease outbreaks is high. Insect attacks in recent years have been similar to those in the Big Hole/Palisades subsection. The Snake River cottonwood stands are also predominately in the mature age class due to lack of disturbance, which they need in order to regenerate. Historic disturbance patterns consisting of periodic flooding have been interrupted since placement of the Palisades Dam.

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

Much of this subsection is made up of five inventoried roadless areas. Bear Creek is the largest inventoried area. Development or evidence of humans is easier to see in these roadless areas than in the Big Hole Mountains subsection. The size of the roadless areas and intrusions from motorized-use roads limit their wilderness characteristics.

Figure III-9 displays this subsection along with the major prescription areas.

Caribou Range Mountains Subsection (M331Di)

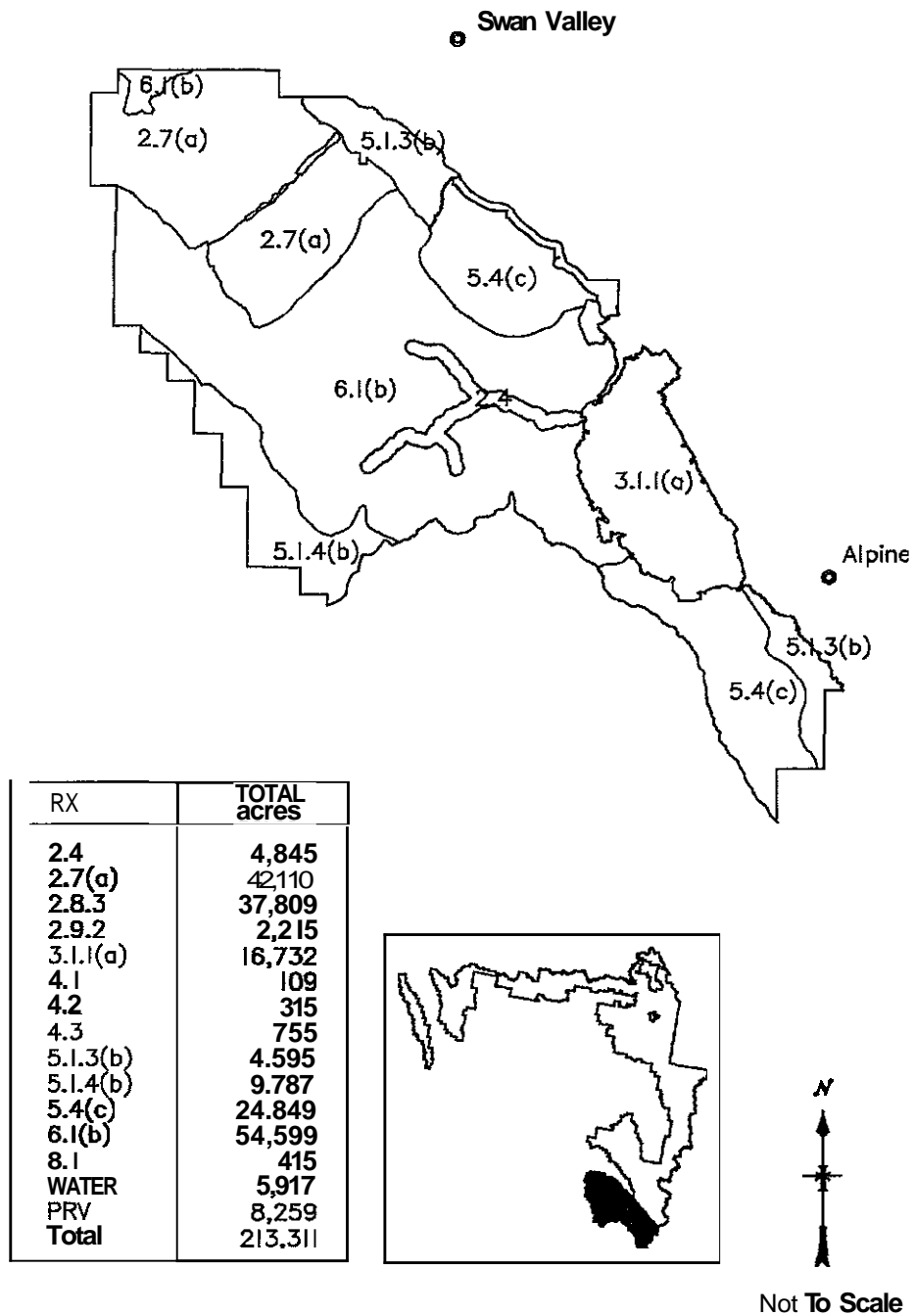


Figure III-9

DESIRED FUTURE CONDITION

Recreation will emphasize dispersed recreation opportunities, and semi-primitive backcountry experiences while providing high-quality motorized use on designated trail systems

The recreational use around Palisades Reservoir and the South Fork of the Snake River will continue but be balanced with the needs of wildlife and other resources

On lands suitable for timber harvest silvicultural management will reduce the risks of insect and disease attack while improving big game winter range conditions. Prescribed fire and some vegetation manipulation will be used on the remainder of the subsection where access permits to help restore and maintain a healthy ecosystem

Quality range management practices will continue on this subsection. High valued big game winter range in the Fall Creek area will be maintained or improved

GOALS AND OBJECTIVES

Goals - Properly Functioning Condition,

- 1 Continue cooperation with other agencies in conducting research and implementing management actions to regenerate cottonwood along the South Fork of the Snake River

- 2 Develop a fire management plan which allows for natural fire and which considers summer home development and risk around the Palisades Reservoir

Goals - Recreation

- 1 Improve the quality of summertime OHV use in this subsection and protect resource values by locating and maintaining trails at suitable locations

- 2 Emphasize winter recreation by allowing continued grooming of snow machine trails oriented towards family opportunities, and providing shelter facilities (warming huts)

Objective - Heritage Resources

Complete heritage resource inventory of this subsection by 2007

Goal - Roadless

Protect resource values on lands managed with a nonwilderness emphasis

STANDARDS AND GUIDELINES

Old Growth Habitat

Within one mile of the Palisades Reservoir and the South Fork of the Snake River, emphasis will be given to managing old growth Douglas-fir, spruce and cottonwood habitats for wildlife species (G)

Access - Alpine Wetland Area

This area is located near the Salt River on the Palisades Reservoir. It is closed to cross-country travel except on designated routes for all wheeled vehicles and snow machines (S)

Range

On the Palisades Ranger District, the Garden-Pritchard S&G allotment will be closed immediately to grazing for watershed protection (S)



Chapter III - Part 3

Management Prescriptions



Table III-1 Acreage by Prescription, Ownership or Other Management Within the Forest Boundary

RX	NAME	TOTAL ACRES	RX	NAME	TOTAL ACRES
			3 2 (i)	Semi-Primitive Motorized	59,621
1 1 6	Wilderness, Opportunity Class I	102,345	3 2 (i)	Semi-Primitive Motorized	27,128
1 1 7	Wilderness, Opportunity Class II	19,565	4 1	Developed Recreation Sites	895
1 1 8	Wilderness, Opportunity Class III	12,572	4 2	Special Use Permit Recreation Sites	3,956
1 2	Wilderness Study, Snowmachine	49,236	4 3	Dispersed Camping Management	3,255
1 3	Wilderness, Recommended	154,137	5 1 (c)	Timber Management	82,459
2 1 1	Special Management Areas	13,627	5 1 3 (a)	Timber Management No Clearcut	34,354
2 1 2	Visual Quality Maintenance	10,000	5 1 3 (b)	Timber Management No Clearcut	13,924
2 2	Research Natural Areas	11,653	5 1 4 (a)	Timber Management Big Game	6,606
2 3	Eligible Wild River	21,709	5 1 4 (b)	Timber Management Big Game	126,437
2 4	Eligible Scenic River	15,132	5 1 4 (c)	Timber Management Big Game	23,354
2 5	Eligible Recreation River	8,033	5 1 4 (d)	Timber Management Big Game	2,898
2 6 1 (a)	Grizzly Bear Habitat	17,052	5 2 1	Visual Quality Improvement	7,017
2 6 2	Grizzly Bear Plateau Core	30,815	5 2 2	Visual Quality Maintenance	14,264
2 6 5	Grizzly Bear Bechler BMU	19,976	5 3 5	Grizzly Bear Habitat Out Core	216,480
2 7 (a)	Elk Deer Winter Range	02,257	5 4 (a)	Elk Deer Summer Range	13,300
2 7 (b)	Elk Deer Winter Range	37,565	5 4 (b)	Elk Deer Summer Range	14,289
2 8 3	Aquatic Influence Zone	163,970	5 4 (c)	Elk Deer Summer Range	46,176
2 9 1	South Fork Snake Scenic River	933	6 1 (b)	Range Management	157,386
2 9 2	South Fork Snake Recreation River	3,801	8 1	Concentrated Development Areas	4,641
3 1 1 (a)	Non-Motorized	46,070		BLM	389
3 2 (b)	Semi-Primitive Motorized	18,341		NFS (Non-Forest Service)	38,710
3 2 (c)	Semi-Primitive Motorized	9,309		PRV	31,541
3 2 (d)	Semi-Primitive Motorized	5,118		STA	25,702

INTRODUCTION

A management prescription is a composite of the specific multiple-use direction applicable to all or part of a management area that generally includes, but is not limited to, goals, objectives, standards and guidelines, and probable management practices

The terms goals, objectives, standards and guidelines were defined in the Introduction of this Chapter. The goals, objectives, standards and guidelines in this section are specific to each management prescription.

Most management prescriptions have a motorized access density standard established. Roads or trails are frequently used as a convenient geographic feature to identify management prescription area boundaries. When roads or trails are used to identify a management prescription area boundary where the TMARD (Total Motorized Access Route Density) or OROMTRD (Open Road and Open Motorized Trail Route Density) is 0.0 miles/square mile, the road or trail miles are not counted in the TMARD or OROMTRD for that particular prescription area. The road and trail miles are included in the TMARD and OROMTRD calculations in the adjacent management prescription areas. The road and trail miles are included when calculating environmental effects, such as elk vulnerability, grizzly bear cumulative effects, etc.

All areas of the Forest are allocated to one prescription area. For those areas where two management intents overlap one prescription was identified to prevail over the other. In cases where research natural areas (Prescription 2.2) or eligible wild (2.3), scenic (2.4) or recreational (2.5) rivers lie within designated wilderness (1.1.6, 1.1.7 or 1.1.8), the wilderness prescription prevails. Where any of those four prescriptions lie within a wilderness study area (1.2) or recommended wilderness (1.3), they prevail over the wilderness study area or recommended wilderness prescription. Direction on prevalence of the aquatic influence zone (Prescription 2.8.3) is given in the description of that item.

1.1.6 DESIGNATED WILDERNESS - OPPORTUNITY CLASS I

Description

This prescription applies to the Winegar Hole Wilderness and portions of the Jedediah Smith Wilderness.

The effects of human activities are not noticeable to most visitors. Camping activities are not evident, although facilities such as bearproof storage boxes may be present to assist recovery of listed threatened or endangered species. User-created routes and nonsystem trails may exist but they appear as game trails and are not shown on maps or trail guides.

Opportunities exist for individuals or small groups to experience a high quality wilderness-dependent educational experience. A low level of recreation use occurs in these remote areas which often contain rugged terrain. There is a lack of system trails, a lack of signing, and information about the area is not distributed. Trailhead facilities for these areas are minimally developed to encourage low levels of use. There is a low level of outfitter/guide use.

Low use levels allow for meeting the user's expectations of finding a recreation or wilderness experience with a high degree of solitude. Signs of the user's passing are not evident. Opportunity for discovery may exist.

Refer to the "Monitoring Plan" and the "Jedediah Smith Wilderness Environmental Assessment for Forest Plan Amendment Process Paper" for detailed descriptions of opportunity classes (I, II, III) and use levels.

This prescription meets the Interagency Grizzly Bear Committee definition for core areas

Goals

- 1 The maintenance of the natural diversity of wildlife species is given the highest priority and is dominant over other uses. There is no great alteration of wildlife behavior or use of crucial habitat by wildlife as a result of human activities.
- 2 Human activities are managed so there is no appreciable modification of natural succession. Any vegetation loss resulting from camping recovers within one growing season.
- 3 There is no measurable downward trend in plant species composition and plant diversity due to livestock grazing. Utilization levels are compatible with maintaining or enhancing ecological condition. The range is managed so that plant communities are at or trending towards potential natural community status except where natural disturbance, and not livestock or recreation use, determines the lower seral condition.
- 4 There are outstanding opportunities for solitude, self-reliance, and challenge. Users do not normally see or hear other users.
- 5 A very minor amount of human-caused bare soil persists from year-to-year in localized areas. No great human-caused soil erosion occurs.
- 6 Opportunities are provided for research that do not require permanent instrumentation or direct contact with visitors in the Wilderness.
- 7 Manage as trailless areas. Any existing trails will be abandoned and allowed to regress to a natural state unless needed to prevent resource damage.
- 8 Manage for a low level of outfitter/guide use.

Objectives

- 1 Coordinate with the Wyoming Game and Fish Department to prepare a wilderness fishery management plan within five years of implementation of the ROD, with consideration of the State's existing fishery management plan for wilderness fisheries.
- 2 Implement a wilderness education program for all users, which could include yearly contacts with local schools, yearly programs with organizational camps, information available at Forest and District offices for distribution to the public, periodic contacts at trailheads by Forest Service personnel with wilderness users, ethics orientation for wilderness use presented to permittees and Forest Service personnel, and information about grizzly bears.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is as follows:

Within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription, except that livestock grazing in existing Management Situation 2 habitat will continue to be managed under Management Situation 2 guidelines. (S)

Ecological Processes and Patterns

Fire/Fuels

Natural and manager-ignited fires will be allowed to burn under predetermined prescriptive

conditions as described in wilderness fire management action plans (G)

Biological Elements

Fisheries, Water and Riparian Resources

1 Fish stocking for recreational fishing is permitted with species native to the Wilderness in waters previously stocked (prior to wilderness designation) by the Game and Fish Department (G)

2 Fish stocking for reestablishment of native species may occur (G)

Forest Use and Occupation

Access (S) - 1 1 6

Season	Type of Access	Cross-County Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	No
	Horse/Pack Stock	Yes	No
	Mtn Bike/Mechanized	No	No
Snow free Seasons	Motorized, <50" wide	No	No
	Motorized, >50" wide	No	No
	OROMTRD 2/	N/A	0.0 mi/sq mi
Snow Seasons	Winter Nonmotorized	Yes	No
	Snowmachine	No	No

1/ These areas are managed as trailless, there are no maintained trails. Motorized use is prohibited, except for emergencies or valid uses specified in the law

2/ OROMTRD= Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

Recreation

Dispersed - No dispersed facilities are provided, except facilities may be present for recovery of listed threatened and endangered species. Existing bearproof food storage boxes in Opportunity Class I zones installed prior to 1993 may remain, but no additional boxes or other facilities will be installed in these areas (S)

- No signing (S)

- No distribution of information about these areas (S)

ROS - Manage for a primitive classification (S)

VQO - Manage for a preservation classification (S)

Heritage Resources

Evaluate and protect these resources in the context of a setting where there is little public visibility (G)

Production of Commodity Resources

Range

Manage allotments at FRES levels A, B, or C (G)

1.1.7 DESIGNATED WILDERNESS - OPPORTUNITY CLASS II

Description

This prescription applies to portions of Jedediah Smith Wilderness

The effects of human activities are somewhat evident to visitors. Camping activities are set back from trails and water. Trail treads are evident but the trail may be brushy and its location blends well with the natural topography. Trails are maintained to protect the resource.

Opportunities exist for individuals and moderate sized groups to experience a quality wilderness-related educational experience.

A moderate level of recreation use occurs. Bridges generally are not provided except where needed for resource protection. Directional and resource protection signs may be provided. Campsite facilities such as bearproof food boxes may be present for recovery of listed threatened and endangered species. Trailheads used by those accessing these areas contain bulletin boards and may provide undeveloped areas for overnight camping. There may be a high level of outfitter/guide use.

There is a moderate to high opportunity for solitude during July-September. Opportunities for solitude are high at other times. Users may experience a moderate degree of self-reliance and challenge. Users normally do not see other users but may occasionally hear other groups.

Moderate use levels may result in other users seeing or hearing some evidence of recreational activities. Fixed anchors at rappel stations, impacts on approach and descent routes, and some protection left by previous parties notifies users that others have gone before.

Refer to Chapter V and the "Jedediah Smith Wilderness Environmental Assessment for Forest Plan Amendment Process Paper" for detailed descriptions of opportunity classes (I, II, III) and use levels.

This prescription meets the Interagency Grizzly Bear Committee definition for core areas.

Goals

1. The maintenance of the natural diversity of wildlife species is given high priority. There is no displacement of wildlife during critical periods (winter and birthing), and only temporary displacement during noncritical periods.
2. Human activities are managed so there is only limited modification of natural succession at campsites, trails, and grazed areas. Some vegetation loss persists from year-to-year at identified campsites.
3. There is no measurable downward trend in plant species composition and plant diversity due to livestock grazing. Utilization levels are compatible with maintaining or enhancing ecological condition. The range is managed so that plant communities are at or trending towards potential natural community status except where natural disturbance, and not livestock use or recreation use, determines the lower seral condition.
4. Some bare soil persists from year-to-year due to human activities. Human-caused soil erosion may occur.
5. Research opportunities may include a minor amount of instrumentation and only occasional contact with visitors.

Objectives

In addition to Objectives 1 and 2 in prescription 1 1 6, also add the following

Install signs at wilderness trailheads advising users they may encounter a variety of other legitimate wilderness uses including sheep and cattle grazing, llama trekking, etc

Standards and Guidelines

Forestwide standards and guidelines apply Additional direction for this prescription is listed below

Within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription, except that livestock grazing in existing Management Situation 2 habitat will continue to be managed under Management Situation 2 guidelines

Ecological Processes and Patterns

Fire/Fuels

Natural and manager-ignited fires will be allowed to burn under predetermined prescriptive conditions as described in the Wilderness Fire Management Action Plan (G)

Biological Elements

Fisheries, Water and Riparian Resources

Same as 1 1 6 Designated Wilderness

Wildlife

Grizzly Bear - In the event future trails or campsites are developed within the grizzly bear recovery zone, avoid locations within 1/2-mile of key habitat areas such as white bark pine stands, huckleberry patches, riparian areas and wet meadows, avalanche chutes, seasonal insect feeding sites (G)

Harlequin Duck - Avoid locating new trails or campsites within 300 feet of streams which provide harlequin duck habitat (G)

Forest Use and Occupation

Access (S) - 1 1 7

Season	Type of Access	Cross-country Travel	Road and Trail Travel t/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	No	No
Snow free Seasons	Motorized, <50" wide	No	No
	Motorized, >50" wide	No	No
	OROMTRD2/	N/A	0 0 m/sq mi
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	No	No

Recreation

Dispersed - Additional food storage boxes may be provided in Opportunity Class II zones for protection of the grizzly bear (G)

Directional and resource protection signs may be provided (G)

Trails/Bridges - Trails have evident tread but may be brushy Bridges generally are not provided except where needed for resource protection (G)

ROS - Manage for a primitive to semi-primitive nonmotorized classification (G)

VQO - Manage for a preservation classification (S)

Heritage Resources

Evaluate and protect these resources in the context of a setting where there is some public visibility (G)

Production of Commodity Resources

Range

Same as 1 1 6 Designated Wilderness

1.1.8 DESIGNATED WILDERNESS - OPPORTUNITY CLASS III

Description

This prescription applies to areas of the Jedediah Smith Wilderness

The effects of human activities are evident to most visitors but blend in with the natural setting Camping is set back from trails and water Trail treads are very evident

Opportunities exist for individuals and large groups to experience a quality wilderness educational experience

Recreation use is relatively high Bridges are provided where needed for resource protection or visitor safety Directional, informational and regulatory signs may be provided Campsite facilities such as bear proof food boxes may be present for recovery of listed threatened and endangered species Trailheads used by those accessing these areas may contain information stations, undeveloped and developed areas for overnight camping and stock facilities There may be a moderate level of outfitter/guide use

There is a low to moderate opportunity for solitude during July-September Opportunities are high at other times Users may experience a low to moderate degree of challenge and self reliance Users may see or hear other groups especially during July-September

High use levels at peak times may result in other users seeing and hearing other visitors Visitors may encounter other groups, which may slow their progress and may impact their solitude expectations Fixed anchors at rappel sites are evident Approach and descent trails are evident, and their impacts are managed to control erosion Fixed protection anchors on climbs may be evident to hikers at the base of cliffs, but not those on system trails

Refer to Chapter V and the "Jedediah Smith Wilderness Environmental Assessment for Forest Plan Amendment Process Paper" for detailed descriptions of opportunity classes (I, II, III) and use levels

Goals

- 1 The maintenance of the natural diversity of wildlife species is given high priority but does not dominate other uses except where measures are needed to recover listed threatened and endangered species. Temporary displacement of non-TES species may occur except on crucial ranges but there is no permanent displacement. Some habituation of species may be evident.
- 2 Human activities are managed so that modification of natural succession only occurs at campsites, trails, and grazed areas. Moderate vegetation loss persists from year-to-year at identified campsites.
- 3 There is no measurable downward trend in plant species composition and plant diversity due to livestock grazing. Utilization levels are compatible with maintaining or enhancing ecological condition. The range is managed so that plant communities are at or trending towards potential natural community status except where natural disturbance, and not livestock or recreation use, determines the lower seral condition.
- 4 A moderate amount of bare soil may persist from year-to-year due to human activities. A moderate amount of human-caused soil erosion may occur.
- 5 Research opportunities may include some instrumentation and moderate contact with visitors.
- 6 Manage for a moderate level of outfitter/guide use.

Objectives

Same as Prescription 1 1 7

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription, except that livestock grazing in existing Management Situation 2 habitat will continue to be managed under Management Situation 2 guidelines.

Ecological Processes and Patterns

Fire/Fuels

Natural and manager-ignited fires will be allowed to burn under predetermined prescriptive conditions as described in the Wilderness Fire Management Action Plan (G)

Biological Elements

Fisheries, Water, and Riparian Resources

1 Stocking of native and nonnative fish is permitted only in waters previously stocked by Game and Fish Department (S)

2 Fish stocking for reestablishment of native species may occur (G)

Wildlife

Grizzly Bear - In the event future trails or campsites are developed within the grizzly bear recovery zone, avoid locations within 1/2-mile of key habitat areas such as white bark pine stands, huckleberry patches, riparian areas and wet meadows, avalanche chutes, and seasonal insect feeding sites (G)

Harlequin Duck - Avoid locating new trails or campsites within 300 feet of streams which provide harlequin duck habitat (G)

Forest Use and Occupation

Access (S)- 1 1 8

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	No	No
Snow free Seasons	Motorized, <50" wide	No	No
	Motorized, >50" wide	No	No
	OROMTRD 2/	N/A	0.0 mi/sq mi
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	No	No

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps. Motorized use is prohibited, except for emergencies or valid uses specified in the law (FSM 2326 03)

2/ ROMTRD = Road and Trail Route Density includes all open roads and open motorized trails. (See Roads in Glossary for more information)

Recreation

Dispersed - Bear proof food storage boxes may be provided in Opportunity Class III zones for protection of the grizzly bear (G)

Directional, informational, regulatory and resource protection signs may be provided (G)

Trails/Bridges - Trails are well defined and brushed out. Bridges are provided where needed for resource protection and visitor safety (G)

ROS - Manage for a primitive to semi-primitive nonmotorized classification (G)

VQO - Manage for a preservation classification (S)

Heritage Resources

Evaluate, protect and interpret these resources in the context of a setting where there is moderate human influence and public visibility (G)

Production of Commodity Resources

Range

Same as 1 1 6 Designated Wilderness Opportunity Class I

1.2 WILDERNESS STUDY AREA

Description

This prescription applies to the Wyoming portion of the Palisades and Teton Basin Ranger Districts, which was designated as a Wilderness Study Area by the Wyoming Wilderness Act of 1984

The 1984 Act provided the area be administered to "maintain its present existing wilderness character and potential for inclusion in the National Wilderness Preservation System" (AMS, Roadless Areas, Page 7) The Act provided that oil and gas exploration and development be allowed in accordance with laws and regulations generally applicable to nonwilderness lands in the National Forest system, and that snowmobiling should continue to be allowed in the same manner and degree as was occurring prior to the date of enactment of the Act

This is a mostly pristine area where little sign exists of people away from trails or camping areas. They are undeveloped lands retaining their primeval character and influence, and are managed so as to preserve their natural condition. They generally appear to have been affected primarily by the forces of nature and therefore offer an excellent opportunity for solitude or a primitive and unconfined type of recreation. Occasionally, however, a visitor may see effects of human activity such as primitive campsites, rustic bridges, trails, signs, or primitive roads. A visitor may also encounter livestock, mining, or a snowmobile.

You may find areas of the forest where recent burns, insect activity, or blowdowns dominate the landscape. You would not expect to encounter very much motorized equipment, except snowmobiles.

This prescription meets the Interagency Grizzly Bear Committee definition for core areas.

Goals

1. Protect and perpetuate wilderness character.
2. Insects and disease are allowed to play, as nearly as possible, their natural ecological role in the environment.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Insects and Disease

Insect and plant disease epidemics may be controlled to prevent unacceptable damage to resources on adjacent lands or an unnatural loss to the Wilderness Study Area resource due to exotic pests (G)

Fire/Fuels

Minimum Impact Suppression Tactics (MIST) will be employed to the maximum extent possible (G)

Allow prescribed fires from both natural and management-ignition when they meet the objectives of the Wilderness Study Area (G)

Physical Elements

Soil and Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans, or where their influences create a serious threat or loss of the Wilderness Study Area values (G)

Promote natural healing where a definite hazard to life or property or important environmental qualities outside and within the Wilderness Study Area are not imminent, or where natural vegetation would return in a reasonable time (G)

Use indigenous species to reestablish vegetation as the first choice. Where native species are unlikely to succeed, use appropriate self-extirpating naturalized species (G)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of wilderness-like resources or to protect life, property, and other resource values outside the Wilderness Study Area (S)

Maintenance or reconstruction of existing water development structures is allowed if it does not change the location, size, or type, or which does not increase the storage capacity of a reservoir (G)

Minerals/Geology

Locatable - Withdraw from mineral entry, or remove from mineral entry through the notation rule, subject to valid existing rights (G)

Mineral Material - This area is not available for mineral material entry (S)

Biological Elements

Fisheries, Water and Riparian Resources

Fish stocking of native and nonnative species is allowed where it existed prior to establishment of the Wilderness Study Area (G)

Wildlife

Reintroduce wildlife species only if the species was once indigenous to the area and was eliminated by human-induced events (S)

Allow wildlife habitat manipulation only if (S)

- 1 The condition needing change is a result of abnormal human influence
- 2 The project can be accomplished with assurance that there will be no serious or lasting damage to wilderness characteristics
- 3 There is reasonable assurance that the project will accomplish the desired objectives

Forest Use and Occupation

Access (S) - 1 2

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Season	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Season	Motorized, <50" wide Motorized, >50" wide OROMTRD 3/	No 2/ No 2/ N/A	Yes No 2/ 0.2 m/sq mi
Snow Seasons	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes
1/ individual roads and trails are designated open or closed in the Forest Plan Travel Maps 2/ Motorized use is prohibited, except for emergencies or valid uses specified in the law 3/ OROMTRD = Open road and open motorized trail mute density includes all open roads and open motorized trails (See Roads in Glossary for more information)			

Trails and bridges are constructed/maintained to accommodate heavy foot and horse traffic (G)

Roads

Roads are allowed only to the extent they already exist (S)

Recreation

ROS - Manage for primitive or semi-primitive nonmotorized classification (G)

VQO - Manage for a preservation classification (S)

Heritage Resources

Remove structures that do not qualify for the National Register of Historic Places, or allow them to deteriorate naturally unless they are (G)

1 Deemed necessary to support public purposes of the Wilderness Study Area, or

2 Serve administration purposes

Interpretation of cultural resources located in the Wilderness Study Area shall be done outside the area (S)

Production of Commodity Resources

Timber

Trees may be cut only for valid mining claims under specific conditions, when emergency conditions such as fire, insect and disease arise, for protecting public safety, or when administrative use make it necessary (G)

1.3 RECOMMENDED WILDERNESS

Description

This prescription applies to areas that are recommended for addition to the Wilderness Preservation System. They will be managed in their present condition (including existing trail use and snowmachine use, as long as existing uses will not degrade the character of the resources) until Congress takes action on that recommendation. In the Lionhead area and the Winegar Hole Addition, this management prescription meets the Interagency Grizzly Bear Committee criteria for grizzly bear core areas (IGBC Task Force Report July 1994).

These are mostly pristine areas of the Forest where you find little sign of people away from trails or camping areas. They are undeveloped lands retaining their natural condition. They generally appear to have been affected primarily by the forces of nature and therefore offer an excellent opportunity for solitude or a primitive and unconfined type of recreation. Occasionally, however, a visitor may see effects of human activity such as primitive campsites, rustic bridges, trails, signs or primitive roads. A visitor may also encounter livestock or mining activity.

You may also find areas of the forest where recent burns, insect activity, or blowdowns dominate the landscape. You may encounter mechanized equipment on designated trails during the summer or snow-machine use during the winter.

Goals

Protect and perpetuate wilderness character

In the Lionhead area and Winegar Hole Addition, maintain grizzly bear core area attributes as defined in the IGBC Task Force Report, July 1994.

Objective

Within the grizzly bear recovery zone, an active education program will be implemented each year, including patrols during the fall hunt.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

In the Lionhead area and Winegar Hole Addition, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription.

The standards and guidelines for this prescription are the same as 1.2 (Wilderness Study) except as follows:

Forest Use and Occupation

Access (S) - 1 3

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestnan Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motonzed, <50" wide Motonzed, >50" wide OROMTRD 3/	No 2/ No 2/ N/A	Yes 2/ No 2/ 0 0 mi/sq mi
Snow Seasons 4/	Winter Nonmotonzed Snowmachine	Yes Yes 2/	Yes 5 Yes 2/
<p>1/ Individual mads and trails are designated open or closed in the Forest Plan Travel Maps</p> <p>2/Motonzed use is controlled as follows</p> <p>Idaho portion of Winegar Hole Motonzed use will be managed according to direction in adjacent Management Prescription 2 6 5</p> <p>Lionhead Closed to all motonzed vehicles. except open to snowmachines beginning Thanksgiving Day</p> <p>Italian Peak Open to two wheeled motonzed vehicles only on designated mutes, and snowmachines anywhere</p> <p>Palisades The Idaho portion is open to snowmachines. but closed to all other forms of motonzed use</p> <p>3/ OROMTRD =Open road and open motonzed trail route density includes all open roads and open motonzed trails. (See Roads in Glossary for more information)</p> <p>4/ Within grizzly bear BMUs. site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc) will be imposed to resolve human-gnuly bear conflicts</p>			

Recreation

- 1 Developed- Developed, hardened campsites are generally not allowed (G)
- 2 Existing hell-skiing operations which **do** not degrade wilderness values may continue (G)

2.1.1 SPECIAL MANAGEMENT AREAS

Description

This management prescription applies to areas with unique cultural, geologic, botanical, or zoological resource values, and sites which are listed or eligible for the National Register of Historic Places

Vegetation will vary depending on the objectives of each special area A mix of age class distributions, openings, and horizontal/vertical diversity may be present In general, vegetation will appear natural in the special management areas, however, exceptions may exist for some areas, and some human-caused vegetation manipulation will occur depending on the objectives of each special area

Facilities may or may not be present to manage the special areas. Access will range from black top roads, to trails, to no access at all. Administrative sites could have a variety of facilities such as buildings, roads, trails, microwave towers, boat ramps and pasture for the livestock used by Forest Service personnel to manage the Forest.

The amount of human activity apparent in special areas will vary, depending upon the management objectives of each area.

Special management areas may provide some forage for livestock. Timber harvest may be rare or not at all. Restricted livestock grazing and timber activities can be expected to provide additional protection to the special values in the area. Surface facilities for leasable minerals, such as oil and gas, will not be found within a special management area. To protect the values within a special management area, restrictions can be expected for valid existing rights to develop locatable minerals, such as precious metals and high value industrial minerals.

Because of the unique characteristics of these special management areas, these lands may provide economic opportunities for outfitter and guides, educational opportunities for the public and research opportunities for resource managers and academia. These areas will provide a spectrum of recreational opportunities from developed sites containing comfort facilities and visitor centers in a natural setting to sites with no access at all in a pristine setting.

Goal

- 1 Manage and protect the unique cultural, historic, botanical, geological, and/or zoological resources
- 2 Maintain or enhance the inherent values associated with each special interest area
- 3 Allow insects and disease to play their natural role in ecological succession, except where resource values will be adversely affected
- 4 Maintain or enhance the inherent wildlife habitat values associated with each special management area

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription (S)

Ecological Processes and Patterns

Fire/Fuels

Prescribed fire, utilizing both management-ignited and natural ignitions, may be used to maintain fire-dependent characteristics of the area (G)

Physical Elements

Soil and Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans (G)

Promote natural healing where natural vegetation would return in a reasonable time (G)

Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing (G)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of resources (S)

Lands

Establish exterior boundaries of sites when necessary for protection (G)

Minerals/Geology

Same as 1 2 Wilderness Study Area

Forest Use and Occupation

Access (S) - 2 1 1

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes 2/ Yes 2/ No	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD3/	No No N/A	Yes Yes <= 10 mi/sq mi
Snow Seasons	Winter Nonmotorized Snowmachine	Yes 2/ Yes 2/	Yes Yes

Roads

New road construction may occur if needed to meet the management objectives for the special management area (G)

Recreation

Dispersed - Minimal recreation facilities may be provided (such as trails, board walks, toilets, etc) Generally, such recreation facilities are not encouraged, and are only provided to protect resource values (G)

ROS - Primitive to roaded natural (G)

VQO - Retention to partial retention (G)

Heritage Resource

Multiple user interpretive sites may be provided Avoid indoor interpretive sites unless warranted by special circumstances (G)

Production of Commodity Resources

Range

Livestock grazing and associated developments (such as fencing) are permissible as long as they do not adversely affect the unique resources of the special management area (G)

Timber

These areas are removed from the suitable timber base. They do not contribute to the ASQ (S)

Generally, no timber harvesting will be allowed in special management areas. Exceptions to this may occur on a site-specific basis for such things as public safety, visual quality, long term maintenance of vegetation conditions, etc (G)

2.1.2 VISUAL QUALITY MAINTENANCE

Description

This prescription emphasizes maintaining the existing visual quality within major travel corridors with high quality natural vistas, while allowing livestock production, and other compatible commodity outputs. There is no scheduled timber harvesting.

Overall you may notice signs of people camping by the roadside. The main road system is paved or gravel-surfaced and well maintained, with gentle grades well suited for sedan travel. Vistas of the surrounding areas provide a variety of high quality views.

The roadside area is dominated by a wide variety of vegetation and landscape forms (e.g. mountain peaks, valleys, meadows, streams, etc.) that are easily observed from natural vistas and natural openings along the road. Occasionally, a few older cut areas show tree seedlings, saplings and poles up to 35 feet tall and have a less-disturbed appearing forest floor. Scattered dead trees are seen throughout the forest, but generally it appears healthy and vigorous.

If you watch for wildlife, you may occasionally see an elk, deer or moose in a natural opening or alongside the road, but generally these are hidden from view by the trees. During the summer and fall, you may encounter cattle or sheep grazing in openings. Signs of intensive management practices, such as burning, spraying, seeding, fences, water developments and gates are normally visually compatible.

Nonmotorized activities, such as hiking, biking or horseback riding may originate from trail or road points along the main road. Some roads and nearby areas are available for year-around snowmobile, motorcycle, and 4 wheel-drive vehicle use.

Goals

- 1 Manage these travel corridors to protect their natural visual quality
- 2 Manage these lands in an environmentally sensitive manner to promote the production of noncommodity resources at varying levels, and limited commodity production
- 3 Manage these lands to provide various dispersed recreational opportunities
- 4 Maintain stand vigor by controlling tree density

Standards and Guidelines

Forestwide standards and guidelines apply. The Standards and Guidelines are the same as 5.2.2 except as shown below.

Forest Use and Occupation

Access (S) - 2.1.2

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 3/	N/A	2/
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes
1/ individual roads and trails are designated open or closed in the Forest Plan Travel Maps			
2/ OROMTRD = Open road and open motorized trail. Mute density does not apply to this prescription area.			

Production of Commodity Resources

Timber

These areas are removed from the suitable timber base. They do not contribute to the ASQ (S).

2.2 RESEARCH NATURAL AREAS

Description

These management prescription areas are important ecological or natural areas established for nonmanipulative research, education, and to maintain natural diversity on National Forest system lands. They also may assist in carrying out provisions of special acts, such as the Endangered Species Act and the monitoring provisions of the National Forest Management Act.

These areas are good examples of physical or biological units in which current natural conditions are maintained insofar as possible. These conditions are ordinarily achieved by allowing natural, physical and biological processes to prevail without human intervention.

Nonmanipulative research activities occur in these areas. Some scientific instrumentation may be present. Since these areas are also used for education purposes, occasional groups of people may be present observing and being instructed about the area.

Generally, there are no developed facilities on site. Interpretation of special features will generally be done off site. A road or trail may be present to provide access primarily for research and education purposes. Recreation use is not promoted in these areas, and may be reduced or eliminated if adverse impacts are occurring.

There are nine established **RNAs** on the Targhee National Forest, as follows

Area Name	Year Established	Location	Size Acres	Area Features
Meadow Canyon'	1981	Dubois R D	3880	Alpine Tundra, Rare Plants 1/
Copper Mountain	1987	Dubois R D	550	Alpine Grassland
Thurman Creek	1991	Island Park R D	330	Spring Fed Streams
Moose Creek Plateau	1991	island Park R D	440	Obsidian Sands, Lodgepole Pine 2/
Willow Creek	1987	Ashton R D	1100	Aspen, Lumber Pine, Mtn Maple
Webber Creek	1988	Dubois R D	2245	High Mtn Grassland 1/
Burns Canyon	1996	Palisades R D	490	Sub-alpine Fir/ Ninebark Habitat 3/
Targhee Creek	1996	island Park R D	2640	Wet Meadows, Lakes, Alpine & Subalpine Ecosystems 1/, 2/
Sheep Mountain **	1996	Dubois R D	1542	Alpine Vegetation

This prescription meets the Interagency Grizzly Bear Committee definition for core areas

Goals

- 1 Maintain specially designated areas that provide representation of important terrestrial and aquatic ecosystems on the Forest
- 2 Protect and maintain these areas so that ecological processes prevail in the development of ecosystem composition and structure

Objective

By 2007, in cooperation with the Intermountain Research Station, develop a research plan and monitoring plan for each research natural area

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed as follows

Within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription (S)

Physical Elements

Minerals/Geology

Locatable - Withdraw from mineral entry, or remove from mineral entry through the notation rule, subject to valid existing rights (S)

Mineral Material - This area is not available for mineral material entry (S)

Forest Use and Occupation

Access (S) - 2 2

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes 2/ Yes 2/ No	Yes Yes Yes
Snow free Seasons	Motorized. <50" wide Motorized. >50" wide OROMTRD 3/	No No N/A	Yes Yes 3/
Snow Seasons	Winter Nonmotorized Snowmachine	Yes 2/ Yes 2/	Yes Yes

Recreation

No bear baiting (S)

2.3 ELIGIBLE WILD RIVER

Description

The purpose of this prescription is to maintain and protect the free-flowing character and the "outstandingly remarkable" values which qualify the river to be considered eligible as a Wild River in the National Wild and Scenic Rivers System pending a suitability determination. This prescription shall also be applied to a river determined to be suitable as a Wild River and to a river designated as a Wild River until such time as a Wild River Management Plan can be adopted. In Targhee Creek, this management prescription meets the Interagency Grizzly Bear Committee criteria for grizzly bear core areas (IGBC Task Force Report July 1994).

Wild Rivers are intended to remain as a "vestige of primitive America" with the river corridor, within at least 1/4-mile of the ordinary high water mark on each side of the river, essentially natural and unmodified. Management maintains or improves this undeveloped character, and prevents the degradation or loss of the fish and wildlife, scenic, recreational, cultural, historic, ecologic, or other values which are determined to be outstandingly remarkable. This management prescription provides recreation opportunities that afford a high degree of independence, closeness to nature and self-reliance in an unmodified natural setting.

A few inconspicuous roads and/or motorized trails may lead to the boundary of the river area. This will not disqualify a river segment from study for wild river classification. Motorized travel on land or water could be permitted but is generally not compatible with this prescription. Most existing intrusions of roads and motorized trails would be recommended for restriction or obliteration if designated by Congress.

Interaction between users is infrequent and evidence of resource management activities and other

users is minimal. Motorized use within the area is generally not compatible with this designation. Access is usually cross-country or on constructed trails.

The forest presents a natural appearance. A variety of forest successional stages may be present, ranging from areas with recent wildfires to old growth habitat. Firewood is available for camping, but is not available for home use. Outfitter and guiding activity may be present. Domestic livestock grazing may be present in some areas, and you may see limited range improvements such as fencing. A variety of nonforested rangeland successional stages may be present.

Eligible wild river segments are as follows:

RIVER	INVENTORIED TRIBUTARIES	LOCATION	LENGTH OF SEGMENT (miles)
Robinson Creek	None	From the Yellowstone N.P. boundary to Warm River	12.00
Targhee Creek	West and East Forks of Targhee Creek	Unnamed lake north of Edwards Lake to the boundary with the State section (within recommended wilderness)	12.50 includes tributaries
Henry's Fork of the Snake	None	Riverside Campground to 11.4 mile upstream from Mesa Falls, 11.4 mile downstream from Mesa Falls to Warm River	19.00
Waterfall Canyon	None	From the waterfall to Upper Palisades Lake (within recommended wilderness)	2.00
Palisades Creek	None	From the confluence of the north Fork of Palisades Creek and Corral Canyon to Palisades Campground (within recommended wilderness)	9.00
Darby Creek	North and South Forks of Darby Creek	From the source in the Darby Badlands to the boundary of the Jedediah Smith Wilderness	7.10
North Fork of Teton Creek	South and Roaring Forks of Teton Creek		
Bitch Creek	North and South Bitch Creek	From the source of the North and South Forks in the Jedediah Smith Wilderness to the forest boundary	28.00
Big Elk Creek	North, South and Siddoway Forks	Main stem and the lower two miles of each of the three forks (partly within recommended wilderness)	12.00

Goals

Maintain and protect the free flowing character and the outstandingly remarkable values of the river and corridor which qualify it as a wild river.

In Targhee Creek, maintain grizzly bear core area attributes as defined in the IGBC Task Force Report, July 1994.

Objective

Insects and disease are allowed to play, as nearly as possible, their ecological role in the environment

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

In Targhee Creek and Robinson Creek, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription.

In Bitch Creek, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply, except that livestock grazing in Management Situation 2 (MS2) habitat will continue to be managed under MS2 guidelines. (S)

Ecological Processes and Patterns

Insects and Disease

Insect and plant disease epidemics may be controlled to prevent unacceptable damage to resources on adjacent lands or an unnatural loss to the wild river resource due to exotic pests. (G)

When control is necessary, it shall be carried out by measures that have the least adverse impact on the wild river resource and are compatible with wild river management objectives. (S)

Fire/Fuels

Employ Minimum Impact Suppression Tactics to the maximum extent possible. (G)

Physical Elements

Soil and Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans or their influences create a serious threat or loss of outstandingly remarkable river resource values. (G)

Promote natural healing where a definite hazard to life or property or important environmental qualities outside and within this prescription area are not imminent, or where natural vegetation would return in a reasonable time. (G)

Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing. (S)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of outstandingly remarkable river resource values, or to protect life, property, and other resource values outside the area. (S)

Minerals/Geology

Locatable - These areas are recommended for withdrawal from mineral activity, or, should be removed from mineral entry through the Notation Rule, subject to valid existing rights. For valid existing claims, design mineral exploration, and development activities to be compatible with this prescription. Apply the following management practices to reduce resource impacts. (G)

- 1 Design mineral management activities to maintain the present and continued productivity of fish habitat.

- 2 Take maximum advantage of topographic and vegetation screening when locating mining facilities and equipment
- 3 Haul away, bury, burn, or scatter vegetation removed from the project area when vegetation is located adjacent to sensitive travel routes
- 4 Minimize the scale of spoil/disposal areas in relation to the surrounding landscape as seen from sensitive viewpoints
- 5 Use colors that simulate those found in the characteristic landscape. Avoid use of reflective materials in project facilities
- 6 Apply timing restrictions to instream construction as needed to protect fisheries habitat and mitigate adverse disturbance of stream sediments
- 7 Use sedimentation traps as needed to mitigate adverse stream sedimentation and meet State and Federal water quality regulations
- 8 Design reclamation plans so minerals activities leave a natural appearing condition
- 9 Shape landform modifications to simulate naturally occurring forms
- 10 Revegetate disturbed areas in accordance with project plans

Mineral Material -These areas are not available for mineral material entry (S)

Biological Elements

Fisheries, Water and Riparian Resources

Fish habitat will exist/evolve with natural ecological processes. Fish habitat manipulation can only occur if (S)

- 1 The condition needing change is a result of abnormal human influence
- 2 The project can be accomplished with assurance that there will be no serious or lasting damage to wild river values
- 3 There is reasonable assurance that the project will accomplish the desired objectives

Fish stocking of non-native species is allowed where it existed prior to establishment of the Wild River (S)

Wildlife

Reintroduce wildlife species only if the species was once indigenous to the area and was eliminated by human-induced events (S)

Wildlife habitat will exist/evolve with natural ecological processes. Wildlife habitat manipulation can only occur if (S)

- 1 The condition needing change is a result of abnormal human influence
- 2 The project can be accomplished with assurance that there will be no serious or lasting damage to outstandingly remarkable river values
- 3 There is reasonable assurance that the project will accomplish the desired objectives

Forest Use and Occupation

Access (S) - 2 3

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	NO	Yes
Snow free Seasons	Motorized. <50" wide	No	No 2/
	Motorized. >50" wide	No	No 2/
	OROMTRD 3/	N/A	0 0 miles mi 3/
Snow Seasons 4/	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ individual roads and trails are designated open in the Forest Plan Travel Maps

2/ This use may be allowed where currently existing and it does not degrade the outstandingly remarkable river values

3/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails. Some open roads and motorized trails may currently exist, most of these intrusions would be recommended for restriction or obliteration if designated by Congress (See Roads in Glossary for more information)

4/ Within grizzly bear BMUs, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc) will be imposed to resolve human-grizzly bear conflicts

Roads

No new roads may be constructed that would change or modify the classification for which the river was designated (S)

Recreation

Dispersed - Recreation facilities will be of a very primitive nature, using a pack-it-in, pack-it-out philosophy (G)

ROS - Primitive to semi-primitive nonmotorized (G)

VQO - Retention (S)

Heritage Resource

Remove structures that do not qualify for the National Register, or allow them to deteriorate naturally unless they are (G)

1 Deemed necessary to support public purposes of wild rivers, or

2 Serve administration purposes

Interpretation of heritage resources located in wild river corridors shall be done outside the corridor (S)

Outfitter/Guide

Permanent caches or nonnative improvements are not allowed unless they existed prior to the establishment of the wild river and have not been phased out. Upon designation of a Wild River, any existing caches will be phased out within two years (S)

Production of Commodity Resources

Range

Minimize conflicts with recreation use (G)

Range developments (water tanks, fences, etc) that do not detract from the overall objectives of the area are acceptable (G)

Timber

Lands are removed from the suitable timber base They do not contribute to the ASQ (S)

Cutting of trees will not be allowed except when needed in association with a primitive recreation experience (such as clearing for trails and protection of users) or to protect the environment (such as control of fire) (G)

2.4 ELIGIBLE SCENIC RIVER

Description

The purpose of this prescription is to maintain and protect the free-flowing character and the "outstandingly remarkable" values which qualify the river to be considered eligible as a Scenic River in the National Wild and Scenic Rivers System pending a suitability determination This prescription shall also be applied to a river determined to be suitable as a Scenic River and to a river designated as a Scenic River until such time as a Scenic River Management Plan can be adopted.

Proposed Scenic Rivers are managed to protect and enhance the outstandingly remarkable fish and wildlife, scenic, recreational, historic, cultural or other values identified for the river, within, as a minimum, 1/4-mile of the ordinary high water mark on each side of the river Moderate levels of existing development, including roads which cross the river but are generally screened from the river banks, are allowed New development and uses must not degrade the values which qualify the river for consideration as eligible Recreation facilities of a rustic design, including boat access, cabins, access roads leading to the river and trails are appropriate The area is managed to provide a waterway and associated shorelines where activities are not visually evident to the casual observer The Scenic River management prescription may provide recreation opportunities which meet high expectations for scenic quality associated with an essentially natural appearing environment and a free-flowing river

Administrative and recreation facilities are screened from the river Nonrecreation special use structures may occur if they meet visual quality objectives and do not degrade the outstandingly remarkable values Recreation facilities are designed to be compatible with the visual quality objectives of the river and corridor Recreation opportunities range from roaded natural to primitive Outfitter and guiding activity may be present

No development of hydroelectric power facilities is permitted New structures that would have a direct adverse effect on river values are not authorized

Lands are open to mineral entry subject to regulations prescribed by the Secretary of Agriculture to protect the free-flowing character and outstandingly remarkable values of the river Existing and new activity must minimize surface disturbance, sedimentation, air pollution, visual impairment, and meet applicable State Water Quality Standards Reasonable access is permitted

Fish and wildlife habitat improvement may occur and is designed to be visually compatible with the scenic qualities of the river and corridor

Roads are generally screened from the river and infrequent road and trail crossings (bridges) may be present. Trails paralleling the river are acceptable.

Domestic livestock grazing may be present in some areas. Range improvements may occur and are designed to be visually compatible with the scenic qualities of the river and corridor.

Forested lands are classified as unsuitable, no scheduled timber harvesting is allowed. Personal use wood cutting is compatible with this land use designation provided that management objectives are met.

Eligible scenic river segments are as follows:

RIVER	INVENTORIED TRIBUTARIES	LOCATION	LENGTH OF SEGMENT (miles)
Buffalo River	None	Buffalo River Springs to the confluence with Elk Creek	5.00
Henry's Fork of the Snake	None	Coffeepot Campground to McCrea's Bridge	4.50
Henry's Fork of the Snake	None	Island Park Dam to Box Canyon Summer Homes	3.00
Henry's Fork of the Snake	None	North boundary of Harriman Park to Pinehaven Subdivision	8.20
Henry's Fork of the Snake	None	From Mesa Falls 1/4 mile upstream and downstream	0.50
Warm River	None	Warm River Springs to the confluence with the Henry's Fork	9.00
Fall River	None	From the Yellowstone Park boundary to the National Forest boundary	11.50
Burns Creek	None	Just west of Crystal Lake to the trailhead	5.00
Big Elk Creek	None	First mile main stem	1.00
Bear Creek	North Fork and Deadman Creek	Main stem west of Palisades reservoir and the two forks	15.00

Goal

Maintain and protect the free-flowing character and the outstandingly remarkable values of the river and corridor which qualify it as a Scenic River.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

In Fall River, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this prescription (S).

For those segments of Warm River and Buffalo River lying within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 apply to this prescription (S).

Ecological Processes and Patterns

Insects and Disease

Allow sanitation and salvage of infested timber as long as such practices are carried out in such a way that there is no substantial adverse effect on the river and its immediate environment (G)

Fire/Fuels

Same as 2 3 Eligible Wild River

Physical Elements

Soil and Water

Same as 2 3 Eligible Wild River

Lands

Same as 2 3 Eligible Wild River

Minerals/Geology

Same as 2 3 Eligible Wild River

Biological Elements

Fisheries, Water and Riparian Resources

Fish stocking of non-native species is allowed (S)

Wildlife

Same as 2 3 Eligible Wild River

Forest Use and Occupation

Access (S) - 2 4

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motonzed, <50" wide	No	Yes 2/
	Motonzed, >50" wide	No	Yes 2/
	OROMTRD 3/	N/A	3/
Snow Seasons 4/	Winter Nonmotonzed	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps
 2/ Motorized use is allowed unless it needs to be prohibited or restricted to protect the river values
 3/ OROMTRD = Open road and open motorized trail route density does not apply to this prescription area
 4/ Within grizzly bear **BMUs**, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc.) will be imposed to resolve human-grizzly bear conflicts

Roads

No new roads may be constructed or road improvements made that would change or modify the classification for which the river was designated (S)

Recreation

Dispersed- Comfort and convenience facilities, such as fireboxes and shelters may be provided as necessary within the river area. These should harmonize with the surroundings and be managed so they do not adversely affect spawning grounds (G)

Maintain existing dispersed campsites that do not degrade the outstandingly remarkable values (G)

Trails - Trails and bridges paralleling or crossing the river are acceptable, provided VQO and ROS objectives for the river and corridor are maintained (G)

No new trails may be constructed or trail improvements made that would change or modify the classification for which the river was designated (S)

ROS - Primitive to semi-primitive motorized (G)

VQO - Retention (S)

Outfitter/Guide

Permanent caches or improvements are allowed if they meet the visual quality management objectives for the river and corridor and are within the Greater Yellowstone Area Outfitter Plan (G)

Production of Commodity Resources

Range

Range management is permitted to the extent it is currently practiced and does not degrade river values (G)

Range developments (water tanks, fences, etc.) that do not detract from the overall objectives of the area are acceptable (G)

Manage allotments at FRES levels B, C, or D (G)

Timber

Lands are not included in the suitable timber base. They do not contribute toward the ASQ (S)

Personal use wood cutting is allowed with restrictions to protect the outstanding remarkable values (G)

2.5 ELIGIBLE RECREATION RIVER

Description

The purpose of this prescription is to maintain and protect the essentially free-flowing character and the outstandingly remarkable values which qualify the river to be considered eligible as a Recreational River in the National Wild and Scenic Rivers System pending a suitability determination. This prescription shall also be applied to a river determined to be suitable as a Recreation River and to a river designated as a Recreation River until such time as a Recreation River Management Plan can be adopted.

Proposed Recreational Rivers are managed to protect the outstandingly remarkable fish and wildlife, scenic, recreational, historic, cultural or other values identified for the river, within, as a minimum, 1/4 mile of the ordinary high water mark on each side of the river. The area may include significant human development, residences, roads and highways, and minor existing modifications to the waterway, including diversion dams. Major water resource projects are not authorized. The area may include landscapes in a variety of visual conditions. Activities and structures may be dominant in some areas, but harmonize and blend with the generally natural-appearing environment to provide a pleasing setting for recreation activities. This management area prescription may provide recreation opportunities where the interaction between users may be moderate-to-high with evidence of current and past use prevalent. Roads are designed for conventional motorized vehicles. Facilities may exist for boat or aircraft use.

Allowed motorized use within the area may include boats, aircraft, snowmachines, construction and maintenance of needed facilities. Motorized land travel for recreation purposes may be restricted. All scheduled resource management activities are integrated in such a way that the recreation and water quality values remain paramount.

Administrative and recreation facilities are located and designed to complement and facilitate area management. Recreation opportunities range from semi-primitive nonmotorized to rural. Outfitter and guiding activity may be present.

To the extent of Forest Service authority, no development of hydroelectric power facilities is permitted. New structures that would have a direct adverse effect on river values are not authorized.

Lands are open to mineral entry subject to regulations prescribed by the Secretary of Agriculture. Existing and new activity must minimize surface disturbance, sedimentation, air pollution, visual impairment, and meet applicable State Water Quality Standards. Reasonable access is permitted.

Forested lands are classified as unsuitable, no scheduled timber harvesting is allowed. Personal use woodcutting is compatible with this land use designation provided that management objectives are met.

Design and location of roads and facilities provide for conventional motorized use. User safety and opportunities for nonmotorized recreation activities may be provided by restricting motorized use to designated routes and areas. Both motorized and nonmotorized trail opportunities may be provided.

Fish projects may be identified and implemented which create or improve fishing opportunity. Wildlife habitat emphasis is on maintaining healthy and productive habitat conditions for indigenous species and improving wildlife viewing opportunities.

Domestic livestock grazing may be present in some areas. Range improvements may occur and are designed to be compatible with the recreational qualities of the river and corridor.

Eligible Recreation River segments are as follows

RIVER	INVENTORIED TRIBUTARIES	LOCATION	LENGTH OF SEGMENT (miles)
Buffalo River	None	Confluence with Elk Creek to the backwaters of Pond's power dam	2.00
Henry's Fork of the Snake	Henry's Lake Outlet, Moose Creek	Big Springs to Coffeepot Campground, Outlet from Forest boundary to junction with Big Springs outflow. Moose Creek from source to junction with Henry's Fork	19.4 includes pail of Outlet and Moose Cr
Henry's Fork of the Snake	None	Box Canyon Summer Homes to the North boundary of Harriman State Park	1.80
Henry's Fork of the Snake	None	Pinehaven Subdivision to Riverside Campground	3.00
Pine Creek	West, North Pine Creek	Tie Canyon SW to Forest boundary	7.5

Consider the use of indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing (G)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of Recreational River resource values, or to protect life, property, and other resource values outside the area (S)

Lands

Same as 2 3 Eligible Wild River

Minerals/Geology

Same as in 2 3 Eligible Wild River

Biological Elements

Fisheries, Water and Riparian Resources

Fish stocking of non-native species is allowed (S)

Wildlife

Same as 2 3 Eligible Wild River

Forest Use and Occupation

Access (S) - 2 5

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow tree Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motonzed, <50" wide	No	Yes 2/
	Motonzed, >50" wide	No	Yes 2/
	OROMTRD 3/	N/A	3/
Snow Seasons 41	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

Recreation

Dispersed - All forms of recreation facilities may be provided, such as boat access points, trails, toilets, fire rings, grills, garbage collection, etc. Facilities are designed to be compatible with the ROS and VQO of the river and corridor and should be managed so they do not adversely affect spawning grounds (G)

Close the Henrys Fork of the Snake River from its headwaters at Big Springs downstream to the Big Springs boat launch, to all human entry including rafting, innertubing, swimming, wading, fishing and other motorized and nonmotorized activities, to protect fish habitat and other resource values (S)

Trails - Trails and bridges paralleling or crossing the river are acceptable, provided VQO and ROS objectives for the river and corridor are maintained (G)

- Both motorized and nonmotorized trail opportunities may exist (G)
- New trails could be constructed on one or both river banks. There can be several bridge crossings and numerous river access points (G)

ROS - Semi-primitive nonmotorized to urban (G)

VQO - Partial retention VQO in the foreground as seen from the river, roads, trails and recreational facilities (S)

- Modification to maximum modification for all other areas within the corridor (G)

Outfitter/Guide

Permanent caches or improvements are allowed if they meet the visual quality management objectives for the river and corridor and are within the Greater Yellowstone Area Outfitter Plan (G)

Production of Commodity Resources

Range

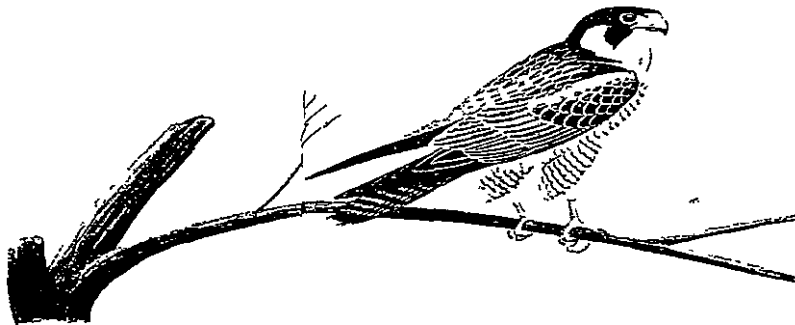
Range developments (water tanks, fences, etc) that do not detract from the overall objectives of the area are acceptable (G)

Manage allotments at FRES levels B, C, or D (G)

Timber

Lands are not included in the suitable timber base. They do not contribute to the ASQ (S)

Personal use wood cutting is allowed with restrictions to protect the outstandingly remarkable values (G)



2.6.1 (a) GRIZZLY BEAR HABITAT (NO ASQ, NO CROSS-COUNTRY, NO SHEEP)

Same as 5 3 5 except

Forest Use and Occupation

Access (S) - 2 6 1 (a)

Season	Type of Access	Crosscountry Travel	Road and Trail Travel 1/
Snow tree Seasons	Pedestrian Horse/Pack Stock Mtn BikeMechanized	Yes Yes Yes	Yes Yes Yes
Snow tree Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD 2/ TMARD	NO NO N/A N/A	Yes Yes
Snow Seasons 31	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes
<p>1/ individual roads and trails are designated open or closed in the Forest Plan Travel Maps</p> <p>21 TMARD = Total motonzed access route density includes all open and restricted roads and motorized trails (See Roads in Glossary for more informaton) Unless a figure is specified here, this is calculated on a BMU or subunit basis Please refer to the Forestwide standards and guidelines for Access</p> <p>OROMTRO = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information) Unless a figure is specified here, this is calculated on a BMU or subunit basis Please refer to the Forestwide standards and guidelines for Access</p> <p>31 Within grizzly bear BMUs, site-specific restrictions an winter recreation activity (such as area closures, timing restrictions, etc) will be imposed to resolve human-grizzly bear conflicts</p>			

Production of Commodity Resources

Range

No domestic sheep grazing is allowed (S)

Timber

Lands are not included in the suitable timber base They do not contribute to the ASQ (S)

2.6.2 GRIZZLY BEAR CORE AREA

Description

The core area is defined as an area that provides a predictable refuge in space and time for a bear population segment or family unit This area is consistently available for use by wary bears while activities occur elsewhere The core area contains moderate to high quality bear foods, provides predictable and consistently available space to meet seasonal bear habitat needs, and achieves the lowest mortality risk possible due to human activities for a period not less than 11 years Management activities shall follow established rules The primary emphasis for this area is on providing secure habitat for grizzly bears

This is a refugium of high quality habitat available to bears where management activities do not occur during the period bears are active Habitat conditions provide space that is consistently available and

predictably locatable to bears. This area provides a portion of the foraging requirement for a reproductive female and a female's offspring for spring, summer, and fall foraging away from human activities. Secure habitat exists, and mortality risk to bears is low.

This prescription meets the Interagency Grizzly Bear Committee definition for core areas.

Goals

1. Insects and diseases are allowed to play their natural role in ecosystem development.
2. Any nonfederal lands within this area will be a high priority for acquisition.
3. Manage dispersed recreation to minimize grizzly conflicts with humans.

Objective

A fire management plan will be developed (and will be coordinated with any adjacent wilderness fire plans) to address wildfires.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

The Interagency Grizzly Bear Guidelines for Management Situation 1 Habitat apply to this management prescription.

Ecological Processes and Patterns

Fire/Fuels

No prescribed fire is allowed (S)

In the event of a fire that warrants suppression, only minimum impact suppression techniques will be allowed (S)

Physical Elements

Minerals/Geology

Same as 2.3 Eligible Wild River

Biological Elements

Wildlife

No wildlife habitat improvement projects are allowed (S)

Forest Use and Occupation

Access (S) - 2 6 2

Season	Type of Access	Crosscountry Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	NO	NO
	Motorized, >50" wide	NO	NO
	TMARD 2/	N/A	
	OROMTRD 2/	N/A	0.0 mi/sq mi
Snow Seasons 3/	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

31 Within grizzly bear BMUs, site-specific restrictions on winter recreation activity (such as area closures, limiting restrictions, etc.) will be imposed to resolve human-grizzly bear conflicts

Roads

Construct no new roads (S)

Recreation

Special Uses - No special uses are allowed from April 1 to December 15 (S)

Trails - Construct no new trails (S)

ROS - Primitive to semi-primitive nonmotorized (G)

VQO - Retention (S)

Heritage Resource

No new interpretation/enhancement of cultural sites (S)

Outfitter/Guide

No outfitter and guide permits are allowed from April 1 to December 15 (S)

Production of Commodity Resources

Range

No livestock grazing permits of any kind are allowed (S)

Timber

Lands are not included in the suitable timber base. They do not contribute to the ASQ (S)

No vegetation management of any kind will occur (S)

2.6.5 GRIZZLY BEAR SECURITY AREA

Description

This area is consistently available for use by wary bears while activities occur elsewhere. This area contains moderate to high quality bear foods, provides predictable and consistently available space to meet seasonal bear habitat needs, and achieves the lowest mortality risk possible due to human activities for a period not less than the planning period. Management activities shall follow established rules. Emphasis for this area is on providing secure habitat for grizzly bears.

This is an area of high quality habitat available to bears where management activities are limited during the period bears are active. Habitat conditions provide space that is consistently available and predictably locatable to bears. This area provides a portion of the foraging requirement for a reproductive female and offspring for spring, summer, and fall foraging.

This prescription meets the Interagency Grizzly Bear Committee definition for core areas.

Goals

- 1 Insects and diseases are allowed to play their natural role in ecosystem development
- 2 Any nonfederal lands within this area will be a high priority for acquisition
- 3 Activities which adversely affect grizzly bear populations and/or their habitat will not be allowed
- 4 Manage dispersed recreation to minimize grizzly conflicts with humans

Standards and Guidelines

The Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription, except that livestock grazing in existing Management Situation 2 habitat will continue to be managed under Management Situation 2 guidelines.

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Fire/Fuels

Prescribed fire is allowed to maintain or improve grizzly bear habitat (G)

Physical Elements

Minerals/Geology

Same as 2.3 Eligible Wild River.

Biological Elements

Wildlife

1 Inventory, monitoring, and short duration activities such as trail maintenance, spraying weeds, range maintenance activities, wildlife habitat improvement, etc., should be concentrated in time and space (G)

2 Wildlife habitat improvement projects are permitted which maintain grizzly bear habitat (G)

Forest Use and Occupation
Access (S) - 2 6 5

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide TMAARD 2/ CROWTRD 2/	No N/A N/A	No No 00 m/sq m R
Snow Seasons 3/	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ TMAARD = Total motorized access route density includes all open and restricted roads and motorized trails (See Roads in Glossary for more information) Unless a figure is specified here, this is calculated on a BMLU or subunit basis Please refer to the Forestwide standards and guidelines for Access

CROWTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (see Roads in Glossary for more information) Unless a figure is specified here, this is calculated on a BMLU or subunit basis Please refer to the Forestwide standards and guidelines for Access Two roads are designated open through this prescription area the Ashton/Flag Ranch Road (#261) and the Jackass Loop Road (#264)

3/ Within grizzly bear BMLUs site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc) will be imposed to resolve human-grizzly bear conflicts

Roads
Same as 2 6 2 Grizzly Bear Core Area

Recreation
Special Uses

1 No new special uses are allowed from April 1 to December 15 (S)

2 Existing special use permits may be transferred (G)

Trails - Construct no new trails (relocating existing trails to maintain or improve habitat is permitted) (S)

ROS - Primitive to semi-primitive motorized (G)

VGO - Retention (S)

Heritage Resource

Same as 2 6 2 Grizzly Bear Core Area

Outfitter/Guide

No new outfitter and guide permits are allowed from April 1 to December 15 (S)

Production of Commodity Resources

Range

Forestwide standards and guidelines apply for the management of domestic sheep grazing in Management Situation 2 grizzly bear habitat (G)

Cattle grazing is allowed Allotment Management Plan will specify measures to meet agency grizzly goals and objectives (S)

Permittee's full compliance in meeting grizzly bear management goals and objectives for grizzly bear habitat will be a condition of the permit In addition, the following will be required (S)

1 Temporary cessation or modification of permitted livestock grazing activities will occur to resolve grizzly bear conflicts with humans or livestock

2 Livestock carcasses will be disposed of or rendered unattractive to bear within **24** hours after they are discovered Disposal may include removing the carcass from the area, burning, using an acceptable chemical repellent, or other methods approved by the District Ranger Disposal shall be in accordance with other governing agencies (such as the Wyoming Game and Fish Department) in order to determine cause of death for reimbursement purposes

3 Human food, refuse, and prepared livestock/pet foods associated with the livestock operation will be made unavailable to grizzlies through proper storage, handling, and disposal Proper storage includes a) inside a bearproof container, b) suspended horizontally from adjacent posts or trees, c) stored in a hard-sided vehicle or trailer, or d) other methods approved by the District Ranger The exception is when the food is being eaten or prepared for eating, or when food and similar organic matter is being transported Unburned human foods, garbage or other refuse will be carried off the Forest as often as practical

4 High quality food production areas for grizzlies such as wet alpine and subalpine meadows, stream bottoms, aspen groves, and other riparian areas will receive special grazing direction such as light, once-over grazing, special utilization standards, or complete closure These sites and their corresponding direction will be identified in the Annual Operating Plan

5 Livestock depredation believed to be associated with bears will be reported within **24** hours after they are discovered to the District Ranger and the proper State agencies

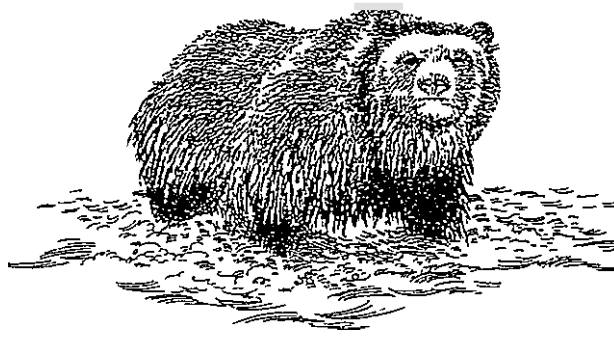
6 Any observation of grizzly bear or grizzly bear sign will be reported to the District Ranger as soon as practical

7 Any action taken by the permittee or their agents which violates the Endangered Species Act will be grounds for cancellation of their grazing permit

Timber

Lands are not included in the suitable timber base They do not contribute to the ASQ (S)

No firewood harvest is allowed other than for dispersed camping (S)



2.7 (a-b) ELK & DEER WINTER RANGE

Description

This management prescription emphasizes management actions and resource conditions which provide quality elk and deer winter habitat. Habitats are managed for multiple land use benefits, to the extent these land uses are compatible with maintaining or improving elk and deer winter habitat.

These areas are "crucial mid-to-late" natural winter ranges for deer and elk. These are the winter range areas which are considered to be the determining factor in a population's ability to maintain itself at a certain level over the long term. Moose, antelope and bighorn sheep may also be present.

Vegetation management occurs to maintain or improve winter habitat conditions. Winter range forage is abundant, includes a good mixture of grasses, forbs, and shrubs, and is well distributed throughout the area. Cover is maintained and well distributed.

Access is managed or restricted to provide security for wintering elk and deer. Area closures are emphasized where terrain and vegetation allow OHV use, with motorized use occurring only on designated routes.

Livestock grazing, timber management, recreation, and other resource management activities can occur as long as desired vegetation range conditions are being maintained.

Goals

- 1 Provide quality elk and deer winter range
- 2 Minimize forage use conflicts between big game and livestock on the winter range
- 3 Forested vegetation is managed to maintain or improve cover *or* forage conditions needed for wintering deer and elk
- 4 Nonforested vegetation is managed to maintain or improve forage production needed for wintering deer and elk
- 5 Minimize human disturbance to wintering big game animals

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed as follows:

Ecological Processes and Patterns

Fire/Fuels

Prescribed fire is allowed to maintain or improve winter habitat and enhance ecological conditions (G)

Forest Use and Occupation

Access (S) - 2 7 (a)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes 2/ Yes 2/ Yes 2/	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD 31	No No N/A	Yes Yes <= 2 0 mi/sq mi
Snow Seasons	Winter Nonmotorized Snowmachine	No NO	Yes 41 Yes 41

Access (S) - 2 7 (b)

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD 2/	No No N/A	Yes Yes <= 2 0 mi/sq mi 2/
Snow Seasons	Winter Nonmotorized Snowmachine	Yes No	Yes Yes 31
<p>1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps</p> <p>2/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)</p> <p>In 2 7 (b) Prescription areas <= 4 0 sq mi in size, OROMTRD does not apply</p> <p>31 Snowmachine use will be restricted to 50 feet on either side of a designated road or trail</p>			

Recreation

Dispersed - Manage recreation sites to maintain winter habitat conditions. Minimal recreation facilities may be provided (such as hitch rack, rudimentary toilets, etc.) Generally, recreation facilities are not encouraged (G)

ROS - Semi-primitive nonmotorized to roaded natural (G)

VQO - Retention to modification (G)

Heritage Resource

No new interpretation/enhancement of cultural sites (S)

Production of Commodity Resources

Timber

These areas are not part of the suitable timber base. They are not part of the **ASQ** (S)

2.8.3 AQUATIC INFLUENCE ZONE

Description

This prescription applies to the aquatic influence zone associated with lakes, reservoirs, ponds, perennial and intermittent streams, and wetlands (such as wet meadows, springs, seeps, and bogs). These areas control the hydrologic, geomorphic, and ecological processes that shape the various water types mentioned above and directly affect aquatic life. They also provide unique habitat characteristics which are important to those plant and animal species which rely on aquatic, wetland, or riparian ecosystems for all or a portion of their life cycle. Many such habitats are locally rare or are sensitive to disturbance (such as fens and thermal springs). Overall, these areas serve as important reservoirs of biodiversity, critical linkages for the interchange of plant and animal genetic material, specialized areas of nutrient cycling and freshwater filtration, storage, and transport, and are important to water quality.

Management emphasis is directed at the application of ecological knowledge to restore and maintain the health of these areas in ways that also produce desired resource values, products, protection, restoration, enhancement, interpretation, and appreciation of these areas.

These aquatic influence zones provide a high level of aquatic protection and maintain ecological functions (e.g., sediment transport, microclimate control, nutrient regulation, and connectivity within the watershed) and processes (e.g., stream channel formation, plant community development, recruitment of organic material including large wood, and hydrologic cycles) necessary for the restoration and maintenance of habitat for aquatic and riparian dependent organisms. They also maintain future management options.

This management prescription is defined on the ground using boundary widths which may vary by water type, and geographic characteristics. The actual boundaries of the aquatic influence zone, as determined by a person having current knowledge of fluvial geomorphology, of stream-riparian ecology, or both, could be narrower or wider than the prescribed boundary widths.

The five basic water types found on the Forest are

- 1 Fish-bearing Stream Reaches,
- 2 Perennial Non-fish-bearing Stream Reaches,
- 3 Lakes,

4 Reservoirs, Ponds and Wetlands Greater Than One Acre,

5 Intermittent Streams, and Wetlands Less Than One Acre

In cases of overlap, this prescription prevails over all other prescriptions except the following

Designated Wilderness - Opportunity Class I (Prescription 1 1 6)

Designated Wilderness - Opportunity Class II (1 1 7)

Designated Wilderness - Opportunity Class III (1 1 8)

Wilderness Study Area (I 2)

Recommended Wilderness (1 3)

Special Management Areas (2 1 1)

Research Natural Areas (2 2)

Eligible Wild River (2.3)

Eligible Scenic River (2 4)

Eligible Recreation River (2 5)

South Fork Eligible Scenic River (2 9 1)

South Fork Eligible Recreation River (2 9 2)

Developed Recreation Sites (4 1)

Special Use Permit Recreation Sites (4 2)

Dispersed Camping Management (4 3)

Concentrated Development Areas (8 1)

Where this prescription area runs through areas which meet the IGBC definition for core areas, this prescription area also meets the IGBC definition for core areas

Goals

- 1 Minimize adverse effects to aquatic and riparian dependent species from past, existing and proposed management activities
- 2 Allow endemic levels of insects and disease to play their natural role in ecological succession, compatible with other resource objectives
- 3 Manage wood residue (natural and human-made), including fuelwood, to maintain or restore ecological health and function
- 4 Coordinate with Idaho Fish and Game, Wyoming Game and Fish, and other interested individuals or groups, to identify and evaluate potential beaver reintroduction sites. Support reintroductions into areas that would benefit from beaver activity and where conflicts with other uses have been resolved

Objective

- 1 Within five years of the Record of Decision, all existing roads, trails, culverts, fords and stream crossings within these lands will be inventoried and evaluated as to whether they meet management prescription goals. Those that do not meet management prescription goals will be scheduled for restoration or obliteration

Standards and Guidelines

Forestwide standards and guidelines apply. Riparian forage utilization standards are found in the forest-wide standards and guidelines for Range. Additional direction for this prescription is listed below.

Boundary widths for the five water types apply until a site-specific analysis is completed. The slope

distances specified for boundary widths in the five water types will vary by ecological subsection. Following are the slope distances of boundary widths, in feet, by ecological subsection (G)

BOUNDARY WIDTHS OF WATER TYPES, BY SUBSECTIONS

Water Type			
	3,4	2	1,5,6,7
Fish-bearing Stream Reaches 1/	150	200	300
Perennial Nonfish-bearing Stream Reaches 1/	75	75	150
Lakes 2/	150	200	300
Reservoirs, Ponds, Wetlands Greater Than One Acre 3/	75	75	150
Intermittent Streams, Wetlands Less Than One Acre 4/	75	75	100
<p>1/ The boundary width is the slope distance on both sides of the stream, in feet, measured from the edge of the stream, or the area from the edge of the active stream channel to the outer edges of the riparian vegetation, whichever is greater</p> <p>2/ The boundary width is the slope distance specified, in feet, measured from the high water mark of the lake, or the area from the high mark of the lake to the outer edge of the riparian vegetation or seasonally saturated soil, whichever is greater</p> <p>3/ The boundary width is the slope distance specified, in feet, measured from the edge of the body of water (edge is defined as the maximum pool elevation of the water body), or the wetland area to the outer edges of the riparian vegetation, whichever is greater</p> <p>4/ The boundary width is the slope distance on both sides of the intermittent stream, in feet, measured from the edge of the stream, or the wetland area to the outer edges of the riparian vegetation, whichever is greater</p>			

Ecological Processes and Patterns

Insects and Disease

Where catastrophic insect and disease damage results in degraded riparian conditions, unscheduled timber harvest (salvage and commercial fuelwood cutting) is allowed where needed to attain the goals of this management prescription providing other goals of this management prescription are not adversely affected (G)

Fire/Fuels

Avoid locating bases, camps, helibases, staging areas, helispots, hazardous material storage facilities, and other centers for incident activities within these lands. If the only suitable location for such activities is within this area, an exception may be granted following a review and recommendation by a resource advisor. The resource advisor will prescribe the location, use conditions, and rehabilitation requirements (G)

Avoid application of chemical retardant, foam, or additives in these areas. Exceptions may be warranted in situations where overriding safety concerns exist, or following a review and recommendation by a resource advisor, when an escape would cause more long-term damage (G)

Prescribed fire activities on adjacent lands must be compatible with management prescription goals. (S)

Use minimum impact suppression methods (G)

Physical Elements

Lands

Avoid locating utility corridors and their access roads in these lands whenever possible (G)

Minerals/Geology

Adequate reclamation plans and bonds are required in mining plans of operation. These bonds must cover the full costs of removing facilities, equipment, and materials, recontouring disturbed areas to near pre-mining topography, isolating and neutralizing or removing toxic or potentially toxic materials, salvaging and replacing topsoil, and preparing seedbeds and revegetating to meet management prescription goals (S)

Do not locate permanent structures or facilities within these lands (S)

Do not locate waste dumps, leaching pads, and other facilities within these lands where other alternatives are available. If no other alternative exists, ensure that safeguards are in place to prevent release or drainage of toxic or other hazardous materials onto these lands (S)

Do not allow debris, overburden, and other materials associated with mining activities to be placed within these lands if other alternatives are available. If no alternative is available, place them outside the active floodplain and outside the Stream Protection Zones defined by the state. In either case, place them in such a manner as to prevent their entry by erosion, high water, or other means into stream channels (S)

Discourage mineral material extraction (subject to valid permitted rights, or where permitted by plans of operation) (G)

Plans of operation will be consistent to the fullest extent possible with management prescription goals (G)

Biological Elements

Wildlife

Strive to maintain dead and defective tree habitat at a level capable of supporting 100 percent potential populations of the management indicator species for primary cavity excavators. (G)

Forest Use and Occupation

Access (S) - 2 8 3

Season	Type of Access	Cross-Country Travel 2/	Road and Trail Travel 1/
Snow free Seasons	Pedestnan	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motonzed, <50" wide	No	Yes
	Motonzed, >50" wide	No	Yes
	OROMTRD 3/	NA	3/
Snow Seasons 4/	Winter Nonmotonzed	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ When cross-country travel is found to result in soil displacement in excess of 15 percent of an activity area, or alternation of natural stream channel morphology, reduce impacts through education, use limits, more intensive maintenance, facility modification, and/or closures

3/ OROMTRD= Open road and open motonzed trail route density includes all open roads and open motorized trails. The acres in this prescription area and the OROMTRD will be included in the calculations with the acres and OROMTRD in adjacent upland prescription areas (See Roads in Glossary for more information)

4/ Within grizzly bear BMUs, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc) will be imposed to resolve human-grizzly bear conflicts

Containers holding more than five gallons of spare vehicle fuel should be stored outside the AIZ or stored in such a way as to prevent leakage into riparian areas. Vehicle refueling should be done in a way that avoids contamination of water bodies (G)

Roads and Trails

No new roads, trails, or landings will be constructed within these lands until appropriate standards for construction, maintenance, and operations are in place (G)

Improve, seasonally close, close, relocate and stabilize, or obliterate roads and trails that have been identified as posing a high risk of causing unnaturally high levels of sediment input or are known to be doing so. Action to be taken will be determined based on travel management needs, terrain, the need for the road or trail, the potential environmental impacts, and resource priorities (G)

Roads and trails or sections of them that have been identified as inhibiting riparian, wetland or aquatic ecosystem processes and/or functions (e.g., plant community development, sediment transport, and stream channel development) will be improved, relocated, or obliterated. The decision to improve, relocate, or obliterate will be based on the potential environmental impact, the ecological condition of the riparian, wetland and aquatic resources affected, and the need for the road or trail (G)

Culverts and stream crossings found to pose a risk to riparian, wetland or aquatic conditions will be improved to accommodate at least a 50-year flood, including associated bedload and debris (G)

New stream crossings will be constructed and maintained to prevent diversion of streamflow out of the channel and down the road in case of failure. In locations found to have high potential for failure, the roadway will be hardened to further lessen the chance of roadway failure or severe erosion should the crossing overtop (G)

Constructed temporary stream crossings, such as log and culvert installations, may be allowed if temporary crossings will be constructed and used in such a way as to minimize sediment input and to provide for fish passage. They will be maintained during use and removed and rehabilitated as soon as they are no longer needed (G)

Construct, reconstruct, and maintain all road and trail crossings of streams which currently or historically bear fish to provide for fish passage. Exceptions are allowed where it is necessary to restrict fish movements in order to protect native or desirable nonnative fish populations (G)

Conserve surfacing materials and protect riparian resources, by properly maintaining roads and avoiding side casting during road maintenance activities (G)

Recreation and Outfitter/Guide

When dispersed recreation is found to result in soil disturbance in excess of 15 percent of an activity area, or alteration of natural stream channel morphology, address impacts through education, use limits, more intensive maintenance, facility modification, and /or closures (G)

Recreational grazing must meet range standards for utilization of riparian vegetation (S)

Permitted stock holding, watering, and handling facilities within riparian vegetation (may not include the entire AIZ boundary) are allowed only if appropriate mitigation measures are implemented to reduce negative impacts (S)

ROS - Primitive to urban (G)

VQO - Retention to modification (G)

Production of Commodity Resources

Range

Incorporate into AMPs, objectives for attainment of desired vegetation conditions for riparian plant community seral stage development and stream channel condition (G)

Proposed livestock watering facilities, corrals, and holding pastures within these lands are allowed only if appropriate mitigation measures are implemented to reduce negative impacts (S)

Existing livestock watering facilities, corrals, and holding pastures within these lands are allowed at permit issuance only if mitigation measures are implemented to reduce negative impacts (G)

Timber

These lands are not included in the suitable timber base. They are not part of the ASQ (S)

Where needed to attain management prescription goals, design silvicultural prescriptions and allow prescribed burning and stocking control, as well as the reestablishment and culturing of stands to attain desired vegetation characteristics (G)

Mechanized treatment of wood residue is minimized (G)

Burning of mechanized treated wood residues within the bankfull channel is prohibited (S)

Where catastrophic events such as fire or windstorms result in degraded riparian conditions, unscheduled timber harvest (salvage and commercial fuelwood cutting) may be selected as the most desirable management practice (G)

2.9.1 SOUTH FORK ELIGIBLE SCENIC RIVER

Description

This prescription applies to the portion of the South Fork of the Snake River that has been determined to be an eligible scenic river, consisting of the water surface, islands, sand bars, riparian vegetation, and adjacent uplands from Conant Valley powerline downstream to Riley Diversion (17 miles)

Within this corridor are campgrounds, picnic sites, boating sites/ramps, and other facilities such as trailheads, scenic and wildlife viewing areas, fishing access points and inventoried National Forest recreation sites selected for potential development. Development ranges from native material roads and campsites, with nonflush toilets, to a high degree of site modification with comfort and convenience facilities including paved roads, water systems, flush toilets, and boat launches.

Overall, you notice signs of people, generally oriented toward water use. Drifting downstream in a boat, you notice roads, buildings, picnic tables, camping spots and, occasionally, people fishing along the river bank. You hear sounds of vehicles and other human activity. You will see powerlines across the river from time to time. Other stretches of river have few roads or developments and provide a relatively quiet, peaceful, natural setting.

As you float you often see stands of cottonwood, most of them mature. In and around these cottonwood stands you may see bald eagles or peregrine falcon perched in trees, or great blue heron on the ground. During the winter you may see elk, moose, and deer on adjacent slopes.

During the summer, livestock may be seen grazing next to the river and on nearby slopes.

The management direction contained in the Snake River Activity/Operations Plan, as developed between the U S Forest Service and the Bureau of Land Management and signed in February 1991, applies to this area. This management direction will be adjusted (if necessary) to reflect direction from the required suitability study.

Goals

1. Maintain the river's scenic values.
2. Maintain or enhance critical nesting, foraging and wintering areas for bald eagles, maintain big game winter range and improve unsatisfactory big game habitat. Maintain heron rookeries and improve goose nesting opportunities.

Standards and Guidelines

Manage this area according to the standards and guidelines established in the Snake River Activity/Operations Plan (U S Forest Service & Bureau of Land Management, February 1991), except for the direction shown below (S).

Physical Elements

Minerals/Geology
Same as 2.3 Eligible Wild River

Forest Use and Occupation

Access (S) - 2 9 1

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized. <50" wide	No	Yes
	Motorized. >50" wide	No	Yes
	OROMTRD 2/	N/A	2/
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	No	Yes
1/ individual roads and trails are designated open or closed in the Forest Plan Travel Maps			
2/ OROMTRD= Open road and open motorized trail route density does not apply to this prescription area			

2.9.2 SOUTH FORK ELIGIBLE RECREATION RIVER

Description

This prescription applies to the portion of the South Fork of the Snake River that has been determined to **be** an eligible recreation river, consisting of the water surface, islands, sand bars, riparian vegetation, and adjacent uplands

The rest of the description is the same as the scenic portion of the river (2 9 I)

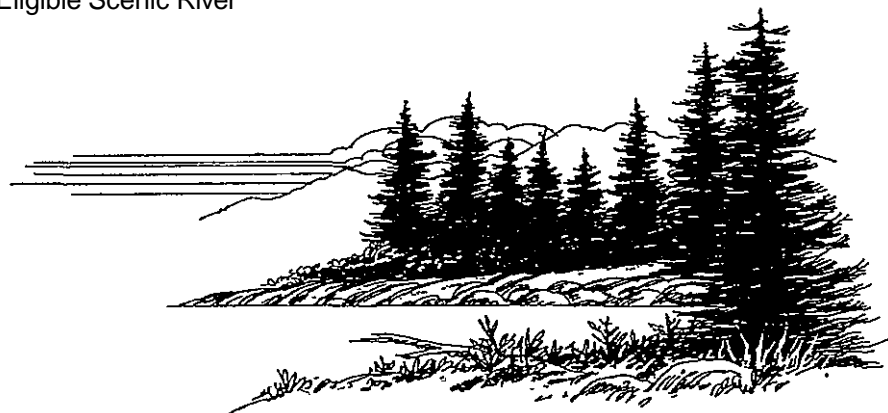
Goals

Goals are the same as the scenic portion except

Maintain the river's recreation values, from Palisades Dam to Conant Valley powerline, some 165 miles

Standards and Guidelines

Same as 2 9 1 S Fork Eligible Scenic River



3.1.1 (a) NONMOTORIZED

Description

This management prescription identifies areas where semi-primitive nonmotorized recreation **use**, like hiking and horseback riding, will occur during the summer months. The experience is similar to a primitive experience, but does allow some motorized use, like chainsaws for summer trail maintenance, snowmachines during the winter, and helicopters. Groomed snowmachine trails are not allowed.

These areas are accessible by trails or cross-country, you find no usable roads. All-terrain vehicles and motorcycles cannot use the area. Encounters with other people diminish as you move away from nearby roads and trailheads. Generally, you experience a backcountry setting with a high likelihood of solitude. However, you may occasionally meet large groups.

You may find oversnow vehicles, helicopter use, stock tanks, or fences. Otherwise, the forest generally presents a natural appearance. A variety of forest seral stages may be present, ranging from areas with recent wildfires to old growth habitat. Firewood is available for camping, but is not generally available for home use. Outfitter and guiding activity may be present. Domestic livestock grazing may be present in some areas, and you may see range improvements such as fencing and stock tanks. A variety of nonforested rangeland seral stages may be present.

Goals

1. Maintain or enhance semi-primitive nonmotorized dispersed recreation opportunities outside of the winter season.
2. Prescribed natural fire and manager-ignited fire will be managed to maintain fire's ecological role and to enhance habitat.
3. Allow insects and disease to play their natural role in ecological succession, compatible with other resource objectives.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Fire/Fuels

The emphasis will be on prescribed natural fire whenever conditions permit. (G)

Employ Minimum Impact Suppression Tactics (MIST) to the maximum extent possible. (G)

Physical Elements

Soil and Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans or their influences create a serious threat or loss of resource values. (G)

Promote natural healing where a definite hazard to life or property or important environmental qualities outside and within this prescription area are not imminent, or where natural vegetation would return in a reasonable time. (G)

6

Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing (G)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of semi-primitive nonmotorized resources or to protect life, property, and other resource values outside the area (S)

Minerals/Geology

Same as 1 2 Wilderness Study Area

Forest Use and Occupation

Access (S) - 3 1 1 (a)

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	No 2/
	Motorized, >50" wide	No	No 2/
	OROMTRD 3/	N/A	0 0 mi/sq mi 3/
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ Motorized use is not allowed, except that motorized equipment is allowed for trail construction/maintenance. Motorized transport of Forest Service employees is not allowed except on contracts where motorized maintenance equipment is being used.

YOROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

Roads

Existing system or nonsystem roads will be closed as soon as practicable (S)

No new road construction (S)

Recreation

Dispersed- Minimal recreation facilities may be provided (such as hitch rack, rudimentary toilets, etc) not to exceed Development Level I (see Glossary) Generally, recreation facilities are not encouraged (G)

High impact campsites should be restored to meet Frissell Condition Class 3 (see Glossary) (G)

Trails - Trails and bridges are constructed/maintained to a level to accommodate heavy foot and horse traffic, where allowed (G)

- Motorized/mechanized trail maintenance and construction equipment may be used (G)

ROS - Primitive to semi-primitive nonmotorized (G)

VQO - Retention to partial retention (G)

Production of Commodity Resources

Range

Livestock Grazing - Range developments (water tanks, fences, etc) that do not detract from the overall objectives of the area are acceptable (S)

Timber

These areas are removed from the suitable timber base They do not contribute to the ASQ (S)

No timber harvesting, except for 'minor' forest products such as camp firewood, posts and poles for fencing on Forest only, administrative use, etc Harvesting does not trigger the need for reforestation Chainsaws are allowed (S)

3.1.2 NONMOTORIZED

Description

This management prescription identifies areas where semi-primitive nonmotorized recreation use, like hiking and horseback riding, will occur during the summer months The experience is similar to a primitive experience, but does allow some motorized use, like chainsaws for summer trail maintenance, snowmachines during the winter, and helicopters Groomed snowmachine trails are not allowed

This management prescription meets the Interagency Grizzly Bear Committee criteria for grizzly bear core areas (IGBC Task Force Report, July 1994)

These areas are accessible by trails or cross-country, you find no usable roads All-terrain vehicles and motorcycles cannot use the area Encounters with other people diminish as you move away from nearby roads and trailheads Generally, you experience a backcountry setting with a high likelihood of solitude However, you may meet large groups occasionally

You may find oversnow vehicles, helicopter use, stock tanks, and fences Otherwise, the forest presents a natural appearance. A variety of forest successional stages may be present, ranging from areas with recent wildfires to old growth habitat Firewood is available for camping, but is not available generally for home use Outfitter and guiding activity may be present Domestic sheep grazing is greatly reduced or absent to provide better management in grizzly bear habitat Cattle grazing may be present in some areas, and you may see range improvements such as fencing and stock tanks A variety of nonforested rangeland successional stages may be present

Goals

- 1 Maintain or enhance semi-primitive nonmotorized dispersed recreation opportunities outside of the winter season
- 2 Maintain grizzly bear core area attributes as defined in the IGBC Task Force Report, July 1994

Standards and Guidelines

Forestwide standards and guidelines apply Within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription, except that livestock grazing in existing Management Situation 2 habitat will continue to be managed under Management Situation 2 guidelines Additional direction for this prescription is listed below

Ecological Processes and Patterns

Insects and Disease

Allow insects and disease to play their natural role in ecological succession, compatible with other resource objectives (G)

Fire/Fuels

Wildfire will be managed using the appropriate suppression response. The emphasis will be on prescribed natural fire whenever conditions permit (S)

Employ Minimum Impact Suppression Tactics (MIST) to the maximum extent possible (G)

Use management-ignited fire to maintain fire's ecological role and to enhance habitat (G)

Physical Elements

Soil and Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans or their influences create a serious threat or **loss** of resource values (G)

Promote natural healing where a definite hazard to life or property or important environmental qualities outside this prescription area are not imminent, or where natural vegetation would return in a reasonable time (G)

Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing (S)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of semi-primitive nonmotorized resources or to protect life, property, and other resource values outside and within the area (G)

Minerals/Geology

All operating plans and special use permits will specify measures to meet grizzly bear management goals and objectives for grizzly bear habitat. The following will be required (S)

- 1 Temporary cessation or modification of permitted activities will occur to resolve grizzly bear conflicts
- 2 Human food, refuse, and prepared livestock/pet foods associated with the permitted activity will be made unavailable to grizzlies through proper storage, handling, and disposal. Proper storage includes a) inside a bearproof container, b) suspended horizontally from adjacent posts or trees, c) stored in a hard-sided vehicle or trailer, or d) other methods approved by the District Ranger. The exception is when the food is being eaten or prepared for eating, or when food and similar organic matter is being transported. Unburned human foods, garbage or other refuse will be carried off the forest as often as practical.
- 3 Any observation of grizzly bear or grizzly bear sign will be reported to the District Ranger as soon as practical.
- 4 Access roads that are not open on the travel plan will be low standard roads and gated to allow access only to the operators. Nonwinter motorized use behind locked gates is authorized only for permitted activities.

Forest Use and Occupation

Access (S) - 3 1 2

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	NO	No 2/
	Motorized, >50" wide	NO	No 21
	TMARO 3/	N/A	
	OROMTRD 3/	N/A	0.0 m/sq mi
Snow Seasons 4/	Winter ** motorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

21 Motorized use is not allowed, except that motorized equipment is allowed for trail construction/maintenance. Motorized transport of Forest Service employees is not allowed except on contracts where motorized maintenance equipment is being used.

3/ TMARO = Total motorized access route density includes all open and restricted roads and motorized trails (See Roads in Glossary for more information). Unless a figure is specified here, this is calculated on a BMU or subunit basis. Please refer to the Forestwide standards and guidelines for Access.

OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information). Unless a figure is specified here, this is calculated on a EMU or subunit basis. Please refer to the Forestwide standards and guidelines for Access.

4/ Within grizzly bear BMUs, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc.) will be imposed to resolve human-grizzly bear conflicts.

Roads

Construct no new roads (S)

Recreation

Dispersed - Minimal recreation facilities may be provided (such as hitch rack, rudimentary toilets, etc.) not to exceed Development Level I. Generally, recreation facilities are not encouraged (G)

High impact campsites should be restored to meet Frissell Condition Class 3 (G)

Trails - Trails and bridges are constructed/maintained to a level to accommodate heavy foot and horse traffic, where allowed (S)

Motorized/mechanized trail maintenance and construction equipment may be used (G)

ROS - Primitive to semi-primitive nonmotorized (S)

VQO - Preservation to partial retention (G)

Production of Commodity Resources

Range

Forestwide standards and guidelines apply for the management of domestic sheep grazing in Management Situation 2 grizzly bear habitat (G)

Cattle grazing is allowed (S)

Allotment Management Plans will specify measures to meet agency grizzly goals and objectives (S)

Permittee's full cooperation in meeting grizzly bear management goals and objectives for Situation 2 grizzly bear habitat will be a condition of the permit. In addition, the following will be required (S)

- a Temporary cessation or modification of permitted livestock grazing activities may occur to resolve grizzly bear conflicts with humans or livestock
- b Livestock carcasses will be disposed of or rendered unattractive to bear within 24 hours after they are discovered. Methods may include removing the carcass from the area, burning, using an acceptable chemical repellent, or others approved by the District Ranger. Disposal shall be in accordance with other governing agencies (such as the Wyoming Game and Fish Department) in order to determine cause of death for reimbursement purposes
- c Human food, refuse, and prepared livestock/pet foods associated with the livestock operation will be made unavailable to grizzlies through proper storage, handling, and disposal. Proper storage includes a) inside a bearproof container, b) suspended horizontally between adjacent posts or trees, c) stored in a hard-sided vehicle or trailer, or d) other methods approved by the District Ranger. The exception is when the food is being eaten or prepared for eating, or when food and similar organic matter is being transported
- d High quality food production areas for grizzlies such as wet alpine and subalpine meadows, stream bottoms, aspen groves, and other riparian areas will receive special grazing direction such as light, once-over grazing, special utilization standards, or complete closure. These sites and their corresponding direction will be identified in the Annual Plan of Use
- e Livestock depredation believed to be associated with bears will be reported within 24 hours after they are discovered to the District Ranger and the proper State agencies
- f Any observation of grizzly bear or grizzly bear sign will be reported to the District Ranger as soon as practical
- g Any action taken by the permittee or their agents which violates the Endangered Species Act will be grounds for cancellation of their grazing permit

Range developments (water tanks, fences, etc.) that do not detract from the overall objectives of the area are acceptable (S)

Timber

These areas are removed from the suitable timber base. They are not part of the ASQ (S)

No timber harvesting, except for 'minor' forest products such as camp firewood, posts and poles for fencing on Forest only, administrative use, etc. Harvesting does not trigger the need for reforestation. Chainsaws are allowed (S)

3.2 (b,c,d,g,i,j) SEMI-PRIMITIVE MOTORIZED

Description

This management prescription identifies areas with a semi-primitive backcountry recreation experience, associated with some motorized vehicle use. These areas are accessible by roads and trails. Cross-country motorized vehicle use is only allowed in prescription areas 3.2 (b) and 3.2 (f). Roads and trails are designed and maintained to allow easy passage. You will find occasional to frequent encounters with trail users. You may meet large groups occasionally.

Generally, the forest presents a natural appearance. A variety of forest successional stages may be present, ranging from areas with recent wildfires to late successional habitat. Firewood is available for camping and home use. Outfitter and guiding activity may be present. Domestic livestock grazing may be present in some areas, and you may see range improvements such as fencing and stock tanks. A variety of nonforested rangeland successional stages may be present.

Goals

1. Maintain or enhance semi-primitive motorized dispersed recreation opportunities.
2. Prescribed natural fire and management-ignited fire will be managed to maintain fire's ecological role and to enhance habitat.

Standards and Guidelines

Within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to management prescription 3.2 (c), except that livestock grazing in existing Management Situation 2 habitat will continue to be managed under Management Situation 2 guidelines.

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Insects and Disease

Allow insects and disease to play their natural role in ecological succession. (G)

Fire/Fuels

The emphasis will be on prescribed natural fire whenever conditions permit. (G)

Employ Minimum Impact Suppression Tactics (MIST) to the maximum extent possible. (G)

Physical Elements

Minerals/Geology

All operating plans and special use permits will specify measures to meet grizzly bear management goals and objectives for grizzly bear habitat. The following will be required. (S)

1. Temporary cessation or modification of permitted activities will occur to resolve grizzly bear conflicts.

2. Human food, refuse, and prepared livestock/pet foods associated with the permitted activity will be made unavailable to grizzlies through proper storage, handling, and disposal. Proper storage includes a) inside a bearproof container, b) suspended horizontally from

adjacent posts or trees, c) stored in a hard-sided vehicle or trailer, or d) other methods approved by the District Ranger. The exception is when the food is being eaten or prepared for eating, or when food and similar organic matter is being transported. Unburned human foods, garbage or other refuse will be carried off the forest as often as practical.

3 Any observation of grizzly bear or grizzly bear sign will be reported to the District Ranger as soon as practical.

4 Access roads that are not open on the travel plan will be low standard roads and gated to allow access only to the operators. Nonwinter motorized use behind locked gates is authorized only for permitted activities.

Biological Elements

Wildlife

Maintain snags at 60 percent of biological potential for woodpeckers (G)

Forest Use and Occupation

Access (S) - 3 2 (b)

Season	Type of Access	Cross Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motorized. <50" wide Motorized. >50" wide OROMTRD	Yes 2/ No N/A	Yes Yes <= 1.0 mi/sq mi 3/
Snow Seasons	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes
<p>2/ Motorized use is not allowed on slopes > 40%, on unstable soils, or during the period from October 1 to December 30.</p> <p>3/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information). In the Spring Mtn Canyon area (Lemhi Mtns, Dubois R D) OROMTRD is <= 1.3 miles/square mile.</p>			

Access (S) - 3 2 (c)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes 2/
	Motorized, >50" wide	NO	Yes 2/
	OROMTRD 3/	N/A	
Snow Seasons 4/	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ Motorized use is generally not allowed on designated trails during the period from October 1 to December 30, except where noted on the Forest Plan Travel Maps

3/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information) Unless a figure is specified here, this is calculated on a EMU or subunit basis Please refer to the Forestwide standards and guidelines for Access

4/ Within grizzly bear BMUs, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc) will be imposed to resolve human-grizzly bear conflicts

Access (S) - 3 2 (d)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD	N/A	<= 10 milsq mi 2/
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

In 3 2 (d) Rescription areas <= 3 5 sq mi in size. OROMTRD does not apply

Access (S)- 3 2 (g)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	NO	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD	N/A	<= 1 0 mi/sq mi 2/
Snow Seasons 3/	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information) In grizzly bear habitat, this is calculated on a BMU or subunit basis Please refer to the Forestwide standards and guidelines for Access In 3 2 (g) prescription areas which are narrow linear road corridors (ie Pass Creek Eightmile Creek, Irving Creek, East Dry Creek). OROMTRD does not apply This figure applies to other areas outside the BMU's

3/ Within grizzly bear BMUs, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc) will be imposed to resolve human-grizzly bear conflicts

Access (S)- 3 2 (l)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 1 2 mi/sq mi 2/
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

Access (S) - 3 2 (j)

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD2/	N/A	<= 0.5 mi/sq mi 2/
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes
1/ individual roads and trails are designated open or closed in the Forest Plan Travel Maps			
2/ OROMTRD= Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)			

Roads

Generally, construct no new roads (G)

Recreation

Dispersed- Dispersed recreation facilities may be provided to reduce adverse resource impacts at heavily used sites (G)

- Development level shall not exceed Level 2 for developed recreation sites (see Glossary) (S)

- High impact campsites should be restored to meet Frissell Condition Class 3 (see Glossary) (G)

Trails - Trails and bridges are constructed/maintained to a level to accommodate heavy foot, horse, and motorized vehicle traffic, where allowed (G)

ROS - Semi-primitive nonmotorized and roaded natural (G)

VQO - Retention to partial retention (G)

Production of Commodity Resources

Range

Range developments (water tanks, fences, etc) that do not detract from the overall objectives of the area are acceptable (G)

Forestwide standards and guidelines apply for the management of domestic sheep grazing in Management Situation 2 grizzly bear habitat (3 2 (c), 3 2 (g)) (G)

Timber

These areas are removed from the suitable timber base They are not part of the ASQ (S)

Timber management is allowed for such products as camp firewood, home use firewood, posts and poles for fencing on Forest, Christmas trees, wildlife habitat, administrative use, etc Harvesting generally does not trigger the need for reforestation (G)

Commercial post and pole sales are allowed provided no new temporary or system road construction occurs (G)

4.1 DEVELOPED RECREATION SITES

Description

This prescription applies to existing campgrounds, picnic areas, boating sites/ramps, and other facilities such as trailheads, snow parks, scenic and wildlife viewing areas, fishing access points, and inventoried National Forest recreation sites selected for potential development located throughout the Targhee National Forest. Development ranges from native material roads and campsites, with nonflush toilets, to a high degree of site modification with comfort and convenience facilities including paved roads, water systems, mobility impaired access, flush toilets and boat launches. (See Developed Recreation Sites - Development Scales 1-5 in the Glossary)

Overall, you find many signs of people. You see little or no evidence of resource development except for recreation. Picnic tables, roads, buildings, and camping spots are obvious. You often hear sounds of vehicles and other human activity. Signs advise that off-highway vehicle use is not allowed except to enter and depart the site on roads.

You can gather down firewood for camping, but you cannot gather it for home use. Access to fishing may be rather easy if the facility is near a stream or river, but the fishing may be less satisfactory than in more remote areas.

You generally will not find livestock within campgrounds, but they may be visible nearby. Signs and sounds of logging may also be apparent from time to time.

Wildlife, in the form of chipmunks, squirrels, birds, and occasional big game may be seen.

Generally you will find a variety of vegetation conditions from sagebrush to forested land within these areas. The forest cover will vary from mature trees to young seedling and sapling trees. The forest will generally be in a healthy, vigorous condition to provide for safety and provide for a friendly, relaxed outdoor experience. The area around the campground will generally exhibit a variety of visual conditions, depending on past insect, disease, and fire activity and management's response to those disturbances.

Goals

- 1 Provide for a variety of concentrated public recreation uses in a roaded-natural setting based on the character of the areas and visitors' needs
- 2 Protect and enhance a natural appearing environment within and adjacent to the existing sites to the extent possible while maintaining the existing array of developed recreation sites
- 3 Promote wildlife viewing opportunities when compatible with developed recreation use
- 4 Provide an appropriate mix of reservation and nonreservation sites in campgrounds
- 5 Provide short trails to facilities and opportunities for interpretation
- 6 Manage aspen for its value in providing seasonal color

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Insects and Disease

Control insects and disease consistent with recreational objectives (S)

Fire/Fuels

All wildfires that threaten these areas will be aggressively suppressed (S)

Prescribed fire generally will not apply here. It may be used, however, to obtain natural regeneration in preference to soil-disturbing techniques (G)

Natural fuels will be reduced or otherwise treated so the potential fireline intensities will not exceed 100 BTU per second per foot on 90 percent of the days during the regular fire season (Burning Index < 40) (G)

Physical Elements

Soil and Water

Where standards are not being met, actively rehabilitate these areas. Use rehabilitation techniques that do not detract from the recreation opportunity (S)

Avoid new construction on unstable or highly erosive soil (G)

On new developments provide adequate vegetation filters to maintain and/or enhance riparian-dependent resources (G)

Lands

Corridor rights-of-way should avoid campgrounds and other facilities (G)

Minerals/Geology

Same as 1.2 Wilderness Study Area

Biological Elements

Wildlife

Animal Damage Control - Animal damage control generally will not be done on these sites because of potential conflicts with recreation users and their pets, except for control of problem bears, beavers, porcupines, etc (G)

Forest Use and Occupation

Access (S) - 4.1

Season	Type of Access	Cross-County Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	No	Yes
	Mtn Bike/Mechanized	No	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes 2/
	Motorized, >50" wide	No	Yes 2/
	OROMTRD 3/	N/A	N/A
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ Motorized use is allowed only on existing roads and is limited to entering, leaving, and visiting other sites within the facility

3/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

Recreation

Developed

Campgrounds and picnic areas that have a seasonal use level of 40 percent or higher should be managed at the Standard Service Level (see Glossary) (G)

Campgrounds and picnic areas that have a season-long use level of 20 to 40 percent should be managed at less than the Standard Service Level (G)

Those with less than 20 percent average season-long use may require closure of sites first and then, if needed, closure of the entire facility (G)

Trailhead facilities adjacent to designated wilderness will be developed to a level appropriate to the adjacent wilderness management prescription (G)

Development Level Developed sites should be built, improved, and maintained in accordance with the established Recreation Opportunity Spectrum (ROS) classification for the management prescription area and the development standards as follows (G)

ROS Class	Site Development Scale
Primitive	None
Semi-primitive Nonmotorized	Not to exceed 1
Semi-primitive Motorized	Not to exceed 2
Roaded Natural	Not to exceed 3
Urban	Not to exceed 4

ROS - Semi-primitive motorized to urban (G)

VQO - Manage for a full range from retention to modification. Facilities are often evident but harmonize and blend with the natural setting (G)

Production of Commodity Resources

Range

Grazing at trailheads, boatramps, picnic areas, etc. may be allowed when developments or recreation use is not adversely affected (G)

Timber

Developed recreation sites are removed from the suitable timber base. These lands do not contribute to the ASQ (S)

4.2 SPECIAL USE PERMIT RECREATION SITES

Description

This prescription applies to ski areas, resorts, summer home sites and organization camps (such as Boy Scouts and Girl Scouts of America) that are allowed under a special use permit.

The emphasis is on providing privately operated types of recreation on National Forest land for large concentrated groups of people. Overall, you find many signs of people. You see little or no evidence of resource development except for recreation. Cabins and buildings used by permittees are visible but blend into the surroundings. Roads are generally gravelled, but may be paved in higher use areas. OHV use is limited to entry and departure routes and for administrative purposes. In some areas you may see extensive development associated with ski areas or resorts—for example, buildings, ski lifts, maintenance equipment, etc. Many pedestrians and cars may be seen in these areas.

You generally will not find livestock within these areas, but they may be visible nearby. Signs and sounds of logging may also be apparent from time to time.

Wildlife, in the form of chipmunks, squirrels, birds, and occasional big game may be seen.

Generally you will find a variety of vegetation conditions from sagebrush to forested land within these areas. The forest cover will vary from mature trees to young seedling and sapling trees. The forest will generally be in a healthy, vigorous condition to provide for safety and provide for a friendly, relaxed outdoor experience. The area around the special use facility will generally exhibit a variety of visual conditions, depending on past insect, disease, and fire activity and management's response to those disturbances.

Goals

- 1 Provide for privately operated recreation **use**
- 2 Protect and enhance a natural appearing environment to the extent possible while providing for private and group recreation opportunities
- 3 Strive to incorporate opportunities for watchable wildlife

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Insects and Disease

Control insects and disease consistent with visual objectives (S)

Fire/Fuels

All wildfires that threaten these areas will be aggressively suppressed (S)

Prescribed fire generally will not apply here. It may be used, however, to achieve resource objectives (G)

Natural fuels will be reduced or otherwise treated so the potential fireline intensities will not exceed 100 BTU per second per foot on 90 percent of the days during the regular fire season (Burning Index < 40) (G)

Physical Elements

Soil and Water

Use rehabilitation techniques that do not detract from the recreation opportunity (G)

Avoid new construction on unstable or highly erosive soils (G)

On new developments provide adequate vegetation filters to maintain and/or enhance riparian-dependent resources (G)

Lands

Corridor rights-of-way will avoid summer homes and group facilities (G)

Continue existing recreation residence permits under specific subsection direction and the following conditions for specific areas

a) Implement the Big Springs Summer Home Agreement (S)

b) New recreation residence tracts (summer homes) will not be established. No new residences will be permitted on vacant lots that are no longer leased unless necessary to replace lots damaged by landslides at the Hoffman site or to implement the Big Springs court order (S)

Do not consider Buffalo, Moose Creek, and Big Springs summer home areas for land exchange (S)

Minerals/Geology

Locatable- Withdraw from mineral entry, or remove from mineral entry through the notation rule, subject to valid existing rights (G)

Mineral Material- No entry for mineral materials (S)

Biological Elements

Wildlife

Projects that allow selected wildlife species to be more visible to recreation users may be allowed when compatible with special use permit recreation sites (G)

Animal Damage Control - Animal damage control generally will not be done on these sites because of potential conflicts with recreation users and their pets, except for control of problem bears, beavers, porcupines, etc (G)

Plants

Projects or events that focus on the identification and/or uses of plants are allowed where compatible with special use permits and the activities do not degrade the vegetation at the facility (G)

Forest Use and Occupation

Access (S) - 4 2

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes No 2/ No	Yes Yes Yes
Snow free Seasons	Motonzed, <50" wide Motorized, >50" wide OROMTRD 4/	No No N/A	Yes 3/ Yes 3/ not applicable
Snow Seasons	Winter Nonmotorized Snowmachine	Yes Yes 5/	Yes Yes 5/

Recreation

Developed - Natural vegetation should be favored around facilities. However, mowing natural vegetation around facilities may be allowed (G)

Trails - Trails may be allowed for the convenience of people using these sites (G)

Short trails are allowed which provide access to facilities and opportunities for interpretation (G)

ROS - Roaded natural to urban (G)

VQO - Manage for a full range from partial retention to maximum modification. Facilities are often evident, but harmonize and blend with the natural setting (G)

Production of Commodity Resources

Range

Unless grazing activities are needed to meet recreation objectives, or unless authorized by special use or grazing permit, grazing of recreation stock and other livestock will not be allowed in special use recreation sites (G)

Grazing activities may be allowed in and around facilities designed for livestock use (G)

Timber

Developed recreation sites are removed from the suitable timber base. These lands do not contribute to the ASQ (S)

All vegetation treatment options are available, but only as required to meet specific recreation objectives (G)

Stipulate removal of unsafe and/or dead trees in the special use permit. Native species may be planted to provide cover when naturally-occurring vegetation is inadequate (G)

4.3 DISPERSED CAMPING MANAGEMENT

Description

The purpose of this prescription is to maintain a quality dispersed recreation experience for the public and still protect other resource values that occur in the same area. This prescription applies to highly attractive and desirable, heavy summer use areas such as around lakes or reservoirs, along roads and streams, or at trailheads where there are multiple campsites accessed by conventional wheeled vehicles (> 50" wide) or boats. Included would be heavy use areas where dispersed camping occurs in potential conflict with other resources or where site damage is occurring or likely to occur.

While dispersed recreation is the main theme, protecting the resource values of the area is also critical. Therefore this prescription is intended to create a balance between the users and the resource they came to enjoy. This prescription is intended to be applied in those areas where special concerns or consideration must be given to dispersed recreation use in order to maintain the recreation opportunities.

This prescription includes areas not considered developed, but which are used by the public on a reoccurring basis. They include sites where developed status does not fit, but use by the public is more than occasional use during the recreation use period. These sites may have some limited developed facilities which may include one or two, but not the majority of the following: fire-rings, tables, toilet facilities, signs, and/or water. These sites are not fee areas and have very limited capital investment.

Management emphasis is directed at managing dispersed or undeveloped type camping opportunities, such that other resources are not unacceptably affected. Minor development is allowed to protect the site or prevent resource damage, but development should not put sites into a developed site management emphasis. Restrictions may be placed on camping locations to allow used areas to recover or to protect natural resources.

Goals

- 1 Provide facilities to a level only to meet resource protection needs
- 2 Provide a balance between recreation use and other resource needs so that the resources which provide attractions to the area are protected to a point they continue to be important recreational attractions
- 3 Maintain or improve the quality of the dispersed camping sites that now exist in the area
- 4 Avoid allowing heavy buildup of fuels in these areas to reduce risk of accidental fire ignition

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Fire/Fuels

Avoid application of chemical retardant, foam, or additives in these areas. Exceptions may be warranted in situations where overriding safety situations exist, or following a review and recommendation by a resource advisor, when an escape would cause more long-term damage. (G)

Use minimum impact suppression methods. (G)

Physical Elements

Minerals/Geology

Adequate reclamation plans and bonds are required in mining plans of operation. These bonds include costs of removing facilities, equipment, and materials, recontouring disturbed areas to near pre-mining topography, isolating and neutralizing or removing toxic or potentially toxic materials, salvaging and replacing topsoil, and preparing seedbeds and revegetating to meet management prescription goals. (G)

Avoid locating permanent structures or facilities within these lands. Limit road construction to the minimum necessary for the approved activity. (G)

Avoid locating waste dumps, leaching pads, and other facilities within these lands or within the viewshed where other alternatives are available. If no other alternative exists, ensure that visual mitigation such as screening is in place to prevent degradation of visual quality on these lands. (G)

For leasable minerals, avoid surface occupancy for exploration and development activities where leases do not already exist. (G)

Mineral material extraction should be discouraged (subject to valid permitted rights, or permitted plans of operation as allowed by Law). (G)

Forest Use and Occupation

Access (S) - 4 3

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No 2/	Yes
	Motorized, >50" wide	No 2/	Yes
	OROMTRD 3/	N/A	N/A
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

Roads and Trails

No new roads, trails, or landings will be constructed within these lands until appropriate standards for construction, maintenance, and operations are in place (G)

Improve, seasonally close, close, relocate and stabilize, or obliterate roads and trails (or sections of them) that have been identified as posing a high risk of causing unnaturally high levels of sediment input into fish spawning areas. Action to be taken will be determined based upon travel management needs, terrain, the need for the road or trail, and resource priorities (G)

Roads and trails that have been identified as inhibiting riparian, wetland or aquatic ecosystem processes and/or functions (e.g., plant community development, sediment transport, and stream channel development) will be improved, relocated, or obliterated. The decision to improve, relocate, or obliterate will be based on the potential environmental impact, the ecological condition of the riparian, wetland and aquatic resources affected, and the need for the road or trail (G)

Culverts and stream crossings found to pose a risk to riparian, wetland or aquatic conditions will be improved to accommodate at least a 50-year flood, including associated bedload and debris (G)

New stream crossings will be constructed and maintained to prevent diversion of streamflow out of the channel and down the road in case of failure(s). In locations found to have high potential for failure, the roadway will be hardened to further lessen the chance of roadway failure or severe erosion should the crossing overtop (G)

Constructed temporary stream crossings, such as log and culvert installations, may be allowed. Temporary crossings will be constructed and used in such a way as to minimize sediment input and to provide for fish passage. They will be maintained during use and removed and rehabilitated as soon as they are no longer needed (G)

Construct, reconstruct, and maintain all road crossings of streams which currently or historically bear fish to provide for fish passage. Exceptions are allowed where it is necessary to restrict fish movements in order to protect native or desirable nonnative fish populations (G)

Conserve surfacing materials and riparian and other resources by properly maintaining roads and avoiding sidecasting during road maintenance activities (G)

Recreation and Outfitter/Guide

When dispersed recreation is found to result in soil displacement in excess of 15 percent of an activity area (e.g., aquatic influence zone, riparian areas, dispersed campsites, etc.), or alteration of natural stream channel morphology, address impacts through education, use limits, more intensive maintenance, facility modification, and/or closures (G)

Recreational grazing must meet range standards for utilization of riparian vegetation (S)

Permitted stock holding, watering, and handling facilities within riparian vegetation (does not include the entire aquatic influence zone) are only allowed if appropriate and mitigation measures are implemented to reduce negative impacts (S)

Road surfacing or hardening should be encouraged in areas of high use and evident resource damage. Both parking location and access roads should be considered (G)

Fire circles created by the public, should not exceed one per site. Where more than one circle is inventoried, action should be taken to reduce the number to one. Action could include education, signing, facility installation closure order, surfacing, etc. Restrictions to require use of fire pans or contained fires may be necessary and should be considered in the area management plan (G)

Boat launching along streams, river sections, lakes or reservoirs should be restricted to developed sites or if no sites exist, consideration should be made to develop a facility to meet the public needs (G)

For all groups in excess of 20 persons, the site should have toilet facilities. Where facilities do not exist, portable toilet units should be provided by groups of 20 or more persons (G)

When portable toilet units are used, they shall be placed away from water and must be packed out when use has ended (S)

Solid waste disposal will be accomplished using the Pack In-Pack Out program (G)

ROS - Primitive to urban (G)

VQO - Retention to modification (G)

Production of Commodity Resources

Range

Incorporate into AMPs, objectives for attainment of site-specific DFCs for riparian or wetland plant community seral stage development and stream channel condition (G)

Proposed livestock watering facilities, corrals, and holding pastures within these lands are allowed only if appropriate, and mitigation measures are implemented to reduce negative impacts (S)

Existing livestock watering facilities, corrals, and holding pastures within these areas are allowed at permit issuance only if mitigation measures are implemented to reduce negative impacts (G)

Salting sites should be placed 1/4 mile from dispersed sites (G)

Timber

These lands are not included in the suitable timber base. They are not part of the ASQ (S)

Where needed to attain management prescription goals, design silvicultural prescriptions and allow prescribed burning and stocking control, as well as the reestablishment and culturing of stands to attain desired vegetation characteristics (G)

5.1 (c) TIMBER MANAGEMENT

Description

The emphasis is on scheduled wood-fiber production and use, on livestock production, and on other compatible commodity outputs, and consideration for long-term forest health

Overall, you notice many signs of people. You see a fairly extensive roading system and timber harvest activity in some areas. The main road system is gravel-surfaced and well maintained, with gentle grades well suited for sedan travel. You may see timber harvest equipment on roadsides and meet logging traffic along the roadway. You will see other people driving for pleasure or hauling out a load of firewood. Driving a sedan you can travel about two-thirds of the main road system. About one-third of the main road system is closed for wildlife security or roadway protection.

You notice frequent low-standard branch roads with native and gravel surfaces. Most of these low-standard roads are closed annually or seasonally to vehicle access. Some branch roads remain open for public access, for commodity production and for Forest Service administration.

The forest is a mosaic of different sizes, ages and heights. Older, taller trees tend to dominate the landscape, but openings with smaller trees are obvious. Recently cut areas show tree stumps, slash and disturbed soil. Recently cut areas have a partial canopy of older trees. Older clearcut areas have seedlings, saplings, poles, and older trees up to 35 feet tall and have a less disturbed appearing forest floor. Dead trees from the mountain pine beetle infestation are seen in older stands and scattered throughout the rest of the forest.

Firewood is available in designated areas, by permit, from live and dead trees, designated aspen areas, and from slash and logs decked for that purpose.

If you watch wildlife, you will see a variety of species, particularly those which prefer young seral stages of forest vegetation to those which prefer later stages. Elk and deer numbers have generally increased somewhat in recent years. However, in areas of active timber harvest activity, some elk and other big-game species may have been displaced to areas with greater security. Because of the setting, outfitted hunting may not be as common as it is in less-developed areas.

During the summer and fall you encounter cattle or sheep and notice signs of intensive management practices, such as burning, spraying, seeding, fences, cattleguards, water developments and gates. You see some cattle within streamside riparian areas and on nearby slopes. Away from the streams, you see scattered groups of livestock. You may find traffic delays when livestock is being moved.

You find such nonmotorized activities as hiking, biking and horseback riding along roads closed to vehicle traffic. Some roads and areas are available for snowmobile, motorcycle, and 4-wheel-drive vehicle use.

Goals

- 1 Manage lands to promote the production of commodity and noncommodity resources
- 2 Establish fire protection objectives for the area and desired fuel conditions

3 Fire management strategies emphasize preservation and protection of timber and range values scheduled for current use

4 Effectively control insects and disease and sustain forest growth

5 Provide a wide array of dispersed recreation opportunities

Standards and Guidelines

Forestwide standards and guidelines apply Additional direction for this prescription is listed below

Ecological Processes and Patterns

Insects and Disease

Practices to prevent or control insects and disease through direct control or silvicultural practices may be considered (G)

Fire/Fuels

Wildfires will normally be suppressed using control strategies during the fire season Pre- and post-fire season strategies may include containment, confinement, or control (G)

Prescribed fire may be used to reduce fuel loading, obtain natural regeneration; improve livestock forage conditions, for wildlife habitat improvement, and for other purposes that meet the needs of this prescription (G)

Biological Elements

Wildlife

Maintain snag habitat at greater than 40 percent of the biological potential for woodpeckers (G)

Forest Use and Occupation

Access (S) - 5 1 (c)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Nonmotorized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 1.5 mi /sq mi
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

ROS - Recreation is managed to provide a combination of semi-primitive nonmotorized to roaded natural opportunities (G)

VQO - The VQO is generally Partial Retention to Modification. In visually sensitive foreground areas, the VQO is Retention (G)

Production of Commodity Resources

Range

Livestock grazing may be allowed on transitory forage produced following timber harvest where and when that use will not conflict with regeneration efforts or other concerns (G)

Timber

Lands are included in the suitable timber base. They contribute toward the **ASQ** (S)

Regeneration systems should rely on natural regeneration to the greatest extent possible (G)

Reforested sites may be protected from rodent and livestock damage to encourage the greatest possible survival and growth over time, consistent with other resource needs (G)

Harvest and treatment residues should be made available for firewood and other products in a manner compatible with site preparation, productivity, and restocking requirements. Designated aspen areas should be made available for firewood (G)

5.1.3 (a-b) TIMBER MANAGEMENT (NO CLEARCUTTING, URBAN INTERFACE FUELS MANAGEMENT)

The purpose of this prescription is to allow timber management with no clearcutting, and to allow **fuels** management within and adjacent to urban areas of the Forest

Description

The emphasis is on scheduled wood-fiber production and use, on fuels management within and adjacent to urban areas of the Forest, on livestock production, and on other compatible commodity outputs, with consideration for long-term forest health

Overall, one would notice the same conditions as in Management Prescription 5.1 (b) and (c)

Goal

Manage vegetation and fuels to minimize fire risk for urban facilities within the interface

Standards and Guidelines

Forestwide standards and guidelines apply. The same standards and guidelines apply as 5.1 except

Forest Use and Occupation

Access (S) - 5 1 3 (a)

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	HorsePack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motonzed, <50" wide	Yes	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 3 0 mi/sq mi 2/
Snow Seasons	Winter Nonmotorized Snowmachine	Yes	Yes
		Yes	Yes

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	HorsePack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motonzed. <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 3 0 mi/sq mi 2/
Snow Seasons	Winter Nonmotorized Snowmachine	Yes	Yes
		Yes	Yes

Production of Commodity Resources

Timber

No clearcutting is allowed in this prescription area (S)

5.1.4 (a-d) TIMBER MANAGEMENT (BIG GAME SECURITY EMPHASIS)

The purpose of this prescription is to provide commodity resource development with special emphasis on big game security

Description

The emphasis is on scheduled wood-fiber production and use, big game security, other compatible commodity outputs, and consideration for long-term forest health. It combines the forested security block emphasis of 5.4 with cross-country motorized use allowed in 5.1, but restricts that motorized use during the big game hunts.

This management prescription emphasizes management actions and resource conditions which provide increased security for big game species, and hunting opportunities with limited access. Habitats are managed for multiple land use benefits, but these are managed over time and space to provide security and cover for hunted big game species.

Spring, summer, and fall forage is abundant and well distributed throughout the area. Hiding and thermal cover is abundant and in large patches to provide security for big game throughout the spring, summer, and fall seasons. Big game movements and migrations are facilitated due to well distributed forage and cover.

Timber management emphasizes providing a variety of forested seral stages, with large blocks of forested vegetation providing hiding cover. Security areas are provided adjacent to areas where timber harvesting is occurring.

Motorized access is managed to provide big game security. You notice frequent low-standard branch roads with native and gravel surfaces. Most of these low-standard roads are closed annually or seasonally to vehicle access. Some branch roads remain open for public access, for commodity production and for Forest Service administration.

Hiking off-road conditions, forest stand conditions, ability to view wildlife, presence of cattle and sheep, and nonmotorized activities are the same as 5.1.

Goals

1. Protect the long-term productivity of the land and meet areawide standards that protect resource values such as fisheries, water quality, wildlife habitat (including big game security areas) and visual quality.
2. Manage for big game security in greater than 250 acre forested blocks.

Standards and Guidelines

Forestwide standards and guidelines apply. The same standards and guidelines apply as 5.1 except'

Forest Use and Occupation

Access (S) - 5 1 4 (a)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD 31 OROMTRD 31	Yes 2/ No N/A N/A	Yes Yes ≤ 15 mi/sq mi prior to and after the fall big game hunt ≤ 10 mi/sq mi during the fall big game hunt
Snow Seasons	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes
<p>1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps</p> <p>2/ Open to travel from June 15 to September 30</p> <p>3/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information) Standard changes from 15 mi/sq mi to 10 mi/sq mi on October 1</p>			

Access (S) - 5 1 4 (b)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD	No No N/A	Yes Yes ≤ 15 mi/sq mi 2/
Snow Seasons	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes
<p>1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps</p> <p>2/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)</p>			

Access (S) - 5 1 4 (c)

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD 3/ OROMTRD 3/	Yes 2/ No N/A N/A	Yes Yes ≤ 15 m/sq mi prior to and after the fall big game hunt ≤ 10 m/sq mi during the fall big game hunt
Snow Seasons	Winter Nonmotorized Snowmachine	Yes Yes 4/	Yes Yes
<p>1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps</p> <p>2/ Open to travel from June 15 to September 30</p> <p>3/ OROMTRD= Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more Information)</p> <p>4/ Cross-country snowmachine use is allowed from January 1 to April 30</p>			

Access (S) - 5 1 4(d)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD	No No N/A	Yes Yes ≤ 15 m/sq mi 2/
Snow Seasons	Winter Nonmotorized Snowmachine	Yes No	Yes Yes 3/
<p>1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps</p> <p>2/ OROMTRD= Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more Information)</p> <p>3/ Designated routes only (Buckskin-Morgan route open season long, and Road #218 from Forest Boundary at ski area to the Buckskin-Morgan route is open only during the off-season of Kelly Canyon Ski Area) Snowmachine use is allowed to groom cross-country ski trails</p>			

Production of Commodity Resources

Timber

Manage for big game cover in forested blocks over 250 acres in **size** (a forested block is defined as adjacent stands of sapling, pole, mature and old growth trees) **(S)**

For the forested component within the prescription area, no more than 20 percent of the acres will be in a created opening at any point in time (a created opening is defined as a) clearcuts (nonstocked and seedling stages), b) seed cuts of a shelterwood (nonstocked and seedling stages), or c) group selection (nonstocked and seedling stages) (S)

Naturally occurring forested blocks **less** than 250 acres in size, may have 20 acre harvest units, with no more than 20 percent of the block in the created opening category at one time (G)

For scheduling harvest activity areas, big game security areas will be provided Security should provide the following conditions

- 1 Security areas will be greater than 250 acres in size, or depending on the size of the timber sale area boundary, as large as necessary to meet big game security needs (G)
- 2 Within the security area, OROMTRD must be < the density established for this management prescription (S)
- 3 No timber harvesting activity or similar type of disturbance activity (i.e. involving heavy equipment, noise, concentrated human activity) can occur within the security area during the time it is designated as a security area while the adjacent timber harvesting activity is occurring (S)

5.2.1 VISUAL QUALITY IMPROVEMENT

Description

This prescription emphasizes improving or maintaining visual opportunities for visitors along major travel corridors through heavily timbered areas, while allowing livestock production, timber harvest, and other compatible commodity outputs The purpose of this prescription is to maintain or create openings in timber stands to provide scenic vistas

Overall you may notice signs of people camping by the roadside or as part of a commercial timber harvest

As you drive, you see occasional timber harvest activity in some areas The main road system is paved or gravel-surfaced and well maintained, with gentle grades suited for sedan travel Clearcuts and harvest areas have been designed and located to provide vistas of the surrounding area

There will be occasional places to pull off the road and have a picnic, read an interpretive sign or photograph a pleasing landscape

The road side area is dominated by a mix of older stands of trees, young stands, and created openings to provide scenic vistas A few areas show tree stumps, hand-piled slash, and disturbed soil Occasionally, older cut areas show tree seedlings, saplings and poles up to 35 feet tall and have a less-disturbed appearing forest floor Scattered dead trees are seen throughout the forest, but generally it appears healthy and vigorous

If you watch for wildlife, you may occasionally see an elk, deer or moose in a natural opening or alongside the road, but generally they are hidden from view by the trees During the summer and fall, you may encounter cattle or sheep grazing in openings Signs of intensive management practices, such as burning, spraying, seeding, fences, water developments and gates are normally visually compatible

Nonmotorized activities, such as hiking, biking or horseback riding may originate from trail or road points along the main road. Some roads and nearby areas are available for year-around snowmobile, motorcycle, and 4 wheel-drive vehicle use.

Goals

1. Manage these major travel corridors to improve or maintain their visual quality.
2. Manage these lands in an environmentally sensitive manner to promote the production of commodity and noncommodity resources at varying levels through a variety of silvicultural prescriptions.
3. Establish fire protection objectives for the area and desired fuel conditions.
4. Fire management strategies emphasize preservation and protection of timber and range values scheduled for current use.
5. Effectively control the insects and disease and sustain forest growth.
6. Provide a wide array of dispersed recreation facilities.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Insects and Disease

Practices to prevent or control insects and disease through direct control or silvicultural practices may be considered (G)

Fire/Fuels

Wildfires will normally be suppressed using control strategies during the fire season. Pre- and post-fire season strategies may include containment, confinement, or control (G)

Prescribed fire may be used to reduce fuel loading, obtain natural regeneration, improve livestock forage conditions, improve wildlife habitat, and for other purposes that meet the needs of this prescription (G)

Biological Elements

Wildlife

Maintain snag habitat at 40 percent or greater of the biological potential for woodpeckers (G)

Forest Use and Occupation

Access (S) - 5 2 1

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	Yes	Yes
	Motorized, >50" wide	Yes	Yes
	OROMTRD 2/	N/A	N/A
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

Roads

Management of the area does not require an extensive road system, and will consist of short spurs from the main travel routes (G)

Recreation

Trails - Motorized trails should be developed using primarily local roads and trails not being actively used for commodity recovery (G)

ROS - Recreation is managed to provide a combination of semi-primitive nonmotorized to roaded natural opportunities (G)

VQO - The Visual Quality Objective (VQO) is Retention to Maximum Modification (G)

Production of Commodity Resources

Range

Livestock grazing may be allowed on transitory forage produced following timber harvest where and when that use will not conflict with regeneration efforts or other concerns (G)

Timber

Lands are included in the suitable timber base They contribute toward the ASQ (S)

Any silvicultural system may be used, depending on the visual quality that is being emphasized (G)

Regeneration systems should rely on natural regeneration to the greatest extent possible (G)

Reforested sites may be protected from rodent and livestock damage to encourage the greatest possible growth over time, consistent with other resource needs (G)

Maximum created opening size could be 40 acres, but will generally be 1 to five acres in size to create scenic vistas (G)

Harvest and treatment residues should be made available for firewood and other products in a manner compatible with the visual quality objective. Designated aspen areas should be made available for firewood to ensure the color provided by these stands is maintained over time. (G)

5.2.2 VISUAL QUALITY MAINTENANCE

Description

This prescription emphasizes maintaining the existing visual quality within major travel corridors with high quality natural vistas, while allowing livestock production, limited timber harvest, and other compatible commodity outputs.

Overall you may notice signs of people camping by the roadside. Signs of commercial timber harvesting will generally not be evident.

The natural vistas include a wide variety of vegetation and landscape forms (mountain peaks, valleys, meadows, streams, etc.) easily observed from openings along the road. Occasionally, older cut areas show tree seedlings, saplings and poles up to 35 feet tall and have a less-disturbed appearing forest floor. Scattered dead trees are seen throughout the forest, but generally it appears healthy and vigorous.

If you watch for wildlife, you may occasionally see an elk, deer or moose in a natural opening or alongside the road, but generally they are hidden from view by the trees. During the summer and fall, you may encounter cattle or sheep grazing in openings. Signs of intensive management practices, such as burning, spraying, seeding, fences, water developments and gates are normally visually compatible.

Nonmotorized activities, such as hiking, biking or horseback riding may originate from trail or road points along the main road. Some roads and nearby areas are available for year-around snowmobile, motorcycle, and 4 wheel-drive vehicle use.

Other signs of activity are the same as 5.2.1.

Goals

1. Manage these travel corridors to protect their visual quality.
2. Silvicultural practices are designed to emphasize or maintain visual quality of the area.

Standards and Guidelines

Forestwide standards and guidelines apply. The standards and guidelines are the same as 5.2.1 except.

Biological Elements

Wildlife

No assigned snag habitat biological potential for woodpeckers.

Forest Use and Occupation

Access (S) - 5 2 2

Season	Type of Access	Cross-County Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motonzed, <50" wide	Yes 2/	Yes
	Motorized, >50" wide	Yes 2/	Yes
	OROMTRD 3/	N/A	N/A
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes
1/ individual roads and trails are designated open or closed in the Forest Plan Travel Maps			
2/ Allowed unless visual features are degraded by disturbances to vegetation or soils Where this prescription is used in the Centennials subsecbon, cross-country motorized travel is prohibited in the snow free seasons			
3/ OROMTRD = Open road and open motorized trail route density does not apply to this prescription area			

Recreation

VQO - The Visual Quality Objective (VQO) is Retention to Partial Retention (G)

Production of Commodity Resources

Range

Livestock grazing may be allowed on transitory forage produced following timber harvest where and when that use will not conflict with regeneration efforts or other concerns (G)

Timber

Lands are included in the suitable timber base They contribute to the ASQ (S)

Regeneration systems should rely on natural regeneration to the greatest extent possible (G)

Reforested sites may be protected from rodent and livestock damage to encourage the greatest possible survival and growth over time, consistent with other resource needs (G)

Maximum created opening size shall generally be less than five acres (G)

Harvest and treatment residues should be made available for firewood and other products in a manner compatible with the visual quality objective Designated aspen areas should be made available for firewood to ensure the color provided by these stands is maintained over time (G)

5.3.5 GRIZZLY BEAR HABITAT (NIC FOR ASQ, NO CROSS-COUNTRY, PHASE OUT SHEEP)

Description

This management prescription emphasizes a high degree of security and resource conditions which contribute toward the conservation and recovery of the grizzly bear, and benefits to other wildlife Habi-

tats will be managed to meet the goals of grizzly bear recovery Other uses may be allowed when compatible with these goals

Grizzly habitat maintenance and improvement, and grizzly-human conflict minimization will receive the highest management priority Management decisions will favor the needs of the grizzly bear when grizzly habitat and other land use values compete Land uses which can affect grizzlies and/or their habitat will be made compatible with grizzly needs or such uses will be disallowed or eliminated Grizzly-human conflicts will be resolved in favor of grizzlies unless the bear involved is determined to be a nuisance bear (IGBC, 1986)

The abundance and distribution of natural food sources (such as huckleberry habitats, whitebark pine, etc) are maintained or improved by natural events such as fire and insect disturbances, or by designed vegetation management activities A variety of forested seral stages are present, and are the result of natural disturbances such as fire and insects or by designed vegetation management activities Habitat conditions which contribute to the movement of bears to adjacent bear management units are maintained Human activities are managed or restricted so that human conflicts with grizzlies are unlikely, this includes restricting human activities and generally reduced public access

Goals

- 1 Make nonfederal lands within this area a high priority for acquisition
- 2 Maintain grizzly bear security through a low density of open, motorized roads and trails.
- 3 Manage recreation to minimize grizzly conflicts with humans
- 4 Wildlife habitat improvement projects will maintain or improve grizzly bear habitat Vegetation manipulation to improve grizzly bear habitat includes treatment to maintain long term ecosystem vegetation patterns

Objective

By 1998, develop a fire management plan for this prescription area

Standards and Guidelines

Forestwide standards and guidelines apply Additional direction for this prescription is listed below

The Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription, except that livestock grazing in existing Management Situation 2 habitat will continue to be managed under Management Situation 2 guidelines

Ecological Processes and Patterns

Effects of proposals will be analyzed at multiple scales Analysis areas will follow ecological boundaries, watersheds, and topographic breaks Cumulative effects will be analyzed on no less than a BMU subunit scale (G)

Insects and Disease

Insects and disease are allowed to play their natural role in ecosystem development, unless this conflicts with the maintenance of grizzly bear habitat (G)

Fire/Fuels

Prescribed fire is allowed to maintain or improve grizzly habitat (G)

Physical Elements

Minerals/Geology

All operating plans and special use permits will specify measures to meet grizzly bear management goals and objectives for grizzly bear habitat. The following will be required (S)

- 1 Temporary cessation or modification of permitted activities will occur to resolve grizzly bear conflicts
- 2 Human food, refuse, and prepared livestock/pet foods associated with the permitted activity will be made unavailable to grizzlies through proper storage, handling, and disposal. Proper storage includes a) inside a bearproof container, b) suspended horizontally from adjacent posts or trees, c) stored in a hard-sided vehicle or trailer, or d) other methods approved by the District Ranger. The exception is when the food is being eaten or prepared for eating, or when food and similar organic matter is being transported. Unburned human foods, garbage or other refuse will be carried off the forest as often as practical
- 3 Any observation of grizzly bear or grizzly bear sign will be reported to the District Ranger as soon as practical
- 4 Access roads that are not open on the travel plan will be low standard roads and gated to allow access only to the operators. Nonwinter motorized use behind locked gates is authorized only for permitted activities

Biological Elements

Wildlife

Maintain snag habitat at greater than 60 percent of the biological potential for woodpeckers (G)

Environmental analysis areas (for NEPA purposes) will be at least 7,000 acres in size (G)

Long-term activities, for purposes of this prescription, are those activities which may last more than one field season, or may be expected to recur in different areas year after year. They may occur over a larger geographic area than short-term activities. These include timber sales, firewood harvesting, prescribed burns, road reclaiming, tree thinning, and trail construction

Long-term activities must be concentrated in activity areas on an annual basis between April 1 and September 15. Each activity area shall not exceed 7,000 acres in size (S)

Long-term activities should be concentrated in space and be of as short a duration as is practical (G)

Long-term activity areas should generally follow ecological boundaries, watersheds and topographic breaks. Activity areas should be distributed such that no less than 7,000 acres lie between them (G)

Short-term activities, for purposes of this prescription, are those activities that are typically accomplished within one field season and will not necessarily recur on an annual basis. These activities generally occur over a more limited spatial extent than long-term activities. These include tree planting, trail maintenance, spraying weeds, and range maintenance activities

Inventory, monitoring, and short-term activities should be concentrated in time and space (G)

Short-term management activities should be planned to be concentrated in one consecutive 30-day period. Exceptions should be implemented over as short a duration as is practical (G)

Management activities may take place during winter (December 15 to April 1) and shall be addressed on a case-by-case basis. The primary concern during the winter will be the changes the activity may have on habitat quality and quantity (G)

Administrative Responsibilities- Emergency cessation or modification of activities will occur when those activities are in conflict with grizzly bear management objectives. Scheduled activities will not occur during the season of bear use in areas where foraging opportunities are limited in their availability, in area, or time (S)

Forest Use and Occupation

Access (S) - 5 3 5

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stack	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	TMARD 2/	N/A	
	OROMTRD 2/	N/A	
Snow Seasons 3/	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

Roads

New or relocated roads should meet the following guidelines (G)

- 1 Avoid high quality (such as whitebark pine habitat) grizzly bear habitat
- 2 Minimize sight lines on temporary roads and skid trails
- 3 Revegetate temporary roads following use
- 4 Follow minimum required construction standards

Motorized administrative use on restricted roads and restricted motorized trails by personnel of resource management agencies is acceptable at low intensity levels as defined in existing cumulative effects analysis models. This includes contractors and permittees in addition to agency employees. (See Roads and Trails in the Glossary for definitions) (S)

Recreation

Special Uses - Special Use Activities which adversely affect grizzly bear populations or their habitat will not be permitted (S)

Trails - New or relocated trails will meet the following

- 1 Avoid high quality grizzly bear habitat (G)
- 2 Locate so as to minimize the risk of human/bear interactions (for example, do not place trails along roaring streams where bears cannot hear humans approaching) (G)

ROS - Primitive to semi-primitive motorized (G)

VQO - Retention to partial retention (G)

Heritage Resource

No new interpretation/enhancement of cultural sites (S)

Production of Commodity Resources

Range

Forestwide standards and guidelines apply for the management of domestic sheep grazing in Management Situation 2 grizzly bear habitat (G)

Cattle grazing is allowed Allotment Management Plans will specify measures to meet agency grizzly goals and objectives (S)

Permittee's full compliance in meeting grizzly bear management goals and objectives for grizzly bear habitat will be a condition of the permit In addition, the following will be required (S)

- 1 Temporary cessation or modification of permitted livestock grazing activities will occur to resolve grizzly bear conflicts with humans or livestock
- 2 Livestock carcasses will be disposed of or rendered unattractive to bear within 24 hours after they are discovered Disposal may include removing the carcass from the area, burning, using an acceptable chemical repellent, or other methods approved by the District Ranger Disposal shall be in accordance with other governing agencies such as the Wyoming Game and Fish Department in order to determine cause of death for reimbursement purposes
- 3 Human food, refuse, and prepared livestock/pet foods associated with the livestock operation will be made unavailable to grizzlies through proper storage, handling, and disposal Proper storage includes a) inside a bearproof container, b) suspended horizontally from adjacent posts or trees, c) stored in a hard-sided vehicle or trailer, or d) other methods approved by the District Ranger The exception is when the food is being eaten or prepared for eating, or when food and similar organic matter is being transported Unburned human foods, garbage or other refuse will be carried off the Forest as often as practical
- 4 High quality food production areas for grizzlies (wet alpine and subalpine meadows, stream bottoms, aspen groves, and other riparian areas) will receive special grazing direction such as light, once-over grazing, special utilization standards, or complete closure These sites and their corresponding direction will be identified in the Annual Operating Plan
- 5 Livestock depredation believed to be associated with bears will be reported within 24 hours after they are discovered to the District Ranger and the proper State agencies

6 Any observation of grizzly bear or grizzly bear sign will be reported to the District Ranger as soon as practical

7 Any action taken by the permittee or their agents which violates the Endangered Species Act will be grounds for cancellation of their grazing permit

Timber

These lands are included in the suitable timber base They contribute toward the ASQ, but are a NIC (S)

There will be no vegetation manipulation in riparian areas in the spring or in whitebark pine areas in the fall (except in years of poor cone crops) (G)

Scarification is limited to 15 percent or less of an area where soil disturbance impedes the reestablishment of grizzly bear foods (for example where berry producing shrubs are present such as blue huckleberry, mountain ash, chokecherry, buffaloberry, grouse whortleberry, etc , where wet site species are present such as horsetail, cow parsnip, camas, wet-site carex spp , etc) (S)

Scarification of elk sedge (*Carex geyeri*) and Ross's sedge (*Carex rossii*) is allowed at levels above 15 percent since these species readily reestablish following scarification (G)

Cover - Maintain greater than 70 percent of the forested acres in each analysis area in vegetation that provides security cover for the grizzly bear Where security cover is below 70 percent, no treatments are allowed which would further reduce the number of acres meeting security cover (S)

Security cover is defined as forested acres (all tree species) which have not been managed or burned in the last 20 years, and managed or burned forested areas within the last 20 years which meet the following criteria. (G)

Overstory Basal Area of trees 5 0"+	Understory Trees/ac 0-4 9" and 7'+	Acreage Multiplier
130+ sq ft per acre	250+	1 0 (Good)
80-129 sq ft per acre	150-249	0 7 (Medium)
30-79 sq ft per acre	50-149	0 4 (Poor)

The overstory and understory categories for security cover are to be considered separately A stand having either 130 sq ft of basal area per acre or 250 understory trees per acre over seven ft tall would meet the requirements for full security cover Both live and dead tree basal areas are used for overstory calculations (S)

Maintain greater than 20 percent thermal cover in each analysis area Where thermal cover is below 20 percent, no treatments are allowed which would further reduce the number of acres meeting thermal cover criteria Thermal cover is defined as forest stands with over 80 sa ft of basal area per acre (live and dead trees), greater than 45 percent canopy closure, and trees over 40 feet tall (S)

For created openings maximum distance to security cover should be 300 feet (G)

Created openings will be located at least 1,500 feet from open roads. A clearcut and seedtree cut result in created openings. Final removal of a shelterwood or an overstory removal result in a created opening if the stand is less than seven feet tall or less than stocking standards. (S)

No new created openings are allowed adjacent to existing openings (including meadows and created openings). Maintenance of natural openings is allowed. (S)

Leave strips between openings will be the larger of 600 feet or 3 times the sight distance (the distance needed to hide 90 percent of a grizzly bear). (S)

Dead & Down Component - If available, leave at least two pieces per acre over 12 inches in diameter. Woody material should be in various stages of decay if possible. If a treatment area is below forestwide standards, use the treatment to increase down woody material to recommended amounts. (Note: This requirement accrues toward the requirements in the forestwide standards and guidelines. It is not cumulative to them.) (G)

Security Areas - Maintain a minimum 7,000 acre security area adjacent to each timber sale area. (S)

Security areas must provide the following conditions. (S)

1. Within the security area, TMARD and OROMTRD must be less than or equal to the density established for the BMU (see forestwide standards and guidelines, Access)
2. Within the security area, security cover must be greater than or equal to the amount established for this management prescription
3. No timber harvesting activity or similar type of disturbance activity can occur within the security area during the time it is designated as a security area

5.4 (a,b,c) ELK SUMMER RANGE

Description

This management prescription emphasizes management actions and resource conditions which provide increased security for elk, and hunting opportunities with limited access. Habitats are managed for multiple land use benefits, but these uses are managed over time and space to provide security and cover for elk. These habitat conditions are also favorable for many other wildlife species.

Spring, summer, and fall forage is abundant and well distributed throughout the area. Hiding and thermal cover is abundant and in large patches to provide security for elk throughout the spring, summer, and fall seasons. Elk movements and migrations are facilitated due to well distributed forage and cover.

Timber management emphasizes providing a variety of forested age classes, with large blocks of forested vegetation providing hiding cover. Security areas are provided adjacent to areas where timber harvesting is occurring.

Motorized access is managed to provide security for elk. Motorized summer **use** will occur only on designated routes.

Livestock grazing exists in some areas, forage utilization, water developments, grazing systems, and other livestock management actions are managed to be compatible with elk habitat needs.

Dispersed recreation, mining activity, and other multiple uses are managed in time and space to help provide security habitat for elk

Goals

- 1 Provide elk security areas while allowing for other resource activities
- 2 Utilize silvicultural techniques which prevent or lessen insect and disease epidemics to maintain cover values for elk

Standards and Guidelines

Forestwide standards and guidelines apply Additional direction for this prescription is listed below

Ecological Processes and Patterns

Fire/Fuels

Use prescribed fire to improve forage production, assist in forest regeneration and enhance ecological conditions (G)

Biological Elements

Wildlife

Maintain snag habitat at greater than 60 percent of the biological potential for woodpeckers (G)

Forest Use and Occupation

Access (S) - 5 4 (a)

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/mechanized	No	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 1 0 milesq mi
Snow Seasons	Winter Nonmotorized Snowmachine	Yes	Yes
		Yes	Yes

Season	Type of Access	Cross-County Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Nechanized	No	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	0.5 m/sq mi
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	No	No

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

Access (S) - 5.4 (c)

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Nechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 1.25 m/sq mi
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

ZOROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

Recreation

ROS - Primitive to urban (G)

VQO - Retention to partial retention (G)

Production of Commodity Resources

Timber

These lands are part of the suitable timber base. They contribute toward the ASQ (S)

Manage for elk cover in forested blocks greater than 250 acres (a forested block is defined as adjacent stands of saplings, pole, mature and old growth trees) (S)

For the forested component within the prescription area, no more than 20 percent of the acres will be in a created opening at any point in time (a created opening is defined as a) clearcuts (nonstocked and seedling stages), b) seed cuts of a shelterwood (nonstocked and seedling stages), or c) group selection (nonstocked and seedling stages) (S)

Naturally occurring forested blocks less than 250 acres in size, may have 20 acre harvest units, with no more than 20 percent of the block in the created opening category at one time (G)

Adjacent to harvest activity areas, big game security areas will be provided Security areas must provide the following conditions (S)

- 1 Security areas will be greater than 250 acres in size, or as large as the timber sale area boundary, whichever is greater
- 2 Within the security area, OROMTRD must be < the density established for this management prescription
- 3 No timber harvesting activity or similar type of disturbance activity can occur within the security area during the time it is designated as a security area

6.1 (b) RANGE MANAGEMENT

Description

The purpose of this management prescription is to achieve and maintain healthy nonforested rangelands for livestock forage production and good watershed condition

Forage is provided on a sustained-yield basis that protects rangeland values, including domestic livestock grazing and wildlife habitat Cattle, sheep, horses, and perhaps other domestic livestock can often be seen Important seasonal ranges for big game animals exist in many of these areas Not all areas are grazed by domestic livestock, some areas may be reserved for wildlife and watershed restoration work Range improvements such as fencing, corrals, and water developments are present Roads, trails, and stock driveways exist, as needed, to provide access for livestock management Vegetation manipulation (with the use of fire, mechanical means, or herbicides) may occur to achieve or maintain healthy rangeland conditions A variety of rangeland vegetation successional stages can be observed Herders, range riders, camps, and transport vehicles may be seen at various times and places Dispersed recreation activity generally occurs throughout these areas

Goal

Provide forage on a sustained-yield basis that protects rangeland values, including domestic livestock grazing, and wildlife habitat

Standards and Guidelines

Forestwide standards and guidelines apply Additional direction for this prescription is listed as follows

Ecological Processes and Patterns

Fire/Fuels

Prescribed fire is allowed to achieve desired forage or ecological condition (G)

Forest Use and Occupation

Access (S) - 6 1 (b)

Season	Type of Access	Cross-County Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 2 m/sq mi 2/
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

In 6 1 (b) Prescription areas <= 4 0 sq mi in size. OROMTRD does not apply

Recreation

Dispersed- Limited recreation facilities, which are not detrimental to intensive range management, and other resources may be provided in this prescription (G)

Opportunities may exist for some interpretative signs for public education (G)

ROS - Semi-primitive nonmotorized to roaded natural (G)

VQO - Retention to modification (G)

Outfitter/Guide

Outfitter/Guide stock are allowed, AUMs are specified in outfitter/guide permits and Rangeland Project Decisions (RPDs) (G)

Production of Commodity Resources

Timber

These areas are removed from the suitable timber base They are not part of the ASQ (S)

Timber may be harvested to improve wildlife habitat and to provide miscellaneous products (such as posts & poles, firewood, etc) as long as the harvest does not trigger the need for reforestation (G)

8.1 CONCENTRATED DEVELOPMENT AREAS

Description

This prescription applies to all existing concentrated developments including active mines, borrow pits, gravel pits, electronic sites, utility corridors (electric transmission lines of 50 Kv or greater, and major natural gas conduits), and administrative sites (including guard stations and rental cabins). Concentrated development is normally small, but may be extensive on occasion. A wide variety of vegetation and landtypes may be present. This category is often surrounded by other management areas.

These are generally highly developed areas with much evidence of people, structures, roads, and often disturbed ground. High noise levels sometimes emanate from these sites due to the use of heavy equipment or blasting at various times. Other sites are collections of buildings and storage structures from which the administration of the National Forest is carried out. Some closed gates and restrictions on travel may be present in order to protect equipment and developments.

Goal

Allow concentrated development in small areas for mineral development and infrastructure needs.

Objectives

1. Restrict development of concentrated development sites to the smallest area possible.
2. Obtain materials from commercial sources or borrow sites identified in the Forest "Compendium for Material Sources".

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Insects and Disease

Attempt to control epidemics at small outbreak sizes. Salvage of dead and dying trees of commercial value is possible. (G)

Fire/Fuels

All wildfire will be aggressively suppressed. (S)

Physical Elements

Lands

Energy/utility corridors will be no more than 600 feet in width. (S)

Forest Use and Occupation

Access (S) - 8 1

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized. <50" wide	No 2/	Yes
	Motorized. >50" wide	No 2/	Yes
	OROMTRD 31	N/A	N/A
Snow Season	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

Recreation

Dispersed - Do not encourage use of areas in proximity to these sites (G)

Trails - Protect existing trails and wherever possible avoid development of trails in or near concentrated development sites Where feasible move existing trails away from these areas (G)

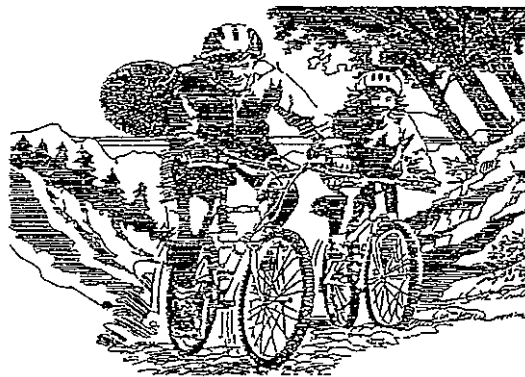
ROS - Semi-primitive nonmotorized to urban (G)

VQO - The Visual Quality Objective (VQO) is generally Partial Retention to Maximum Modification (G)

Production of Commodity Resources

Timber

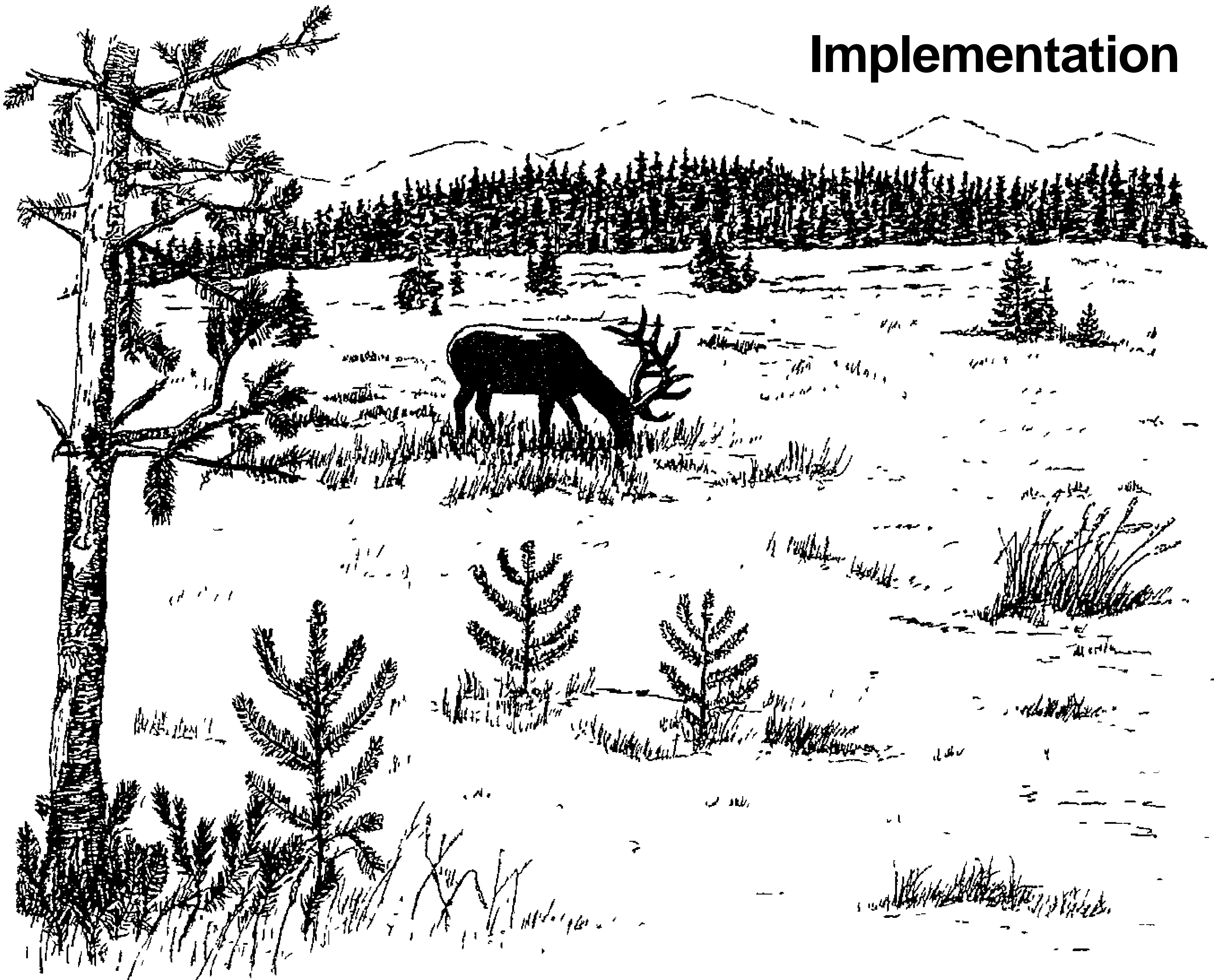
These lands are removed from the suitable timber base They do not contribute to the ASQ (S)



Chapter

IV

Implementation



CHAPTER IV FOREST TIMBER SCHEDULE

The following tables display the timber sale program by watershed over the first ten years of this revised forest plan. Volumes are in MMBF. Miles of road construction is based on an estimate of 0.23 miles per MMBF. Miles of road reconstruction is based on an estimate of 0.15 miles per MMBF.

The figures in these tables represent our best estimate as to how the ASQ will be achieved. These estimates will change as new information becomes available, and as site-specific analysis for individual projects reveals the need for adjustments. Some of these sales may not occur at all, other sales not identified herein may occur.

The lands described in the following table are in the noninterchangeable component on ASQ lands. Figures represent a proportion of the average annual ASQ.

LANDS	VOLUME (MMBF)
	2.0 MMBF
Roadless areas/steep slopes	0.0 MMBF
Roadless areas/no steep slopes	1.1 MMBF
Steep slopes	0.1 MMBF
TOTAL NIC	3.2 MMBF

The roadless areas which may be entered for timber harvest over the next decade are:

- Garfield Mountain
- Mount Jefferson
- Pole Creek
- Caribou Creek
- Bear Creek
- Garns Mountain
- West Slope Tetons

Watershed 002 Indian Creek						District Palisades (D-4)					
Estimated Harvest			Allowable Logging Method			Allowable Silvicultural System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Helic	CC	SW	CT	SEL	Const.	Recon
TOTAL	400	100								0.09	0.06

Watershed 003 Elk Creek						District Palisades (D-4)					
Estimated Harvest			Allowable Logging Method			Allowable Silvicultural System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Helic	CC	SW	CT	SEL	Const.	Recon
1997	234	60	Y	Y	Y	Y	Y	Y	Y	0.05	0.04
TOTAL	234	60								0.05	0.04

Watershed 004 Palisades Creek						District Palisades (D-4)					
		Estimated Harvest		Allowable Logging Method			Allowable Silviculture System			Est Miles of Road	
SaleName	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	117	30	Y	Y	Y	Y	Y	Y	Y	003	002
TOTAL	117	30								003	002

Watershed 005 Rainey Creek						District Palisades (D-4)					
No Sales Scheduled											

Watershed 006 Pine Creek						District Palisades (D-4)					
No Sales Scheduled											

Watershed 007/33 Heise/Kelly Canyon						District Palisades (D-4)					
		Estimated Harvest		Allowable Logging Method			Allowable Silviculture System			Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	741	190	Y	Y	Y	Y	Y	Y	Y	017	011
TOTAL	741	190								017	011

Watershed 008 Henry's Fork Headwaters						District Island Park (D-2)					
		Estimated Harvest		Allowable Logging Method			Allowable Silviculture System			Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	300	80	Y	Y	Y	N	Y	N	Y	000	000
TOTAL	2,300	520								200	003

Watershed 009A Island Park - Centennials						District Island Park (D-2)					
Estimated Harvest		Allowable Logging Method				Allowable Silviculture System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
2003	3,000	600	Y	Y	Y	Y	Y	Y	Y	1 00	0 40
	2,672	685	Y	Y	Y	Y	Y	Y	Y	0 00	0 45
	669	172	Y	Y	Y	Y	Y	Y	Y	0 61	0 00
TOTAL	6,341	1,457								1 61	0 85

Watershed 009B Island Park - Bishop Mountain						District Island Park (D-2)					
Estimated Harvest		Allowable Logging Method				Allowable Silviculture System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
1997	92	39	Y	Y	Y	Y	Y	Y	Y	0 02	0 01
1998	4,000	1,025	Y	Y	Y	Y	Y	Y	Y	0 92	0 60
2005	1,000	300	Y	Y	Y	Y	Y	Y	Y	5 00	0 15
	669	172	Y	Y	Y	Y	Y	Y	Y	0 15	0 10
TOTAL	5,761	1,536								6 09	0 86

Watershed 010 Buffalo River						District Island Park (D-2)					
Estimated Harvest		Allowable Logging Method				Allowable Silviculture System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
1997	41	45	Y	Y	Y	Y	Y	Y	Y	0 00	0 01
2005	1,000	300	Y	Y	Y	Y	Y	Y	Y	0 00	0 15
TOTAL	1,041	345								0 00	0 16

Watershed 011 Middle Henry's Fork District Island Park (D-2) & Ashton (D-3)											
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
1997	100	50	Y	Y	Y	N	N	N	Y	0 00	0.02
	25	8	Y	Y	Y	Y	N	N	N	0.00	0 00
1998	500	128	Y	Y	Y	N	Y	N	Y	0.00	0 08
TOTAL	625	186								0.00	0 10

Watershed 012 Warm River District Ashton (D-3)											
No Sales Scheduled											

Watershed 013 Robinson Creek District Ashton (D-3)											
SaleName	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
										0 00	0 23
TOTAL	1,500	300								0 00	0 23

Watershed 014 Big Bend Ridge District Ashton (D-3)											
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
SS 2002	2,000	400	Y	Y	Y	Y	Y	Y	Y	000	030
2001	3,000	600	Y	Y	Y	Y	Y	Y	Y	000	045
TOTAL	8,619	1,928								083	129

Watershed 015 Conant Creek						District Ashton (D-3)					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	5,070	1,300	Y	Y	Y	Y	Y	Y	Y	1.17	0.76
TOTAL	5,070	1,300								1.17	0.76

Watershed 016 Falls River						District Ashton (D-3)					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
2001	2,000	400	Y	Y	Y	Y	Y	Y	Y	0.00	0.30
2002	1,400	250	Y	Y	Y	Y	Y	Y	Y	0.00	0.21
2003	1,500	250	Y	Y	Y	Y	Y	Y	Y	0.00	0.23
Small Sales	3,405	894	Y	Y	Y	Y	Y	Y	Y	0.80	0.52
TOTAL	8,385	1,794								0.80	1.26

Watershed 017 Trail Creek						District Teton Basin (D-5)					
No Sales Scheduled											

Watershed 018 Darby Creek						District Teton Basin (D-5)					
No Sales Scheduled											

Watershed 019 Teton Creek						District Teton Basin (D-5)					
SaleName	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	273	70	Y	Y	Y	Y	Y	Y	Y	0.06	0.04
TOTAL	273	70								0.06	0.04

Watershed 020 Leigh Creek						District Teton Basin (D-5)					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	858	220	Y	Y	Y	Y	Y	Y	Y	0.2	0.13
TOTAL	858	220								0.2	0.13

Watershed 021 Badger Creek						District Teton Basin (D-5)					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
SS	4,290	1,100	Y	Y	Y	Y	Y	Y	Y	0.94	0.64
TOTAL	4,290	1,100								0.94	0.64

Watershed 022 Mahoanv Creek						District Teton Basin ID-51					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	1,365	350	Y	Y	Y	Y	Y	Y	Y	0.32	0.20
TOTAL	1,365	350								0.32	0.20

Watershed 023/024 Canyon & Moody Creek						District Palisades (D-4) & Teton Basin (D-5)					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales											
D-4	400	100	Y	Y	Y	Y	Y	Y	Y	0.09	0.06
D-4	400	100	Y	Y	Y	Y	Y	Y	Y	0.09	0.06
D-5	1,462	380	Y	Y	Y	Y	Y	Y	Y	0.33	0.22
TOTAL	2,262	580								0.51	0.34

Watershed 025 Camas Creek District Dubois (D-1) & Island Park (D-2)											
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales											
1997	580	115	Y	Y	Y	N	N	Y	N	0 00	0 09
	570	230	Y	Y	Y	N	N	Y	N	0 00	0 09
	570	225	Y	Y	Y	N	N	Y	N	0 00	0 09
	200	47	Y	Y	Y	N	N	Y	N	0 00	0 01
	3,860	2,200	Y	Y	Y	N	N	Y	N	0 00	0 58
2006	4,500	900	Y	Y	Y	Y	Y	Y	Y	0 00	0 68
SS	1,139	292	Y	Y	Y	Y	Y	Y	Y	0 26	0 17
TOTAL	11,419	4,009								0 26	1 71

Watershed 026A Beaver Creek District Dubois (D-1)											
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
1997	20	40	Y	Y	Y	Y	Y	Y	Y	0 00	0 00
1999	4,300	800	Y	Y	Y	Y	Y	Y	Y	0 00	0 65
2000	4,300	850	Y	Y	Y	Y	Y	Y	Y	0 00	0 65
2004	4,300	850	Y	Y	Y	Y	Y	Y	Y	2 00	0 65
									Y	0 05	0 03
TOTAL	113,143	2,600								2 05	1 98

Watershed 026B Beaver Creek District Dubois (D-1)											
No Sales Scheduled											

Watershed 027/028 Medicine Lodge/Indian Creek District Dubois (D-1)										Est Miles of Road	
Estimated Harvest		Allowable Logging Method				Allowable Silviculture System					
Sale Name	Volume	Acres	Trac	Skv	Heli	CC	SW	CT	SEL	Const	Recon
1997	583	115	Y	Y	Y	Y	Y	Y	Y	0 13	0 09
	22	40	Y	Y	Y	Y	Y	Y	Y	0 00	0 01
	1,111	285	Y	Y	Y	Y	Y	Y	Y	0 26	0 17
TOTAL	1,716	440								0 39	0 27

Watershed 029 Warm Springs District Dubois (D-1)											
No Sales Scheduled											

Watershed 030A Upper Birch Creek (West) District Dubois (D-1)											
No Sales Scheduled											

Watershed 0308 Upper Birch Creek (East) District Dubois (D-1)											
No Sales Scheduled											

Watershed 031A Lower Birch Creek (West) District Dubois (D-1)											
No Sales Scheduled											

Watershed 031B Lower Birch Creek (East) District Dubois (D-1)											
No Sales Scheduled											

Watershed 034 Snow Creek District Ashton (D-3)											
No Sales Scheduled											

Watershed 035 Burns-Pat Creek						District Palisades (D-4)						
		Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon	
Small Sales	500	120	Y	Y	Y	Y	Y	Y	Y	0 18	0 12	
TOTAL	500	120								0 18	0 12	

		Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
SaleName	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon	
Small Sales	800	180	Y	Y	Y	Y	Y	Y	Y	0 18	0 12	
TOTAL	800	180								0 18	0 12	

Watershed 037 Elk-Bear Creeks						District Palisades (D-4)					
No Sales Scheduled											

Watershed 038 Fall Creek						District Palisades (D-4)						
		Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon	
SS 1998	400	100	Y	Y	Y	Y	Y	Y	Y	0 09	0 06	
SS 2002	600	150	Y	Y	Y	Y	Y	Y	Y	0 13	0 09	
SS 2006	320	80	Y	Y	Y	Y	Y	Y	Y	0 07	0 05	
TOTAL	1,640	410								0 36	0 25	

Watershed 039 Pritchard Creek						District Palisades (D-4)					
No Sales Scheduled											

Watershed 040 Brockman Creek						District Palisades (D-4)					
Estimated Harvest			Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
SaleName	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	600	150	Y	Y	Y	Y	Y	Y	Y	014	009
TOTAL	600	150								014	009

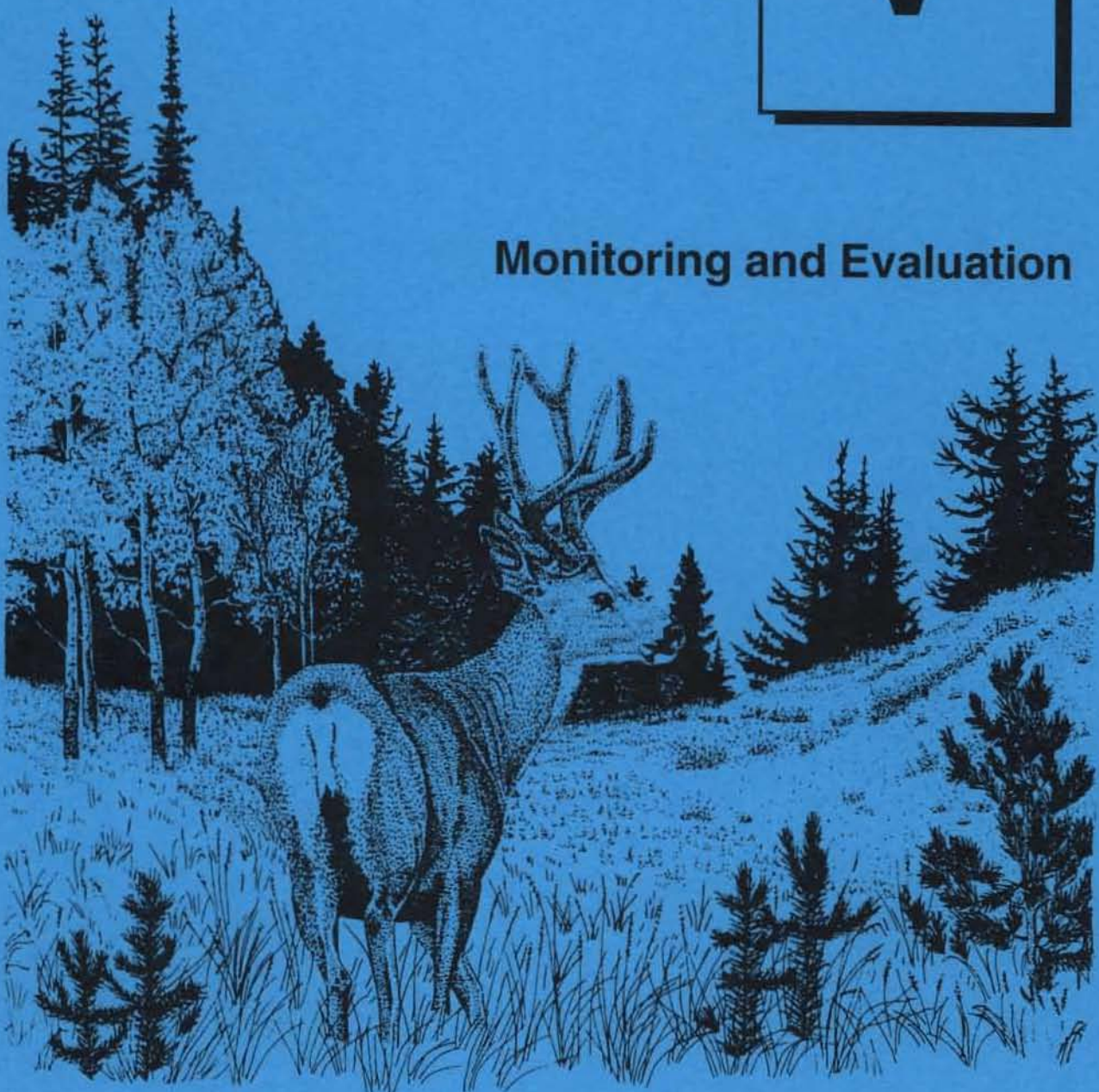
Forest Total	80,000	19,975								1843	1166
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Chapter

V

Monitoring and Evaluation



CHAPTER V

MONITORING AND EVALUATION

INTRODUCTION

In the preceding chapters of the Revision, the Forest Service identified general management direction in terms of goals and objectives and commitments to carry out that direction. Monitoring and evaluation provides an opportunity for the agency to demonstrate how it is complying with the standards and guidelines, and whether or not the standards and guidelines are performing in the predicted manner. In essence, it answers the question, "Are we doing what we said we would do?", and "Are the assumptions on which we based decisions and allocations correct?"

A monitoring and evaluation plan is required by Forest Service planning regulations, which stipulate a report will be issued at the midpoint of the planning cycle. The Forest will issue a monitoring report annually to demonstrate progress toward meeting goals and objectives, and to identify as early as possible any needed changes to the Revised Forest Plan.

RELATIONSHIP TO OTHER MONITORING ACTIVITIES

This plan shows how the Forest will monitor compliance with, and performance of, standards and guidelines and assumptions in the Revision. The monitoring activities listed in this plan are only a part of a larger range of monitoring activities which take place on the Forest.

Monitoring requirements are often determined in planning and analysis which support specific projects (known as the NEPA process). Though these monitoring activities are conducted independently of Revision monitoring, there will often be an overlap between the two in that project monitoring can give some indication of how Revision standards and guidelines are working, or accomplishment of Revision goals and objectives. Monitoring of randomly-selected projects for compliance with Revision standards and guides is also conducted.

The Forest conducts some monitoring which is required by law or regulation and which may not necessarily demonstrate how the Revision is working. An example of this type of monitoring is regeneration surveys which are done in timber harvest units. Additionally, some contract administration provides information on how Revision goals and objectives are being met, and provides information on compliance with standards and guides.

The research branch of the Forest Service conducts a wide range of trials and experiments to determine the causes of resource problems, or to improve resource management. The results of these scientifically-rigorous experiments are documented in research technical reports and serve to validate current goals, objectives, standards and guidelines, or to recommend changes to them. This type of monitoring is crucial to the Forest's adaptive management approach.

Collectively, all of the above-mentioned efforts, and other day-to-day work not discussed here, comprises a large body of monitoring work of which Revision monitoring is an important part. While not all of the items monitored by these other efforts are expressly listed in the Revision Monitoring Plan, they often overlap and are closely related.

TYPES OF MONITORING

Three types of monitoring can assess performance of the Revision. The three types of monitoring are implementation, effectiveness and validation.

Implementation monitoring answers the question, "Are projects and activities being implemented in compliance with the standards and guidelines?" Implementation monitoring forms the basis for the other types of monitoring, since those cannot be conducted unless projects and activities comply with Revision standards and guidelines. Thus this monitoring type may be the most important of the three types, and needs to be conducted most often.

Effectiveness monitoring answers the question, "Is implementation of the standards and guidelines giving us the results we expected?" Effectiveness monitoring often means quantitatively assessing the effects of management actions. Since this may require quite a bit of data, effectiveness monitoring is generally conducted on a limited basis and deals with sensitive areas and activities that pose higher risks of adverse effects on Forest resources, or addresses items of high public interest. Once the question of whether effects are as expected is answered, then implementation monitoring is sufficient.

Validation monitoring answers the questions, "Are these results what we really want? Are there better ways to meet the Revision goals and objectives?" Validation monitoring is usually conducted when there is reason to question basic assumptions or coefficients, such as when these are not reasonably supported by existing research. Validation monitoring focuses on items of strong public interest, agency concern, diversity of opinion, or that have the potential to be unduly lax or restrictive. This type of monitoring may require a partnership with the Research branch and long-term investigations. Once an item is validated, as with effectiveness monitoring, then implementation monitoring is sufficient.

ITEMS TO BE MONITORED

To maximize the efficiency of the overall monitoring effort, the Forest has focused on certain critical items, identified partners, and will measure as many items as possible with the least number of indicators. The items selected for Revision monitoring met these important criteria, among others:

- critical planning assumptions
- activities with the greatest risk to resources
- most potentially constraining on outputs

The items are listed in brief in the accompanying Monitoring Item Summary, and in greater detail in the individual Monitoring Item Descriptions on the following pages.

MONITORING AND THE BUDGET

The monitoring program outlined here is the optimal level, assuming the Revision is fully funded. It is unlikely that annual budgets will fully fund the monitoring effort shown here. Priorities for the annual monitoring effort will be based on annual budgets and program direction, and on the priority of the item, in descending order, from Forest Priority Group 1 to Forest Priority Group 3.

In order to maximize efficiency and promote cooperation, the Forest will seek to develop monitoring partnerships with federal and state agencies and other entities as appropriate, to further shared goals and carry out agency responsibilities.

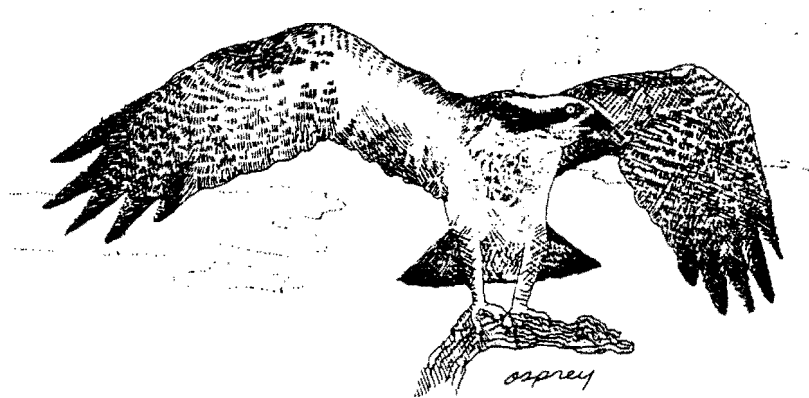
The cost of annually monitoring the items in Priority Groups 1, 2 and 3 is as follows:

Priority Group	Cost for Entire Group
1 (27 items):	between \$283,525 and \$285,525;
2 (6 items):	between \$76,690 and \$86,690;
3 (12 items):	between \$100,800 and \$115,300;
Total Program Cost (45 items):	between \$461,015 and \$487,515.

MONITORING ITEM SUMMARY

Monitoring Item	Forest Priority Group	Page
PHYSICAL ELEMENTS		
Air Quality		
Long-term Visual Range in Class I and II Airsheds	3	V-6
Soils		
Hydrologic Disturbance in Watersheds	2	V-7
Woody Residue Needs for Soil and Wildlife	1	V-7
Detrimental Soil Disturbance	2	V-9
Fine Organic Matter Retention	3	V-9
BIOLOGICAL ELEMENTS		
Fisheries, Water and Riparian Resources		
Improvement of WQL Streams	1	V-11
Application of BMPs	3	V-11
Native Cutthroat Trout Habitat Features	1	V-12
Vegetation		
Timber Volume Removed From Unsuitable and Suitable-Unscheduled Lands	1	V-13
Pest Increase in Managed Stands	1	V-14
Ute Ladies'-Tresses Populations	1	V-14
Vegetation Structure, Composition and Distribution of Sagebrush/Grassland Habitats	3	V-15
Wildlife		
Cavity Nesters	1	V-16
Standing Dead Tree Habitat	3	V-17
Grizzly Bear Population	1	V-18
Grizzly Bear Habitat Improvement	1	V-19
Bald Eagle Nesting Population	1	V-20
Gray Wolf Population	1	V-21
Peregrine Falcon Nesting Population	1	V-22
Furbearer Population Trends	1	V-23
Goshawk Population Trends	1	V-24
Forest Owl Population	1	V-25
Trumpeter Swan Nesting Population	1	V-26
Spotted Frog Population	1	V-27
Common Loon Population	1	V-28
Harlequin Duck Population	1	V-29
Elk Vulnerability and Elk Habitat Effectiveness	1	V-30
Red Squirrel Population	1	V-31
FOREST USE AND OCCUPATION		
Forest Users		
User Satisfaction	2	V-32
Forest Operation		
Budget	1	V-33

Recreation		
Seasonal Trail Use Impacts to Soil and Vegetation	2	V-33
Recreation/Wildlife Conflicts	2	V-34
Dispersed Campsite Soil Displacement	3	V-35
Jedediah Smith Wilderness LAC	3	V-35
Roads and Trails Access		
Authorized Use Level	2	V-39
Road Closure Effectiveness	1	V-39
Achievement of Road Density Standards	1	V-41
PRODUCTION OF COMMODITY RESOURCES		
Range		
Streambank Disturbance/Stubble Height/ Channel Stability	1	V-42
Riparian Forage Utilization Within Key Areas	1	V-42
Upland Forage Utilization Within Key Areas	3	V-43
Riparian and Upland Long-Term Trend in Benchmarks	3	V-44
Timber		
Changes to Land Suitability	1	V-44
Maximum Created Opening Size	3	V-45
Security Cover Retention	3	V-46
Large Forested Block Retention	3	V-46



HOW THE MONITORING INFORMATION WILL BE USED

The results of annual monitoring activities will be evaluated to either verify the propriety of current actions, standards and guidelines; or to determine the need to change them. This evaluation will be assembled into an annual report and made available to Forest stakeholders.

Based on the information in the annual report the Forest will identify any changes needed to actions, standards or guidelines. Depending on the magnitude of the change required the Forest may choose to amend the Revised Plan through either the minor (nonsignificant) or major (significant) amendment processes. If the changes needed are of such a large magnitude that it is not feasible to amend the Plan, a Revision may be called for. Through the constant updating of direction due to yearly monitoring or advances in knowledge the Forest will strive to minimize the need to revise the Plan.

The monitoring item descriptions contain certain information in a standard format, which is briefly explained below.

Monitoring Item - The subject of the monitoring. This can often be tied back to a particular standard or guideline in the Revised Plan.

Type of Monitoring - Implementation, Effectiveness or Validation. The item may address more than one type of monitoring, such as effectiveness and validation.

Priority - The relative importance assigned to the item by the Forest leadership team, with one being highest priority and three the lowest.

Where Applies - Shows areas of the Forest where the monitoring would be conducted.

Indicator - Describes the parameter(s) that will be used to show compliance or change. For example, trails meeting acceptable standards could be measured in miles; areas meeting standards for down woody residue might be measured in acres; and so on.

Method - Explains how the monitoring will be conducted. For example, line transects could be used to monitor vegetation conditions; user surveys could be used to monitor recreation use and experience; and so on. If partnerships can be developed for doing the monitoring, that might be explained here.

Expected Precision and Reliability

- **Precision** - Shows how correct the monitoring result can be expected to be. For methods which allow scientifically replicable measurements these may be expressed in terms of how closely the estimate approaches the average of a cluster of sample values. For methods which are less scientifically rigorous precision may be expressed in terms of high, medium (or moderate) and low.

- **Reliability** - Measures the confidence which may be placed in the correctness of the estimate. Reliability may be expressed in terms of high, medium (or moderate) and low.

Tolerance or Variability Indicating Action - Explains the point at which management review or corrective action will be taken.

Frequency of Monitoring - Shows how often the monitoring will be conducted.

Lead Responsibility - Designates Forest personnel accountable for conducting the monitoring.

Estimated Annual Cost - Gives an estimate of the yearly cost to the Forest to conduct the monitoring.



MONITORING AND EVALUATION STRATEGY
Monitoring Item Description

PHYSICAL ELEMENTS

Air Quality

Monitoring Item - Long-term Visual Range in Class I and Class II Airsheds

Type of Monitoring - Implementation. The standards have not been quantified so there is also a need to establish a baseline.

Priority - Forest Priority Group 3.

Where Applies - Monitoring should be conducted in designated wilderness on the Forest; and other nonwilderness areas upwind from and adjacent to Class I airsheds and Class II wilderness airsheds managed by other entities.

Indicator - Visibility in miles.

Method - The following methods will be used:

1. Mounted, timed-exposure camera(s) established at fixed photopoint(s). The exposures should be evaluated periodically by density-monitoring devices in addition to ocular means.
2. Aerosol particle evaluation, to supplement information gathered by photographic means on days not meeting visual standards. These devices gather and evaluate information at the site only, not at remote locations on the visual evaluation track, and can help determine the particulate components of air not meeting standards to help discover the cause.

There appears to be ample opportunity for partnerships in this effort. Other federal agencies such as the Environmental Protection Agency, the U. S. Fish and Wildlife Service, and the National Park Service are already engaged in efforts of this type. The adjacent national parks, especially Grand Teton National Park, have been conducting some of this type of monitoring for some time, most recently in conjunction with their own prescribed burning activities which have increased since the 1988 Yellowstone fires. Within the Forest Service, the Bridger-Teton National Forest has conducted air quality monitoring for years in connection with oil and gas development activities. The Rocky Mountain Regional Office and Rocky Mountain Research Station both have shown interest in, and have expertise in, air quality monitoring.

Expected Precision and Reliability

- Precision - High.
- Reliability - High.

Tolerance or Variability Indicating Action - Reference standards.

Frequency of Monitoring - This will depend on local activities. Initially the frequency should be higher, until a baseline is established, perhaps at intervals of two to three times a week. After ambient conditions are determined, frequency could be relaxed and targeted toward times when conditions exceed naturally-occurring ambient conditions, or the Forest is planning and conducting activities which threaten to exceed standards.

Lead Responsibility - The Forest fire management group.

Estimated Annual Cost

Installation of camera:	\$2,000 per unit, or \$200/year
Annual operation and evaluation cost:	\$1,500 per unit
Installation of aerosol monitoring unit:	\$5,000 per unit, or \$500/year
Annual operation and evaluation cost:	\$1,500 per unit

TOTAL COST: \$3,700/year

Soils

Monitoring Item - Hydrologic Disturbance in Watersheds

Type of Monitoring - Implementation, Validation. Designed to measure implementation of the standard and verify its applicability.

Priority - Forest Priority Group 2.

Where Applies - Watersheds 10, 11 and 12 (currently at or above the 30 percent level), and watersheds 13 and 25 (which are approaching the 30 percent level).

Indicator - Bank instability (natural versus management-induced) along representative stream reaches within the above-mentioned watersheds.

Method - Rosgen stream-typing and Intermountain Region streambank stability ratings.

Expected Precision and Reliability

- Precision - Moderate.
- Reliability - Moderate.

Tolerance or Variability Indicating Action - Determine if bank instability is occurring within the watersheds currently exceeding the 30 percent guideline. Determine the sufficiency of the 30 percent guideline.

Frequency of Monitoring - Annually, until the 30 percent figure is validated or changed by appropriate study.

Lead Responsibility - The forest soil scientist will coordinate an integrated effort by watershed specialists and aquatic scientists.

Estimated Annual Cost - \$4,500.

Monitoring Item - Woody Residue Needs for Soil and Wildlife

Type of Monitoring - Effectiveness/Validation

Priority - Forest Priority Group 1.

Where Applies - Subsection, Watershed, Stand (~25 acres), Site

Indicator -

1. Size class, length, composition class to meet standards
 1. logs of > 7" diameter @ small end and > 20' length
 2. number of logs per acre consisting of logs in appropriate decomposition classes as shown in the Forestwide S&Gs for soil and wildlife
2. Acre/acres (patch) dependent upon analysis approach; and area size, species or life form (such as cavity-nesters) of interest.
3. Distribution/condition/availability
 1. stand
 2. subwatershed or watershed
 3. landscape (incl. species type and sere(s))
 4. subsection
4. Follow requirements for woody residue and dead and down material in the Forestwide S&Gs.

Method - Sampling in project or analysis areas by subsection by watershed/subwatershed, by type, elevation, and soil productivity class (integrated resource inventory).

Also, follow procedures such as those outlined within "Guidelines for Sampling Some Physical Conditions of Surface Soils", by Steve Howes, John Hazard, and J. Michael Geist, Pacific Northwest Region, July 1983 (R6-RWM-146-1983). Sampling would be on line transects.

Role of partners will depend on the availability of funds and relation of partner skills to task needs.

Expected Precision and Reliability

- Precision - Variable by type but generally high
- Reliability - High

Tolerance or Variability Indicating Action - Changes in management will be necessary when:

- A. Baseline studies (inventory) refine dead/down needs in varied forest types for species needs;
- B. Monitoring of projects and comparison of results among treated areas demonstrate that current guidelines are in need of change.

Measures and need for change in both (A) and (B) should be determined through evaluations of site, stand and landscape conditions coupled with baseline forestwide (systematic) species inventories and improved knowledge of regional life history characteristics and requirements for various species of wildlife that use dead and down logs.

Frequency of Monitoring - (Soils) Prior to and following project analyses for each subsection. Analyses and evaluations should include site, stand and landscape conditions. For soils, monitoring would be conducted annually, until an adequate determination can be made for ground-disturbing resource management practices.

Lead Responsibility - (Soils) Monitoring teams including soils, vegetation and wildlife/ecology specialists.

Estimated Annual Cost - Will vary by the number of projects anticipated and planned to affect the distribution and abundance of dead and down material. Per analysis and project costs will vary, but will likely range from \$2,000 to \$4,000, depending on size of analysis area and levels of previous and expected disturbance. Costs do not include baseline inventories nor NEPA preparation.

Monitoring Item - Detrimental Soil Disturbance

Type of Monitoring - Implementation and Effectiveness.

Priority - Forest Priority Group 2.

Where Applies - Forestwide (select representative sites where various land treatments have occurred).

Indicator - At least 85 percent of the total area within an activity area must have soil in satisfactory condition; or, no more than 15 percent of an activity area may have detrimentally-disturbed soil. Detrimen- tally-disturbed soil is soil that has been displaced, compacted, puddled, or severely burned.

Method - Follow procedures such as those outlined in "Guidelines for Sampling Some Physical Condi- tions of Surface Soils", by Steve Howes, John Hazard, and J. Michael Geist, Pacific Northwest Region, July 1983 (R6-RWM-146-1983). Sampling would be done on line transects.

Expected Precision and Reliability

- Precision - Moderately high.
- Reliability - Moderately high.

Tolerance or Variability Indicating Action - For those resource practices consistently exceeding the 15 percent threshold, determine if techniques can be improved or another method found. Evaluate areas with greater than 15 percent soil disturbance for rehabilitation opportunities.

Frequency of Monitoring - Annually, until an adequate determination can be made for various resource practices that are ground-disturbing.

Lead Responsibility - Forest or District soil scientist.

Estimated Annual Cost - \$5,000.

Monitoring Item - Fine Organic Matter Retention

Type of Monitoring - Implementation and Effectiveness.

Priority - Forest Priority Group 3.

Where Applies - Forestwide (select representative sites, or habitat types, where various land treatments have occurred).

Indicator - At least 50 percent (evenly distributed) of the total area within an activity area must retain its fine organic matter (duff layer plus materials less than 3-inches in diameter) within forested ecosystems;

provide for a minimum of 65 percent ground cover (plants, litter and rock - greater than 3/4-inch in diameter) on rangeland ecosystems; or, in both ecosystems, an equivalent percentage if the site cannot naturally attain the minimum percentages mentioned above.

Method - Follow procedures such as those outlined within "Guidelines for Sampling Some Physical Conditions of Surface Soils" by Steve Howes, John Hazard, and J. Michael Geist, Pacific Northwest Region, July 1983, (R6-RWM-146-1983). Sampling would consist of line transects and 1/10th acre plots.

Expected Precision and Reliability

- Precision - Moderately high to high.
- Reliability - Moderately high to high.

Tolerance or Variability Indicating Action - For those resource practices consistently exceeding the threshold, determine if techniques can be improved or another method found. Evaluate areas exceeding the standard for rehabilitation opportunities.

Frequency of Monitoring - Annually, until an adequate determination can be made for various ground-disturbing resource management practices.

Lead Responsibility - Forest or District soil scientist.

Estimated Annual Cost - \$1,000.



BIOLOGICAL ELEMENTS

Fisheries, Water and Riparian Resources

Monitoring Item - Improvement of Water Quality Limited Streams

Type of Monitoring - Validation. This monitoring should answer the question, Is water quality in these streams at the point where they can be delisted?

Priority - Forest Priority Group 1.

Where Applies - First on streams listed as Water Quality Limited, and then, if necessary, monitoring will be extended to their tributaries and watersheds. This item will follow updates to the State WQL lists.

Indicator - Depends on the reason for listing, e.g., on streams listed for nutrient concerns, nitrate + nitrite and orthophosphate are used as indicators. If monitoring of streams for the specific compound or component turns up concerns, monitoring would be extended to find the source of the concern.

Method - Approved protocols for the constituent of concern. Procedures include those used by Idaho DWR - Division of Environmental Quality (BURP Methods), methods approved for the State of Wyoming, the U.S. Geological Survey, or in publications such as "Monitoring Protocols to Evaluate Water Quality Effects of Grazing Management on Western Rangeland Streams" by Stephen Bauer and Timothy Burton, October 1993 (EPA 910/R-93-017). Methods will change as water quality standards and assessment procedures change.

Expected Precision and Reliability

- Precision - Depends on the parameter/constituent being measured (e.g., nutrients may be in mg/l, but sediment measurements vary widely)
- Reliability - if conditions remain constant, should be able to reproduce. Some constituents, though, vary with streamflow. There are some things that are difficult to reproduce when dealing with a fluid medium.

Tolerance or Variability Indicating Action - When it can be reliably determined that water quality standards are being violated, or that the stream cannot be removed from the WQL list because of deteriorated conditions.

Frequency of Monitoring - Depends on the constituent being monitored. Generally, one can expect to have to visit sites several times during the summer.

Lead Responsibility - Forest hydrologist.

Estimated Annual Cost - Monitoring all WQL streams has an estimated annual cost of approximately \$15,000. This would include a full-time person to do the monitoring at the GS-5 level.

Monitoring Item - Application of Best Management Practices (BMPs)

Type of Monitoring - Implementation and Effectiveness. Measures whether BMPs related to maintaining and improving water quality are being applied.

Priority - Forest Priority Group 3.

Where Applies - Project areas where BMP's are applied (such as timber sale areas, new roads, etc.)

Indicator - Variable, depending upon the BMP which was applied.

Method - For implementation monitoring, reviews would be conducted of projects by teams including the project planner, administrator, and interested specialists. For effectiveness monitoring, water quality, soil characteristics (such as erosion), and fish habitat would be monitored for selected projects.

Expected Precision and Reliability

- Precision - Variable, depending on the project and the impacts being measured.
- Reliability - Results should be reasonably reproducible, unless conditions change between monitoring times.

Tolerance or Variability Indicating Action - If BMP's are not being applied in situations which call for their use, a review would be conducted to determine the reasons. If instream beneficial uses may be put at risk, or if unacceptable soil degradation is occurring, a review would be conducted to determine the reasons.

Frequency of Monitoring -

Implementation monitoring: Once after projects are finished.

Effectiveness monitoring: Variable. Water quality monitoring might be conducted several times per year. Monitoring for changes in soils, fish habitat or channel condition may be conducted once per year.

Lead Responsibility - Soil scientist, fisheries biologist, hydrologist.

Estimated Annual Cost - Average cost would be between \$2,000 and \$10,000 per year, depending on what is being monitored.

Monitoring Item - Native Cutthroat Trout Habitat Features

Type of Monitoring - Validation. Test the following critical planning assumptions: 1) the "expected values" for water temperature and width/depth ratio, for a given Rosgen stream type, represent good habitat conditions for native cutthroat trout at the watershed scale; and 2) these conditions are attainable.

Priority - Forest Priority Group 1. Monitoring needed to meet a Forest Plan objective. Relates to many Forest Plan goals and provides a basis by which several guidelines were developed. Monitoring needed to validate the "expected values" for water temperature and width/depth ratio because they are not strongly supported by site specific research. There is strong public interest and agency concern over fisheries guidelines which may be unduly restrictive or lax.

Where Applies - Within Native Trout Watersheds (17 identified at present).

Indicator - Number of Native Trout watersheds in which correlations have been completed.

Method - Protocol to be determined.

Phase 1: Within all Native Trout Watersheds, assess the population status of native cutthroat trout populations as to presence/absence, relative abundance, presence of other salmonid species, and

level of hybridization. Survey techniques will employ snorkeling and electro-fishing.

Phase 2: Where populations of native cutthroat trout exist, measure and record values for all of the six habitat features, including Rosgen stream type.

Phase 3: Compare, at the watershed scale, the recorded values for water temperature and width/depth ratio to the "expected values."

Expected Precision and Reliability

- Precision - To be determined.
- Reliability - At least 80 percent

Tolerance or Variability Indicating Action

Water temperature: 1) meet State water quality standards; and 2) two degrees C. above values in the table needed to meet biological requirements for native cutthroat trout.

Width/depth ratio: a factor of one.

Frequency of Monitoring - Survey one time.

Lead Responsibility - Forest Fisheries Biologist.

Estimated Annual Cost - Monitoring costs could be incurred over a 2-5 year period. Total cost is \$71,000 (assuming no cost-share above existing partnerships).

- Year 1: \$ 9,000 (lower Henry's Fork drainage)
- Year 2: \$26,000 (Teton drainages)
- Year 3: \$36,000 (South Fork drainages)

Vegetation

Monitoring Item - Timber Volume Removed from Unsuitable and Suitable-Unscheduled (U/S-U) Lands

Type of Monitoring - Implementation

Priority - Forest Priority Group 1.

Where Applies - Applies to harvest on lands not calculated in the Allowable Sale Quantity (ASQ).

Indicator - Million Board Feet (MMBF) for the Revised Plan initial decade.

Method - Review project-level NEPA analysis for identification of U/S-U lands proposed for vegetation manipulation by timber harvest. District timber sale project personnel include summary of cutting units on U/S-U lands and volume to be harvested with the Gate 3 Appraisal package submitted to the Contracting Officer for contract preparation.

Expected Precision and Reliability

- Precision - High

- Reliability - High

Tolerance or Variability Indicating Action - U/S-U harvested volume exceeding 20 MMBF before completion of the Revised Plan initial decade.

Frequency of Monitoring - Annually

Lead Responsibility - Forest Timber Contracting Officer and District Timber Sale project personnel.

Annual Estimated Cost - \$1,000

Monitoring Item - Pest Increase in Managed Stands

Type of Monitoring - Effectiveness. Detects increases in insect and disease attacks in vegetation polygons after management activities.

Priority - Forest Priority Group 1 (required by regulation).

Where Applies - Forestwide where management activities have altered vegetation.

Indicator - An increase in insect and/or disease activity as plotted on annual aerial survey maps.

Method - Forest silviculturist will review the annual aerial survey maps issued by Forest Service Pest Management branch, paying special attention to any increased incidence of pest activity in recent activity areas.

Expected Precision and Reliability

- Precision - Moderate to High
- Reliability - Moderate to High

Tolerance or Variability Indicating Action - Significant pest activity noted in or near recent activity areas in any given year, or low-level recurring pest activity noted over several years, will be cause for visiting the sites to determine whether the pest activity is occurring within recently-treated areas. Further action will be taken as needed.

Frequency of Monitoring - Annually

Lead Responsibility - Forest Silviculturist.

Annual Estimated Cost - GS-12 @ \$200/day for three days per year = \$600.

Monitoring Item - Ute Ladies'-Tresses Populations

Type of Monitoring - Effectiveness/Validation. Designed to assess the effectiveness of standards and guidelines for livestock grazing and other activities for protection of this plant and its habitat.

Priority - Forest Priority Group 1.

Where Applies - Applies in occupied habitat and habitat suitable for the occurrence of this plant.

Indicators -

1) Population trend as indicated by population size, condition or structure, in permanently marked or unmarked areas.

2) Documented habitat changes as indicated by parameters such as hydrology, riparian successional stages, presence or absence of noxious weeds, etc.

Method - To measure population trends, the size and condition of populations will be quantitatively monitored in marked and unmarked areas. In marked areas a permanently marked grid system will be used. Unmarked areas will be monitored using methods such as belt transects, quadrats or well-defined unmarked areas.

Habitat changes will be mapped and documented. In known population areas human activities will be recorded which have been or may be defined as threats to the species and its habitat.

Expected Precision and Reliability

- Precision - Generally high.
- Reliability - Generally high if methods are applied correctly and data interpreted appropriately.

Tolerance or Variability Indicating Action - Ute ladies'-tresses populations fluctuate with respect to the number of individuals flowering from year to year. In general, a sustained downward trend in population numbers would indicate a need for action.

Frequency of Monitoring - At least once a year during flowering and seed-set periods (generally August and September).

Lead Responsibility - Native plant program manager. State fish and game departments and other agencies will be invited to become involved as much as possible.

Annual Estimated Cost - \$1,500

Monitoring Item - Vegetation Structure, Composition, and Distribution of Sagebrush/Grassland Habitats

Type of Monitoring - Implementation.

Priority - Forest Priority Group 3.

Where Applies - Watersheds and subwatersheds.

Indicator - Big sagebrush (*Artemisia tridentata*) canopy cover age distribution across a subwatershed or watershed.

Method - Ocular estimate or Line Intercept Method for Crown Canopy Cover, described in the Forest Service Handbook 2209.21, Ch.44.51.

Expected Precision and Reliability

- Precision - High.
- Reliability - Moderate.

Tolerance or Variability Indicating Action - When sagebrush/grassland habitat conditions are not within Forestwide S&Gs (vegetation).

Frequency of Monitoring - As needed.

Lead Responsibility - District Rangeland Management Specialist.

Estimated Annual Cost

One GS-9 @ \$175.00/day for 35 days = \$6,125/year.

Wildlife

Monitoring Item - Cavity Nesters

Type of Monitoring - Effectiveness and/or Validation. Designed to measure population trends of primary cavity nesting species and relationships to habitat changes.

Priority - Forest Priority Group 1.

Where Applies - Monitoring emphasis will be in the 5.x.x series management prescriptions which allow timber harvesting. Other management prescriptions will be monitored on an as needed basis depending on human activities and natural events such as fires.

Indicator -

Population trend: Birds per transect and/or birds per point.

Habitat changes: Percent biological potential (snags per 100 forested acres) as identified in the Forestwide S&Gs and the 5.x.x series management prescriptions.

Method -

Population trend: Point count surveys following methods which have been used in the Neotropical Migratory Landbird Monitoring Project in the Big Hole Mountains (Kliene 1996). A minimum of 24 transects, with 10 to 15 point count stations per transect, distributed within the 5.x.x series management prescriptions. Surveys should be done in March and April, prior to the start of incubation. Don't use playback calls.

Habitat changes: Documentation of changes in percent biological potential (snags per 100 forested acres). Several data sources could be used which include the following: stand exam surveys, permanent forest inventory plots, and a methodology recently developed at the University of Idaho using variable length and width transects.

Expected Precision and Reliability

- Precision - Moderate to High
- Reliability - Moderate to High

Tolerance or Variability Indicating Action -

Population trend: Population trends are expected to be variable from year to year and are affected by habitat changes, weather conditions, predation, etc. A declining trend for at least four years in a row would be an indication for action.

Habitat changes: Percent biological potential below that specified for a management prescription.

Frequency of Monitoring - Annually

Lead Responsibility - Targhee National Forest. State Fish and Game Departments and other agencies will be involved as much as possible.

Estimated Annual Cost - \$3,800 (24 days at \$160/day/person)
 3,960 (vehicle expense, equipment, etc.)
 800 (record keeping/report writing)
 \$8,600

Monitoring Item - Standing Dead Tree Habitat

Type of Monitoring - Effectiveness/Validation. Determines degree to which wildlife requirements are met by standing dead and replacement green trees.

Priority - Forest Priority Group 3.

Where Applies - Subsection, Watershed, Stand (~25 acres), Site

Indicators -

- A. diameter
- B. tree species
- C. tree height
- D. composition (dead tree hardness/class)
- E. number and dispersion of dead standing and replacement trees (dispersion refers to the evenness and clumpiness of dead and green replacement trees)

Factors to be considered include but are not limited to:

- A. Forest inventories for species that use dead standing trees
- B. Number of species, species group or life form (e.g. cavity nesters, forest raptors, songbirds, furbearers) with potential to occur according to species distribution and available habitat characteristics. (Note: Guidelines do not assume that requirements for one species meet the needs for another where overlap in size and placement characteristics exist.)
- C. Size of female home range and breeding area requirements with representative habitat characteristics for successful breeding and fledging of young according to species of interest or concern.
- D. Existing landscape, stand, and site conditions and characteristics within analysis and treatment areas as determined by inventories prior to project implementation.
- E. Distribution/condition/availability:
 - 1. stand
 - 2. subwatershed or watershed
 - 3. landscape (incl. species type and sere(s)).
 - 4. subsection

F. Distribution of natural opening sizes, shapes and structural characteristics of forest seres comparing natural disturbance types to human-induced.

G. Occurrence and distribution of forest types and effective conditions at landscape, stand and site relative to potential for species occurrence, distribution and reproduction.

Method - Systematic sampling in project or analysis areas by subsection by watershed/subwatershed, forest type, elevation, and soil productivity class (IRI inventory). Role of partners will be systematic inventories of habitat conditions and species occurrences prior to and after vegetation treatments.

Expected Precision and Reliability

- Precision - Variable by species and forest (condition, characteristics) type but generally high.
- Reliability - High

Tolerance or Variability Indicating Action - Changes in management will be necessary as:

A. Baseline studies (inventory) refine or replace dead standing and green replacement trees in varied forest types and conditions for species needs;

B. Monitoring of projects and comparison of results among treated areas demonstrate that current guidelines are in need of change.

Measures and need for change in both (A) and (B) should be determined through evaluations of site, stand and landscape conditions coupled with baseline forestwide (systematic) species inventories and improved knowledge of regional life history characteristics and requirements for various species of wildlife that use dead standing and green replacement trees.

Frequency of Monitoring - Prior to and following project analyses for each subsection. Analyses and evaluations should include site, stand and landscape conditions.

Lead Responsibility - Forest wildlife biologist

Estimated Annual Cost - Will vary by the number of projects anticipated and planned to affect the distribution and abundance of dead and down material. Per analysis and project costs will vary, but will likely range from \$1500 to \$3000 depending on size of analysis area, levels of previous disturbance, and expected disturbance. Costs do not include baseline inventories nor NEPA preparation.

Monitoring Item - Grizzly Bear Population

Type of Monitoring - Effectiveness and/or Validation. Designed to measure grizzly bear population and relationship to habitat changes.

Priority - Forest Priority Group 1.

Where Applies - Grizzly Bear BMU's and Subunits

Indicator -

Population trend: Population trends are developed for the entire Yellowstone recovery area, and are computed from several components of the grizzly bear population which include the following: annual unduplicated sightings of females with cubs, distribution of females with cubs, total known mortality, total female mortality.

Habitat changes: Habitat changes are analyzed with the grizzly bear cumulative effects model (CEM), and include changes in: vegetation (fires, timber harvesting, etc.); road and trail access (also called linear activities); developed sites such as campgrounds, resorts, etc. (also called point activities); and dispersed recreation such as hunting, berry picking, etc. (also called dispersed activities).

Method -

Population trend: In cooperation with the USFWS and Interagency Study Team, report all verified sightings of grizzly bears (especially sows with cubs) and all verified mortalities.

Habitat changes: Within the BMU's and Subunits, Ranger Districts will annually update information on vegetation, linear features, point activities, and dispersed activities. This information will be maintained in the GIS database in the Supervisor's Office.

Expected Precision and Reliability

- Precision - Moderate for population trends (it is difficult to observe bears and verify all reported sightings). High for habitat changes.
- Reliability - Moderate for population trends (it is difficult to observe bears and verify all reported sightings). High for habitat changes.

Tolerance or Variability Indicating Action - Failure to meet the recovery targets as outlined in the Grizzly Bear Recovery Plan (this applies to the entire GYA recovery zone). Failure to meet the Forest Plan S&Gs for the BMU/Subunits on the Targhee National Forest.

Frequency of Monitoring - Annually

Lead Responsibility - Population trend monitoring has been lead by the Interagency Grizzly Bear Study Team and the USFWS; Ranger Districts and the Supervisor's Office provide verified sighting information to the Study Team and USFWS. Habitat monitoring is done by the Ranger Districts and Supervisor's Office.

Estimated Annual Cost - \$19,200 (120 days at \$160/day (30 days/RD & SO))
 8,550 (vehicle expense, equipment, etc.)
 800 (record keeping/report writing)
 \$28,550

Monitoring Item - Grizzly Bear Habitat Improvement

Type of Monitoring - Implementation, Effectiveness. Measures improvement in the quality of grizzly bear habitat on the Forest, and the contribution of the Forest to total grizzly bear habitat quality in the Greater Yellowstone Area.

Priority - Forest Priority Group 1.

Where Applies - Applies to all prescription areas within designated Bear Management Units (BMU's) on the Forest.

Indicator - The primary indicators of trend in grizzly bear habitat are habitat effectiveness; habitat value; and bear displacement. These three are described in detail in the documentation for the grizzly bear cumulative effects model. (IGBC 1990)

In addition to the above, indicators will be used from the Interagency Grizzly Bear Committee Taskforce Report on Motorized Access Management. (IGBC 1994)

Method - Each management unit of the Greater Yellowstone Area, including the Targhee National Forest, will annually submit data on changes in road and trail access, and vegetation, to the USDA-Forest Service Intermountain Regional Office. That office will compile the data, develop a data set fixed in time, and issue this in electronic digital form (CD-ROM). This data will then be forwarded to individual management units for on-site use and runs.

On the Targhee National Forest, individual ranger districts will track changes in road and trail access and vegetation. These will be submitted to the Forest GIS shop for assembly into a Forest data package.

Expected Precision and Reliability

- Precision - Very high.
- Reliability - Results will be reproducible with the same data set.

Tolerance or Variability Indicating Action - Refer to the item on achievement of road density standards.

Frequency of Monitoring - Annually.

Lead Responsibility - Forest wildlife biologist.

Estimated Annual Cost - On each of the three ranger districts with grizzly bear habitat, one person (GS-9 wildlife biologist) will need two weeks to put together the input data required. On receipt of the CD-ROM data from the Regional Office, the Forest GIS shop will need one person (GS-7 tech) for one day to run the cumulative effects model on each of the seven subunits.

GS-9 biologist: 3 districts, two weeks each @ \$150/day	\$4,500
GS-7 GIS technician: 7 subunits, one day each @ \$110/day	\$ 770
TOTAL:	\$5,270

Monitoring Item - Bald Eagle Nesting Population

Type of Monitoring - Effectiveness and/or Validation. Measures the nesting population of bald eagles and its relationship to habitat changes.

Priority - Forest Priority Group 1.

Where Applies - All bald eagle nesting territories.

Indicator -

Population trends: Occupancy and productivity of all bald eagle nesting territories.

Habitat changes: Changes in vegetation within nesting territories; changes in human activities within nesting territories.

Method -

Population trends: Standard monitoring of occupancy and productivity which has been done for more than a decade.

Habitat changes: Documentation and mapping of vegetation changes within nesting territories using the forest GIS database. Documentation of changes in human activities within nesting territories, which may include recreation use (boating, floating, fishing, etc.), motorized access, construction activities, etc.

Past monitoring has been a cooperative effort with the Idaho Department of Fish and Game, BLM, U.S. Fish and Wildlife Service, Forest Service, and some private individuals. It is expected that this cooperation will continue in the future.

Expected Precision and Reliability

- Precision - High for population trends and vegetation changes. Moderate to high for human activities.
- Reliability - High for population trends and vegetation changes. Moderate to high for human activities.

Tolerance or Variability Indicating Action - Failure of an adult pair to occupy a nesting territory more than two years in a row. Data on productivity shows that spring weather has a great influence on productivity. Therefore, reductions in productivity must indicate factors other than spring weather are responsible for reduced productivity.

Frequency of Monitoring - Annually.

Lead Responsibility - Coordinated by the Forest wildlife biologist.

Estimated Annual Cost - \$16,000

Monitoring Item - Gray Wolf Population

Type of Monitoring - Effectiveness and/or Validation. Designed to measure gray wolf population and relationship to habitat changes.

Priority - Forest Priority Group 1.

Where Applies - Forestwide

Indicator -

Population trend: Number of wolf packs, reproduction, movements, and mortality are being monitored.

Habitat changes: Intrusive human disturbances within one mile around active den sites and rendezvous sites between April 1 and June 30, when there are five or fewer breeding pairs of wolves in each experimental population area. Forestwide standards for livestock grazing and gray wolves.

Method -

Population trend: In cooperation with the USFWS and monitoring teams, report all verified sightings of gray wolves (especially evidence of packs).

Habitat changes: Within one mile of active den sites and rendezvous sites, restrict intrusive human disturbances between April 1 and June 30, when there are five or fewer breeding pairs of

wolves in each experimental population area. Increase monitoring of livestock allotments where wolf packs have established.

Expected Precision and Reliability

- Precision - High
- Reliability - High

Tolerance or Variability Indicating Action - Failure to implement the Revision S&Gs for gray wolves.

Frequency of Monitoring - Annually

Lead Responsibility - Habitat monitoring is done by the Ranger Districts and Supervisor's Office, and coordinated by the Forest biologist. Population trend monitoring has been lead by the USFWS and wolf monitoring teams. Ranger Districts and the Supervisor's Office provide verified sighting information to the USFWS.

Estimated Annual Cost - \$8,000 (50 days at \$160/day)
 2,000 (vehicle expense, equipment, etc.)
 800 (record keeping/report writing)
 \$10,800

Monitoring Item - Peregrine Falcon Nesting Population

Type of Monitoring - Effectiveness and/or Validation. Designed to measure the peregrine falcon nesting population and relationship to habitat changes.

Priority - Forest Priority Group 1.

Where Applies - All peregrine falcon nest sites and territories.

Indicator -

Population trend: Occupancy and productivity of all peregrine falcon nest sites and territories.

Habitat changes: The primary concern is human activity, such as rock climbing, at known nest sites. In the past, use of pesticides which caused egg shell thinning was the primary concern. Human activities and use of pesticides will be the main habitat changes monitored. General habitat conditions and changes within the foraging area will also be monitored.

Method -

Population trend: Standard monitoring of occupancy and productivity which has been done for more than a decade.

Habitat changes: Periodic visits to nest sites to document changes in human activities. If necessary, cameras could be established to document human activity at nest sites. Documentation of the use of pesticides. Documentation of general habitat changes through tracking of proposed project activities and GIS databases.

Past monitoring has been a cooperative effort with the Idaho Department of Fish and Game, BLM, U. S. Fish and Wildlife Service, Forest Service, and some private individuals. It is expected that this cooperation will continue in the future.

Expected Precision and Reliability

- Precision - High for population trends. Moderate to high for human activities.
- Reliability - High for population trends. Moderate to high for human activities.

Tolerance or Variability Indicating Action - Peregrine falcon nest sites may not be occupied or produce young every year. Nest sites may also change over time. A nest site not occupied for more than two consecutive years may indicate the need to assess needed management actions.

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist.

Estimated Annual Cost - \$4,800 (30 days at \$160/day)
 1,200 (vehicle expense, equipment, etc.)
 800 (record keeping/report writing)
 \$6,800

Monitoring Item - Furbearer Population Trends

Type of Monitoring - Effectiveness and/or Validation. Measures the population trends of marten, fisher, wolverine, and relationships to habitat changes.

Priority - Forest Priority Group 1.

Where Applies - Ecological subsections of the Forest.

Indicator -

Population trend: travel distance per encounter of tracks or other sign, (example: 1.43 marten tracks or sign per mile).

Habitat changes: documented changes in important habitat parameters such as forest seral stages, dead and downed woody debris, motorized access, etc.

Method -

Population trend: Winter track/sign surveys following procedures developed by Dr. Steve Minta in the Western Yellowstone Forest Carnivore Project. Briefly: a minimum of three sampling units of four square miles in each ecological subsection, with 8 to 10 linear miles of snowmachine routes in each sampling unit. Each sampling unit should be sampled 3 times during the winter period. Specific protocol is documented in Western Yellowstone Forest Carnivore Project Study.

Since wolverine and fisher are extremely rare, additional monitoring using the following techniques may be used:

- A. Scent stations with cameras and/or track recording;
- B. Surveys of natal denning areas in boulder fields (for wolverine);
- C. All observations from reputable sources will be recorded and maintained in District and Forest databases.

Habitat changes: Documentation and mapping of changes in forest seral stages (timber harvest, fires, etc.) in the Forest GIS database. Documentation of changes in motorized access (see road and trail access monitoring items). Loss of dead and downed woody debris due to firewood gathering, timber harvesting, etc.

Expected Precision and Reliability

- Precision - Moderate to High
- Reliability - Moderate to High

Tolerance or Variability Indicating Action - Furbearer populations will fluctuate naturally due to a variety of factors such as weather, prey abundance, trapping pressure (martens), etc. Populations are expected to change due to programmed management actions like timber harvesting, as predicted in the FEIS. Therefore a sustained downward trend for at least four sampling winters which is greater than expected from programmed management actions will trigger management review.

Frequency of Monitoring - At least half of the ecological subsections each winter.

Lead Responsibility - Forest wildlife biologist. State Fish and Game Departments and other agencies will be involved as much as possible.

Estimated Annual Cost - \$18,000

Monitoring Item - Goshawk Population Trends

Type of Monitoring - Effectiveness and/or Validation. Designed to measure population trends of goshawks and relationships to habitat changes.

Priority - Forest Priority Group 1.

Where Applies - Forestwide

Indicator -

Population trend: adult occupancy of known goshawk nesting territories.

Habitat changes: documented changes in important habitat parameters identified in the Forestwide S&Gs within known goshawk nesting territories.

Method -

Population trend: Random sampling of adult occupancy at a minimum of 15 goshawk nesting territories each year. Sampling can occur during April (no taped calls), and June 10-30 (using taped calls). More than one trip to each territory may be needed to accurately assess adult occupancy. Alternate nest sites must be checked.

In addition to random sampling, all verified observations of adult occupancy in territories will be recorded. All new verified territories will be added to the forestwide database.

Habitat changes: Documentation and mapping of changes in habitat conditions identified in the Forestwide S&Gs within active and historic nest territories, using the forest GIS database.

Expected Precision and Reliability

- Precision - Moderate to High
- Reliability - Moderate to High

Tolerance or Variability Indicating Action - Habitat changes which exceed the Forestwide goshawk S&Gs. Goshawk territories are not always occupied every year. However, overtime, a stable population should revolve around some average occupancy rate. A sustained downward trend of adult occupancy for at least four years may indicate a need for action.

Frequency of Monitoring - Annually

Lead Responsibility - Targhee National Forest. State Fish and Game Departments and other agencies will be involved as much as possible.

Estimated Annual Cost - \$7,200 (1 person for 45 days at \$160/day)
 4,550 (vehicle expense, equipment, etc.)
 800 (record keeping/report writing)
 \$12,550

Monitoring Item - Forest Owl Population

Type of Monitoring - Effectiveness and/or Validation. Designed to measure population trends of boreal, great gray and flammulated owls, and relationships to habitat changes.

Priority - Forest Priority Group 1.

Where Applies - Ecological subsections of the forest.

Indicator -

Population trend: Travel distance per encounter of calling adults (example: 0.5 boreal owl or great gray owl encounters per ten miles).

Habitat changes: Documented changes in important habitat parameters such as forest seral stages, dead and downed woody debris, etc., within active and historic nesting territories.

Method -

Population trend: A minimum of ten miles of calling transects within each ecological subsection (70 miles total) conducted each year. Briefly: Boreal owls can be surveyed from about February through April; great gray owls from March through May; and flammulated owls during May. Follow standard survey/calling protocol which has been used on the forest for owl surveys for the past several years. About four miles of transect can be done in one night by one team.

In addition to the survey routes, all verified observations of boreal, great gray, and flammulated owls during the nesting and brooding rearing seasons will be recorded and maintained in a forest database.

Habitat changes: Documentation and mapping of changes in forest seral stages (due to timber harvest, fires, etc.) within active and historic nest territories, using the forest GIS database. Loss of dead and downed woody debris due to firewood gathering, timber harvesting, etc.

Expected Precision and Reliability

- Precision - Moderate to High
- Reliability - Moderate to High

Tolerance or Variability Indicating Action - Forest owl populations will fluctuate naturally due to a variety of factors such as weather, prey abundance, etc. Forestwide S&Gs were developed to maintain suitable habitat conditions in known territories. Therefore a sustained downward trend for at least four sampling years which can be correlated with changes in habitat conditions due to vegetation management or natural events such as fire will trigger management review.

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist. State Fish and Game Departments and other agencies will be involved as much as possible.

Estimated Annual Cost - \$5,760 (2 person teams/18 days at \$160/day/person)
 4,520 (vehicle expense, equipment, etc.)
 800 (record keeping/report writing)
 \$11,080

Monitoring Item - Trumpeter Swan Nesting Population

Type of Monitoring - Effectiveness and/or Validation. Designed to measure nesting populations and relationship to habitat changes.

Priority - Forest Priority Group 1.

Where Applies - Trumpeter swan nesting habitat; highest priority will be the ponds and lakes identified in the Forestwide S&Gs.

Indicator -

Population trend: Occupancy of suitable nesting habitat and productivity of swan pairs using suitable nesting habitat.

Habitat changes: Changes in riparian and aquatic habitat within or adjacent to suitable nesting habitat; changes in human activities within or adjacent to suitable nesting habitat.

Method -

Population trend: Standard monitoring of occupancy and productivity which has been done for more than a decade. Emphasis will be on those sites listed in the trumpeter swan Forestwide S&Gs.

Habitat changes: Documentation and mapping of riparian and aquatic vegetation changes at suitable nesting ponds and lakes. Documentation of changes in water depths. Documentation of changes in human activities at suitable nesting ponds and lakes, which may include recreations use, motorized access, livestock grazing, etc.

Expected Precision and Reliability

- Precision - High for population trends. Moderate to high for habitat changes.

- Reliability - High for population trends. Moderate to high for habitat changes.

Tolerance or Variability Indicating Action - From 1982 to 1996, the number of sites occupied by pairs has ranged from 7 to 17. Only one site has been occupied by a swan pair all 15 years, and only one site has been occupied by a swan pair 14 out of the 15 years. Total young observed has ranged between 3 and 16 for the 15 years of data. The recent work to move swans to new areas may have resulted in reduced pairs using suitable habitat on the forest. We therefore expect a lot of variability between years. However, a downward trend in the number of pairs and/or productivity for more than four years in a row would indicate that some management action may be necessary.

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist. Ranger Districts will gather data, in cooperation with the State Fish and Game Departments and the U.S. Fish and Wildlife Service (Red Rock Lakes National Wildlife Refuge).

Estimated Annual Cost -	\$3,200 (20 days at \$160/day)
	1,000 (vehicle expense, equipment, etc.)
	800 (record keeping/report writing)
	\$5,000

Monitoring Item - Spotted Frog Population

Type of Monitoring - Effectiveness and/or Validation. Designed to measure populations of frogs and relationship to habitat changes.

Priority - Forest Priority Group 1.

Where Applies - Spotted frog habitat, which is riparian and wetland areas on the northern portions of the Forest.

Indicator -

Population trend: Occupancy at documented sites and relative abundance at those sites.

Habitat changes: Changes in riparian and aquatic habitat conditions within or adjacent to documented sites; changes in human activities within or adjacent to documented sites.

Method -

Population trend: The Forest and Idaho State University recently completed a survey of spotted frogs on the forest. Sites with spotted frogs were documented, and a relative estimate of the frog population observed at each site was made. Each year, random sampling of occupancy and relative abundance will be done at a minimum of 15 sites, using the same techniques and procedures as used by Idaho State University. In addition to resurveying known sites, new sites with spotted frogs will be added to the data base, and included in the survey program.

Habitat changes: Spotted frog habitat is to be managed according to Rx 2.8.3 and Forestwide S&Gs for Fisheries, Water and Riparian Resources. As spotted frog sites are surveyed each year, documentation will be done on the habitat conditions and adherence to the management direction. Conditions will be compared with descriptions from the Idaho State University survey reports.

Expected Precision and Reliability

- Precision - Moderate for population trends. Moderate to high for habitat changes.
- Reliability - Moderate for population trends. Moderate to high for habitat changes.

Tolerance or Variability Indicating Action - The survey results from Idaho State University indicate that spotted frog distribution and abundance is highly variable between years, and is strongly influenced by moisture and water. We expect survey results to be variable. A consistent decline in the relative abundance of frogs at a majority of the survey sites, and a downward trend in riparian habitat conditions, would indicate that some management action may be necessary.

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist will coordinate work by district personnel. Other agencies and institutions will be involved as much as possible.

Estimated Annual Cost - \$4,000 (25 days at \$160/day)
 1,000 (vehicle expense, equipment, etc.)
 800 (record keeping/report writing)
 \$5,800

Monitoring Item - Common Loon Population

Type of Monitoring - Effectiveness and/or Validation. Designed to measure populations of common loons and relationship to habitat changes.

Priority - Forest Priority Group 1.

Where Applies - Suitable common loon nesting and brood rearing habitat identified in Process Paper D. Additional sites may be added when new information documents that new sites are suitable.

Indicator -

Population trend: Occupancy at documented sites and productivity of breeding pairs at those sites.

Habitat changes: Changes in riparian and aquatic habitat conditions within or adjacent to documented sites; changes in human activities within or adjacent to documented sites.

Method -

Population trend: Annually document the presence of common loons at the sites listed in Process Paper D. Several visits should be made to each site during the nesting and brood rearing seasons to document the presence of young.

Habitat changes: Common loon habitat is to be managed according to prescription 2.8.3 and Forestwide S&Gs for Fisheries, Water and Riparian Resources. As common loon sites are surveyed each year, habitat conditions and adherence to the management direction will be documented.

Expected Precision and Reliability

- Precision - High for population trends. Moderate to high for habitat changes.

- Reliability - High for population trends. Moderate to high for habitat changes.

Tolerance or Variability Indicating Action - Successful reproduction by common loons has been documented at only three sites. Our data indicates that occupancy by pairs and successful reproduction does not occur every year at these sites. The Forest Plan has two objectives for common loons. One objective is to evaluate the potential to provide and maintain suitable breeding habitat. The second objective is to develop common loon management plans for suitable sites if the evaluation indicates there is potential to provide and maintain suitable breeding habitat. While these objectives are being accomplished, we want to maintain existing habitat conditions and existing levels of common loon pairs.

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist and Ranger Districts. Other agencies and institutions will be involved whenever possible.

Estimated Annual Cost - \$1,600 (10 days at \$160/day)
 400 (vehicle expense, equipment, etc.)
 400 (record keeping/report writing)
 \$2,400

Monitoring Item - Harlequin Duck Population

Type of Monitoring - Effectiveness and/or Validation. Designed to measure populations of harlequin ducks and relationship to habitat changes.

Priority - Forest Priority Group 1.

Where Applies - Suitable harlequin duck nesting and brood rearing habitat identified in Process Paper D. Additional sites may be added when new information documents that new sites are suitable.

Indicator -

Population trend: Occupancy at documented sites and productivity of breeding pairs at those sites.

Habitat changes: Changes in riparian and aquatic habitat conditions within or adjacent to documented sites; changes in human activities within or adjacent to documented sites.

Method -

Population trend: Annually document the presence of harlequin ducks at the sites listed in Process Paper D. Several visits should be made to each site during the nesting and brood rearing seasons to document the presence of young.

Habitat changes: Harlequin duck habitat is to be managed according to Rx 2.8.3 and Forestwide S&Gs for Fisheries, Water and Riparian Resources, and Forestwide S&Gs for harlequin ducks. As harlequin duck sites are surveyed each year, documentation will be done on the habitat conditions and adherence to the management directions.

Expected Precision and Reliability

- Precision - Moderate for population trends. Moderate to high for habitat changes.
- Reliability - Moderate for population trends. Moderate to high for habitat changes.

Tolerance or Variability Indicating Action - Successful reproduction by harlequin ducks has been documented at only three sites. Our data indicates that occupancy by pairs and successful reproduction does not occur every year at these sites. If harlequin duck presence is to be maintained on the forest, existing habitat conditions and existing levels of harlequin duck pairs must be maintained. Any decline in existing habitat conditions may indicate the need for action.

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist will coordinate work by district personnel. Other agencies and institutions will be involved as much as possible.

Estimated Annual Cost - \$3,200 (20 days at \$160/day)
 800 (vehicle expense, equipment, etc.)
 800 (record keeping/report writing)
 \$4,800

Monitoring Item - Elk Vulnerability and Elk Habitat Effectiveness

Type of Monitoring - Effectiveness and/or Validation.

Priority - Forest Priority Group 1.

Where Applies - Forestwide.

Indicator -

Population trend: Percent bull elk mortality during the general elk hunting seasons.

Habitat changes: Open road and open motorized trail route density (OROMTRD), cross-country OHV use, hiding cover.

Method -

Population trend: Percent bull elk mortality is gathered by the State Fish and Game Departments.

Habitat changes: OROMTRD is covered in the Road and Trail Access monitoring. Cross-country OHV use will be monitored during the fall general elk seasons with the help of the State Fish and Game Departments. Cover analysis will be updated using the Forest GIS vegetation database to account for natural disturbances (such as fire) and management activities (such as timber harvesting).

Expected Precision and Reliability

- Precision - High
- Reliability - High

Tolerance or Variability Indicating Action - Failure to implement the Revision S&Gs for OROMTRD, cross-country OHV travel, and timber harvesting.

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist compiles data. Percent bull elk mortality is done by the State Fish

and Game Departments. Ranger Districts and the Supervisor's Office have the lead on OROMTRD, cross-country OHV travel, and cover analysis.

Estimated Annual Cost - \$9,600 (60 days at \$160/day)
 2,400 (vehicle expense, equipment, etc.)
 800 (record keeping/report writing)
 \$12,800

Monitoring Item - Red Squirrel Population

Type of Monitoring - Effectiveness and/or Validation. Designed to measure population trends of red squirrels and relationship to habitat changes.

Priority - Forest Priority Group 1.

Where Applies - Grizzly bear BMU's and subunits.

Indicator -

Population trend: Densities of active squirrel middens.

Habitat changes: Cone producing conifer stands, with emphasis on cone producing whitebark pine.

Method -

Population trend: Follow methodology described by David J. Mattson and Daniel P. Reinhart in: "Indicators of Red Squirrel (*Tamiasciurus hudsonicus*) Abundance in the Whitebark Pine Zone," Great Basin Naturalist 56(3):272-275 (1996).

Habitat changes: Documentation and mapping of changes in forest seral stages (due to timber harvest, fires, etc.) within grizzly bear BMU's and subunits, using the Forest GIS database.

Expected Precision and Reliability

- Precision - Moderate to high.
- Reliability - Moderate to high.

Tolerance or Variability Indicating Action - Red squirrel populations will fluctuate with natural fluctuations in cone crops due to weather and other variables and disturbances which replace cone bearing age trees such as fire and timber harvesting. The management objective is to maintain red squirrel populations wherever suitable habitat occurs. Therefore, a population decline in suitable habitat that cannot be correlated with natural fluctuations in cone crops may indicate action is needed.

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist.

Estimated Annual Cost - \$12,800 (2 person teams/40 days at \$160/day)
 2,000 (vehicle expense, equipment, etc.)
 800 (record keeping/report writing)
 \$15,600

FOREST USE AND OCCUPATION

Forest Users

Monitoring Item - User Satisfaction

Type of Monitoring - Implementation, Effectiveness. Designed to measure forest customer satisfaction with the direction, progress, and administration of the Revision.

Priority - Forest Priority Group 2.

Where Applies - Forestwide.

Indicator - Comments, both written and oral, approving or disapproving of the direction of Forest management and the rate of progress in implementing it.

Method - Forest User mailing lists would be used to periodically build random samples. Individuals and groups on this list would then be sampled using methods such as phone surveys or mailings. These samples would be conducted by organizations or academic institutions with sampling expertise, under contract to the Forest. Informal, optional, person-to-person user surveys would be conducted of trail users, campers, and sport recreationists by field-going Forest personnel. Records and notes would be kept of public meetings held by the Forest. Forest employees would be encouraged to record and submit informal notes of opinions and suggestions of friends and family for consideration by the Forest.

Expected Precision and Reliability

- Precision - Samples designed with statistical principles could be quite accurate. Otherwise it would still provide a reasonable indication to managers.
- Reliability - The results should be reasonably reproducible.

Tolerance or Variability Indicating Action - This would have to be determined by Forest line officers based on the issue.

Frequency of Monitoring - Annually or as needed.

Lead Responsibility - Forest Public Affairs Officer

Estimated Annual Cost - Working with a survey organization would require three weeks per year for the Public Affairs Officer. Helping to assess the surveys would require GS-9 employees. To conduct field surveys of recreationists would require two weeks for two GS-9 employees.

Contract to conduct phone sample	\$3,000
GS12 PAO, three weeks @ \$1,000/wk	\$3,000
GS9 45 hours at \$18/hr.	\$ 810
GS9 (field survey), 4 wks. @ \$18/hr	\$2,880
TOTAL:	\$9,690

Forest Operation

Monitoring Item - Budget

Type of Monitoring - Implementation and Effectiveness

Priority - Forest Priority Group 1. Required by regulation at 36 CFR 219.12(K)(3).

Where Applies - Forestwide.

Indicator - Forest budget adjusted for the effects of inflation.

Method - Convert annual budget figures to the same basis as the Revision's projected budget. Compare the results.

Expected Precision and Reliability

- Precision - High
- Reliability - High

Tolerance or Variability Indicating Action - +/- 25 percent of projected budget.

Frequency of Monitoring - Every five years.

Lead Responsibility - Forest Budget and Finance Officer.

Annual Estimated Cost - \$1,000 every five years.

Recreation

Monitoring Item - Seasonal Trail Use Impacts to Soil and Vegetation

Type of Monitoring - Implementation and Effectiveness. Designed to measure the impacts to on-trail and off-trail soils and vegetation from impacts from hiking, horse use and OHV use, for compliance with the 15 percent soil disturbance policy.

Priority - Forest Priority Group 2.

Where Applies - System trail and off-trail areas.

Indicator - Soil displacement on the trail or within the adjacent meadow or basin area.

Method - Visual and photo documentation and trail condition surveys.

Expected Precision and Reliability

- Precision - 60-75 percent
- Reliability - 60-75 percent

Tolerance or Variability Indicating Action - When condition surveys show that use is impacting the trail tread or adjacent soils and vegetation such that significant resource damage, health, and safety, or trail maintenance are at risk.

Frequency of Monitoring - Annually on approximately 5-10 percent of the system trail areas (60-120 miles) and adjacent off-trail areas. (Priority areas initially are the Big Hole Mountains, Madison-Pitchstone Plateaus, Caribou Range Mountains and Lemhi-Medicine Lodge subsections.)

Lead Responsibility - Recreation and Engineering Staffs

Estimated Annual Cost - \$25,000-35,000.

Monitoring Item - Recreation/Wildlife Conflicts

Type of Monitoring - Implementation and Effectiveness. Designed to measure conflicts between all forms of recreation and wildlife.

Priority - Forest Priority Group 2.

Where Applies - Forestwide.

Indicator - Number of violations of closure areas; observed wildlife disturbances; and diminishing wildlife populations or signs of stress.

Method - Field and aerial observations, photography. This item will depend partially on the results of monitoring of the effectiveness of road closures, which is another Priority Group 2 item.

It is expected that partnerships can be developed with state game and fish agencies, State recreation agencies, other agencies and possibly recreation user groups to monitor this item.

Expected Precision and Reliability

- Precision - 50-75 percent
- Reliability - 50-75 percent

Tolerance or Variability Indicating Action - When evaluation of wildlife populations indicates they are beginning to falter or seek out other areas for security and solitude, then an evaluation of recreation use levels will take place. Evaluation of other uses of the area may also be appropriate.

Frequency of Monitoring -

- Winter, in prescription areas emphasizing winter range values: weekly in 10 percent of winter range per year for 3-4 months;
- Summer, in prescription areas emphasizing big game security or summer range values: weekly for 3 to 4 months, especially in the early summer.

Lead Responsibility - District Rangers

Estimated Annual Cost - \$30,000.

Monitoring Item - Dispersed Campsite Soil Displacement

Type of Monitoring - Implementation, Effectiveness. Designed to measure soil displacement in heavy-use dispersed campsites, for compliance with the 15 percent soil disturbance policy.

Priority - Forest Priority Group 3.

Where Applies - 4.3 prescription areas.

Indicator - Displaced soil.

Method - Frissell Condition Class method.

Expected Precision and Reliability

- Precision - 75 percent+
- Reliability - Very Good, 75 percent+

Tolerance or Variability Indicating Action - Significant or consistent violation of the 15 percent soil disturbance policy in 4.3 prescription areas will be cause to reexamine campsite use. This may also trigger validation monitoring of the propriety of applying the policy in these areas.

Frequency of Monitoring - Annually, within approximately 10 percent of the one hundred 4.3 prescription areas. (Lemhi-Medicine Lodge and Caribou Range Mountains subsections will receive top priority for this monitoring initially.)

Lead Responsibility - Forest Recreation Staff

Estimated Annual Cost - \$40,000

Monitoring Item - Jedediah Smith Wilderness LAC

Type of Monitoring - Implementation and Effectiveness. Designed to measure impacts from wilderness use on wilderness quality (from the Limits of Acceptable Change planning process for the Jedediah Smith Wilderness).

Priority - Forest Priority Group 3.

Where Applies - Jedediah Smith Wilderness.

Indicator - See The Jedediah Smith monitoring plan which follows.

Method - See The Jedediah Smith plan which follows.

Expected Precision and Reliability

- Precision - 75 percent
- Reliability - 75 percent

Tolerance or Variability Indicating Action - If it is determined that impacts from use of the Wilderness are exceeding those limits shown, then an evaluation will be made of the possible causes and potential remediations identified.

Frequency of Monitoring - Annually.

Lead Responsibility - Teton Basin Ranger District, and Forest Recreation Staff.

Estimated Annual Cost - \$15,000-20,000.

Jedediah Smith Wilderness Monitoring Plan - Further Details

INDICATORS AND STANDARDS

Indicators and standards will be monitored yearly and may require adjustment if on site administration indicates resources or social conditions are deteriorating beyond an acceptable level. These measurements relate only within each specific zone of the Wilderness and not all of one type of zone lumped together. In other words, for Class 1, if the standard is exceeded in a particular Class 1 zone, then management action will be taken. Following each indicator is a list of management actions which could be used to bring the indicator back to the identified standard for its class. The order of the actions shown does not indicate priority.

Indicator #1	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Number of occupied campsites users may see from their site	0	2	3	1, 2, 4

Possible Management Actions - If number of visible campsites is approaching or exceeds standards:

1. Remove campsite(s) and restore the area to as near natural condition as possible.
2. Relocate campsite(s) to more suitable location and restore to as near natural condition as possible.
3. Talk with users and suggest other camping possibilities.

Indicator #2	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Condition of individual campsites	vegetation flattened, not permanently injured	vegetation worn away at center of activity	vegetation lost around center of activity	1, 2, 5

Possible Management Actions - If condition of campsite is approaching or exceeds standards:

1. Rehabilitate the site, sign it for restoration, and/or close it.
2. Talk with users about minimum impact camping techniques.
3. Relocate site to a more durable location and restore the vacated campsite to as near natural condition as possible.
4. Visit local schools, organizational groups to discuss wilderness ethics, regulations, minimum impact practices.

Indicator #3	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Condition of user-created routes and trail segments	game trail	18" to 42" wide, brush, rock, litter present	42" wide, brushed out along edge	1, 2, 4

Possible Management Actions - If user-created route or trail is approaching or exceeds standard:

1. Talk with users about trail conditions and experiences.
2. Ensure trail crews and maintenance volunteers are aware of standards and do not exceed them.
3. Rehabilitate trail sections that exceed standards.
4. Relocate trail segments to more suitable locations.
5. Encourage use on other trails.
6. Limit number of users on trail.
7. Visit local schools, organizational groups to discuss wilderness ethics, regulations, minimum impact practices.

Indicator #4	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Number of encounters per mile with other parties along a user-created route or trail	0*	3*	5*	1, 2, 3, 4, 5
* Encounters may be higher within first mile of trail from trailhead.				

Possible Management Actions - If number of encounters is approaching or exceeds standards:

1. Encourage users to vary starting times.
2. Lower party size and stock limits.
3. Monitor user acceptance of trail use levels.
4. Encourage users to go to other places.

Indicator #5	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Number of substantiated complaints about outfitters and grazing permittees from the public and other permittees	2	5	10	3, 5

Possible Management Actions - If the number of complaints concerning permittees is approaching or exceeds standards:

1. Increase permit administration on the ground.
2. Require wilderness ethics education as a condition of permit issuance.
3. Restrict the number of permits issued.
4. Bring parties together to discuss issue(s).

Indicator #6	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Number of violations of regulations by type	5	10	15	1, 3, 5
1/ See process paper for Jedediah Smith Wilderness				

Possible Management Actions - If the number of violations is approaching or exceeding standards:

1. Increase presence of uniformed Forest Service personnel.
2. Visit local schools, organizational groups to discuss wilderness ethics, regulations, minimum impact camping techniques.
3. Review regulations for appropriateness.
4. Increase posting of regulations at trailheads.

MONITORING

Air Quality

1. Monitor acid deposition in Wilderness lakes. Specifically, Two Island Lake is extremely sensitive to acid deposition; and Middle Granite Lake is more typical of Wilderness lakes with some buffering capacity. Reference for more information the water quality survey conducted in 1992 by personnel from the Targhee and Bridger-Teton National Forests.
2. Monitor visual air quality by means such as periodic photography. Consider establishing a monitoring station at the Grand Targhee ski area or other location which would permit observation of air quality in both the Wilderness and Grand Teton National Park.

Wildlife

1. Monitor human/grizzly interactions (confrontations and movements) to determine any change in the known range of the bear, and which management actions are needed if any.
2. Monitor grizzly bear activity and movement relevant to domestic sheep grazing to determine which management actions are needed if any.
3. Continue annual population censusing of bighorn sheep including lamb survival and ram harvest (Wyoming Game and Fish Department).

Cultural Resources

Monitor cultural resource sites in high public use areas annually to assess potential and actual effects. Formulate mitigations in conjunction with the Wyoming State Historic Preservation Officer when effects are adverse.

Roads and Trails Access

Monitoring Item - Authorized Use Level

Type of Monitoring - Implementation. Designed to measure the amount of authorized motorized use on closed roads and trails, to determine if a route or area is effectively open.

Priority - Forest Priority Group 2.

Where Applies - This item is most important in prescriptions which feature the following:

- * elk and deer habitat values—5.1.4, 5.4, 2.7;
- * grizzly bear habitat values—5.3.5, 2.6.1, 2.6.2, 2.6.5;

Indicator - The number of motorized trips per week per route.

Method - The districts will keep a record of administrative motorized use allowed on each route by date. This record could be maintained by the district ranger, and could be supported by an entry of dates and trips made per road, returned gate permits, or other means. At reporting time this record would be totalled and an evaluation made as to whether or not the number of trips throughout the summer effectively opened the road. Those roads opened would be noted to the GIS shop.

Expected Precision and Reliability

- Precision - Precision could be high depending on the accuracy of the record keeping.
- Reliability - The results would be wholly dependent on the records kept.

Tolerance or Variability Indicating Action - Reference prescription standards.

Frequency of Monitoring - Annually.

Lead Responsibility - The district ranger would keep records of allowed entries onto closed routes for administrative purposes, and evaluate the data. The Forest GIS shop would display any resultant roads which are effectively opened.

Estimated Annual Cost

- * Two days per district per GS-9 biologist: 5 (\$450)
- * Two days for one GS-5 GIS technician: \$240

TOTAL: \$2,500

Monitoring Item - Road Closure Effectiveness

Type of Monitoring - Effectiveness. Designed to measure the effectiveness of road and trail closures.

Priority - Forest Priority Group 1.

Where Applies - This item is most important in prescriptions which feature the following:

- * elk and deer habitat values—5.1.4, 5.4, 2.7;
- * grizzly bear habitat values—5.3.5, 2.6.1, 2.6.2, 2.6.5;

- * any 1-series prescriptions where motorized use exceeds prescription limits;
- * those areas where roads and/or trails were closed to stop direct resource damage.

Indicator - The units of measure to be used are:

- * direct encounter of a prohibited use in a restricted area;
- * evidence of prohibited use such as tire tracks.

Method - Several methods would be used, in a rough stratified sampling approach. Visual checks of access points to closed road systems would be performed. Ocular check information from incidental employee observations would also be used. On the basis of evidence such as use encounters or tire tracks, roads would be placed into strata of confirmed-use, suspected-use and no-use. Each of these strata would then be sampled with mounted cameras activated by motion sensors. Although we might not be able to obtain a scientifically- valid number of samples due to cost, the data would help to refine our estimates of use and target areas of greatest concern.

There is an opportunity to develop partnerships with several entities, including state fish and game departments and the U. S. Fish and Wildlife Service. It is possible that user groups would be interested in assisting with this as well, though this would have to be done as appropriate.

Expected Precision and Reliability

- Precision - We can measure presence or absence of prohibited use with some accuracy. We will not be able to measure the number of offenses accurately.
- Reliability - Evidence of recent use at one point in time should be reliable. This data cannot be used reliably by itself to judge the frequency of prior use or predict future use since this will depend to some extent on the individual violators. The data could be entered into a predictive model if one is available and accepted.

Tolerance or Variability Indicating Action - Reference the standards in the Roads section of the Forest-wide Standards and Guidelines. Briefly, the point at which some action would be required is when use exceeds 1-2 trips per week during the majority of the weeks during the spring/summer/fall period.

Frequency of Monitoring - The visual checks would be performed three times during the spring/summer/ fall seasons, to incorporate at least one holiday weekend and the fall hunting season. Due to the limited number of cameras and personnel costs, we may wish to target only one or two districts per year, or only portions of certain districts. Complete Forest coverage would take several years.

Lead Responsibility - Forest law enforcement officer.

Estimated Annual Cost - Assume we will monitor one district per year. Assume one GS-5 tech can visually monitor ten roads per day, or thirty roads per sampling round of three days. Assume one GS-9 camera tech can install, monitor and remove six cameras (six roads) per one-week sampling round. Also assume we will purchase two camera units @ \$800 (the Forest wildlife shop already has 4-6 of these, but some need repairs). Then:

For visual checks:	
* One GS-5 tech twice per summer @ three days	\$ 750;
* Rental vehicle @ \$15/day	\$ 90;
For camera confirmations:	
* two new camera units amortized over ten years	\$ 160/year;
* install and read cameras-one week per sampling round three times per summer for one GS-9 @ \$700/week	\$2,100;

* materials/incidentals-mounting hardware, film, developing of film, incidental repairs \$ 500;
Analysis/evaluation - one GS11 for one week \$ 800.

TOTAL: \$4,400/year.

Monitoring Item - Achievement of Road Density Standards

Type of Monitoring - Implementation monitoring. Designed to measure the achievement of standards in prescription areas for Total Motorized Access Route Density (TMARD), and Open Road and Open Motorized Trail Route Density (OROMTRD).

Priority - Forest Priority Group 1.

Where Applies - This item is most important in prescriptions which feature the following:

- * elk and deer habitat values-5.1.4, 5.4, 2.7;
- * grizzly bear habitat values-5.3.5, 2.6.1, 2.6.2, 2.6.5;

Indicator - Miles per square mile of open roads and open motorized trails (for OROMTRD); and open and restricted roads and motorized trails (for TMARD).

Method - The method is explained in more detail in the Forestwide standards and guides for access. The Forest geographic information system (GIS) and associated database will be used. Highlights of the method include:

- * annually update the transportation database with road and trail closures and other pertinent data;
- * GIS calculate the contiguous area of each prescription polygon;
- * calculate the miles of routes that are open and seasonally open, and total these;
- * moving-window technology will be used.

No partners in this effort were identified.

Expected Precision and Reliability

- Precision - High.
- Reliability - High.

Tolerance or Variability Indicating Action - Progress in achieving the TMARD and OROMTRD standards should follow an established activity schedule based on plan goals and objectives. At the end of the specified time period the standards should be met. If the standards are not met by the end of the time period a management review should be conducted to determine the cause.

Frequency of Monitoring - Annually.

Lead Responsibility - The district ranger will annually forward accomplishments toward meeting standards, and other pertinent data, to the Forest engineer. The GIS shop will do the calculations and produce the report.

Estimated Annual Cost - One GS-7 biologist for two days on each district - 2 (\$180) (5)
One GS-5 GIS technician for one week per district - 5 (\$600)
TOTAL: \$4,800

PRODUCTION OF COMMODITY RESOURCES

Range

Monitoring Item - Streambank Disturbance/Stubble Height/Channel Stability

Type of Monitoring - Validation.

Priority - Forest Priority Group 1.

Where Applies - At any one of the 100 established correlation plot sites across the Forest.

Indicator - Percent of streambank disturbance in relation to stubble height and how these parameters relate to channel stability.

Method - Targhee Monitoring Protocol.

Expected Precision and Reliability

- Precision - High.
- Reliability - High.

Tolerance or Variability Indicating Action - To be determined.

Frequency of Monitoring - At various times throughout the field season for a five-year time period.

Lead Responsibility - Forest range and watershed staffs, and district rangeland management specialists.

Estimated Annual Cost - Each year, 150* percent of the plots will be monitored for trampling and stubble height. Fifty percent will be monitored for stream channel stability:

1 day/plot x 150* plots x \$175/day (GS-9) =	\$26,250
55 days (50 field, 5 office) x \$200/day (GS-11) =	\$11,000
Total	\$37,250

* 150 plot readings per year; of the 100 plots, some will be read twice.

Monitoring Item - Riparian Forage Utilization Within Key Areas

Type of Monitoring - Implementation

Priority - Forest Priority Group 1.

Where Applies - Key areas in grazing allotments.

Indicator - Stubble height of key species in the hydric greenline and AIZ; percent utilization of browse in the entire key area; and soil disturbance levels in the AIZ.

Method - Targhee Monitoring Protocol.

Expected Precision and Reliability

- Precision - Moderate.
- Reliability - Moderate.

Tolerance or Variability Indicating Action - When the stubble height is more than one inch below allowable use levels or when browse use is more than 10 percent above proper use.

Frequency of Monitoring - At least once a year on units within priority allotments and additional readings if time allows.

Lead Responsibility - District Rangeland Management Specialist.

Estimated Annual Cost - One-third of all allotments on each District will be monitored yearly: 1 GS-9 @ \$175.00/day. Each priority allotment will require one trip per unit. Since the allotments have an average of five units each, it will total five days per priority allotment. One-third of 154 allotments = 51.

$$\begin{aligned}(\$175.00) (5) &= 875 \\ &51 \\ &\$44,625 \text{ yearly}\end{aligned}$$

Monitoring Item - Upland Forage Utilization Within Key Areas

Type of Monitoring - Implementation.

Priority - Forest Priority Group 3.

Where Applies - Key areas within grazing allotments. These sites will be used in areas where upland forage is limiting.

Indicator - Percent utilization of key species and soil disturbance in key areas.

Method - Targhee Monitoring Protocol.

Expected Precision and Reliability

- Precision - Moderate.
- Reliability - Moderate.

Tolerance or Variability Indicating Action - When the utilization is ten percent above proper use.

Frequency of Monitoring - Once a year on units within priority allotments and additional readings if time allows.

Lead Responsibility - District Rangeland Management Specialist.

Estimated Annual Cost - Upland use will be monitored on one-third of the allotments on each district. One GS-9 at \$175.00/day. Average allotment requires 2 days per year. One-third of 154 allotments = 51.

$$\begin{aligned}(\$175.00) (2) &= 350.00 \\ &51 \\ &\$17,850.00 \text{ yearly Forestwide}\end{aligned}$$

Monitoring Item - Riparian and Upland Long-Term Trend in Benchmarks

Type of Monitoring - Implementation

Priority - Forest Priority Group 3.

Where Applies - There should be at least one benchmark in each dominant ecological type unit within an area of interest.

Indicator - Acres of riparian and uplands meeting or moving toward DVC's (range objectives 1 and 2).

Method - Targhee Monitoring Protocol.

Expected Precision and Reliability

- Precision - High.
- Reliability - High.

Tolerance or Variability Indicating Action - When less than ten percent of the acres identified in range objectives 1 and 2 have improved each year.

Frequency of Monitoring - Every five years.

Lead Responsibility - District Rangeland Management Specialist

Estimated Annual Cost - One GS-9 @ \$175.00/day, 5 days per study (3 field, 2 office days). 35 ecological types x 2 sites/type = 105 Benchmark sites. Ten percent of Benchmarks monitored annually = 11 Benchmarks/year

$$(11 \text{ sites})(5 \text{ days/site}) = 55 \text{ days}$$
$$(\$175/\text{per day})(55\text{days}) = \$9,625$$

Timber

Monitoring Item - Changes to Land Suitability

Type of Monitoring - Validation of tentative suitability assessment made in the Revised Plan.

Priority - Forest Priority Group 1.

Where Applies - Applies primarily to lands in 5-series prescriptions, but could involve the review of projects anywhere on the Forest.

Indicator - Change in total acreage in tentatively suited and unsuited lands using the criteria in the regulations and directives system.

Method - Review project-level NEPA analyses for site-level confirmations of LMP tentative suitability calls. Changes to initial calls on either suited or unsuited lands would be documented on a hardcopy map maintained in the planning shop. This map would aggregate changes from various documents. Changes to the Forest tentatively suited land base could be entered into the Forest GIS.

Expected Precision and Reliability

- Precision - Site-specific analysis should give a precise description of true conditions.
- Reliability - Using given parameters such as slope percent and soil stability, results should be reliable and reproducible.

Tolerance or Variability Indicating Action - A significant overall change in tentatively suitable acres could trigger a revision of the ASQ.

Frequency of Monitoring - Annually.

Lead Responsibility - The Forest planning shop would aggregate the findings. Project ID teams would do the individual analyses.

Estimated Annual Cost - \$1,000

Monitoring Item - Maximum Created Opening Size

Type of Monitoring - Implementation

Priority - Forest Priority Group 3.

Where Applies - This item needs to be monitored in the following prescription areas:

- Rx 5.2.1 - generally 1 to 5 acres, but less than 40;
- Rx 5.2.2, 2.1.2 - generally less than 5 acres;
- Rx 5.3.5, 2.6.1 (a) - less than 6.5 acres;
- Rx 5.4 (some areas) - 20 acres or less;

Indicator - Size of created openings, in acres.

Method - Compliance with the standard would be described in environmental documents.

Expected Precision and Reliability

- Precision - High.
- Reliability - High.

Tolerance or Variability Indicating Action - Proposals to exceed the respective area standard would need to be sound and ecologically-based, and would require a Forest Plan amendment. If a trend is seen in legitimate proposals to exceed the respective standards the standards would need to be reviewed.

Frequency of Monitoring - In each decision document, where vegetation management is selected.

Lead Responsibility - IDT leader and line officer.

Estimated Annual Cost - \$1000 per year, primarily in incidental GIS and other analysis costs to display compliance with the standard.

Monitoring Item - Security Cover Retention

Type of Monitoring - Implementation and effectiveness. Designed to measure compliance with the standard governing security cover retained for grizzly bears in vegetation management projects.

Priority - Forest Priority Group 3.

Where Applies - This item must be monitored in the following prescription areas:

5.3.5, 2.6.1 (a) - 70 percent.

Indicator - Percent cover in area (see prescriptions for specifics).

Method - Environmental analysis and documentation for specific project proposals will display compliance with the respective standards. See prescriptions.

Expected Precision and Reliability

- Precision - High.
- Reliability - High.

Tolerance or Variability Indicating Action - Proposals to exceed the standard will require a Revision amendment. If a trend is seen toward exceeding the standard in soundly-based ecological management proposals the standard will need to be reviewed. This may involve reopening formal consultation.

Frequency of Monitoring - Every decision document selecting vegetation management in BMU's.

Lead Responsibility - IDT leaders, District Biologists, line officers.

Estimated Annual Cost - \$2000, primarily in incidental GIS and other analysis costs to display compliance with the standard. If the information required to demonstrate security cover is not found in the Forest data base, then field survey may be required.

Monitoring Item - Large Forested Block Retention

Type of Monitoring - Implementation. Designed to measure retention of 250-acre forested blocks where required.

Priority - Forest Priority Group 3.

Where Applies - This applies to prescription areas 5.1.4 (c) and 5.4 (a-c).

Indicator - Size of forested blocks within project areas.

Method - Timber sale environmental documents will disclose compliance with this measure. Additionally, follow-up activity reviews should review effectiveness of treatments.

Expected Precision and Reliability

- Precision - High.
- Reliability - High.

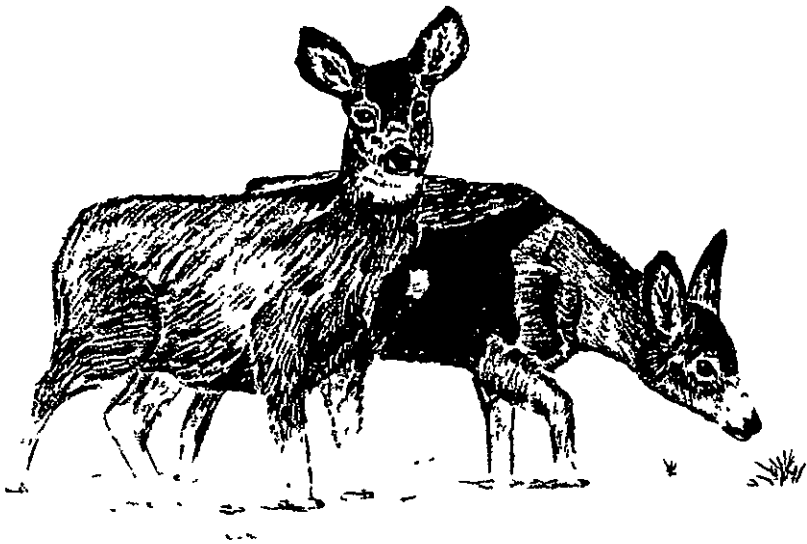
Tolerance or Variability Indicating Action - Any proposal to violate the standard requires a Revision amendment. If a trend develops of proposals citing ecologically-sound reasons to amend the Plan or change the standard, the standard needs to be reviewed.

Frequency of Monitoring - With every decision document selecting a vegetation management alternative.

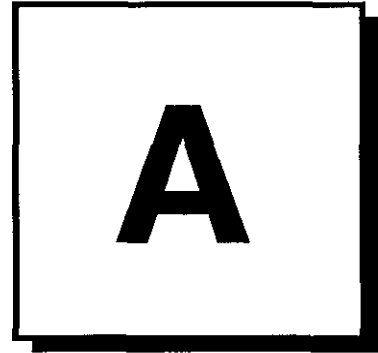
Lead Responsibility - IDT leaders and line officers.

Estimated Annual Cost - \$1,000, primarily in incidental costs of GIS or other analysis to demonstrate compliance with the standard.

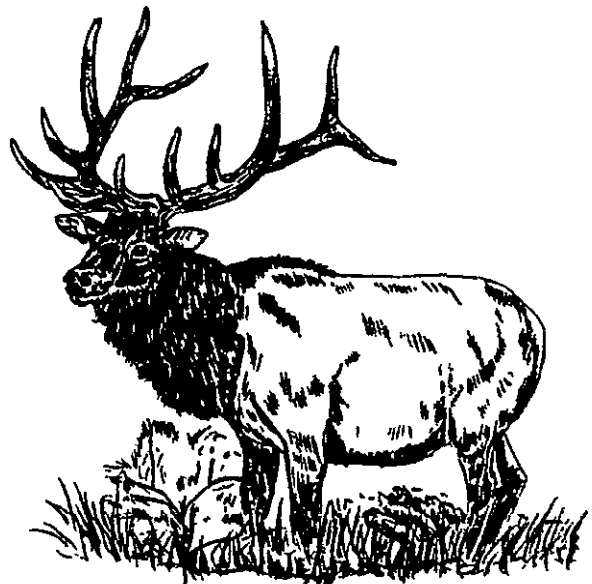




Appendix



National Goals Relevant to Land and Resource Management



APPENDIX A
NATIONAL GOALS RELEVANT TO LAND AND RESOURCE MANAGEMENT
(BASED ON FSM OBJECTIVE STATEMENTS)

American Indians * 1563

1. Maintain a governmental relationship with federally recognized tribal governments
2. Implement programs and activities honoring treaty rights and fulfill legally mandated trust responsibilities to the extent that they are determined applicable to National Forest System lands
3. Administer programs and activities to address and be sensitive to traditional native religious beliefs and practices
4. Provide research, transfer of technology and technical assistance to American Indian governments.

Solid Waste Management * 2130.2

1. Program objectives are to design, operate, and maintain all solid waste systems under Forest Service jurisdiction in such a manner so as to meet all federal, state, and local requirements, promote public health and safety, protect Forest resource and environmental qualities; and complement and support the total land-use management process.

Pesticide Management * 2150.2

1. To ensure the proper use of pesticides.

Energy Management * 2170.2

The objectives of energy management are to:

1. Conserve energy in the conduct of Forest Service programs and in the operation of Forest Service programs and in the operation of Forest Service facilities, and to improve efficiency in the production and use of wood products.
2. Minimize undesirable consequences associated with development of renewable and nonrenewable energy source extracted from Forest System lands.
3. Facilitate recovery of fuels from Forest System lands and implement programs to support production and use of alternative fuels
4. Provide leadership and support for environmentally acceptable and scientifically sound development, production, and use of all energy resources from lands.

Range Management * 2202.1

1. To manage range vegetation to protect basic soil and water resources, provide for ecological diversity, improve or maintain environmental quality, and meet public needs for interrelated resource uses.
2. To integrate management of range vegetation with other resource programs to achieve multiple-use objectives contained in Forest System land and resource management plans

3. To provide for livestock forage, wildlife food and habitat, outdoor recreation, and other resource values dependent on range vegetation.

4. To contribute to the economic and social well being of people by providing opportunities for economic diversity and by promoting stability for communities that depend on range resources for their livelihood

Grazing and livestock Use Permit System * 2230.2

1. To administer the grazing permit system consistent with range resource management objectives found in Forest land management plans, and to best serve the public's long-term economic and social needs

Range Improvements * 2240.2

1. Without impairing land productivity or water quality, implement and maintain range improvements to the extent benefits are commensurate with cost and demand for livestock forage.

2. Provide information and advice through the Range Technical Information System and the Vegetative Rehabilitation and Equipment Workshop to enhance restoration, improvement, and quality of ranges

Structural Range Improvement * 2242.02

1. Install structural range improvements to obtain proper livestock management and to meet objectives contained in Forest System land and resource management plans and allotment management plans

Maintenance of Improvement * 2244.02

1. To maintain in operable condition all range improvements on the National Forest System and other lands controlled by the Forest Service.

Range Improvement Investment * 2246.02

1. Invest in cost-effective range improvements to achieve objectives established in Forest System land and resource management plans and allotment management plans.

Recreation * 2302

1. To provide nonurbanized outdoor recreation opportunities in natural-appearing forest and rangeland settings.

2. To protect the long-term public interest by maintaining and enhancing open-space options, public accessibility, and cultural, visual, and natural resource values.

3. To promote public transportation and/or access to National Forest recreation opportunities.

4. To shift landownership patterns as necessary to place urbanized recreation setting into other ownerships to create more public open space and/or natural resource recreation values.

National Wilderness Preservation System * 2320.2

1. Maintain and perpetuate the enduring resource of Wilderness as one of the multiple uses of National Forest System land.

2 Maintain Wilderness in such a manner that ecosystems are unaffected by human manipulation and influences so that plants and animals develop and respond to natural forces.

3 Minimize the impact of those kinds of uses and activities generally prohibited by the Wilderness Act, but specifically exempted by the Act or subsequent legislation.

4 Protect and perpetuate Wilderness character and public values including, but not limited to, opportunities for scientific study, education, solitude, physical and mental challenges and stimulation, inspiration, and primitive recreation experiences.

Recreation in Wilderness * 2323.11

1. Provide consistent with management of the area as Wilderness, opportunities for public use, enjoyment, and understanding of the Wilderness, through experiences that depend on a Wilderness setting

2. Provide outstanding opportunities for solitude or primitive and unconfined type of recreation

Range in Wilderness * 2323.21

1. Manage Wilderness range in manner that utilizes the forage resource in accordance with established Wilderness objectives

Wildlife and Fish Management in Wilderness * 2323.31

1 Provide an environment where the forces of natural selection and survival rather than human actions determine which and what numbers of wildlife species will exist.

2 Consistent with objective #1, protect wildlife and fish indigenous to the area from human-caused conditions that could lead to federal listing as threatened or endangered.

3 Provide protection for known populations and aid recovery in areas of previous habitation, of federally listed threatened or endangered species and their habitats.

Stocking Methods *2323.34b

Stocking shall normally be done by primitive means, however, Regional Foresters may permit dropping of fish from aircraft for those waters where this practice was established before the area was designated a wilderness. Conduct aerial stocking pre- or post-visitor seasons. Landings are prohibited Specify mitigation for stocking methods in wilderness implementation schedules.

Stocking Policy *2323.34c

1. Do not stock exotic species of fish in wilderness. The order of preference for stocking fish species is:

- a Federally listed threatened or endangered, indigenous species.
- b. Indigenous species.
- c. Threatened or endangered native species if species is likely to survive and spawn successfully
- d. Native species if species is likely to survive and spawn successfully.

2. Stock barren waters only after determining that the scientific and research values of such barren waters will not be eliminated from a wilderness and documenting the desirability of such action in the forest plan.

3 Consider on a case-by-case basis presently unstocked waters that at one time supported an indigenous fish population and that could provide suitable habitat for an indigenous species with unusual wilderness appeal.

Soil and Water in Wilderness *2323.41

1. Maintain satisfactory natural watershed condition within Wilderness.

Forest Cover in Wilderness * 2323.51

1. Manage forest cover to retain the primeval character of the environment and to allow natural ecological processes to operate freely.

Air Resource in Wilderness * 2323.61

1. Protect air quality and related values, including visibility, on Wilderness land designated Class 1 by the Clean Air Act as amended in 1977.

2 Protect air quality in Wilderness areas not qualifying as Class 1 under the same objectives as those for other national Forest System lands.

Minerals in Wilderness * 2323.72

1. To preserve the Wilderness environment while activities for the purpose of gathering information about mineral resources

2. To ensure that mineral exploration and development operations conducted in accordance with valid existing rights for federally owned, locatable, and leasable minerals (FSM 2810 and FSM 2820) and for nonfederally owned minerals (FSM 2830) preserving the Wilderness resource to the extent possible.

3. To ensure the restoration of lands disturbed during exploration and development activities as nearly as practicable promptly upon abandonment of operations.

Insects and Disease in Wilderness * 2324.11

1. To allow indigenous insect and plant diseases to play, as nearly as possible, their natural ecological role within Wilderness.

2. To protect the scientific value of observing the effect of insects and diseases on ecosystems and identifying genetically resistant plant species.

3 To control insect and plant disease epidemics that threaten adjacent lands or resources.

Research in Wilderness * 2324.21

1. To provide appropriate opportunity for scientific studies that are dependent on a Wilderness environment.

Fire Management in Wilderness * 2324.21

1. Permit lightning-caused fires to play, as nearly as possible, their natural ecological role within Wilderness.

2 Reduce, to an acceptable level, the risks and consequences of wildfire within Wilderness or escaping from Wilderness

Structures and Improvements in Wilderness * 2324.31

1. To limit structures and improvements for administrative purposes or under special-use permit to those actually needed for management, protection, and use of the Wilderness for the purpose for which the Wilderness was established.

Motorized Equipment in Wilderness * 2326.02

1. To accomplish management activities with nonmotorized equipment and nonmechanical transport of supplies and personnel.

2. Exclude the sight, sound, and other tangible evidence of motorized equipment or mechanical transport within Wilderness except where they are needed and justified.

Public Managed Recreation Opportunities * 2330.2

1 To maximum opportunities for visitors to know and experience nature while engaging in outdoor recreation.

2. To develop and manage sites consistent with the available natural resources to provide a safe, healthful, aesthetic, nonurban atmosphere.

3. To provide a maximum contrast with urbanization at National Forest sites.

Privately Provided Recreation Opportunities * 2340.2

1 To provide, under special-use authorization, sufficient, suitable facilities and service that supplement or complement those provided by the private sector, state, and local government on private land and the Forest Service on National Forest System land to meet public needs, as determined through land and resource management planning.

2. To facilitate the use, enjoyment, understanding, and appreciation of the National Forest, natural resource, setting.

Concession Uses Involving Privately Developed Facilities * 2343.02

1 To provide a diversity of recreation activities that emphasize the Forest setting and rustic, natural-resource-based recreation opportunities

Group Use By Institutions or other Entities * 2345.02

1. To allow group recreation opportunities, facilities, and service at camps on National Forest System land when suitable private lands are not available.

Trail, River, and Similar Recreation Opportunities * 2350.2

1. Provide recreation opportunities for users of the general forest, water, and cave resources.

2. Provide opportunities for a variety of recreation pursuits with emphasis on activities that are in harmony with the natural environment and consistent with the recreation role of the National Forest.

3. Mitigate adverse impacts of users on the natural resources, cultural and historical resources, and on other users.

Forest Development Trails * 2353.02

1. Provide trail-related recreation opportunities that serve public needs and meet land management and recreation policy objectives
2. Provide trail recreation opportunities that emphasize the natural setting of the National Forest and are consistent with land capability
3. Provide trail access for National Forest management and protection.

Scenic and Historic Trails * 2353.41

- 1 To develop and administer National Scenic or National Historic Trails to ensure retention of the outdoor recreation experience for which the trail was established and continued production of maximum benefits from the land

National Wild and Scenic Rivers System * 2354.02

1. Provide river and similar water-recreation opportunities to meet the public needs in ways that are appropriated to the National Forest recreation role and are within the capabilities of the resource base. Protect the free-flowing conditions of designated Wild and Scenic Rivers and preserve and enhance the values for which they were established.

Off-Road Vehicle Management * 2355.02

1. Provide off-road vehicle recreation opportunities that are in concert with the environmental setting, minimize off-road vehicle effects on the land and resources, promote public safety, and control conflicts with other uses of National Forest System lands.

Cave Management * 2356.02

1. Provide cave-related recreational, cultural, educational, and scientific study opportunities that serve public need Balance surface resource management and cave use with the protection of cave values

Special Interest Areas * 2360.3

- 1 To protect and, where appropriate, foster public use and enjoyment of areas with scenic, historical, geological, botanical, zoological, paleontological, or other special characteristics. To classify areas that possess unusual recreation and scientific values so that these special values are available for public study, use, or enjoyment.

Cultural Resources * 2361.02

1. Complete an inventory of cultural resources on all National Forest System land by 1985 sufficient to provide a database for land management planning
2. Complete an inventory of all cultural resources on National Forest System land by 1990.
- 3 Until these inventories are complete, exercise caution to ensure cultural resources are not damaged, destroyed or transferred by meeting the coordination requirements outlined in FSM 2361.3
4. As part of the decision-making process, document inventory and evaluation procedures to ensure adequate participation by cultural resource professionals.

5 Perform inventories at appropriate levels prior to initiating project actions.

National Registry of National Landmarks * 2373.02

To cooperate with the U.S. Department of Interior National Park Service.

1. Encourage the preservation of sites illustrating the geological and ecological character of the United States.
2. Enhance the scientific and educational value of sites thus preserved.
3. Foster a greater concern in the conservation of the nation's natural heritage.

Visual Quality * 2380.2

1. To manage all National Forest System lands to attain the highest possible visual quality commensurate with other appropriated public uses, costs, and benefits.

Interpretive Services/Visitor Information * 2390.2

1. To assist those visitors in the National Forest, research projects, and state and private forestry locations in gaining a greater appreciation of the role of conservation in the development of the nation's heritage and culture.
2. To promote visitor understanding of the Forest Service, the National Forest System, forestry research, and state and private forestry programs.
3. To inform visitors of recreation opportunities and facilities on the National Forests.
4. To help visitors know and experience the natural environment.
5. To implement an interpretive program that helps solve management problems and aids in the development of public understanding of Forest Service management.
6. To expand the number of interpretive associations that contribute to public understanding of Forest Service practices, support interpretive services objectives, increase public awareness, and aid in management of National Forest resources.
7. To increase visitor understanding of natural and cultural history principals and their relation to land management techniques

Timber Management * 2402

1. Provide a continuous supply of National Forest timber for the use and necessities of the citizens on the United States.
2. To provide, as far as feasible, an even flow of National Forest timber in order to facilitate the stabilization of communities and opportunities for employment.
3. To cultivate and maintain tree stands in the manner that promotes and achieves a diverse pattern of vegetation that best meets the needs of people now and in the future.
 - a Manage and provide for regeneration of tree stands.

b. Maintain a diversity of forest vegetation types and resources consistent with the Forest Plan

Personal Use Firewood * 2409.18

1. To provide firewood and other wood for personal use in order to aid in the protection and silvicultural improvements of the National Forest.

Commercial Timber Sales * 2430.2

1. To provide an orderly program of timber sales from each National Forest in accordance with the Forest Plan or approved interim plans.

2. To offer for sale the ASQ and other sales specified in Forest Plans, subject to financing levels or other modification during their implementation.

3. To coordinate the timber sales program with planning, management, and use of other Forest resources

4 To provide a continuous flow of raw material to local forest industries

Salvage Sales * 2435.02

1. To manage the use of salvage sale fund to provide for the rapid optimum practical use of wood material damaged through natural event, such as insects, windstorms, wildfires, hurricanes, and tornadoes

Reforestation * 2470.02

1. To maintain all forest lands within the National Forest System in appropriate forest cover

2. Improve the quality and yield of new timber stands.

3. Achieve desired time and stocking level goals in a cost-efficient manner

Silvicultural Practices * 2470.2

1 To prescribe, implement, and monitor silvicultural practices that develop forest stand conditions, which meet land management objectives designated in Regional Guides and Forest Plans.

Harvest Cutting * 2471.02

1. To manage timber and other forest resources for protection, enhancement, and sustained yield of those resources through the sale or permitted use of forest products with the long-term intent to regenerate the stand.

Timber Stand Improvement * 2476.02

1. Maintain or increase the growth rate, health, species composition, and/or improve the quality of stands for timber or other resource uses according to direction in the Forest Plan.

Watershed Management * 2502

1. To protect and, where appropriate, enhance soil productivity, water quality and quantity, and timing of waterflows.

2. To maintain favorable conditions of streamflow and continuous production of resources from National Forest System watersheds.

Watershed Protection and Management * 2520.2

1 To protect National Forest watersheds by implementing practices designed to retain soil stability, improve or maintain site productivity, secure favorable conditions of water flow, and preserve or enhance aquatic values.

Watershed Improvement * 2522.02

1 Restore hydrologic balance of degraded watershed areas by stabilizing soil, controlling surface runoff and erosion, reducing flood potential, and improving long-term soil productivity.

2. Improve soil and water quality.

Burned Area Emergency Rehabilitation * 2523.02

1. To provide for immediate rehabilitation of watersheds following wildfire to help stabilize soil, control water, sediment, and debris movement

Riparian Areas * 2526.02

1. To protect, manage, and improve riparian areas while implementing land and resource management activities.

2. To manage riparian areas in the context of the environment in which they are located, recognizing their values.

Floodplain Management Wetland Protection * 2527.02

1. To reduce risk of flood loss

2 To minimize impacts of floods on human safety, health, and welfare

3. To minimize destruction, loss, and degradation of wetlands.

Water Quality Management * 2532.02

1. To protect and, when needed, improve the physical, chemical, biological, and aesthetic quality of the water resource consistent with the purposes of the National Forests and national water-quality goals.

2. To provide water of a quality suitable for the beneficial uses identified in the land and resource management planning process.

3 To ensure safe drinking water subject to public use on National Forests, whether the source is a natural or developed water supply. (When state standards do not exist, observe EPA water-quality criteria.)

Municipal Supply Watersheds * 2542.02

1 To manage National Forest System lands for multiple-use by balancing present and future resource use with domestic water-supply needs.

Soil Resource Improvement * 2553.02

1. To improve soil quality to selected levels for specific purposes by mechanical treatment, chemical, or other soil additives, irrigation, or vegetative manipulation
- 2 To rehabilitate soils that are in unsatisfactory condition

Air Quality * 2580.2

1. Protect air-quality-related values within Class 1 areas, as described in 42 U.S.C.7475 (d)(2)(b) and (c) and section 2580.5.
2. Control and minimize air-pollutant impact from land management activities.
3. Cooperate with air regulatory authorities to prevent significant adverse effects of air pollutants and atmospheric deposition on forest and rangeland resources.

Fish and Wildlife * 2602

1. Maintain ecosystem diversity and productivity by:
 - a Recovering threatened or endangered species.
 - b. Maintaining at least viable populations of all native and desired nonnative wildlife, fish, and plants in habitats distributed throughout their geographic range on National Forest System lands.
 - c. Producing habitat capability levels to meet sustained yield objectives relative to demand for featured management indicator species identified in RPA and Forest Plans.
2. Provide diverse opportunities for aesthetic, consumption, and scientific uses of wildlife, fish, and sensitive plant resources in accordance with national, regional, state and local demands.

Animal Damage Management * 2650.2

1. To protect resources and permitted livestock from animal damage on National Forest System lands and to protect human health and safety

Threatened and Endangered Species * 2670.21

1. Manage National Forest System habitats and activities for threatened and endangered species to achieve recovery objectives so that special protection measures provided under the Endangered Species Act are no longer necessary.

Sensitive Species * 2670.22

1. Develop and implement management practices to ensure that species do not become threatened or endangered because of Forest Service actions.
2. Maintain viable populations of all native and desired nonnative wildlife, fish, and plant species in habitats distributed throughout their geographic range on National Forest System lands.
3. Develop and implement management objectives for populations and/or habitat of sensitive species.

Special Uses * 2702

1. To authorize the use of National Forest System lands by federal, state, and local agencies, as well as private industry and individuals, in accordance with governing laws and regulations to best serve the interest of the public and the United States.

Special Use Authorization * 2710.2

1. To issue appropriate special-use authorizations according to the law, regulations, and policy for occupancy and use of land in a manner consistent with the purpose of the National Forest System and Forest Plans.

Special Use Administration * 2721.02

1. To issue and to administer special-use permits for recreation uses that serve the public, promote public health and safety, and protect the environment.

Special Uses Management * 2730.2

1 Provide rights-of-way for the public road system, including the federal-aid system, when such roads cross National Forest System lands or interest in lands.

2 Accommodate the access needs for the protection, development, and utilization of lands and resources owned by private interests or administered by public agencies when the planned Forest Development Road System and public road system do not meet those needs adequately

3. Protect and enhance the quality of air, water, soil, and natural beauty of Forest Service administered lands in the granting of any right-of-way.

4. Cooperate with intermingled and adjacent landowners in developing roads that serve the needs of both parties through the exchange of rights-of-way.

5. Provide access across National Forest System land to private land that is adequate to secure the owners thereof reasonable use and enjoyment of their land without unnecessarily reducing the management options of the Forest Service or damaging National Forest lands or resources.

Withdrawals * 2761.02

1. Protect the United States' improvements and other unique values that are subject to disposition or destruction under the public land laws.

2. Provide a consistent and efficient withdrawal program that meets land and resource management objectives.

3. Ensure cooperation and coordination with the Secretary of the Interior and the Bureau of Land Management.

4. Encourage mineral activity where mineral extraction is the best use of the site

Federal Power Act Projects * 2770.2

1 To ensure hydroelectric production where it is compatible with National Forest purposes. To ensure that planning, construction, and operation of hydroelectric projects are performed in such a manner to protect or effectively utilize National Forest System land and resources.

Minerals and Geology * 2802

1. Encourage and facilitate the orderly exploration, development, and production of mineral and energy resources within the National Forest System in order to maintain a viable, healthy minerals industry and to promote self-sufficiency in those mineral and energy resources necessary for economic growth and the national defense.
2. Ensure that exploration, development, and production of mineral and energy resources are conducted in an environmentally sound manner and that these activities are integrated with the planning and management of other National Forest resources
3. Ensure that lands disturbed by mineral and energy activities are reclaimed for other productive uses.

Minerals Reservations Outstanding Mineral Rights * 2830.2

1. To administer mineral reservations and outstanding mineral rights consistent with the rights reserved or outstanding and the acquired rights of the United States in a manner that minimizes damage to National Forest System resources.

Mineral Materials * 2850.2

1. To meet the demand for mineral materials consistent with the management of other surface resources.

Reclamation * 2840.2

1. Minimize the environmental impacts resulting from such activities.
2. Ensure that disturbed lands are returned to a use that is consistent with long-term Forest land and resource management plans

Rural Development * 3602

1. To utilize Forest Service programs and authorities to provide more jobs and income opportunities, to improve rural living conditions, to enrich the cultural life of rural America, and to maintain and protect the environment and natural resources of rural areas.
2. Participation in the Rural Conservation and Development Program (RC&D) is to improve the ability of state and local units of government and local sponsors to accelerate the conservation, development, and use of forest resources with the aim of improving the social, economic, and environmental conditions in an authorized RC&D area.

Rural Development * 3610.2

1. To protect and manage the natural resources including scenic, Wilderness, and other special values of forest and range environments in rural areas.
2. To promote research to expand the technological base for forestry and the use of forest products and to lend support for rural housing goals.
3. To encourage the development and transfer of technological improvements to protect and improve the quality of the rural environment, and to extend the supplies of natural resources
4. To maintain or increase the forest land base, improve its productivity, and improve forest landownership patterns.

5 To promote orderly development and wise use of forest resources consistent with sound stewardship to develop and increase rural employment and income with the aim of improving or stabilizing rural social and economic conditions

6. To expand public understanding of environmental conservation and natural resource planning, protection, and management and how stewardship is related to these activities.

7. To provide information and analysis for determining forest resource potentials and opportunities to enhance rural development

Resource Conservation and Development Program * 3620.2

1 To help provide the people of the area with employment and other economic opportunities through the orderly development, improvement, conservation, and utilization of forest land-related resources in the RC&D areas.

2. *To provide state and local leadership with the opportunity to coordinate and use the facilities and techniques available under current agricultural programs and any applicable new programs as may be instituted to aid in planning and carrying out a balanced program of development, conservation, and protection of natural resources to meet local, state, and national needs.*

3. To develop a level of state and local leadership that can assume independent programs in forest and related resource management and achieve state and local forestry and related resource goals and objectives.

Research Natural Areas * 4063.02

1 Preserve a wide spectrum of representative areas that typify important forest, shrubland, grassland, alpine, aquatic, geological, and similar natural situations that have special or unique characteristics of scientific interest and importance that in combination form a national network of ecological areas for research, education, and maintenance of biological diversity.

2. Preserve and maintain genetic diversity.

3. Protect against serious environmental disruption.

4 Serve as reference areas for the study of success.

5. Provide on-site and extension education activities.

6. Serve as baseline areas for measuring long-term ecological changes

7. Serve as control areas for comparing results from manipulative research

8. Monitor effects of resource management techniques and practices

Fire Management * 5102

1. To protect, maintain, and enhance the production and quality of National Forest resources through fire protection and use of prescribed fire.

Fire Suppression * 5130.2

1 To suppress wildfires at minimum cost consistent with land and resource management objectives and fire management direction as stated in fire management action plans.

Prescribed Fire * 5140.2

1. To use prescribed fires, from either management ignitions or natural ignitions, in a safe, carefully controlled, cost-effective manner as a means of achieving management objectives defined in the Forest Plan.

Fuel Management * 5150.2

1. To identify, develop, and maintain fuel profiles that contribute to the most cost-efficient fire protection and use program in support of land and resource management direction in the Forest Plan.

Landownership Adjustment * 5402

1. Achieve the optimum landownership pattern to provide for resource use to meet the needs of the people now and in the future.

2 Settle land title claims equitably and promptly

3. Provide resource administrators readily accessible and understandable title information affecting the status and use of lands and resources they administer.

Land Purchases and Donations * 5420.2

1. Enhance the multiple use and sustained yield of the goods and services from the National Forest System.

2. Protect and improve the quality of renewable resources

3 Protect and preserve important historic, cultural, and natural aspects of the national heritage.

4. Provide for access, use, and enjoyment of the forest resources by the public.

5. Improve administrative efficiency and effectiveness of the National Forest System.

Land Exchange * 5430.2

1. To implement land management and resource planning directions to attain an optimum National Forest System landownership pattern that provides for resource uses that best meet the present and future needs of the people.

Partial Interest Acquisition * 5440.2

1. Provide for acquisition of only those interests in land necessary to meet planned program objectives.

2. Provide for continuance of private land uses consistent with planned program objectives.

National Forest System Modification * 5450.2

1. The objectives of National Forest System modifications are to

- a. Obtain National Forest status for all appropriate land within the National Forest System.
- b. Modify existing National Forest System unit boundaries as needed to provide logical exterior boundaries.
- c. Establish purchase units as needed to meet program objectives.
- d. Establish National Forest or other boundaries as needed to facilitate management and administration.

2. The objectives of land transfer are to:

- a. Improve management efficiency of federal lands.
- b. Improve service to the public
- c. Result in net benefits to the government, to the public, or both.

Right-of-Way Acquisition * 5460.2

1. To acquire, across nonNational Forest System land, road and trail rights-of-way that are adequate for the protection, administration, and utilization of the National Forests. Where compatible with National Forest needs, the rights-of-way should also accommodate the utilization and development of resources in other ownerships upon which communities within or adjacent to the National Forest depend.
2. To acquire such rights-of-way in time to meet road and trail construction and resource development program schedules.
3. To acquire all interests to permit use of road and trails to meet the multiple use and sustained yield objectives of the National Forests.

Reservations and Outstanding Rights * 5470.2

1. To accomplish real property adjustments free of encumbrances that would detract from present or future uses of National Forest System land or that would needlessly restrict private land use and impose an unwarranted management obligation on the Forest Service.

Condemnation * 5480.2

1. To acquire real property by condemnation when all other methods of acquisition fail and the property or interest is required for the protection, administration, or utilization of National Forest System lands.

Land Surveying * 7151.02

1. Provide legal land surveys and related service to locate, mark, post, and maintain land corners, property corners, and property lines between National Forest System land and other ownerships for the protection and management of National Forest System lands and resources.

Landline Location Program * 7152.02

1. Provide the land manager and public with visible and legally defensible administrative and property boundary lines on the ground, and to accurately depict the location of landownership lines on administrative maps produced by the Forest Service.

Sign and Poster Program * 7160.2

1. Support accomplishment of management are a direction contained in the Forest Plan for the administration, protection, management, and use of National Forest System lands.
2. Provide information for the safety, enjoyment and convenience of National Forest and National Grassland visitors, users, cooperators, and employees.
3. Provide information about geographic and historical features, and the use, management, and research activities on the National Forest and National Grasslands.
4. Identify National Forests and National Grassland facilities and land.

Portable Water Supply * 7420.2

1. Protect the health of the public and Forest Service personnel Accomplishment of this objective requires that water provided by the Fores Service for human consumption at any administrative side or public use area must be both safe and protected.

Wastewater Collection Systems and Treatment Works * 7430.2

- a. Avoid creating health hazards or nuisance conditions.
 - b. Restore and maintain the chemical, physical, and biological quality of water resources.
 - c. Manage future pollution or degradation of surface or groundwaters
2. The objective of this program is to plan, design, construct, operate, and maintain wastewater disposal facilities and other effluent-disposal activities to ensure that discharge and/or infiltration of pollutants do not create health hazards or nuisance conditions, nor alter the quality or characteristics of either groundwater or surface water beyond applicable federal and/or state water-quality and effluent-discharge standards Where no standards exist, the quality of characteristics of surface and groundwater shall.
- a. Be maintained as near to their existing conditions as measurable.
 - b. Not be degraded to adversely affect either present or projected beneficial uses (FSH 7409 11 Ch 20).
 - c. Not be allowed to degrade the quality of subsequent ground- or surface-receiving waters beyond the standards when such have been established.

Transportation System * 7702

1. To plan, develop, and operate a network of transportation facilities and transportation modes that provide user safety, convenience, and efficiency of operations.
- 2 To provide access to National Forest System lands to accomplish management direction and protection objectives that is coordinated with national and state-wide transportation needs.
3. To minimize the total transportation present value cost including user, maintenance, construction, restoration, realignment, and betterment costs.

Transportation Planning * 7710.2

1. To efficiently provide facilities that will achieves Forest management direction and that are appropriate for this intended use.
- 2 To direct the orderly development and management of the transportation system and to ensure the documentation of decisions affecting the system.
3. Document desired future condition for highway corridors (existing and planned) across National Forest System lands.

Development * 7720.2

1. To locate, survey, design, and construct transportation facilities in accordance with FSM 7702.

Operation and Maintenance * 7730

- 1 Operate and maintain the Forest Development Transportation System in a manner to provide cost effective support of resource management direction and safe travel for users of the system while protecting the environment, adjacent resources and the public investment.

Highway Safety Program * 7733.02

1. Reduce traffic accident, deaths, injuries and the resulting property damage.

Federal Lands Highway Program * 7740

1. To assist the Federal Highway Administration with the administration of the Forest highway program to plan and develop access roads to:
 - a. Enhance the value of National Forest System resources.
 - b. Protect, develop, and use the National Forest System and its renewable resources.
 - c. Enhance economic development at the local, regional, and national levels
 - d. Serve local needs and communities dependent on the National Forest System activities.
 - e Provide for economy of operation and maintenance and the safety of the users.
 - f. Provide safe and adequate rural highways connection the National Forest System with major highway systems

AMERICAN INDIANS (FSM 1563)

1. On October 22, 1992, the United States Department of Agriculture issued a policy statement on Indian tribes. The outlined policies include:
 - a. Supporting the principles of self-governance delineated in the Indian Self-Determination Act and Education Assistance Act.
 - b. Consulting with tribal governments regarding the influence of USDA activities on water, land, forest, air and other natural resources of tribal governments

- c. Seeking input from tribes on USDA policies and issues affecting tribes and reconciling Indian needs with the principles of good resources management.
- d. Observing the American Indian Religious Freedom Act.
- e. Working with tribal governments, high schools and universities to encourage the development of agribusiness skills and sharing of information through exchange of technical staff and skills.
- f. Encouraging early communication and cooperation between agencies with responsibilities to tribal governments.
- g. Consistent with applicable law or regulation, facilitating tribal participation in program planning and activities

For more on American Indians, see Chapter 3 * Forestwide Standards and Guidelines.

BIOLOGICAL DIVERSITY (FSM 2670)

Sensitive Species

1. Manage sensitive species habitat as directed in interim directive 2600-93-1

For more on Biological Diversity, see Chapter 3 * Forestwide Standards and Guidelines.

CAVES (FSM 2356)

1. Caves will be protected and evaluated under provisions of the Federal Cave Resources Protection Act of 1988. Caves determined to be significant under the Act or being evaluated are exempt from locational disclosure under the Freedom of Information Act. The location of caves will be kept confidential when needed to protect important archeological resources, habitat for endangered wildlife, sensitive cave biota, and unique geological features.
2. Management plans will be prepared for caves determined to be significant
3. Coordinate the management of cave and surface resources.
 - a. Manage the cave resource in partnership with caving organizations, other governmental agencies, scientists, researchers, and outdoor recreationists.
 - b. Interpret cave resources and provide public evaluation for increased public understanding and awareness of the need to protect and preserve these unique ecosystems.
 - c. Provide for public health and safety while recognizing that no cave is completely safe and that risk-taking is part of the caving experience.
4. Adjust silvicultural prescriptions to protect caves.
 - a. Retain a vegetative buffer area around cave entrances.
 - b. Do not alter cave entrances with timber harvest activities.
 - c. Do not dispose of slash, refuse, or burn slash at cave entrances.

5. Road or trail signs should not direct public attention to wild caves.
6. Access for exploration and development of locatable mineral resources will be analyzed in response to a proposed operating plan.
7. Potential impacts to cave resources will be considered in reviewing any project.
8. The water, sediment, nutrient and temperature regimes of caves and karst features will be protected so these environments can function naturally.

DAMS (FSM 7500)

1. For administrative Class A, B, C and high hazard Class D dams located on National Forest System lands, annually update the National Inventory of Dams (PL99-662) in accordance with data elements required by the Federal Emergency Management Agency (FSM 7514).
2. Maintain a record for all dams on National Forest System lands over six feet high (vertical difference between the lowest point on the crest of the dam and the lowest point in the original stream bed). As a minimum, the record should include the dam identification, location, purpose, owner, administrative classification, hazard-potential classification, height, and maximum storage (FSM 7514).

FIRE AND FUELS (FSM 5100)

Fire Suppression

1. *Structural firefighting is the responsibility of local fire service agencies. Structural fire protection from advancing wildfire within the National Forest Protection Boundary is the responsibility of local fire service agencies and the Forest Service (FSM 5133.1).*

Fuel Treatment

2. Cooperate with state and local governments and fire protection districts in the development of fire hazard reduction plans and ordinances by providing technical assistance (FSM 3172, 3173, 3174).
3. Provide a level of protection from wildfire outside of incorporated towns that minimizes the risk of building damage or firefighter exposure. A fire management plan will be written for all facilities on National Forest lands and will be maintained in the Forest's Fire Management Action Plan. National Fire Protection Association (NFPA) standards will be used as guidelines for the development of individual plans. Each plan will provide guidance for structural, vegetative, and infrastructure management of the facilities on the Forest. Planning standards will be used to provide guidance for private landowners requesting direction for wildland fire-protection improvements

Prescribed Fire

4. Use prescribed fire to accomplish resource management objectives, such as reducing fuel load buildup, wildlife habitat improvement, etc. Identify objectives in conjunction with a burning plan approved by a line officer. Prescribed burns adjoining private or other federal or state lands will be coordinated with the adjoining landowner (FSM 5140).
5. Use prescribed fire where it will meet management objectives in the most economically and ecologically acceptable way (FSM 5140). For more on Fire and Fuels, see Chapter 3 * Forestwide Standards and Guidelines.

GEOLOGY (FSM 2800)

1. Permit appropriate prospecting and collecting proposals for fossils and minerals by noncommercial, scientific, and/or educational institutions, and provide appropriate opportunities for recreational collection of mineral and fossil materials, where consistent with Forest Plan goals and objectives FSM 2860.3).
2. Prevent unauthorized removal of fossil and mineral resources (FSM 5302).

3. Propose significant paleontologic sites for designation as special interest areas or geologic areas (FSM 2360, 2372, 4063).

4. Identify special geologic hazards and problems that affect land and resource management and encourage research in those areas (FSM 2880, 2883, 2884).

HERITAGE RESOURCES (FSM 2360)

1. Locate, evaluate, protect and foster public use and enjoyment of heritage resources.
 - a. Protect all heritage resources listed on or eligible for the National Register of Historic Places (NRHP).
 - b. Nominate all eligible heritage resources to the NRHP.
 - c. All projects will be reviewed by a Forest Service professional heritage resources specialist.
 - (1) Complete heritage resource inventories, evaluations and mitigation measures for a project's area of potential effect prior to issuing environmental decision notices (FSM 2361)
 - d. Avoid effects to heritage resources until evaluated and determined ineligible for the NRHP.
 - e. Implement appropriate mitigative measures in consultation with the State Historic Preservation Officer (SHPO) and/or the President's Advisory Council on Historic Preservation (ACHP) when eligible heritage resources will be affected.
 - f. Maintain, stabilize, or enhance all eligible heritage resources. <F2P8B>

For more on Heritage Resources, see Chapter 3 * Forestwide Standards and Guidelines.

INTEGRATED PEST MANAGEMENT (FSM 4500)

1. Use only chemicals registered with the Environmental Protection Agency and follow label instructions.

For more on Integrated Pest Management, see Chapter 3 * Forestwide Standards and Guidelines.

LANDS (FSM 5400)

Landownership Adjustments

1. Work with other federal agencies to consolidate ownership and propose jurisdictional transfers that achieve the following objectives.
 - a. Develop more effective and efficient work units.
 - b. Reduce administrative costs

- c. Improve, maintain and simplify user access to public lands.
- 2. Adjust National Forest System and private lands to create a landownership pattern that meets objectives of the Forest Service and other landowners.
- 3 Manage National Forest System lands identified for exchange or sale consistent with surrounding management area goals and in accordance with the following:
 - a Terminate special-use permits on an opportunity basis and in compliance with applicable regulations and Forest Service policy.
 - b. Renew or extend special-use permits on an annual basis only with specific notice of the potential sale or exchange included in the authorization
 - c. Do not authorize construction of additional permanent facilities.
 - d Do not adversely affect land values by management activities.
 - e. Do not adversely affect land values through issuance of special-use permits.
 - f. Acquire unrestricted rights-of-way whenever possible to maintain the value of the public land.
 - g. Ensure needed public rights-of-way are retained across all lands conveyed out of public ownership (FSM 5403.1).
- 4 Convey lands only if:
 - a. Flood hazards on and downstream from conveyed lands are not increased.
 - b. Natural and beneficial values of acquired wetlands equal or exceed those of conveyed wetlands.
 - c Natural water regimes in wetlands downstream from conveyed lands are not disrupted.
 - d. Lands have been evaluated for the presence of hazardous materials and known hazardous materials have been removed.
 - e. Lands do not contain habitat identified by the U.S. Fish and Wildlife Service as necessary for recovery of federally listed threatened and endangered species.
 - f. Lands do not contain unique resource characteristics (FSH 5409.13, Chapter 30).
- 5 Effect jurisdictional transfers that achieve the following objectives:
 - a Reduce duplication of efforts by users and agencies in terms of time, cost and coordination
 - b. Improve or maintain user access to the administrating agency.
 - c. Decrease travel and enhance management.
 - d. Improve public understanding of applicable laws, regulations, policies and procedures.
 - e. Develop more effective and efficient work units.

Property Boundary Administration (FSM 7150)

6. Locate, mark and post landlines according to the following priorities:

- a. Lines needed to meet planned activities;
- b. Lines needed to protect NFS lands from encroachment, and
- c. All other lines (FSM 7152).

For more on Lands, see Chapter 3 * Forestwide Standards and Guidelines.

MINERALS (FSM 2800)

General

- 1 Require an operating plan for each significant proposed mineral action that may disturb surface resources (FSM 2817, 2818, 2820).
2. In areas of actively producing sites or areas containing known reserves, consider only surface resource programs compatible with mineral activities.
3. Provide reasonable access to outstanding and reserved mineral rights (FSM 2830.5).
- 4 In designated Wilderness areas, provide for reasonable access to proposed operations and for restoration of disturbed lands as near as practical to their natural condition when they are no longer needed for operation.
5. Consider significant cave discoveries for mineral withdrawal and other protection measures (FSM 2761, 5302)
- 6 Deny drilling, mining or production on withdrawn lands, with the exception of valid existing rights at the time of withdrawal (FSM 2811, 2818, 2822, 2823).
7. Resolve suspected abuse of the mining laws such as occupancy of the land for purposes other than prospecting, mining and related operations.
8. Avoid placing or proposing capital investments or other surface resource activities in areas where they would interfere with operating sites or known mineral resources (FSM 2761).
9. Request mineral leasing withdrawals in situations, such as for classified lands.
10. Cover mining activity by an operating plan and performance bond of the appropriate amount.
11. Reclamation will return disturbed lands to the planned uses.

Leasable Minerals

12. Approve Surface Use Plan of Operation (36 CFR 228.107) in conformance with all stipulations included in the lease and necessary conditions of approval determined during review of the applications (FSM 2800).

Geophysical Operations

13. Permit geophysical operations on withdrawn, classified lands where the operations do not interfere with purposes for which the lands are withdrawn. Do not permit such operations if significant adverse effects cannot be prevented (FSM 2860).

Coal, Uranium and Non-Energy Common Materials

14. In designated Wilderness, Congressionally designated Wilderness study areas, and areas recommended for Wilderness in RARE II upon which Congress has not taken final action:

a. Prospecting for and disposals of common varieties of mineral materials will not be authorized.

b. Coal mining in the National Wilderness Preservation System is prohibited by the Coal Leasing Amendments Act of 1975.

c. Unless there is statutory language to the contrary, in which case the statutory provisions control, recommend, or consent to BLM for issuance of leases or permits where operations, including surface-based access, product transportation and other necessary ancillary facilities, will not cause irreversible and irretrievable damage to surface resources and where the lands disturbed can be restored as near as practical to natural conditions

15. In classified lands other than Wilderness (Wild and Scenic River Systems, RARE II Further Planning areas, National Recreation Areas, National Historic Sites, Natural Areas, Special Areas*such as geological, scenic and zoological, and some other specific classifications):

a. Authorize common variety exploration and disposals under terms and conditions to protect the purposes for which the lands were classified. The objective of reclamation requirements will be to return lands to a condition suitable for the purposes for which they were classified.

For special areas classified under 36 CFR 294 and 251.23 for specific management purposes, the regulatory provisions permit no use or occupancy inconsistent with the classification.

b. Coal mining is prohibited by the Coal Leasing Amendment Act of 1975, within the National System of Trails and the Wild and Scenic Rivers System, including study rivers designated by that Act.

c. Recommend or consent to BLM for issuance of leases permits or licenses only when terms and conditions can be applied that will protect the purposes for which the lands were classified. <F2P8B>

For more on Minerals, see Chapter 3 * Forestwide Standards and Guidelines.

RANGE (FSM 2200)

1. Allotment management plans (AMPs) need to provide for threatened, endangered and sensitive species (FSM 2203, 2211, 2212).

2. When updating AMPs, display forage utilization factors by type of management, the season of use, and the ecological type by condition and seral stage within the AMP (FSM 2210, 2211).

3. Construct structural improvements to maintain or improve rangeland conditions within classified Wilderness, consistent with Wilderness values (FSM 2323.26).

4. Riparian utilization or stubble-remaining standards are to be developed and included in AMPs. Consider season of use to minimize impacts on riparian zones (FSM 2211, 2212, 2526).

5. Give emphasis to developing livestock management strategies that are economically efficient, environmentally sound and compatible with other resources (FSM 2212.03 - 2212 8).

6. Structural and nonstructural improvements to maintain or improve rangeland conditions will be designed to benefit livestock and wildlife and minimize impacts on wildlife and recreation users (FSH 2209.22, 2209.23, FSM 2240).

For more on Range, see Chapter 3 * Forestwide Standards and Guidelines.

RECREATION (FSM 2300)

Developed

1. Where terrain allows and demand exists, facilities will be considered for development to accommodate people with disabilities. Different challenge levels will be planned, depending upon the nature of the improvement and the principal form of recreation being provided.

2. The customer will be recognized as a spectrum of our society interested in a wide array of dispersed, sedentary, adventure, developed, guided, self-determined, motorized and nonmotorized activities in controlled and uncontrolled environments. Potential customers will be recognized as those who might use National Forest resources if appropriate services and resources were available (FSM 2330)

3. Sites will be managed and maintained according to the needs of our customers using the site. Safety and cleanliness are of utmost importance. Remove hazardous and/or dead trees in developed sites (FSM 2331 R-2 Supplement #70, FSM 2332).

4. The type and level of development sophistication in developed sites may vary, depending upon the situation and need. They are developed by the Forest Service, concessionaires or cooperators and may be managed by any or a mix of these (FSM 2303).

Recreation Opportunity Spectrum

5. A recreation opportunity spectrum (ROS) table is included in Chapter 1 of this Forest Plan. A decision to change an ROS class will be documented in a NEPA decision document (FSM 1922.15, 2310.3).

For more on Recreation, see Chapter 3 * Forestwide Standards and Guidelines.

RESEARCH NATURAL AREAS (FSM 4060)

1. Discourage or prohibit any public use that contributes to impairment of research or natural values (FSM 4063.36)

2. Use special-use permits or cooperative agreements to authorize and document scientific activity (FSM 4063.37).

RIGHTS-OF-WAY (FSM 5460)

Acquisition

1. Acquire rights-of-way on existing and proposed Forest System roads and trails that cross other than National Forest System lands.

2. Acquire rights-of-way using the following criteria:

- a. Legal access for existing roads and trails that provide general access to the National Forest.
- b. Legal access to support planned projects and high priority activities at least two years prior to project implementation (FSM 5461.2).<F2P8B>

For more on Rights-of-Way, see Chapter 3 * Forestwide Standards and Guidelines.

SOILS (FSM 2550)

- 1 Soil should not be displaced more than a continuous area of 100 square feet or more (FSH 2509.18 R-2 Supplement).
2. Soils should not be compacted more than (FSM 2509 18 R-2 Supplement):
 - a A 15 percent increase in bulk density from the average undisturbed density, or
 - b. Bulk density values that exceed the following threshold values:
 - 1 25g/c * silt and clay
 - 1.30 g/cc * silty clay, silty clay loam and silt loam
 - 1.40 g/cc * loam and clay loam
 - 1.50 g/cc * sandy loam, sandy clay loam and sandy clay
 - 1.60 g/cc * sand and loamy sand
3. Maintain adequate plant cover to protect the watershed and maintain plant health consistent with the soil type.
4. Management practices will be designed and implemented to maintain or improve the long-term soil productivity potential of the National Forest (FSH 2509 R-2 Supplement).
5. Soil quality monitoring will be conducted to determine if soil management goals, objectives and standards are being achieved (FSH 2509 R-2 Supplement).
6. Monitoring results will be used to adjust management activities and mitigating measures where necessary to prevent significant impairment of the long-term soil productivity (FSH 2509 R-2 Supplement).

For more on Soils, see Chapter 3 * Forestwide Standards and Guidelines.

SPECIAL LAND USES (FSM 2700)

1. Act on special-use applications according to the following priorities:
 - a Those required by law or regulation, or national in scope.
 - b. Those in the public interest, mainly local or regional in nature.
 - c. All others
- 2 Do not approve any special-use applications that can be reasonably met on nonfederal or other federal lands unless it is clearly in the public interest (FSM 2703.2).
3. Do not approve special-use applications for areas adjacent to developed sites unless the proposed use is compatible with the purpose and use of the developed site.

4. Utilize approved electronic sites where feasible

5. Do not approve applications for use of federal land that involve any hazardous materials as defined in U.S.C. 9601 et seq., 40 CFR 261.30 and 40 CFR 302.4. The hazardous materials listed are individual chemicals. These references do not relate to hazardous waste dumps (FSM 2703).

TIMBER (FSM 2400)

General

1. *Forests are to be managed to provide net public benefits. Many different philosophies and strategies are used that provide benefits desired in the areas of urban interface, those areas used for recreation and viewing, for wildlife habitat, watershed protection, water-yield enhancement, and others, as well as for wood and fiber products. In most cases, these must be integrated. Managers are to develop and use a wide variety of prescriptions to meet these public priorities and to accept that traditional economic considerations must be supplemented with both the empirical and subjective ones (FSM 2470 3).*

2. Plan areas for timber harvest only if assured, based on existing technology and knowledge, that long-term soil productivity will not be degraded (FSH 2409.26 Chapter 10).

3. Provide for wildlife habitat improvement and enhancement of other renewable resources in sale area improvement plans.

Tree Stand Improvement (Precommercial Thinning)

4. Provide for accelerated growth, create specific stocking, and improve quality and vigor of timber stands.

Silvicultural Prescriptions

5. Silvicultural prescriptions for tree-stand improvement, including thinning, should evaluate the tradeoffs associated with alternative treatments in terms of increased timber yields, economic efficiency, enhanced wildlife habitat, increased wood-products yield and quality, improved long-term forest health, increased species and structural diversity and the desired future condition for the stand (FSH 2409.26c Chapter 10, FSH 2409 17 Chapter 6).

6. Silvicultural prescriptions will be prepared for all vegetation management activities proposing the management of forested vegetation to work toward achieving the desired future condition (FSH 2409).

7. Apply a variety of silvicultural systems and harvest methods that best meet resource management objectives.

8. Prepare individual silvicultural prescriptions for areas or site specific practices.

9. Use thinning practices that consider genetic diversity, competition among the trees for water, nutrients and light. *The frequency of thinning should depend upon the tree species, financial efficiency, and the site's growing conditions (as commonly measured by site index) (FSH 2409.17 Chapter 6)*

10. Where appropriate, reduce competition between desired trees and other vegetation (FSH 2409.17 Chapter 6)

11. If the silvicultural system being applied to a particular area of the landscape is uneven-aged, harvest trees designated for commercial timber production based on the desired density as determined by age class or size, and the objective for the area (FSH 2409.26).

12. In most circumstances, rely on or make primary use of these silvicultural systems that ensure regeneration of forest stands through natural seeding and suckering (FSH 2409 26b Chapter 70).

13. Use artificial regeneration methods when we cannot rely on the natural sequence of events and/or environmental conditions to regenerate the forests within five years or earlier (FSH 2409.26b Chapter 70).

14. Inventory improvement needs in sale areas during sale reconnaissance. Use KV funds as applicable after sale closure to accomplish needed improvements including education and interpretation (FSH 2409.12 Chapter 10).

For more on Timber, see Chapter 3 * Forestwide Standards and Guidelines.

TRANSPORTATION AND TRAVEL

Transportation System Management (FSM 7700)

1. Unless a proposed road is determined necessary as a permanent addition to the National Forest Transportation System, close it and revegetate it. Revegetation will be achieved within six months. Close or obliterate temporary roads immediately when use ends (FSM 7703.1).

2. Retain access rights (FSM 7712 31).

3. Establish the specific purpose and intended use for each existing and proposed road, based on management direction. Document this purpose by writing specific road management objectives, which include appropriate design, operation, and maintenance criteria. Employ traffic (travel) management strategies of encourage, accept, discourage eliminate, unrestricted, or prohibit on all roads (FSM 7712.31).

4. Develop road management programs to require commercial users to pay their share of road maintenance.

5. Propose state and county roads as Forest Highways where the use and development of National Forest System lands affect the public road system, thus necessitating federal investments to ensure that these roads are safe and adequate. Such designation identifies state and local government roads that qualify for construction and reconstruction funding under the Forest Highway program. Designate and develop Forest Development Roads as Forest Highways when use of the road meets requirements for Forest Highway designation (FSM 7740.3).

6. Coordinate Forest information and directional signs with appropriate transportation agencies (FSH 7109.11).

Trails (FSM 2300)

7. Provide for a wide range of recreational opportunities, both motorized and nonmotorized. The trail system on each National Forest will:

a. Consider barrier-free opportunities for all new construction or rehabilitation proposals.

b. Not be dedicated to single use unless clearly necessary to resolve conflicts or create unique opportunities.

c. Have documentation on the purpose and use of each trail (FSH 2309).

8. Trail systems will be integrated across administrative boundaries, including adjacent Forest Service units, other federal agencies, state, and municipal trails (FSM 2353).

9. Maintain each trail to the standard required for the intended user-types

10. The permanent Forest trail system will be determined and identified in the Forest Trail Development Plan. This plan will include the existing and future quality constraints as they apply to trail experiences (FSM 2353).

11. National Historic, Scenic, or Recreation Trails will receive higher priority than other trails for reconstruction, operation and maintenance (FSM 2353).

12. *Maintain all trails to established Forest standards.*

a. Maintain trails in accordance with standards in the Trail Handbook

b. Schedule trail maintenance in accordance with Regional acceptable work standards

13. Construct or reconstruct trails when needed as part of the transportation system.

For more on Transportation and Travel, see Chapter 3 * Forestwide Standards and Guidelines.

VISUAL QUALITY (FSM 2380)

1. Management activities must be consistent with the visual quality objectives (VQO) in this Forest Plan unless a decision is made to change the VQO. A decision to change the VQO will be documented in project NEPA decision documents (FSM 2382.21).

2. At the project implementation stage, the VQO should be refined to the project scale.

3. As new viewer platforms (such as roads, trails, recreation areas or major housing developments outside National Forests) are developed, the VQOs should be reassessed (FSM 2382.32).

4. For areas which do not currently meet the VQO, use landscape rehabilitation as a short-term alternative to restore landscapes containing undesirable-visual impacts to a desired visual quality (FSM 2383).

For more on Visual Quality, see Chapter 3 * Forestwide Standards and Guideline and Appendix G

WATER (FSM 2520)

Water Quality

1. Develop integrated soil/water/fishery improvement schedules for watersheds, coordinated with other resources. Coordinate with state wildlife agencies. Apply treatment and land-use controls as needed to restore soil productivity, water quality, channel stability and aquatic habitat (FSM 2522.03, 2522 2).

For more on Water, see Chapter 3 * Forestwide Standards and Guidelines.

WILD AND SCENIC RIVERS (FSM 2354)

The following guidelines set forth standards for determining the classification (wild, scenic, or recreational) and eventual management of designated Wild and Scenic Rivers (FSH 1909.12).

Wild Rivers

1 Cutting of trees will not be permitted except when needed in association with a primitive recreation experience (such as clearing for trails and protection of users) or to protect the environment (such as

control of fire) Timber outside the boundary but within the visual corridors will be managed and harvested in a manner to provide special emphasis to visual quality

2 All water supply dams and major diversions are prohibited.

3. No development of hydroelectric power facilities is permitted.

4 No flood control dams, levees, or other works are allowed in the channel or river corridor. The natural appearance and essentially primitive character of the river must be maintained.

5 New mining claims and mineral leases are prohibited within 1/4 mile of the river. Valid claims would not be abrogated Subject to regulation (36 CFR 228) that the Secretaries of Agriculture and Interior may prescribe to protect the rivers included in the National System, other existing mining activity would be allowed to continue. Existing mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation, and visual impairment. Reasonable access will be permitted.

6. No roads or other provisions for overland motorized travel would be permitted within a narrow incised river valley or, if the river valley is broad, within 1/4 mile of the river bank. A few inconspicuous roads leading to the boundary of the river area at the time of study will not disqualify wild river classification. Also, unobtrusive trail bridges could be allowed.

7. Agricultural use is restricted to a limited amount of domestic livestock grazing and hay production to the extent currently practiced. Row crops are prohibited

8. Major public use areas, such as large campgrounds, interpretive centers, or administrative headquarters are located outside the wild river area. Simple comfort and convenience facilities, such as fireplaces or shelters, may be provided as necessary within the river area. These should harmonize with the surroundings

9 A few minor existing structures could be allowed assuming such structures are not incompatible with the essentially primitive and natural values of the viewshed. New structures would not be allowed except in rare instances to achieve management objectives (i.e. structures and activities associated with fisheries enhancement programs)

10. New transmission lines, gas lines, water lines, etc. are discouraged Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated, the scenic, recreational, and fish and wildlife values must be evaluated in the selection of the site.

11. Motorized travel on land or water could be permitted, but is generally not compatible with this classification.

Scenic Rivers

12. A wide range of silvicultural practices could be allowed provided that such practices are carried on in such a way that there is not substantial adverse effect on the river and its immediate environment. The river area should be maintained in its near-natural environment. Timber outside the boundary but within the visual scene-area should be managed and harvested in a manner that provides special emphasis on visual quality.

13. All water supply dams and major diversions are prohibited.

14 No development of hydroelectric power facilities is allowed

15. Flood control dams and levees would be prohibited

16. Subject to regulations at 36 CFR 228 that the Secretaries of Agriculture and the Interior may prescribe to protect the values of rivers included in the National System, new mining claims and mineral leases could be allowed and existing operations allowed to continue. However, mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.

17. Roads may occasionally bridge the river area and short stretches of conspicuous or longer stretches of inconspicuous and well-screened roads or screened railroads could be allowed. Consideration will be given to the type of use for which roads are constructed and the type of use that will occur in the river area.

18. A wider range of agricultural uses is permitted to the extent currently practiced. Row crops are not considered as an intrusion of the largely primitive nature of scenic corridors as long as there is not a substantial adverse effect on the natural like appearance of the river area

19 Larger scale public use facilities, such as moderate size campgrounds, public information centers, and administrative headquarters, are allowed if such structures are screened from the river. Modest and unobtrusive marinas also can be allowed

20 Any concentrations of habitations are limited to relatively short reaches of the river corridor. New structures that would have a direct and adverse effect on river values would not be allowed.

21. New transmission lines, gas lines, water lines, etc. are discouraged. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated, the scenic, recreational, and fish and wildlife values must be evaluated in the selection of the site

22. Motorized travel on land or water may be permitted, prohibited or restricted to protect the river values.

Recreational Rivers

23. Timber harvesting would be allowed under standard restrictions to protect the immediate river environment, water quality, scenic, fish and wildlife, and other values.

24. Existing low dams, diversion works, rip rap and other minor structures are allowed provided the waterway remains generally natural in appearance. New structures are prohibited.

25. No development of hydroelectric power facilities is allowed.

26 Existing flood control works may be maintained. New structures are prohibited.

27 Subject to regulations (36 CFR 228) that the Secretaries of Agriculture and the Interior may prescribe to protect values of rivers included in the National System, new mining claims and mineral leases are allowed and existing operations are allowed to continue. Mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.

28. Paralleling roads or railroads could be constructed on one or both riverbanks. There can be several bridge crossings and numerous river access points.

29. Lands may be managed for a full range of agricultural uses to the extent currently practices.

30. Campgrounds and picnic areas may be established in close proximity to the river. However, recreational classification does not require extensive recreation development.

31. Small communities as well as dispersed or cluster residential developments are allowed. New structures are allowed for both habitation and for intensive recreation use.

32. New transmission lines, gas lines, water lines, etc. are discouraged. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated, the scenic, recreational, and fish and wildlife values must be evaluated in the selection of the site.

33. Motorized travel on land or water may be permitted, prohibited or restricted. Controls will usually be similar to surrounding lands and waters.

For more on Wild and Scenic Rivers, see Chapter 3 * Forestwide Standards and Guidelines.

WILDLIFE AND FISH (FSM 2600)

1. Manage animal damage in cooperation with the state wildlife agencies and the Animal and Plant Health Inspection Service to prevent or reduce damage to other resources and direct control toward preventing damage or removing only the offending animal.

2. Provide forage for big game. Allocate forage to big game based on direction in management area prescriptions and FSM 2210, range analysis and allotment management planning.

Endangered or Threatened Species

3. Provide habitat for federally listed or proposed endangered or threatened species on National Forest System lands (FSM 2672.24, 2676).

4. Complete biological evaluations on actions authorized through NEPA decision documents, funded or carried out by the Forest Service to determine the effects on federally listed or proposed endangered or threatened species (FSM 2672.4).

5. Carry out consultation, informal or formal as appropriate, with the U.S. Fish and Wildlife Service when biological assessments determine that Forest Service actions may affect federally listed or proposed endangered or threatened species (FSM 2671.45).

For more on Wildlife and Fish, see Chapter 3 Forestwide Standards and Guidelines.

STATUTES

American Indian Religious Freedom Act
Act of August 11, 1978

Americans with Disabilities Act of 1990

Anderson-Mansfield Reforestation and Revegetation
Act of October 11, 1949

Antiquities Act
Act of June 8, 1906

Archaeological Resources Protection Act of 1979, as amended 1988
Act of October 31, 1979

Architectural Barriers Act of 1968

Bankhead-Jones Farm Tenant Act of 1937
Act of July 22, 1937

Clarke-McNary Act of 1924
Act of June 7, 1924

Clean Air Act Amendments of 1977
Act of August 7, 1977

Clean Water Act of 1977

Clean Water Amendments (*Federal Water Pollutions Control Act Amendments of 1972*)
Act of October 18, 1972

Color of Title
Act of December 22, 1928

Common Varieties of Mineral Materials
Act of July 31, 1947

Comprehensive Environmental Response, Compensation and Liability Act, as amended
Act of December 11, 1980

Cooperative Forestry Assistance Act of 1978
Act of July 1, 1978

Disaster Relief Act of 1974
Act of May 22, 1974

Eastern Wilderness Act
Act of January 3, 1975

Economy Act of 1932
Act of June 30, 1932

Emergency Flood Prevention (Agricultural Credit Act of 1978)
Act of August 4, 1978

Endangered Species Act of 1973
Act of December 28, 1973

Energy Security Act
Act of June 30, 1980

Federal Advisory Committee Act of 1972
Act of October 6, 1972

Federal Cave Resources Protection Act of 1988
Act of November 18, 1988

Federal Coal Leasing Amendments Act of 1975
Act of August 4, 1976

Federal Insecticide, Rodenticide, and Fungicide Act
Act of October 21, 1972

Federal Land Policy and Management Act of 1976
Act of October 21, 1976

Federal Noxious Weed Act of 1974
Act of January 3, 1975

Federal Onshore Oil and Gas Leasing Reform Act of 1987
Act of December 22, 1987
Federal Power Act of 1920
Act of June 10, 1920
Federal-State Cooperation for Soil Conservation
Act of December 22, 1944
Federal Water Pollution Control Act of 1956, as amended (Water Quality Act of 1965, Clean Water
Restoration Act of 1966)
Act of July 9, 1956
Federal Water Project Recreation Act of 1965
Act of July 9, 1965
Fish and Wildlife Conservation
Act of September 15, 1960
Fish and Wildlife Coordination Act
Act of March 10, 1934
Forest Highways
Act of August 27, 1958
Forest and Rangeland Renewable Resources Planning Act of 1974
Act of August 17, 1974
Forest and Rangeland Renewable Resources Research Act of 1978
Act of June 30, 1978
Freedom of Information Act
Act of November 21, 1974
Geothermal Steam Act of 1970
Act of December 24, 1970
Granger-Thye Act
Act of April 24, 1950
Historic Preservation Act
Act of October 15, 1966
Intermodal Surface Transportation Efficiency Act
Act of December 18, 1991
Joint Surveys of Watershed Areas Act of 1962
Act of September 5, 1962
Knutson-Vandenberg Act
Act of June 9, 1930
Land Acquisition
Act of March 3, 1925
Land Acquisition-Declaration of Taking
Act of February 26, 1931
Land Acquisition-Title Adjustment
Act of July 8, 1943
Land and Water Conservation Fund Act of 1965
Act of September 3, 1964
Law Enforcement Authority
Act of March 3, 1905
Leases Around Reservoirs
Act of March 3, 1962
Mineral Leasing Act
Act of February 25, 1920
Mineral Leasing Act for Acquired Lands
Act of August 7, 1947
Mineral Resources on Weeks Law Lands
Act of March 4, 1917

Mineral Springs Leasing
Act of February 28, 1899

Mining Claims Rights Restoration Act of 1955
Act of August 11, 1955

Mining and Minerals Policy Act of 1970
Act of December 31, 1970

Multiple-Use Sustained-Yield Act of 1960
Act of June 12, 1960

National Environmental Policy Act of 1969
Act of January 1, 1970

National Forest Management Act of 1976
Act of October 22, 1976

National Forest Roads and Trails Act
Act of October 13, 1964

National Historic Preservation Act
Act of October 15, 1966

National Historic Preservation Act Amendments of 1980 and 1992
Act of December 12, 1980

National Trails System Act
Act of October 2, 1968

Occupancy Permits
Act of March 4, 1915

Organic Administration Act of 1897
Act of June 4, 1897

Petrified Wood
Act of September 28, 1962

Pipelines
Act of February 25, 1920

Preservation of Historical and Archaeological Data
Act of May 24, 1974

Public Land Surveys
Act of March 3, 1899

Public Rangelands Improvement Act of 1978
Act of October 25, 1978

Rehabilitation
Act of 1973, as amended

Renewable Resources Extension Act of 1978
Act of June 30, 1978

Research Grants
Act of September 6, 1958

Right of Eminent Domain
Act of August 1, 1888

Rural Development Act of 1972
Act of August 30, 1972

Safe Drinking Water Amendments of 1977
Act of November 16, 1977

Sikes Act
Act of October 18, 1974

Small Tracts Act
Act of January 22, 1983

Smokey Bear Act
Act of May 23, 1952

Soil and Water Resources Conservation Act of 1977
Act of November 18, 1977
Solid Waste Disposal (*Resource Conservation and Recovery Act of 1976*)
Act of October 21, 1976
Supplemental National Forest Reforestation Fund
Act of September 18, 1972
Surface Mining Control And Reclamation Act of 1977
Act of August 3, 1977
Sustained Yield Forest Management
Act of March 29, 1944
Timber Export
Act of March 4, 1917
Timber Exportation
Act of April 12, 1926
Title Adjustment
Act of April 28, 1930
Toxic Substances Control Act
Act of October 11, 1976
Transfer Act
Act of February 1, 1905
Twenty-Five Percent Fund
Act of May 23, 1908
Uniform Federal Accessibility Standards (in accordance with the Architectural Act of 1968)
U.S. Criminal Code (*Title 18, United States Code, Chapter 91 * Public Lands*)
Act of June 25, 1948
U.S. Mining Laws (Public Domain Lands)
Act of May 10, 1872

Volunteers in the National Forests Act of 1972
Act of May 18, 1972
Water Quality Improvement Act of 1965
Act of April 3, 1965
Water Resources Planning Act
Act of July 22, 1965
Watershed Protection and Flood Prevention Act of 1954
Act of August 4, 1954
Weeks Act Status for Certain Lands
Act of September 2, 1958
Weeks Act of 1911
Act of March 1, 1911
Wild and Scenic Rivers Act
Act of October 2, 1968
Wilderness Act of 1964
Act of September 3, 1964
Wildlife Game Refuges
Act of August 11, 1916
Wood Residue Utilization Act of 1980
Act of December 19, 1980
Woodsy Owl/Smokey Bear Act
Act of June 22, 1974
Youth Conservation Corps
Act of August 13, 1970

2 CAP = REGULATIONS

- 36 CFR 60 - National Register of Historic Places
- 36 CFR 212 - Forest Development Transportation System
- 36 CFR 213 - Administration Under Bank-Jones Act
- 36 CFR 219 - Planning
- 36 CFR 221 - Timber Management Planning
- 36 CFR 222 - Range Management
- 36 CFR 223 - Sale and Disposal of NFS Timber
- 36 CFR 228 - Minerals
- 36 CFR 241 - *Fish and Wildlife*
- 36 CFR 251 - Land Uses
- 36 CFR 254 - Landownership Adjustments
- 36 CFR 261 - *Prohibitions*
- 36 CFR 291 - Occupancy and Use of Developed Sites and Areas of Concentrated Public Use
- 36 CFR 292 - National Recreation Areas
- 36 CFR 293 - *Wilderness - Primitive Areas*
- 36 CFR 294 - Special Areas
- 36 CFR 295 - Use of Motor Vehicles off Forest Development Roads
- 36 CFR 296 - Protection of Archaeological Resources
- 36 CFR 297 - Wild and Scenic Rivers
- 36 CFR 800 - Advisory Council on Historic Preservation
- 40 CFR 1500-1508 - Council on Environmental Quality
 - National Electrical Code
 - National Fire Code
 - Uniform Building Code
 - Uniform Mechanical Code
 - Uniform Plumbing Code

2 CAP = EXECUTIVE ORDERS

- E.O. 11593 - Protection and Enhancement of Cultural Environment
- E.O. 11990 - Protection of Wetlands
- E.O. 11644/11989 - Use of Off-Road Vehicles
- E.O. 11988 - Floodplain Management
- E.O. 12113 - Independent Water Project Review

Specifics to the Targhee National Forest:

Decomposition Classes for Down Logs, USFS 1985
Bald Eagle Zones Publication

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1993. Intermountain Region Desk Guide, Bridge to Revision, October.
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1994a. The Reintroduction of Gray Wolves to Yellowstone National Park and Central Idaho - Final Environmental Impact Statement. U.S Fish and Wildlife Service, Helena, MT.
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1994b Establishment of a Nonessential Experimental Population of Gray Wolves in Yellowstone National Park in Wyoming, Idaho, Montana; Central Idaho and Southwestern Montana; Final Rules. Federal Register, Vol. 59, No. 224. pp. 60252 to 60281.

GLOSSARY

-A-

Abiotic - Nonliving substances or environmental factors.

Accelerated Soil Erosion - Erosion much more rapid than normal, natural, geological erosion, primarily as a result of the influence of the activities of man or, in some cases, of animals.

Acceptable Storage/Acceptably Stored - (a) stored in a bear resistant container or, (b) stored in a closed vehicle constructed of solid, nonpliable material or; (c) suspended at least 10 feet clear of the ground at all points and 4 feet horizontally from any supporting tree or pole.

Acre-foot - A measure of water or sediment volume equal to the amount which would cover an area of one acre to a depth of one foot (325,851 gallons).

Activity Area - A land area impacted by a management activity, excluding specified transportation facilities, dedicated trails, and mining excavations, and dumps. Activity areas include harvest units within timber sale areas, prescribed burn areas, and grazing areas within range allotments. Riparian and other environmentally sensitive areas may be monitored and evaluated as individual activity areas.

Adaptation - A change in either the genetic makeup or behavior of an organism that enhances its ability to cope with or survive in its environment.

Adaptive Management - A type of natural resource management that implies making decisions as part of an ongoing process. Monitoring the results of actions will provide a flow of information that may indicate the need to change a course of action. Scientific findings and the needs of society may also indicate the need to adapt resource management to new information

Adaptive Planning - A strategy whereby planning efforts are directed towards meeting temporary crises which arise in response to changing conditions.

Aerial Logging - Removing logs from a timber harvest area by helicopter. Fewer roads are required, so the impact to an area is minimized.

Affected Environment - The natural environment that exists at the present time in an area being analyzed.

Afforestation - The establishment of a tree crop on an areas from which it has always or very long been absent

Age Class - An age grouping of trees according to an interval of years, usually 20 years. A single age class would have trees that are within 20 years of the same age, such as 1-20 years or 21-40 years and so on.

Air Pollution - The undesirable addition to the atmosphere of substances (gases, liquids, or solid particles) that are either foreign to or are in quantities exceeding their natural concentrations.

Air Quality - The composition of air with respect to quantities of pollution therein; used most frequently in connection with "standards" of maximum acceptable pollutant concentrations.

Air Shed - A geographic area that because of topography, climate and meteorology share the same air mass.

All-Aged Stand - A portion of a forest or a stand that contains trees of all, or almost all, age classes.

Allocation - The assignment of management practices to specific land areas to achieve established goals and objectives; such as the allocation of a wilderness management zone to an opportunity class.

Allotment (range allotment) - The area designated for use by a prescribed number of livestock for a prescribed period of time. Though an entire Ranger District may be divided into allotments, all land will not be grazed, because other uses, such as recreation or tree plantings, may be more important at a given time.

Allotment Management Plan (AMP) - A document that specifies the program of action designated to reach a given set of objectives for a livestock allotment. It is prepared in consultation with the permittee(s) involved and prescribes the manner and extent to which the permittee's livestock operations will be conducted in order to meet multiple use, sustained yield, economic, and other needs and objectives as determined for the lands involved. It describes the type, location, ownership, and specifications for the range improvements in place or to be installed and maintained on the lands to meet the livestock grazing and other objectives for the land. It contains such other provisions relating to the permittee's livestock management responsibilities and other objectives as may be prescribed by the Forest Service.

Allowable Sale Quantity (ASQ) - The quantity of timber that may be sold from the area of suitable land covered by the Forest Plan for a time period specified by the Plan. This quantity is usually expressed on an annual basis as the "average annual allowable sale quantity."

Allowable Use - The degree of utilization considered desirable and attainable on various specific parts of an allotment considering the present nature and condition of the resource, management objectives, and level of management.

Alternative - One of several policies, plans or projects proposed for decisionmaking.

AMP - Allotment Management Plan

Analysis - A detailed examination of anything complex in order to understand its nature or determine its essential features.

Analysis Area - A geographic area used for environmental analysis. Analysis areas will vary in size, depending on the type of activity and/or project being analyzed, and the associated issues, concerns and opportunities.

Anthropogenic - Involving the impact of humans on natural systems.

Animal Carcass - The dead body or parts thereof, of any mammal, bird, or fish, including domestic livestock.

Animal Unit - Considered to be one mature dry cow of approximately 1000 pounds based upon an average daily forage consumption of 26 pounds dry matter per day. (Abbr. A.U.)

Animal Unit Conversion Factor - A numerical figure expressing the forage requirements of a particular kind or class of animal relative to the requirement for an animal unit. A conversion factor is satisfactory with respect to the amount of forage required to maintain an animal, but may not be applicable in determining stocking rates for range use for particular kinds or classes of animals because of different grazing preferences.

Animal Unit Month (AUM) - The amount of feed or forage required by one mature (1,000 lb.) cow with calf, or equivalent, for 1 month; average daily forage consumption is 26 pounds per day. Each wildlife species will utilize some fraction of this as follows: Elk = 7, Deer = .3, and Antelope = .3.

Apparent Trend - An estimate of trend drawn from the presence or absence of indicators noted or measured during a onetime observation. Conclusion drawn from such a method can be borne out or refuted only by making additional observations or measurements over time. Apparent trend is described in the same terms as measured trend except that when no trend is apparent it shall be described as "not apparent."

Appeal - A request to a higher ranking Forest Service official for relief from a written decision.

Appropriate Suppression Response - The planned strategy for wildfire suppression action, in terms of kind, amount and timing, which most efficiently meets fire management direction under current and expected burning conditions. The response may range from a strategy of prompt control to one of containment, confinement or surveillance.

ASQ - Allowable Sale Quantity

Aquatic Connectivity - The level of connection between aquatic habitat patches. Aquatic ecosystems and species coevolved to function within certain limits of connectivity. When aquatic habitat patches are fragmented beyond natural limits, the key ecological linkages between the biological

(aquatic biota, soil microbes, riparian plants) and physical (water, parent material, gradient) elements are weakened and result in reduced aquatic ecosystem health.

Aquatic Influence Zone - Used in the context of a land management prescription, the area encompassing aquatic and riparian ecosystems and adjacent lands which directly affect the hydrologic, geomorphic, and ecological processes controlling aquatic and riparian ecosystem health and function.

Aquatic Ecosystem - Any body of water, such as streams, lakes, or springs, and all organisms and nonliving components within it, functioning as a natural system and interacting with associated terrestrial ecosystems.

Aquatic Macroinvertebrates - Invertebrates living within aquatic systems that are large enough to be seen with the naked eye, i.e. most aquatic insects.

Aquifer - A water-bearing geologic formation or structure that transmits water.

Artificial Regeneration - Replacement of forest stands by planting young trees or applying seed (direct seeding).

Aspect - The direction a slope faces. A hillside facing east has an eastern aspect.

Assessment - The Renewable Resource Assessment required by the Resources Planning act (RPA).

Associated Species - A species found to be numerically more abundant in a particular forest successional stage as compared to other stages.

Association - Any assemblage of populations living in a prescribed area or physical habitat; it is a loosely organized unit to the extent that it has characteristics additional to its individual components.

AUM - Animal Unit Month

Avoidance Areas - Areas having one or more physical, environmental, institutional or statutory impediments to corridor designation. These are two types of avoidance areas.

Discretionary - areas that may be crossed by corridors only if necessary and reasonable mitigation or avoidance of significant impacts can be obtained.

Nondiscretionary - areas that may not be crossed by corridors unless authorized by the appropriate official (for example, Governor, President, etc.)

-B-

BA - Biological Assessment

Background - The visible terrain beyond the foreground and middleground where individual trees are not visible but are blended into the total fabric of the stand. (See "Foreground" and "Middleground".)

Background Level (Background, Natural Background) - The ever-present environmental conditions or effects above which a phenomenon must manifest itself in order to be detected

Bark Beetle - An insect that bores through the bark of trees to eat the inner bark and lay its eggs. Bark beetles are important killers of forest trees.

Basal Area - The area of the cross section of a tree trunk near its base, usually 4.5 feet above the ground. Basal area is a way to measure how much of a site is occupied by trees. The term basal area is often used to describe the collective basal area of trees per acre.

Base Sale Schedule - A timber sale schedule formulated on the basis that the quantity of timber planned for sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade and that this planned sale and harvest for any decade is not greater than the long-term sustained-yield capacity. This definition expresses the principle of nondeclining flow.

BE - Biological Evaluation

Bear Management Units - 18 land units delineated within the Yellowstone Grizzly Bear Recovery Zone. These units are used for grizzly bear population and habitat analysis. There are three bear management units which encompass portions of the Targhee National Forest.

Bear Resistant Container - A securable container constructed of solid nonpliable material capable of withstanding 200 foot-pounds of energy (using the approved bear-resistant container impact testing machine). When secured and under stress the container will not have any cracks, openings, or hinges that would allow a bear to gain entry by biting or pulling with its claws. Wood containers are not considered bear-resistant unless they are reinforced with metal

Benchmark - (1) A permanent reference point. (2) In range monitoring, it is used as a point where changes in vegetation through time are measured.

Best Management Practices (BMP's) - Practices which have been designed to prevent or reduce the amount of nonpoint pollution, to a level compatible with State water quality standards and quality goals. These practices may be determined by the State, the Forest, a designated area wide planning agency, or on a project level basis. Also referred to as Soil and Water Conservation Practices (SWCP's).

Big Game - Those species of large mammals normally managed for sport hunting.

Biodegradable - Chemicals or substances which can be readily broken down into their component parts by biological action.

Biodiversity - The distribution and abundance of different plant and animal species and communities within an area Diversity encompasses four levels: genetics, species, ecosystems and landscapes.

Biological - Relating to, or affecting life and living organisms.

Biological Assessment (BA) - A document that reviews and evaluates proposed actions of Federal agencies for possible effects on any species listed, or proposed to be listed, as threatened or endangered, and their designated or proposed critical habitat.

Biological Control - The use of natural means to control unwanted pests. Examples include introduced or naturally occurring predators such as wasps, or hormones that inhibit the reproduction of pests. Biological controls can sometimes be alternatives to mechanical or chemical means.

Biological Diversity - See Biodiversity.

Biological Evaluation (BE) - A document that reviews all Forest Service planned, funded, executed, or permitted programs and activities for possible effects on endangered, threatened, proposed, or sensitive plant and animal species.

Biological Potential - The maximum possible resource output limited only by inherent physical and biological characteristics.

Biomass - The total weight of the living organisms in some biological system.

Biosphere - That part of the earth's crust, waters and surrounding air-layer which is inhabited by living organisms.

Biota - The plants and animals of an area, taken collectively.

Biotic - All the living organisms in an areas and their life processes.

Biotic Climax - A climax caused by a permanent influence or culmination of influences caused by one or more kinds of organisms, including humans. See Climax.

Biotic Community - See Community.

Biotic Diversity - See Biodiversity.

BMP - Best Management Practices.

Board Foot - The amount of wood equivalent to a piece 1 foot long by 1 foot wide by 1 inch thick. Generally, five board feet log measure is approximately equivalent to 1 cubic foot of round wood.

Broadcast Burn - Allowing a prescribed fire to burn over a designated area within well-defined boundaries for reduction of fuel hazard, improve forage for wildlife and livestock, or encourage successful regeneration of trees.

Browse - Twigs, leaves and young shoots of trees and shrubs that animals eat. Browse is often used to refer to the shrubs eaten by big game, such as elk and deer.

Brush - Stands of vegetation dominated by shrubby, woody plants or low growing trees.

Buffer - A designated land or water area, along the perimeter of some feature (e.g., a stream), whose use is regulated so as to resist, absorb or preclude unwanted effects to the protected feature.

Buffer Strip - A protective area adjacent to an area requiring special attention or protection.

Burning Index (BI) - A number related to the contribution of fire behavior to the effort of containing a fire. BI is represented in NFDRS by a calculation of flame length in feet multiplied by 10.

-C-

C&H Allotment - A cattle and horse allotment.

Cable Logging - Logging that involves the transport of logs from stump to collection points by means of suspended steel cables. Cable logging reduces the need for the construction of logging roads.

Candidate Species - A species being considered for listing as a federally threatened or endangered species.

Canopy - The more or less continuous cover of branches and foliage formed collectively by the crown of adjacent trees and other woody growth. It usually refers to the uppermost layer of foliage, but it can be used to describe lower layers in a multi-storied forest.

Canopy Closure - The degree to which the collective forest canopy, as projected onto the surface, occupies or covers that surface, i.e. the degree to which the sunlight is blocked or the sky obscured.

Canopy Cover - The percentage of ground covered by a vertical projection of the outermost perimeter of the natural spread of foliage of plants. Small openings within the canopy are included. The sum of canopy cover of several species may exceed 100 percent. (Syn. crown cover).

Capability - The potential of an area of land to produce resources, supply goods and services, and allow resource uses under an assumed set of management practices and at a given level of management intensity. Capability depends upon current

conditions and site conditions such as climate, slope, landform, soils and geology, as well as the application of management practices, such as silviculture or protection from fire, insects and disease.

Carnivore - A organism that feeds on animal substances.

Carrying Capacity - The number of organisms that the resources of a habitat can support. Usually used with respect to specific species even though the carrying capacity of a habitat depends on the interactions of both its abiotic and biotic components.

Catastrophic Condition - A significant change in forest conditions on the area that affects Forest Plan resource management objectives and their projected and scheduled outputs, uses, costs, and effects on local communities and environmental quality.

Catastrophic Event - A large-scale, high-intensity natural disturbance that occurs infrequently.

Cavity - The hollow excavated in trees by birds or other natural phenomena; used for roosting and reproduction by many birds and mammals.

CEM - Cumulative Effects Model (Bear)

Channel - A natural or artificial conduit which periodically or continuously contains moving water, such as a stream. A channel has defined bed and banks.

Chargeable Volume - All volume included in the growth and yield projections for the selected management prescriptions used to arrive at the allowable sale quantity, based on regional utilization standards.

Chemical Control - The use of pesticides and herbicides to control pests and undesirable plant species

Class I Areas (Airsheds) - Regarding air quality, an area designated for the most stringent degree of protection by the Clean Air Act. Included are National parks established before August 1977 and wildernesses designated by the 1964 Wilderness Act

Class II Areas (Airsheds) - The level of air quality protection assigned to areas other than Class I Areas.

Class of Livestock - Age and/or sex group of a kind of livestock. (cf. class of animal)

Classification - The forming, sorting, apportioning, grouping or dividing of objects into classes to form an ordered arrangement of items having a defined range of characteristics.

Clean Air Act - (42 U.S.C. 7609) Section 309 provides authority for the Environmental Protection Agency to review other agency environmental impact statements.

Clearcutting - The cutting method where merchantable trees are removed from a designated area during one operation.

Clearcutting with Reserves Regeneration Method - A variant of the Clearcutting Method in which varying numbers of reserve trees are not cut to attain goals other than regeneration. The method normally creates a two-aged stand.

Climate - The average course or condition of the weather at a particular place over a period of many years as exhibited in extremes, means, ranges and seasonal distributions

Climax - The culminating stage in plant succession for a given site where the vegetation has reached a highly stable condition.

Climax Community - The final stage in succession, its nature is determined largely by the climate and soil of a region.

Climax Species - Species that are self-perpetuating in the absence of disturbance.

Climax Vegetation - The pattern or complex of climax communities in a landscape corresponding to the pattern of environmental gradients or habitats.

Closed Allotment/Area - An allotment or area where livestock grazing is not permitted.

Coarse-filter analysis - An analysis of aggregates of elements such as cover type or plant community.

Coarse Filter Management - Land management that addresses the needs of all associated species, communities, environments, and ecological processes in a land area. (See fine filter management.)

Collector Roads - These roads serve small land areas and are usually connected to a Forest System Road, a county road, or a state highway.

Commercial Forest Land - Forest land that is producing or is capable of producing crops of industrial wood and (a) has not been withdrawn by Congress, the Secretary, or the Chief; (b) existing technology and knowledge is available to ensure timber production without irreversible damage to soils productivity, or watershed conditions; and (c) existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that adequate restocking can be attained within 5 years after final harvesting.

Commercial Thinning - Selective cutting in immature stands in which all or part of the felled trees are extracted for useful products and designed to improve the quality and growth of the remaining trees.

Commodity - A resource product for which a monetary value has been established.

Community - All of the organisms inhabiting a common environment and interacting with one another, or an association of interacting populations usually defined by the nature of their interaction in the place in which they live.

Community cohesion - The degree of unity and cooperation within a community in working toward shared goals and solutions to problems.

Community stability - A community's capacity to handle change without major hardships or disruptions to component groups or institutions. Measurement of community stability requires identification of the type and rate of proposed change and an assessment of the community's capacity to accommodate that level of change.

Community type - An aggregation of all plant communities distinguished by floristic and structural similarities in both overstory and undergrowth layers. A unit of vegetation within a classification.

Compartment - A unit of forested land, usually between 1,000 and 3,000 acres in size, defined by natural and man-made features and used to facilitate timber planning.

Competition - The general struggle for existence and dominance in which living organisms compete for a limited supply of the necessities of life.

Composition - What an ecosystem is composed of. Composition could include water, minerals, trees, snags, wildlife, soil, microorganisms, and certain plant species.

Concern - (Also management concern.) An issue, problem or condition which constrains the range of management practices identified by the Forest Service in the planning process.

Confine - To limit fire spread within a predetermined area principally by use of natural or preconstructed barriers or environmental conditions. Suppression action may be minimal and limited to surveillance under appropriate conditions.

Conifer - A tree that produces cones, such as a pine, spruce, or fir tree.

Connected Actions - Closely related actions which automatically trigger other actions, cannot proceed unless other actions are taken previously or simultaneously, or are interdependent parts of a larger action and depend on the larger action for justification.

Connectivity (of habitats) - The linkage of similar but separated vegetation stands by patches, corridors or "stepping stones" of like vegetation. This term can also refer to the degree to which similar habitats are linked.

Connectivity - The condition in which the spatial arrangement of land or water habitats allows biological and ecological processes to function across the landscape. Connectivity is the opposite of fragmentation.

Constraint - A limitation; action which cannot be taken or must be taken.

Conservation - The careful protection, utilization and planned management of natural resources to prevent their depletion, exploitation, destruction, waste or neglect.

Consistency - All resource plans and permits, contracts and other instruments for the use and occupancy of National Forest System land must be consistent with the Forest Plan.

Consumer Organism - A organism which ingests other organisms or food particles, depending upon their position in the food chain.

Consumptive Use - A use of resources that reduces the supply, such as logging and mining (See also nonconsumptive use).

Contain - To surround a fire, and any spot fires therefrom, with control lines as needed, which can reasonably be expected to check the fire's spread under prevailing and predicted conditions.

Contingency Plan - A plan for providing timely recognition of approaching critical fire situations, priority setting, and deployment of forces and other action to resolve those situations.

Continuous Grazing System - Unrestricted grazing throughout the entire grazing season every year.

Contour - A line drawn on a map connecting points of the same elevation.

Contrast - The degree to which adjacent landscape elements differ from each other, with respect to species composition and physical attributes.

Control - To complete the control line around a fire, any spot fires therefrom, and any interior islands to be saved; burn out any unburned area adjacent to the fire side of the control line; and cool down all hot spots that are immediate threats to the control line, until the line can reasonably be expected to hold under foreseeable conditions.

Coordinated Resource Management (CRM) - The process whereby various user groups are involved in discussion of alternative resource uses and collectively diagnose management problems, establish goals and objectives, and evaluate multiple use resource management.

Core Area - A term used to describe a component of grizzly bear habitat. Core areas are free of motorized access during the nondenning period. Core areas must meet the following criteria:

No motorized use of roads and trails during the nondenning period. Within the core area, restricted roads require closure devices that are permanent such as tank traps, large boulders, dense vegetation, etc.

No roads or trails that receive nonmotorized, high intensity use as defined in established cumulative effects activity definitions.

Minimum of .3 miles from any open road or motorized trail. This will be accomplished by buffering all open roads and open motorized trails.

Consideration should be given to ensure that the core areas meet seasonal bear habitat needs by assuring that spring, summer, fall and denning habitat within the core areas are representative of these seasonal habitats in the entire analysis area.

Once core areas become established and effective, these areas should remain in place for at least 10 years. This duration is based upon the generation time for a female grizzly bear or the time it takes a female grizzly bear to replace herself.

Corridor - A linear strip of land managed for specific vegetational and other (roads) characteristics to allow the movement wildlife species between areas of suitable habitat. The landscape elements that connect similar patches through a dissimilar matrix or an aggregation of dissimilar patches.

Cost-efficiency - The usefulness of specified inputs (costs) to produce specified outputs (benefits). In measuring cost efficiency, some outputs, including environmental, economic, or social impacts, are not assigned monetary values but are achieved at specified levels in the least cost manner. Cost efficiency is usually measured using present net value, although use of benefit-cost ratios and rates-of-return may be appropriate.

Council of Environmental Quality (CEQ) - The Council issues regulations binding on all federal agencies, to implement the procedural provisions of the National Environmental Policy Act. The regulations address the administration of the NEPA process, including preparation of Environmental Impact Statements (EIS) for major federal actions which significantly affect the quality of the human environment.

Cover - Any feature that conceals wildlife or fish. Cover may be dead or live vegetation, boulders, or undercut streambanks. Animals use cover to escape from predators, rest or feed

Cover Class - Represents a percentage range for a fixed area covered by the crowns of plants. It is measured as a vertical projection of the outermost portion of the foliage. Cover Class A = <40% canopy cover; Cover Class B = 40-60% canopy cover; Cover Class C = >60% canopy cover.

Cover-forage Ratio - The ratio of hiding cover to foraging areas for wildlife species

Cover, Percent - The area covered by the combined aerial parts of plants and vegetative ground cover expressed as a percent of the total area.

Cover type (forested cover type) - Stands of a particular vegetation type that are composed of similar species. The aspen cover type contains plants distinct from the pinyon-juniper cover type.

Created Opening - An opening in the forest cover created by the application of even-aged silvicultural practices. (Clearcuts, seed chutes of a shelterwood, or group selection (nonstocked and seedling stages)).

Critical Area - A portion of rangeland which has a critical issue related to it, such as a threatened or endangered or sensitive species, a high use recreation area, or a key wildlife habitat. The area serves as a monitoring and evaluation site for the critical issue.

Critical Habitat - Specific area occupied by threatened or endangered species, on which are found those physical and/or biological features that are essential to the conservation of the species.

Crop Tree - A tree that forms, or is selected to form, a component of the final stand; specifically, one selected to be carried through to maturity. Also known as a final crop tree or growing stock tree.

Crown - The upper part of a tree or other woody plant carrying the main branch system and foliage above a more or less clean stem.

Crown Closure - See cover class.

Crown Cover - The amount of canopy provided by branches and foliage of trees, shrubs, and herbs in a plant community. May be specified by species, growth form or collectively.

Crown Fire - A fire that advances from top to top of trees or shrubs more or less independently of the surface fire. Sometimes crown fires are classed as either running or dependent, to distinguish the degree of independence from the surface fire.

Crown Height - The distance from the ground to the base of the crown of a tree.

CU Allotment - An allotment grazed by both sheep and cattle (common use)

Culmination of Mean Annual Increment - The age at which the average annual growth is greatest for a stand of trees. Mean annual increment is expressed in cubic feet measure and is based on expected growth according to the management intensities and utilization standards assumed in accordance with 36 CFR 219.16 (a)(2)(i) and (ii). Culmination of mean annual increment (CMAI) includes regeneration harvest yields and any additional yields from planned intermediate harvests.

Cultural Resource - The remains of sites, structures, or objects used by humans in the past - historical or archaeological.

Cultural Sensitivity - Refers to the likelihood of encountering significant cultural volumes (quantity and/or quality) that may affect and may be affected by ground-disturbing activities

Cumulative Actions - Actions which when viewed with other proposed actions have cumulatively significant impacts

Cumulative Effects or Impacts - The impact on the environment which results from the incremental impact of an action when added to other past, present and reasonably foreseeable future actions regardless of what agency or person undertakes such other action. Cumulative effects or impacts can result from individually minor but collectively significant actions taking place over a period of time.

Cumulative Effects Analysis - An analysis of the effects on the environment which results from the incremental impact of a proposed action when

added to other past, present and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions.

Cutting Cycle - The planned lapse of time between successive cuttings in a stand.

Cutting Method - Describes cuttings used either to help reproduce forest stands (reproduction or harvest cuttings) or to maintain their vigor and desired composition and structure in terms of tree species, ages, and size classes (intermediate cuttings).

Cycling - One of the ways functions are described; resources which are transported within the system (i.e., animal migration, nutrient cycling in a forest stand, snow melt becoming part of the surface or groundwater flow.)

-D-

Data - Any measurements, facts, evidence or observations reduced to a recorded and retrievable format.

DB - Database

DBH - Diameter at Breast Height

Decomposer - An organism, usually a bacterium or fungus, that breaks down the bodies or parts of dead plants and animals into simpler compounds.

Decomposition - The process of separating into constituent parts, elements, or simpler compounds. In biological systems, a process usually accomplished by fungi and bacteria.

Decomposition Class - Any of five stages of decomposition of logs left in the forest; stages range from essentially sound to almost total decomposition. (See end of glossary for additional information)

Defoliation - The removal of leaves from plants, especially by herbicides or plant eating animals.

Density. Numbers of individuals or stems per unit area. (Density does not equate to any kind of cover measurement.)

Dependent Species - A species for which a habitat element (e.g. snags) is deemed essential for the species to occur regularly or to reproduce.

Departure - A sale schedule that deviates from the principle of nondeclining flow by exhibiting a planned decrease in the sale schedule at any time during the planning horizon. A departure is characterized by a temporary increase, usually in the beginning decade(s) of the planning horizon, over the base sale schedule originally established. This increase does not impair the future attainment of the long-term sustained yield capacity.

Desired Condition (DC) - A portrayal of land or resource conditions which are expected to result if planning goals and objectives are fully achieved.

Desired Future Condition (DFC) - A description of the cumulative results of implementing the goals expressed in the Forest Plan.

Desired Future Condition - Rangelands - The specific future condition of rangeland resources that meets management objectives as identified in the Forest Plan and Allotment Management Plan. Desired future condition of rangelands can be expressed in terms of ecological status of the vegetation, it could include species composition, diversity of habitats, or age classes of species, desired soil protection, including conditions of soil cover, erosion, compaction, and loss of soil productivity; in riparian areas, it includes conditions of streambank and channel stability, stream habitat, streamside vegetation, stream sedimentation, and water quality.

Desired Future Vegetation - The future state of the plant community on a site or an ecological unit which meets forest plan or other management objectives

Desired Plant Community - A plant community which produces the kind, proportion, and amount of vegetation necessary for meeting or exceeding the Forest Land Management Plan or Allotment Management Plan objectives established for an ecological type(s). The desired plant community must be consistent with the type's capability to produce the desired vegetation through management, land treatment, or a combination of the two. The desired plant community must conserve to the extent practicable the long-term potential of the site to produce vegetation, and produce in the short-term those combinations of desired goods and service.

Desirable Plant Species - Species which contribute to the management objectives.

Desired Riparian Vegetation Conditions (DVC) - Those conditions resulting from meeting the Forest Plan objective to "maintain or improve riparian vegetation, aquatic habitat, and water quality." Achieving DVC on the Forest would result in a complex of native riparian plant communities, in predominately mid to late seral stages, with the potential to produce high plant species diversity.

Desired Soil Protection - Desired soil quality standards which meet forest plan or other management objectives for maintaining soil productivity potential, including thresholds for soil cover, erosion, compaction and soil displacement.

Developed Recreation Sites - Relatively small, distinctly defined and developed areas where facilities are provided for concentrated public use, (i.e., campgrounds, picnic areas, and swimming areas). These areas have more than \$50,000 of investment and two or more developed facilities are present.

Development Scale

1 Minimum site modification. Rustic or rudimentary improvements designed for protection of the site rather than comfort of the users. Use of synthetic materials excluded. Minimum controls are subtle. No obvious regimentation Spacing informal and extended to minimize contacts between users. Motorized access not provided or permitted.

2 Little site modification. Rustic or rudimentary improvements designed primarily for protection of the site rather than the comfort of the users. Use of synthetic materials avoided. Minimum controls are subtle. Little obvious regimentation. Spacing informal and extended to minimize contacts between users. Motorized access provided or permitted. Primary access over primitive roads Interpretive services informal, almost subliminal

3 Site modification moderate. Facilities about equal for protection of site and comfort of users Contemporary/rustic design of improvements is usually based on use of native materials. Inconspicuous vehicular traffic controls usually provided. Roads may be hard surfaced and trails

formalized. Development density about 3 family units per acre. Primary access may be over high standard roads. Interpretive services informal, but generally direct.

4 Site heavily modified. Some facilities designed strictly for comfort and convenience of users. Luxury facilities not provided. Facility design may incorporate synthetic materials. Extensive use of artificial surfacing of roads and trails. Vehicular traffic control usually obvious. Primary access usually over paved roads. Development density 3-5 family units per acre. Plant materials usually native. Interpretive services often formal or structured.

5 High degree of site modification. Facilities mostly designed for comfort and convenience of users and usually include flush toilets; may include showers, bathhouses, laundry facilities, and electrical hookups. Synthetic materials commonly used. Formal walks or surfaced trails. Regimentation of users is obvious. Access usually by high-speed highways. Development density 5 or more family units per acre. Plant materials may be foreign to the environment. Formal interpretive services usually available. Designs formalized and architecture may be contemporary. Mowed lawns and clipped shrubs not unusual.

Detrimental Compaction - Soil compaction is a reduction in soil volume, resulting in decreased porosity and increased bulk density. Soil compaction that adversely affects hydrologic function and site productivity is detrimental.

Detrimental Displacement - Soil displacement is the movement of soil from one place to another by mechanical forces such as blade, wheel slippage, and dragging logs. Displacement is detrimental if it adversely affects hydrologic function or site productivity.

Detrimental Disturbance - Refers to areas that have had detrimental compaction, detrimental puddling, detrimental displacement and/or which have been severely burned.

Detrimental Puddling - Soil puddling is a physical change in soil properties due to shearing forces that alter soil structure and reduce permeability and infiltration. Soil puddling that adversely affects hydrologic function and site productivity is detrimental.

tal. Clearly identifiable ruts or hoof prints in mineral soil, or in a horizon of an organic soil, are indicators of detrimental puddling.

Developed Recreation Sites - Relatively small, distinctly defined area where extensive facilities are provided for concentrated public use, (i.e., campgrounds, picnic areas, and swimming areas).

DFC - Desired Future Condition

Diameter at Breast Height (DBH) - The diameter of a tree measured 4 feet 6 inches above the ground.

Direct Effect - An effect that is caused by an action and occurs in [generally] the same time and place as the action.

Discount rate - An interest rate that represents the cost or time value of money in determining the present value of future costs and benefits. A "real" discount rate is one adjusted to exclude the effects of inflation.

Discounting - An adjustment, using a discount rate, for the value of money over time so that costs and benefits occurring in the future are reduced to a common time, usually the present, for comparison.

Dispersal - The movement of plants and animals away from their point of origin to another location where they subsequently get established and produce offspring.

Dispersed Recreation - Recreational activities that do not require developed facilities. These include undeveloped camping sites, hiking, fishing, hunting, biking, etc.

Dispersed Recreation Sites - Relatively small, undeveloped areas where public recreation use occurs. These areas have less than \$50,000 of investment in facilities such as toilets, tables, fencing, etc. These sites are generally adjacent to roads or trails and are used for dispersed recreation activities, such as camping, fishing, hunting, hiking, etc.

Dispersion - To spread out the impacts of timber harvest by distributing harvest units more or less uniformly throughout a drainage.

Distinctive (Class A) landscape - Areas where features of landform, vegetative patterns, water forms, and rock formations are of unusual or outstanding visual quality.

Disturbance - Any event, such as a forest fire or insect infestation that alters the structure, composition, or function of an ecosystem.

Disturbed Soil - see 'soil disturbance.'

Diversity - The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan. See also "Edge," "Horizontal Diversity," and "Vertical Diversity."

Diversity - See Biodiversity.

Dominant - A taxon or group of taxa which by their collective size, mass, or numbers exert the most influence on other components of the ecosystem.

Drainage - A large area mostly bounded by ridges, encompassing part, most or all of a watershed.

Drought Index - A number representing net effect of evaporation, transpiration, and precipitation in producing cumulative moisture depletion in deep duff or upper soil layers.

Durability - The ability of resources to tolerate sustained use, without degradation of the resource base (i.e., productivity or quality).

Dwarf Mistletoe (*Arceuthobium* spp.) - Dwarf mistletoes are parasitic, seedbearing plants that attack most western conifers. Infected trees can be recognized by presence of witch's brooms, cankers, swellings, and other abnormalities. Economic losses can be heavy, as damage results in smaller trees, lower timber quality, and increased mortality.

-E-

EA - Environmental Assessment

Early Forest Succession - The biotic (or life) community that develops immediately following the removal or destruction of vegetation in an area. For instance, grasses may be the first plants to grow in an area that was burned

Ecocentric - A conservation strategy that focus on providing habitat patterns that are manifestations of ecological processes operating at several scales. Also, a philosophical viewpoint which emphasizes the maintenance of natural systems at the expense of commodity production and other human uses. The goal of this philosophy is to permit natural ecological processes to operate as freely as possible, because wild land values for society ultimately depend on the retention of naturalness.

Ecoclass - Classification system for the biological and earth sciences based on linking together existing disciplinary classifications of the major ecosystem components.

Ecology - The interrelationships of living things to one another and to their environment, or the study of these interrelationships.

Ecomap - This was the name given to the Forest Service workgroup that developed the National Hierarchy of Ecological Units for the United States.

Economic impacts -

direct economic impact - Effects caused directly by forest product harvest or processing or by forest uses.

indirect economic impact - Effects that occur when supporting industries sell goods or services to directly affected industries.

induced economic impact - Effects that occur when employees or owners of directly or indirectly affected industries spend their income within the economy.

Ecoregion. A continuous geographic area over which the macroclimate is sufficiently uniform to permit development of similar ecosystems on sites with similar properties. Ecoregions contain multiple landscapes with different spatial patterns of ecosystems.

Ecosystem - An arrangement of living and nonliving things and the forces that move among them. Living things include plants and animals. Nonliving parts of ecosystems may be rocks and minerals. Weather and wildfire are two of the forces that act within ecosystems.

Ecosystem composition - The constituent elements of an ecosystem.

Ecosystem function - The processes through which the constituent living and nonliving elements of ecosystems change and interact, including biogeochemical processes and succession.

Ecosystem Health - Ecosystem health is defined in terms of four major characteristics applicable to any complex system: sustainability, which is a function of activity, organization, and resilience. An ecological system is healthy and free from "distress syndrome" if it is stable and sustainable -that is, if it is active and maintains its organization and autonomy over time and is resilient to stress ("distress syndrome" refers to the irreversible process of system breakdown leading to collapse).

Ecosystem Management - The use of an ecological approach to achieve productive resource management by blending social, physical, economic and biological needs and values to provide healthy ecosystems.

Ecosystem pattern - The structure that results from the distribution of organisms in, and their interaction with their environment. Includes zonation, stratification, activity or periodicity, food-webs, reproductive, social and stochastic.

Ecosystem restoration - Returning an ecosystem from a nonsustainable to a sustainable condition.

Ecosystem Stability - When the ecosystem process and function are operating within the ecosystems historical operating range. The historical range of variability identifies the ecosystem amplitude of historical responses to perturbations and disturbances.

Ecosystem structure - The spatial arrangement of the living and nonliving elements of an ecosystem.

Ecosystem sustainability - The ability to sustain diversity, productivity, resilience to stress, health, *renew ability, and/or yields of desired values, resource uses, products, or services* from an ecosystem while maintaining the integrity of the ecosystem over time.

Edge - The margin where two or more vegetation patches meet, such as a meadow opening next to a mature forest stand, or a Douglas-fir stand next to an aspen stand

Edge Effect - The increased richness of plants and animals resulting from the mixing of two communities where they join.

Effects - Environmental consequences as a result of a proposed action. Included are direct effects, which are caused by the action and occur at the same time and place, and indirect effects, which are caused by the action and are later in time or further removed in distance, but which are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air, water and other natural systems, including ecosystems.

Effects and impacts as used in this statement are synonymous. Effects include ecological (such as the effects on natural resources and on the components, structures and functioning of affected ecosystems), aesthetic quality, historic, cultural, economic, social or health whether direct, indirect or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effects will be beneficial.

EHE - Elk Habitat Effectiveness

EIS - Environmental Impact Statement

Elk Habitat Effectiveness (EHE) - A measure of the quality of an area for elk during the spring/summer/fall seasons. Two habitat parameters are considered to be most important for EHE. 1) motorized road and trail densities (measured in miles/square mile, 2) elk hiding cover (measured as a percentage of an area in cover).

Elk Hiding Cover - Vegetation capable of hiding 90 percent of a standing adult elk from the view of a human at a distance equal to or less than 200 feet

Elk Vulnerability (EV) - The percent mortality of bull elk during the fall general rifle hunting season. Three parameters are considered to be most important for EV: 1) aspect variability; 2) hunter densities (measured in hunter-days/square mile); 3) motorized road and trail densities (measured in miles/square mile).

Emission - A release of air contaminants into the outdoor atmosphere.

Endangered Species - Any species of animal or plant that is in danger of extinction throughout all or a significant portion of its range. Plant or animal species identified by the Secretary of the Interior and endangered in accordance with the 1973 Endangered Species Act.

Endangered Species Act - The Act which requires consultation with U.S. Fish and Wildlife Service if practices on National Forest System lands may impact a threatened or endangered species (plant or animal).

Endemic - Restricted in distribution to a defined area. (Not epidemic)

Environment - The complex of climatic, soil and biotic factors that act upon and influence an ecosystem.

Environmental Analysis - An analysis of alternative actions and their predictable long and short-term environmental effects. Environmental Analyses include physical, biological, social and economic factors.

Environmental Assessment (EA) - A document providing evidence and analysis relating to a proposed action by a Federal Agency. It establishes whether an environmental impact statement (EIS) must be written, or a finding of no significant impact (FONSI) will be issued. It includes the proposed action and alternatives, and evaluates their potential environmental impacts.

Environmental Impact Statement (EIS) A statement of the environmental effects of a proposed action and alternatives to it. It is required for major Federal actions under Section 102 of the National Environmental Policy Act (NEPA) and released to the public and other agencies for comment and review. It is a formal document that must follow the requirements of NEPA, the Council on Environmental Quality (CEQ) guidelines, and directives of the agency responsible for the project proposal.

Ephemeral Streams - Streams that flow only as the direct result of rainfall or snowmelt. They have no permanent flow.

Erosion - The wearing away of the land surface by wind or water.

ESA - Endangered Species Act

Escaped Fire - A fire which has exceeded, or is anticipated to exceed, initial action capabilities or the fire management direction or prescription.

EV - Elk Vulnerability

Even-aged forest - A forest stand comprising trees with less than a 20-year difference in age.

Even-aged Management - Timber management actions that result in the creation of stands of trees in which the trees are essentially the same age. Clearcut, shelterwood, or seed tree cutting methods produce even-aged stands.

Even-aged Stand - A portion of a forest or a stand composed of trees having no, or relatively small, differences in age, although differences of as much as 30 percent are admissible in rotations greater than 100 years.

Even-aged System - A silvicultural system that produces stands in which all trees are about the same age; that is, the difference in age between trees forming the main crown canopy level will usually not exceed 20 percent of the rotation length.

EWU - Ecological Water Unit.

Exclusion Areas - Areas having a statutory prohibition to rights-of-way for lineal facilities or corridor designation

Extensive Management - The practice of forestry on a basis of low operating and investment costs per acre. Also known as extensive forestry.

Extinct - A species is extinct when it no longer exists.

Extinction - The process which results in the complete elimination of a species leaving no living descendants. Extinctions may be local or global.

Eyrie - A ledge along a cliff used for nesting peregrine falcons.

-F-

Fauna - The animal life of an area.

Facilities - Transportation planning, road management and operation, fleet equipment, and engineering services (for example, administrative buildings, water and sanitation systems, sanitary landfills, dams, bridges and communication systems).

Felling - Cutting down trees.

Final Cut - The removal of the last seed bearers or shelter trees after regeneration of new trees has been established in a stand being managed under the shelterwood system of silviculture.

Final Removal - All overstory trees are removed to release an adequately stocked salvageable understory.

Final Removal Cut - A type of cut that releases established regeneration from competition with seed trees under the Seed Tree and Shelterwood Regeneration Methods. Reserve trees may or may not be retained.

Fine Fuels - Fast drying fuels such as grass, leaves, draped pine needles, and small twigs that when dry ignite readily. Fine fuels are considered 1 hour timelag fuels (see timelag definition).

Fine Organic Matter - Organic material on top of mineral soil consisting of fallen vegetative matter in various stages of decomposition. Specifically referred to as horizons in soil descriptions. *Fine organic matter includes woody material up to 3 inches in diameter.*

Fines - waterborn particles the size of sand and smaller.

Fire - The rapid, persistent chemical reaction of a fuel and oxygen that releases heat, light and unburned particulate (smoke).

Fire Ecology - Area of study addressing the relationships among fire, the environment, and living organisms.

Fire Frequency - The number of wildland fires started in a given area over a given time.

Fire Group - A collection of similar habitat types and their associated fire ecology.

Fire Hazard - A fuel complex, defined by volume, type condition, arrangement, and location, that determines the degree of ease of ignition and of resistance to control.

Fire Management - All activities required for the protection of burnable wildland values from fire and the use of fire to meet land management goals and objectives

Fire Management Area - One or more parcels of land having a common set of fire management objectives.

Fire Occurrence - Number of fires per unit time in a specified area.

Fire Regime - The characteristic frequency, extent, intensity, severity and seasonality of fires in an ecosystem.

Fire Risk - The chance of fire starting, as affected by the nature and incidence of causative agents; an element of the fire danger in any area.

Fire Suppression - All work and activities associated with fire extinguishing operations beginning with discovery and continuing until the fire is completely extinguished.

Fireline Intensity - The amount of heat released in BTU's per foot of fire front per second. It is related to the difficulty of containment of a fire.

Fish - Any of numerous cold-blooded aquatic vertebrates having fins, gills and a streamlined body.

Fish-bearing Stream Reaches - Those portions of streams and rivers that support fish of any species during all, or a portion of, their life cycle.

Fisheries Habitat. Streams, lakes, and reservoirs that support fish, or have the potential to support fish.

Floodplain - The lowland and relatively flat area adjoining waters, including, at a minimum, the area subject to a one percent chance or greater chance of flooding in any given year (100 year recurrence).

Flora - The plant life of an area.

FOIA - Freedom of Information Act.

Food Chain - A series of spatially associated species, each of which lives as a predator, parasite or absorber of the next lower species down in the series.

FOR - FORPLAN or FORPLAN Alternative

Forage - All browse and herbaceous foods that are available to grazing animals. It may be grazed or harvested for feeding

Forb - A broadleaf plant that has little or no woody material in it.

Foreground - The part of a scene or landscape that is nearest to the viewer.

Forest - An ecosystem characterized by a more or less dense and extensive tree cover. Usually supporting or capable of supporting forests at a density of 10 percent crown closure or better

Forest and Rangeland Renewable Resources Planning Act (RPA) (1974) - This act requires the development of long term strategies for the management and inventory of the renewable forest and range resources of Forest Service lands.

Forest Health - A measure of the robustness of forest ecosystems. Aspects of forest health include biological diversity, soil, air, and water productivity, natural disturbances, and the capacity of the forest to provide a sustaining flow of goods and services for people.

Forest Land - See "Timber Classification."

Forest Plan - Source of management direction for an individual National Forest unit, specifying allowable activities, minimum requirements, expected outputs and land use allocations for a 10 to 15 year period.

Forest Roads and Trails - A legal term for Forest roads or trails that are under the jurisdiction of the Forest Service.

Forest Structure - Often divided into four conceptual aspects: age, species composition, horizontal or mosaic pattern, and vertical.

Forest Supervisor - The official responsible for administering National Forest lands on an administrative unit, usually one or more National Forests. The Forest Supervisor reports to the Regional Forester.

Forest Trees - Woody plants having a well-developed stem and usually more than 12 feet in height at maturity.

Forest Type - A descriptive term used to group stands of similar character of development and species composition by which they might be differentiated from other groups of stands.

Fragile - Those land or water areas containing ecosystems, possibly but not necessarily rare, that are sensitive to external stimuli which may disturb their balance, especially in an irreversible direction

Fragmentation - The splitting or isolating of patches of similar habitat, typically forest cover, but including other types of habitat. Habitat can be fragmented naturally or from forest management activities, such as clearcut logging.

Freedom of Information Act (FOIA) (1966) - The freedom of information act provides public access to records of the agencies and departments of the Executive Branch of the U.S. government.

Frequency - A quantitative expression of the presence or absence of individuals of a species in a population.

FRES - Forest Range Environmental Study.

Frissell Condition Classes - A classification system which rates the degree of man-caused change that a wilderness, dispersed campsite or concentrated-use area has undergone. There are 5 classes as follows:

Frissell Condition Class 1 - Visible Indicators: Ground vegetation flattened, but not permanently injured. Minimal physical change except for possibly a simple rock fireplace.

Frissell Condition Class 2 - Visible Indicators: Ground vegetation worn away around fireplace or center of activity.

Frissell Condition Class 3 - Visible Indicators
Ground vegetation lost on most of the site, but humus and litter still present in all but a few areas.

Frissell Condition Class 4 - Visible Indicators:
Bare mineral soil widespread. Tree roots exposed on the surface.

Frissell Condition Class 5 - Visible Indicators:
Soil erosion obvious. Trees reduced in vigor or dead.

Fuel Loading - The dry weight of fuels in a given area, usually expressed in tons per acre. Fuel loading may be referenced to fuel size and may include total biomass.

Fuel Management - The treatment of fuels that would otherwise interfere with effective fire management or control. For instance, prescribed fire can reduce the amount of fuels that accumulate on the forest floor before the fuels become so heavy that a natural wildfire in the area would be explosive and impossible to control

Fuel Model - Simulated fuel complex for which all fuel descriptors required for the solution of a mathematical rate of spread model have been specified.

Fuel Moisture Content - The quantity of moisture in fuel expressed as a percentage of the weight when thoroughly dried at 212 degrees F.

Fuels - Plants and woody vegetation, both living and dead, that are capable of burning.

Fuelwood - Wood that is round, split, or sawn and/or otherwise generally refuse material cut into short lengths or chipped for burning.

Function - All the processes within an ecosystem through which the elements interact, such as succession, the food chain, fire, weather, and the hydrologic cycle.

Functional Planning - Planning which focuses on a single aspect or resource of a total complex

Game Species - Any species of wildlife or fish that is harvested according to prescribed limits and seasons.

Geographic Information System (GIS) - A set of procedures and computer hardware and software for organizing, storing, retrieving, analyzing, and displaying data that includes a geographic position component.

GIS - Geographic Information Systems.

Goal - A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms and may not have a specific date for accomplishment.

Goods and Services. The various outputs, including on-site users, produced from forest and rangeland resources.

Grassland - Plant communities whose potential natural and dominant vegetation is comprised of grasses and grasslike plants.

Grasslike Plant - A plant of the Cyperaceae or Juncaceae families which vegetatively resembles a true grass of the Gramineae family.

Grazing - Consumption of forage by animals.

Grazing Formula - The specific order of grazing or sequence within a grazing system.

Grazing period - The time period in which domestic livestock are permitted to graze a specific pasture and/or portion of an allotment.

Grazing Season - The total length of time which domestic livestock are permitted to graze all pastures and/or portions of an allotment

Grazing System - A specialization of grazing management which defines systematically recurring periods of grazing and deferment for two or more pastures or management units. (cf. deferred grazing, intermittent grazing, deferred-rotation grazing, and short-duration grazing.)

Greater Yellowstone Area - A term for 11.7 million acre area that makes up parts of six National Forests and two National Parks in northwest Wyoming, eastern Idaho, and southwest Montana.

Greenline - The first perennial vegetation from the waters edge. Riparian areas that are in late seral status with stable stream banks will exhibit a continuous line of vegetation at the bankfull discharge level. Rocky stream types may have a significant amount of rock causing breaks in the vegetation. This rock is considered part of the green line. Other breaks may occur in the first perennial band of vegetation (watercourses or bare ground). The amounts of these (perennial vegetation, rock, and bare ground) should be recorded.

Grizzly Bear Security Cover - Forested areas (all tree species) which have not been managed or burned in the last 20 years, and managed or burned forested areas within the last 20 years which meet the following criteria:

The overstory and understory categories are to be considered separately. A stand having either 130 sq. ft. of basal area per acre or 250 understory trees per acre over 7 ft. tall would meet the requirements for full security cover. Both live and dead tree basal areas were used for overstory calculations.

Ground Cover - The percentage of material, other than bare ground, covering the land surface. It may include live vegetation, standing dead vegetation, litter, cobble, gravel, stones and bedrock. Ground cover plus bare ground would total 100 percent.

Ground Fire. A fire that burns along the forest floor and does not affect trees with thick bark or high crowns

Ground Water - The supply of fresh water under the earth's surface in an aquifer or in the soil.

Group Selection - A method of tree harvest in which trees are removed periodically in small groups. This silvicultural treatment results in small openings that form mosaics of age class groups in the forest.

Group Selection Regeneration Method - A method of regenerating uneven-aged stands in which trees are cut, and new age classes are established, in small groups.

Growing Stock Trees - Live trees, meeting specified standards of quality or vigor, included in growth and yield projections to arrive at the allowable sale quantity.

Guideline - Guidelines represent a preferred or advisable course of action that is generally expected to be carried out. Deviation from compliance with a guideline does not require a Forest Plan amendment, but the rationale for such a deviation shall be documented in the project decision document.

Guilds - A group of organisms that share a common food resource.

-H-

Habitat - The area where a plant or animal lives and grows under natural conditions.

Habitat Capability - The ability of a land area or plant community to support a given species of wildlife.

Habitat Diversity - The number of different types of habitat within a given area.

Habitat Type - A way to classify land area. A habitat can support certain climax vegetation, both trees and undergrowth species. Habitat typing can indicate the biological potential of a site.

Harvest Activity - A reference to a specific type of cut applied under a regeneration or intermediate treatment method. Refer to FSH 2409.14, Chapter 78 for valid values.

Harvest Cutting - The felling of the final crop of trees either in a single cutting or in a series of regeneration cuttings. Generally, the removal of financially or physically mature trees, in contrast to cuttings that remove immature trees. Also referred to as main felling and major harvest.

Harvesting - A loose term for the removal of natural resource for human use or consumption.

Healthy ecosystem - An ecosystem in which structure and functions allow the maintenance of the desired condition of biological diversity, biotic integrity, and ecological processes over time

Herb - Any flowering plant except those developing persistent woody stems above ground.

Herbivore - Any animal (mammal, bird, insect, etc.) that consumes living plants or their parts.

HGL - Hydric Greenline.

Hiding Cover - Vegetation or other surface characteristics (rocks, downed logs, etc.) that will hide 90% of an animal from the view of a human at some distance that varies by species. For deer and elk that distance is 200 feet.

Hierarchical - A type of classification technique whose successively lower level units must fit entirely within the separate units delineated by the next higher level in that system.

Hierarchical approach - An analysis approach accounting for differences in space and time (USDA Forest Service 1994).

Historical variation - Range of the spatial, structural, compositional, and temporal characteristics of ecosystem elements during a period specified to represent natural conditions.

Home Range - The area in which an animal conducts its activities during a defined period of time

Horizontal Diversity - The distribution and abundance of plant and animal communities or different stages of plant succession across an area of land. The greater the numbers of communities in a given area, the higher the degree of horizontal diversity.

Human dimension - An integral component of ecosystem management that recognizes people are part of ecosystems, that people's pursuits of past, present, and future desires, needs, and values (including perceptions, beliefs, attitudes, and behaviors) have and will continue to influence ecosystems and that ecosystem management must include consideration of the physical, emotional, mental, spiritual, social, cultural, and economic well-being of people and communities.

Human impact or influence - A disturbance or change in ecosystem composition, structure, or function caused by humans.

Hydric Soil - A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth regeneration of hydrophytic vegetation.

Hydric Greenline - A belt of perennial riparian vegetation found closest to the water's edge. It is the area where recovery of riparian and aquatic ecosystems is first expressed and, therefore, can be monitored to test the impacts of livestock grazing. It is also the area which approximates the geographic location (level) of the active floodplain, a feature otherwise difficult to locate.

Hydrologic Cycle - Also called the water cycle, this is the process of water evaporating, condensing, falling to the ground as precipitation, and returning to the ocean as runoff.

Hydrology - The science dealing with the study of water on the surface of the land, in the soil and underlying rocks and in the atmosphere.

Hydrologically Disturbed Condition - Changes in natural canopy cover (vegetation removal) or a change in surface soil characteristics (e.g., compaction) that may alter natural streamflow quantities and character.

-I-

Idaho Stream Segment of Concern - A specified stream segment or body of water that has been designated by the water Quality Advisory Working Committee or the Governor to receive priority for water quality monitoring and management by state and federal agencies.

Idaho and Wyoming Species of Concern - Plant or animal species which are officially listed by state agencies due to concerns for habitats and/or populations.

Igneous Rock - Rocks formed when high temperature, molten mineral matter cooled and solidified.

Implementation Schedules - The schedules of projects and specific actions to implement a Land and Resource Management Plan. Implementation schedules are normally revised annually. They include site-specific actions, responsibilities and target dates.

Improvement Cutting - The elimination or suppression of less valuable trees in favor of more valuable trees, typically in a mixed, uneven-aged forest.

Increaser - Plant species of the original vegetation that increase in relative amount, at least for a time, under overuse.

Index - A number derived from a formula to characterize a complex set of information.

Indicator - An organism or an ecologic community that is so strictly associated with particular environmental conditions, that its presence (or absence) is a fairly certain sign or symptom of the existence of these conditions.

Indicator Species - A plant or animal species adapted to a particular kind of environment. Its presence is sufficient indication that specific habitat conditions are also present.

Indigenous Species - Any species of flora or fauna that naturally occurs in an area and that was not introduced by man.

Indirect Effect - Those effects occurring at a later time or distance from the triggering action.

Individual (Single) Tree Selection - The removal of individual trees from certain size and age classes over an entire stand area. Regeneration is mainly natural, and an uneven-aged stand is maintained.

Individual Tree Selection Cutting - An uneven-aged cutting method in which selected trees from specified size or age classes are removed over the entire stand area to meet a predetermined goal of size or age distribution and species composition in the remaining stand.

Infrastructure - The foundation (transportation, communications, utilities, schools, etc.) underlying an area's economy.

Input - Broadly referring to anything thing that is taken in by or enters into the workings of a system.

Insect Pests - There are a variety of insects in the Intermountain Region that can impact forest health by damaging or killing trees. Insect population levels may also affect other forest resources and activities like wildlife habitat, visual quality and fire

management. Some of the important insects in the area include Douglas-fir beetle (*Dendroctonus pseudotsugae*), Douglas-fir tussock moth (*Orgyia pseudotsugata*), Fir engraver (*Scolytus ventralis*), Mountain pine beetle (*Dendroctonus ponderosae*), Spruce beetle (*Dendroctonus rufipennis*), Western balsam bark beetle (*Dryocoetes confusus*) and Western spruce budworm (*Choristoneura occidentalis*).

Instream Flows - The minimum water volume (cubic feet per second) in each stream necessary to meet seasonal streamflow requirements for maintaining aquatic ecosystems, visual quality, recreational opportunities, and other uses

Integrated Pest Management (IPM) - A process for selecting strategies to regulate forest pests in which all aspects of a pest-host system are considered, including: the impact of the unregulated pest population to resources, alternative regulation strategies, and benefit/cost estimates of these alternatives strategies.

Integrated Resource Management - A management strategy which emphasizes no resource element to the exclusion or violation of the minimum legal standards of others.

Interdisciplinary Team - A team of individuals with skills from different disciplines that focuses on the same task or project.

Intermediate Cut - The removal of trees from a stand sometime between the beginning or formation of the stand and the regeneration cut. Types of intermediate cuts include thinning, release, and improvement cuttings

Intermittent Stream - A stream that flows only at certain times of the year when it receives water, usually from a surface source such as melting snow. These streams have a defined bed and banks.

Intermountain Region - The portion of the USDA Forest Service, also referred to as Region Four, that includes National Forests in Utah, Nevada, southern Idaho and southwestern Wyoming.

Invader - Plant species that were absent in the original vegetation and will invade under disturbance or continued overuse

Inventoried Roadless Area. (West of the 100th meridian) An area which meets the statutory definition of wilderness, does not contain improved roads maintained for travel by standard passenger-type vehicles, and meets one or more of the following criteria:

- Contains 5,000 acres or more
- Contains less than 5,000 acres, but:
 - Due to physiography or vegetation, is manageable in a natural condition.
 - Is a self-contained ecosystem such as an island.
 - Is contiguous to existing wilderness, primitive area, Administration-endorsed wilderness, or roadless area in other Federal ownership, regardless of size.

Inventoried Roadless Area - (East of the 100th meridian) An area which contains no more than a half mile of improved road for each 1,000 acres, and the road is under Forest Service jurisdiction and:

- The land is regaining a natural, untrammelled appearance.
- Improvements existing in the area are being affected by the forces of nature rather than humans and are disappearing or muted.
- The area has existing or attainable National Forest System ownership patterns, both surface and subsurface, that could ensure perpetuation of identified wilderness values.
- The location of the area is conducive to the perpetuation of wilderness values, considering the relationship of the area to sources of noise, air and water pollution and other unsightly conditions that would have an effect on the wilderness experience.

Inventory - The gathering of data for future use.

Inversion - A condition in which air temperatures increase rather than decrease with height in the atmosphere. Vertical motion in the atmosphere is inhibited by this stratification and allows for pollutants to be trapped near the surface.

Irretrievable - Applies to losses of production, harvest or commitment of renewable natural resources. For example, some or all of the timber

production from an area is irretrievably lost during the time an area is used as a winter sports site. If the use is changed, timber production can be resumed. The production lost is irretrievable, but the action is not irreversible.

Irreversible - Applies primarily to the use of non-renewable resources, such as minerals or cultural resources, or to those factors that are renewable only over long time spans, such as soil productivity. Irreversible also includes loss of future options.

Issue - A point, matter or question of public discussion or interest to be addressed or decided through the planning process.

Preliminary issue is an issue identified early in the scoping phase and is sometimes referred to as a tentative issue.

Significant issue is an issue within the scope of the proposed action which is used to formulate alternatives in an Environmental Analysis (EA) or Environmental Impact Statement (EIS).

-K-

Key Area - A relatively small portion of rangeland which because of its location, grazing or browsing value, and/or use, serves as a monitoring and evaluation site. (A key area guides the general management of the entire area of which it is a part, and will reflect the overall acceptability of current grazing management over the range.)

Key Species - (1) Forage species whose use serves as an indicator to the degree of use of associated species. (2) Those species which must, because of their importance, be considered in the management program.

Key Summer Range - The portion of a wildlife species' summer range that is essential for the animal's pre, post, and reproduction cycles. Deer require "fawning areas" where does give birth and hide their fawns for an essential period of time in the spring

Key Winter Range - That portion of big game's range where the animals find food and cover during severe winter weather.

Kind of Livestock - Species of animal.

LAC - Limits of Acceptable Change

Ladder Fuels - Vegetation located below the crown level of forest trees which can carry fire from the forest floor to tree crowns. Ladder fuels may be low-growing tree branches, shrubs, or smaller trees

Land - A term denoting the entire complex of surface and near-surface attributes of the solid portion of the surface of the earth which are significant to mankind

Land Class - The topographic relief of a unit of land. Land classes are separated by slope. This coincides with the timber inventory process. The three land classes used in the Forest Plan are defined by the following slope ranges: 0 to 35%, 36-55%, and greater than 55%.

Landform - Any physical, recognizable form or feature of the earth's surface having a characteristic shape and produced by natural causes.

Landscape - A large land area composed of interacting ecosystems that are repeated due to factors such as geology, soils, climate, and human impacts. Landscapes are often used for coarse grain analysis

Landscape Ecology - The body of knowledge pertaining to the ecological effects of spatial patterns in ecosystems.

Landtype - A group of defined and named taxonomic soil units occurring together in an individual and characteristic pattern over a geographic region.

Land Unit - One of the hierarchy levels used for project planning, encompassing one to tens of acres.

Land Use Allocation - The committing of a given area of land or resources to one or specific uses, e.g., to campgrounds, wilderness, etc.

Large Woody Debris - Organic materials such as plant stems and branches with a diameter greater than 3 inches. Included are both natural materials and management induced post-harvest slash. Large trees, or parts of them, that accumulate in streams or other water bodies. This material is

important for aquatic habitat and stream channel stability, and in maintenance of on-site productivity.

Late-Successional Forests - Forest seral stages that include mature and old-growth age classes.

Legal Notice - A notice of a decision which can be appealed that is published in the Federal Register or in the legal notice section of a newspaper of general circulation.

Lentic - Relating to, or living in, still waters (as lakes, ponds and swamps).

Limiting Factor - Any environmental factor whose presence, absence or abundance is the main factor restricting the distribution numbers or condition of an organism.

Limits of Acceptable Change (LAC) - A planning framework that establishes explicit measures of the acceptable and appropriate resource and social conditions in wilderness settings as well as the appropriate management strategies for maintaining or achieving those desired conditions

Line Officer - The officer (District Ranger, Forest Supervisor, Regional Forester, etc.) that has authority for a specific district, forest, region, etc.

Litter (forest litter) - The freshly fallen or only slightly decomposed plant material on the forest floor. This layer includes foliage, bark fragments, twigs, flowers and fruit.

Long-term Sustained Yield Capacity (LTSYC) - The highest uniform wood yield from lands being managed for timber production that may be sustained, under a specified management intensity, consistent with multiple-use objectives.

Logging Residues - The residue left on the ground after timber cutting. It includes unused logs, up-rooted stumps, broken branches, bark, and leaves. Certain amounts of "slash" provide important ecosystem roles, such as soil protection, nutrient cycling, and wildlife habitat

LTSL - Less-Than-Standard Service Level

LTSYC - Long-term Sustained Yield Capacity.

-M-

M - Thousand Five thousand board feet of timber can be expressed as 5M board feet.

MAI - Mean Annual Increment

Maintenance Class -

Maintenance Class 1, Satisfactory. Facility is safe and sanitary. Annual maintenance will not exceed 10 percent of replacement cost.

Maintenance Class 2, Substandard. Facility is safe and sanitary, although substandard as to type, construction standard, or not in keeping with planned experience-level for the site. Annual maintenance will not exceed 10 percent of current replacement cost of standard type facility. May be scheduled for eventual elimination or replacement but will serve intended purpose for next 3-5 years.

Maintenance Class 3, Heavy Maintenance. Facility unsafe or otherwise unsatisfactory. May be put back in good condition at a cost not to exceed 50 percent of current replacement of like kind facility.

Maintenance Class 4, Replacement. Facility unsafe or otherwise unsatisfactory. To put back in good condition would cost more the 50 percent of the replacement cost. Replace with like kind and standard of facility. Cost includes both removal of old facility and replacement.

Management - To treat with care; handle or direct with skill.

Management Action - Any activity undertaken as part of the administration of the National Forest.

Management Area - Units of land small enough for Districts and the public to relate to, but large enough to provide for management flexibility. A desired future condition developed for the management area will assist in achieving the shared land expectations.

Management Concern - An issue, problem or a condition which constrains the range of management practices identified by the Forest Service in the planning process.

Management Direction - A statement of multiple-use and other goals and objectives, the associated management prescriptions, and standards and guidelines for attaining them.

Management Ignition - A fire started by a scheduled, deliberate management action.

Management Indicator Species - A wildlife species whose population and trend in a certain habitat type indicates the population and trend of other species that are also dependent upon the same habitat.

Management Intensity - A management practice or combination of management practices and associated costs designed to obtain different levels of goods and services.

Management Practice - A specific activity, measure, course of action or treatment.

Management Prescription - Management practices and intensity selected and scheduled for application on a specific area to attain multiple-use and other goals and objectives.

Management Situation 1 - Population and habitat conditions. The area contains grizzly population centers (areas key to the survival of grizzly where seasonal or yearlong grizzly activity, under natural, free-ranging conditions is common) and habitat components needed for the survival and recovery of the species or a segment of its population. The probability is very great that major Federal activities or programs may affect (have direct or indirect relationships to the conservation and recovery of) the grizzly.

Management Situation 2 - Population and habitat conditions Current information indicates that the area lacks distinct population centers, highly suitable habitat does not generally occur, although some grizzly habitat components exist and grizzlies may be present occasionally. Habitat resources in Management Situation 2 either are unnecessary for survival and recovery of the species, or the need has not yet been determined but habitat resources may be necessary. Certain management actions are necessary. The status of such areas is subject to review and change according to demonstrated grizzly population and habitat needs. Major Federal activities may affect the conservation of the grizzly bear primarily in that they may

contribute toward (a) human-caused bear mortalities or (b) long-term displacement where the zone of influence could affect habitat use in Management Situation 1.

Management Situation 3 - Population and habitat conditions. Grizzly presence is possible but infrequent. Developments, such as campgrounds, resorts, or other high human use associated facilities, and human presence result in conditions which make grizzly presence untenable for humans and/or grizzlies. There is a high probability that major Federal activities or programs may affect the species' conservation and recovery.

Market-Value Outputs - Goods and services valued in terms of what people are willing to pay for them rather than go without, as evidenced by market transactions.

Mass Movement/Wasting - The downslope movement of large masses of earth material by the force of gravity. Also called a landslide or earthflow.

Mature Forest - Generally used in an economic sense to indicate that a forest has attained harvest age.

Mature Timber - Trees that have attained full development, especially height, and are in full seed production.

Maximum Modification - See "Visual Quality Objectives."

MBF - Thousand board feet (See board feet.)

Mean Annual Increment - The average yearly growth of trees in a stand over a period of years, usually expressed in annual cubic feet of growth per acre.

Mean Annual Increment of Growth - The total increase in size or volume of individual trees. Or, it can refer to the increase in size and volume of a stand of trees at a particular age, divided by that age in years.

Mean Fire Interval - Arithmetic average of all fire intervals determined in years, in a designated area during a specified time period; the size of the area and the time period must be specified.

Micro climate - The climate of a small site. It may differ from the climate at large of the area due to aspect, tree cover (or the absence of tree cover), or exposure to winds

Microhabitat - A restricted set of distinctive environmental conditions that constitute a small habitat, such as the area under a log.

Microsite - A localized area in which environmental conditions differ in a significant or important way from those of the region outside the area.

Middleground - A term used in the management of visual resources, or scenery. It refers to the visible terrain beyond the foreground where individual trees are still visible but do not stand out distinctly from the stand.

Mineral Soil - Soil that consists mainly of inorganic material, such as weathered rock, rather than organic matter. Any soil composed chiefly of mineral matter (e.g., sand, silt, clay, rocks, etc.)

Minimum Streamflow - A specified minimum level of flow through a channel that must be maintained by the users of the stream for biological, physical, or other purposes.

MIS - Management Indicator Species.

Mitigate/mitigation. To lessen the severity. Actions taken to avoid, minimize or rectify the impact of a land management practice.

Mixed Stand - A stand of trees in which less than 80 percent of the trees in the main crown canopy are of a single species.

MM - Million

MMBF - Million board feet (See board feet.)

Modification - A visual quality objective; management activities may visually dominate the original characteristic landscape, but they must borrow from naturally established form, line, color or texture so that the activity blends with the surrounding area.

Monitoring - The determination of how well project or plan objectives have been met and how closely management practices should be adjusted. (See adaptive management.)

Mortality - Trees that were merchantable and have died within a specified period of time. The term mortality can also refer to the rate of death of a species in a given population or community.

Mountain Pine Beetle - A tiny black insect, ranging from 1/8 to 1/4 inch in size, that bores through a pine tree's bark. When trees are attacked by large numbers they have the ability to stop the tree's intake and transport of the food and nutrients, thus killing the tree.

Multiple-Use - The management of all the various renewable surface resources of the National Forest System lands for a variety of purposes such as recreation, range, timber, wildlife and fish habitat, and watershed.

-N-

National Environmental Policy Act (NEPA) (1970) - The basic national charter for the protection of the environment. It establishes policy, sets goals and provides means for carrying out the policy. The NEPA process helps public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.

National Forest Management Act (NFMA) (1976) - This act amends the Forest and Rangeland Renewable Resources Planning Act of 1974, and lays out the process for developing, adopting and revising land and resource management plans of the National Forest System lands.

National Forest System (NFS) Land - Federal lands that have been designated by Executive Order or statute as National Forests, National Grasslands, Purchase Units, and other lands under the administration of the Forest Service, including Experimental Areas and Bankhead-Jones Title III lands.

Native - Species indigenous to an area of consideration.

Native organism - Animals or plants which originated in the area in which they are found, were not introduced and naturally occur in the area.

Native Species - Any species of flora or fauna that naturally occurs in the United States and that was not introduced by man.

Natural - Existing in, or formed by, nature; not artificial.

Natural Barrier - A natural feature, such as a dense stand of trees or downfall, that will restrict animal travel

Natural Catastrophic Condition - A significant change in forest conditions on the area that affects Forest Plan resource management objectives and their projected and scheduled outputs, uses, costs, and impacts on local communities and environmental quality.

Natural Ignition - A fire started at random by either natural or human causes, or a deliberate incendiary fire.

Natural Regeneration - Renewal of a tree crop by self-sown seed or from sprouts.

Natural Range of Variability - Applied to specific components or elements of an ecosystem there is a distinctive variation in the status of these components, measured at a sufficiently large geographic scale and over a given time period. For example, the total number of nesting owl pairs in a given river basin is expected to have varied around some average number over the last 200 years. The entire spread of owl numbers describes its NRV for the given area. NRV includes aboriginal influences on ecosystems.

Natural Range of Variability - See Range of variability.

Natural Resource - A feature of the natural environment that is of value in serving human needs.

Nest Survey - A way to estimate the size of a bird population by counting the number of nests in a given area.

Net Public Benefits. An expression used to signify the overall long-term value to the Nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not. Net public benefits are measured by both quantitative and qualitative criteria rather than a single measure or

index. The maximization of net public benefits to be derived from management of units of the National Forest System is consistent with the principle of multiple-use and sustained-yield.

NFRS - National Forest recreation sites that have been inventoried

No Action Alternative - The most likely condition expected to exist in the future if management practices continue unchanged

Nonchargeable Volume - All volume not included in the growth and yield projections for the selected management prescriptions used to arrive at the allowable sale quantity.

Noncommercial Vegetative Treatment - The removal of trees for reasons other than timber production

Nonconsumptive Use - The use of a resource that does not reduce its supply; for example, nonconsumptive uses of water include hydroelectric power generation, boating, swimming and fishing.

Noncontinuous Grazing System - Rotational and repeated seasonal grazing systems.

Nondeclining Flow - See base sale schedule.

Nondegradation - A policy of not allowing resources to deteriorate any further than what exists at a chosen point of time. The objective is to either maintain the status quo, or to improve resource conditions.

Nonforest Land - See "Timber Classification."

Nongame - Species of animals not managed for sport hunting.

Nonmarket-Valued Outputs - Goods and services not generally traded in the marketplace, but valued in terms of what reasonable people would be willing to pay for them rather than go without. Those obtaining the actual outputs do not necessarily pay what they would be willing to pay for them.

Nonnative species - A species introduced into an ecosystem through human activities

Nonpoint Source Pollution - Pollution whose source is not specific in location. The sources of discharge are dispersed, not well-defined, or constant. Rain storms and snow melt often make this type of pollution worse. Examples include sediments from logging activities, and runoff from agricultural chemicals.

Nonrenewable Resource. A resource whose total quantity does not increase measurably over time, so that each use of the resource diminishes the supply.

Notice of Intent. A notice printed in the Federal Register announcing that an Environmental Impact Statement (EIS) will be prepared.

Noxious plant - A plant specified by law as being especially undesirable, troublesome, and difficult to control.

Noxious weed - See Noxious plant.

Nutrient Cycle - The circulation of chemical elements and compounds, such as carbon and nitrogen, in specific pathways from the nonliving parts of ecosystems into the organic substances of the living parts of ecosystems, and then back again to the nonliving parts of the ecosystem. For example, nitrogen in wood is returned to the soil as the dead tree decays; the nitrogen again becomes available to living organisms in the soil, and upon their death, the nitrogen is available to plants growing in that soil

Nutrient Cycling - The path of an element through the ecosystem including its assimilation by organisms and its release in a reusable inorganic form.

-0-

Objective - A clear and quantifiable statement of planned results to be achieved within a stated time period. Something aimed at or striven for within a predetermined time period. An objective must be achievable, be measurable, have a stated time period for completion, be quantifiable, be clear, and its results must be described.

Off-Highway Vehicle (OHV) - Any motorized vehicle 50 inches or less in width, having a dry weight of 600 pounds or less (includes trail bikes, motor-

cycles, 3-wheelers, 4-wheelers, etc.; does not include snowmachines).

-P-

Off-Road Vehicles (ORV's) - Vehicles such as motorcycles, all-terrain vehicles, four-wheel drive vehicles and snowmobiles.

OHV - Off-Highway Vehicle.

Old Growth - Terrestrial ecosystems characterized by vegetation and associated animals requiring the most mature successional stages (seres). Old growth forests contain trees normally beyond the age of optimum maturity for economic harvest. The precise definition of old growth varies with the tree species comprising the stand.

Opportunities - Ways to address or resolve public issues or management concerns in the land and resource management planning process.

Optimum - A level of production that is consistent with other resource requirements as constrained by environmental, social, and economically sound conditions.

Organism - A plant or animal.

OROMTRD (Open Road and Open Motorized Trail Route Density) - Includes all open roads and open motorized trails. Density may be displayed as follows: 1) Density (miles/square mile) for an analysis area (such as a watershed or a management prescription area). 2) Density is displayed as a percentage of the analysis area in a defined density category (example. 20% >2.0 miles per square mile).

ORV's - Off-road vehicles.

Output - One of the ways functions are described; resources which leave a system, i.e., animals migrating out of an area, mass erosion, removal of commercial timber from an area.

Overmature Timber - Trees that have obtained full development, particularly in height, and are declining in vigor, health, and soundness.

Overstory - The upper canopy or canopies of plants. Usually refers to trees, tall shrubs, and vines.

Overstory Removal - The final harvest cut of the shelterwood method in which overstory trees are removed releasing the established regeneration.

Packing - A temporary influx of organisms of various sex and age classes into remaining suitable habitat as previously available habitat is changed to unsuitable conditions.

PAOT - Persons-At-One-Time.

Parasites - Organisms that absorb their nutrients from the body fluids of living hosts. Parasites may be fungal, bacterial, plant or animal, (e.g. braconid wasp that parasitizes the fir engraver beetle, or dwarf mistletoe).

Parent Material - The unconsolidated and more or less chemically weathered, mineral or organic matter from which soils developed by soil-forming processes.

Partial Retention - A visual quality objective which, in general, means human activities may be evident, but must remain subordinate to the characteristic landscape.

Particulates - Small particles suspended in the air and generally considered pollutants.

Partnership - A cooperative, working relationship between the Forest Service and individuals, corporations, organizations or public agencies to pool financial and human resources to complete projects on National Forest System lands.

Patch - A small (20-60 acres) part of the forest. An area of vegetation that is internally homogeneous, differing from what surrounds it (matrix).

Patch Cut - A clearcut that creates small openings in a stand of trees, usually between 15 and 40 acres in size. Patch cuts are used to provide the disturbance needed to regenerate aspen.

Payment in lieu of taxes (PILOT) - Payments to local or State governments based on ownership of Federal land and not directly dependent on production of outputs or receipt sharing. Specifically, they include payments made under the payments in Lieu of Taxes Act of 1976 by U.S. Department of the Interior.

Payments to Local Government - The portion of receipts derived from Forest Service resource management that is distributed to State and county governments such as the Forest Service 25 percent fund payments.

Percent Use - The percentage of current year's forage production that is consumed or destroyed by grazing animals. May refer to a single species or to the vegetation as a whole.

Percolation - Downward flow or infiltration of water through the pores or spaces of rock or soil.

Perennial Streams - Streams that flow continuously throughout most years. These streams have defined bed and banks.

Permitted Grazing - Grazing on a National Forest range allotment under the terms of a grazing permit.

Personal Use - Normally used to describe the type of permit issued for removal of wood products (firewood, posts, poles, and Christmas trees) from National Forest land when the product is for home use and not to be resold for profit.

Persons-At-One-Time (PAOT) - A recreation capacity measurement term indicating the number of people who can use a facility or area at one time.

Planning - The act of deciding in advance, what to do. A dynamic problem solving effort used to guide future actions and decisions.

Planning Area - The area covered by a Regional Guide or Forest Plan.

Planning Period - One decade. The time interval within the planning horizon that is used to show incremental changes in yields, costs, effects, and benefits.

Planning Regulations - The rules which guide land and resource management planning on the National Forests.

Plant Association - A potential natural plant community of definite floristic composition and uniform appearance. See Association.

Plantation - Clearcut harvested area that has regenerated with natural and/or planted seedlings.

Plant Community - An aggregation of plants that are similar in species composition and structure, and occupy similar habitats over the landscape. See Community.

Plant Vigor - Plant health. (cf. plant vigor index.)

PM-10 - Smoke and debris particles with an aerodynamic diameter smaller than or equal to a nominal ten micrometers.

PNV - Present net value or Potential Natural Vegetation.

Pole/sapling - The stage of forest succession in which trees are between 3 and 7 inches in diameter and are the dominant vegetation.

Pole Timber - Trees of at least 5 0 inches DBH, but smaller than 8 0 inches in DBH, (except lodgepole pine and aspen which includes trees up to 7.0 inches in DBH).

Policy - A guiding principle which is based on a specific decision or set of decisions.

Pollution - The presence of matter or energy whose nature, location or quantity produces undesired environmental effects.

Porosity - Pertaining to landscapes, the density of a particular type of patch within a matrix. Porous landscapes have many small patches of similar type contained within the matrix.

Potential Natural Community (PNC) - The biotic community that would become established on an ecological type if all successional sequences were completed without interference by man under the present environmental conditions. Natural disturbances, such as drought, floods, wildfire, grazing by native fauna, insects, and disease, are inherent in its development. The PNC may include acclimatized or naturalized nonnative species. (IREG)

Potential vegetation - Vegetation that would develop if all successional sequences were completed under present site conditions (e.g., habitat type).

Practice (Also Management Practice) - A specific activity, measure, course of action, or treatment.

Practicable - When funding is obtained or a project is initiated

Precommercial Thinning - Removal of trees from a young stand to promote increased growth on the remaining stems and maintain a specific stocking or stand density range, controlling species composition and stand quality through selection of trees that are to remain in the stand.

Predator - An animal (rarely a plant) that kills and eats animals. Sometimes used in the sense of an insect consuming a seed.

Preparatory Cut - The removal of trees near the end of a rotation, which opens the canopy and enables the crowns of residual trees to enlarge, to improve conditions for seed production and natural regeneration. Typically done in the shelterwood system.

Prescribed Fire - Controlled application of fire to wildland fuels in either their natural or modified state, under specified environmental conditions which allow fire to be confined to a predetermined area and at the same time to produce the intensity of heat and rate of spread required to attain planned resource management objectives.

Prescribed Fire or Burn - A wildland fire ignited by humans under pre-planned, specified conditions, to accomplish specific, planned resource management objectives. This practice is common in California and is also known as "controlled burning".

Prescribed Natural Fire - A wildland fire ignited by natural sources such as lightning or vulcanism. These fires are allowed to burn in designated areas under carefully established conditions to provide for safety and fire control. If these conditions are exceeded, or predicted to worsen, a fire is reclassified as a wildfire and suppressed.

Prescription - Management practices selected to accomplish specific land and resource management objectives.

Present Net Value - The difference between the discounted value (benefits) of all outputs to which monetary values or established market prices are assigned and the total discounted costs of managing the planning area.

Preservation - See "Visual Quality Objectives."

Presuppression - Activities organized in advance of fire occurrence to assure effective suppression action.

Prey - Animals eaten by predators.

Primary Succession - The concept in which there is a sequence of vegetation development initiated on newly formed soils or upon surfaces exposed for the first time (as by landslides) which have never borne vegetation before.

Primitive ROS (Recreation Opportunity Spectrum) - A classification of wilderness and recreation opportunity. It is characterized by an essentially unmodified environment, where trails may be present but structures are rare, and, where it is highly probable to be isolated from the sights and sounds of people. (See ROS.)

Probability of Ignition - A rating of the probability that a firebrand (glowing or flaming) will cause a fire, provided it lands on receptive fuels. It is calculated from air temperature, fuel shading, and fuel moisture.

Production - One of the ways functions are described, resource which are "manufactured" within the system (i.e., plant growth, animal reproduction, snags falling and becoming down woody material).

Productive - The ability of an area to provide goods and services and to sustain ecological values.

Productivity - The amount of material (wood, forage, meat, etc.) yielded by an ecosystem, or its inherent potential to yield such material.

Program - When capitalized, the Renewable Resource Program required by the RPA. Generally, sets of activities or projects with specific objectives, defined in terms of specific results and responsibility for accomplishment.

Project - A single activity or an integrated group of activities designed to accomplish a specific on-the-ground purpose or result.

Proposal - Exists at the stage in the development of an action when an agency is actively preparing to make a decision on one or more alternative means of accomplishing a goal and the effects can be meaningfully evaluated.

Proposed Action - A proposal by the Forest Service to authorize, recommend or implement an action.

Province - See Physiographic Province.

Public Issue - A subject or questions of widespread public interest relating to management of the National Forest System.

Public Land - Land for which title and control rests with a government - federal, state, regional, county or municipal.

Public Participation - Meeting, conferences, seminars, workshops, tours, written comments, responses to survey questionnaires, and similar activities designed and held to obtain comments from the public about Forest Service planning and decisionmaking.

Purpose and Need - A statement which briefly specifies the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.

-R-

Raptor - A bird of prey; primarily meat eating birds with strong hooked bills and sharp talons. Includes but is not limited to members of the Strigidae (Owls), Cathartidae (New World Vultures), Accipitridae (Hawks and Eagles), Falconidae (Falcons), and shrikes.

Range (of a species) - The area or region over which an organism occurs.

Range - Land on which the principle natural plant cover is composed of native grasses, forbs, and shrubs that area available as forage for big game and livestock

Range Allotment - An area designated for the use of a prescribed number and kind of livestock under one management plan.

Range Analysis - Systematic acquisition and evaluation of rangeland resources data needed for planning allotment management and overall land management.

Range Inspection - A field inspection of rangeland to determine if the Forest Plan Standards and Guides, the Allotment Management Plan Goals and Objectives, and the Grazing Permit requirements are being met and followed.

Range of Natural Variation - The observed limits of change in composition, structure, and function of an ecosystem considering both temporal and spatial factors as influenced by frequency, magnitude, and pattern of disturbances (other synonymous terms include 'natural variation' and 'range of variability').

Rangeland - All land-producing or capable-of-producing native vegetation, and lands that have been revegetated naturally or artificially. It includes all grasslands, shrublands, and those forest lands which will continually or periodically, naturally or through management, support an understory of herbaceous or shrubby vegetation

Rangeland Condition - The state of vegetation, soil cover, and soils in relation to a standard or ideal for a particular ecological type. (See satisfactory rangeland and unsatisfactory rangeland condition.)

Range Management - The art and science of planning and directing range use intended to yield the sustained maximum animal production and perpetuation of the natural resources.

Range of Variability - (Natural Variability, Historical Variability.) The components of healthy ecosystems fluctuate over time. The range of sustainable conditions in an ecosystem is determined by time, processes such as fire, native species, and the land itself. For instance, ecosystems that have a 10-year fire cycle have a narrower range of variation than ecosystems with 200-300 year fire cycles Past management has placed some ecosystems outside their range of variability. Future management should move such ecosystems back toward their natural, sustainable range of variation.

Ranger District - The administrative subunit of a National Forest that is supervised by a District Ranger who reports directly to the Forest Supervisor.

Raptor - A bird of prey, such as an eagle or hawk.

RARE II - Roadless Area Review and Evaluation. The national inventory of roadless and undeveloped areas within the National Forests and Grasslands.

Reach - A continuous unbroken stretch of a stream, with homogeneous characteristics.

Real Dollar Value - A monetary value that compensates for the effects of inflation.

Recharge - The addition of water to ground water by natural or artificial processes

Record of Decision - An official document in which a deciding official states the alternative that will be implemented from a prepared EIS.

Recovery - The achievement of viable populations of threatened or endangered plant or animal species.

Recreation Capacity - The number of people that can take advantage of any supply of recreation opportunity at any one time without substantially diminishing the quality of the experience sought after.

Recreation Opportunity Spectrum (ROS) - Six categories have been defined as follows:

Primitive (P or Class I): Very high probability of experiencing solitude, freedom, closeness to nature, tranquility, self-reliance, challenge and risk. Unmodified natural or natural appearing environment. Very low interaction between users. Minimal evidence of other users. Restrictions and controls not evident after entry. Access and travel is nonmotorized on trails or cross country. No vegetative alterations. Access for people with disabilities can be most difficult and very challenging. No site modifications for facilities. Interpretation through self-discovery. No on-site facilities. No facilities for user comfort. Rustic and rudimentary ones for site protection only. Use undimensioned native materials. (USDA Forest Service 1994).

Semi-Primitive Nonmotorized (SPNM or Class II): High probability of experiencing solitude, closeness to nature, tranquility, self-reliance, challenge and risk. Natural appearing environment. Low interaction between users. Some evidence of other users. Minimum of

subtle on-site controls. Access and travel is nonmotorized on trails, some primitive roads or cross country. Vegetative alterations. sanitation salvage to very small units in size and number, widely dispersed and not evident. Access for people with disabilities is difficult and challenging. Rustic and rudimentary facilities primarily for site protection. No evidence of synthetic materials. Use undimensioned native materials. Interpretation through self-discovery. Some use of maps, brochures, and guidebooks. No on-site facilities.

Semi-primitive Motorized (SPM or Class III): Moderate probability of experiencing solitude, closeness to nature, tranquility. High degree of self-reliance, challenge and risk in using motorized equipment. Predominantly natural appearing environment. Low concentration of users but often evidence of others on trails. Minimum on-site controls and restrictions present but subtle. Vegetative alterations very small in size and number, widely dispersed and visually subordinate. Access for people with disabilities is difficult and challenging. Rustic and rudimentary facilities primarily for site protection. No evidence of synthetic materials. Use undimensioned native materials. Interpretation through very limited on-site facilities. Use of maps, brochures and guidebooks.

Roaded Natural (RN or Class IV): Opportunity to affiliate with other users in developed sites but with some chance of privacy. Self-reliance on outdoor skill of only moderate importance. Little challenge and risk. Mostly natural appearing environment as viewed from sensitive roads and trails. Interaction between users at camp sites is of moderate importance. Some obvious on-site controls of users. Access and travel is conventional motorized including sedan, trailers, RV's and some motor homes. Vegetative alterations done to maintain desired visual and recreational characteristics. Access for people with disabilities is of only moderate challenge. Rustic facilities providing some comfort for the user as well as site protection. Use native materials but with more refinement in design. Synthetic materials should not be evident. Moderate site modification for facilities. Interpretation through simple wayside exhibits. Use native-like materials with some refinement in design. Some casual interpretation by forest staff.

Rural (R or Class V): Opportunity to observe and affiliate with other users is important as is convenience of facilities. Self-reliance on outdoor skills of little importance. Little challenge and risk except for activities such as downhill skiing. Natural environment is culturally modified yet attractive. Backdrop may range from alterations not obvious to dominant. Interactions between users may be high as is evidence of other users. Obvious and prevalent *on-site controls*. *Access and travel facilities* are for individual intensified motorized use. Access for people with disabilities is easy and meets ADAAG standards. Some facilities designed primarily for user comfort and convenience. Some synthetic but harmonious materials may be incorporated. Design may be more complex and refined. Moderate to heavy site modification. Interpretation through more complex wayside exhibits including small lighted structures. Interpretive facilities such as kiosks and portals may be staffed part-time.

Urban (U or Class VI): Opportunity to observe and affiliate with other users is very important as is convenience of facilities and recreation opportunities. Outdoor skills, risk, and challenge are unimportant except for competitive sports. Urbanized environment with dominant structures, traffic lights and paved streets. May have natural appearing backdrop. Recreation places may be city parks and large resorts. Interaction between large numbers of users is high. Intensive on-site controls are numerous. Access and travel facilities are highly intense, motorized and often with mass transit supplements. Vegetation is planted and maintained. Access for people with disabilities is easy and meets ADAAG standards. Facilities mostly designed for user comfort and convenience. Synthetic materials are commonly used. Facility design may be highly complex and refined but in harmony or complimentary to the site. Heavy site modifications for facilities. Interpretation through very sophisticated exhibits in staffed visitor centers, wayside exhibits, etc.

Recreation Visitor Day (RVD) - Twelve visitor hours, which may be aggregated continuously, intermittently, or simultaneously by one or more persons.

Recruitment - The addition to a population from all causes, including reproduction, immigration and stocking.

Reforestation - The natural or artificial restocking of an area with forest trees.

Regeneration - The renewal of a tree crop, whether by natural or artificial means. Also, the young crop itself, which commonly is referred to as reproduction.

Regeneration Method - A harvest method by which a new age class is created. The major methods are clearcutting, Seed-Tree, Shelterwood, Selection, and Coppice Regeneration Methods and their variants).

Regional Forester - The official of the USDA Forest Service responsible for administering an entire region of the Forest Service.

Regulations - Generally refers to the Code of Federal Regulations, Title 36, Chapter II, which covers management of the Forest Service.

Rehabilitation - A short-term management activity used to return visual impacts in the natural setting to a desired visual quality.

Release - Freeing trees from competition for light, water, and nutrients by removing or reducing the vegetation growth that is overtopping or closely surrounding them.

Release Cutting - Removal of competing vegetation to allow desired tree species to grow

Release Treatment - A treatment designed to free young trees from undesirable, usually overtopping, competing vegetation. Treatments include: liberation, cleaning, and weeding.

Removal Cut - The removal of the last seed bearers or shelter trees after regeneration is established

Renewable Resource - Resources whose total physical quantity is replenished over time and is thus can sustain some rate of consumption.

Repeated Seasonal Grazing - A situation in which a pasture is grazed at the same time each year.

Research Natural Area (RNA) - Lands that are protected for the purpose of maintaining biological diversity, conducting nonmanipulative research and monitoring, and promoting education.

Reserve Trees - Deliberate retention of trees in a stand for a specific resource use.

Resident Fish - Fish that are not migratory and complete their entire life cycle in fresh water.

Resource - A broad term denoting anything that is useful for something

Resource Value - The value of an ecosystem for a particular use or benefit on an ecological type. This value may be expressed as the value amount or as a relative rating, when compared to the maximum value for an ecological type.

Responsible Official - The Forest Service employee who has been delegated the authority to carry out a specific planning action.

Restoration - Actions taken to modify an ecosystem in whole or in part to achieve a desired condition.

Restoration Ecology - The study of recreating entire communities of organisms closely modeled after communities that occur naturally.

Retention - A visual quality objective; management activities that are not visually evident; activities repeat form, line, color, and texture characteristics found in the landscape.

Revalidation - Pertaining to prescribed natural fire, the daily certification by the approving line officer that the fire is within prescription and will remain in prescription through the ensuing 24-hour period, given reasonably foreseeable weather conditions and fire behavior.

Revegetation - The reestablishment and development of a plant cover by either natural or artificial means, such as reseeding.

Right-of-Way - An accurately located strip of land with defined width, point of beginning, and point of ending. It is the area within which the user has authority to conduct operations approved or granted by the landowner in an authorizing document, such as a permit, easement, lease, license, or Memorandum of Understanding (MOU).

Riparian - Of, on, or relating to the bank of a natural course of water.

Riparian Area - Geographically definable area with distinctive resource values and characteristics that are comprised of the aquatic and transitional ecosystems. Riparian areas may be associated with lakes, reservoirs, potholes, springs, bogs, wet meadows, and ephemeral, intermittent, or perennial streams

RNA - Research Natural Area.

Road

All created or evolved travel routes that are greater than 500 feet long (minimum inventory standard for the Forest Service Route Management System), which are reasonable and prudently drivable with a conventional passenger car or pickup (vehicles greater than 50 inches wide and having a dry weight of 600 pounds or more).

System Road/Managed Road: A road which is part of the official Forest Transportation Management System; these roads usually have a number and a name; they are usually on the Forest travel plan maps.

Nonsystem Road/Unmanaged Road/Ghost Road: A road which is not part of the official Forest Transportation Management System; these roads usually do not have a number or a name; they are not on the Forest travel plan maps.

Open Road/Motorized Road: Any road without restriction on motorized vehicle use.

Restricted Road: Any road on which motorized vehicle use is restricted seasonally or yearlong. The road requires physical obstruction (generally gated) and motorized vehicle use is legally restricted. Motorized administrative use by personnel of resource management agencies is acceptable at low intensity levels as defined in existing cumulative effects analysis models. This includes contractors and permittees in addition to agency employees.

Reclaimed/Obliterated Road: Any road which has been treated in such a manner so as to no longer function as a road or trail. This can be accomplished through one or a combination of

several means including, recontouring to original slope, placement of logging, road, or forest debris, planting of shrubs or trees, etc.

TMARD (Total Motorized Access Route Density) Includes all open and restricted roads and motorized trails. Density may be displayed as follows: 1) Density (miles/square mile) for an analysis area (such as a watershed or a management prescription area). 2) Density is displayed as a percentage of the analysis area in a defined density category (example: 20% >2.0 miles per square mile)

OROMTRD (Open Road and Open Motorized Trail Route Density): Includes all open roads and open motorized trails. Density may be displayed as follows: 1) Density (miles/square mile) for an analysis area (such as a watershed or a management prescription area). 2) Density is displayed as a percentage of the analysis area in a defined density category (example: 20% >2.0 miles per square mile).

A. Calculating OROMTRD for elk habitat effectiveness (the spring/summer/fall period, but not including the general big game rifle seasons):

1. OROMTRD will be calculated on the basis of principal watersheds. The area in square miles of each principal watershed will be calculated, and the miles of open roads and open trails within that principal watershed will also be calculated to determine the OROMTRD (expressed as miles/square mile). The acreage and road and trail mileage included in the calculation will include all acres (NF and private) within the principal watershed.

a. Open roads includes: (a) all system (managed) roads which are open for motorized use on the Forest Plan Travel Maps; plus (b) all system (managed) and nonsystem (unmanaged) roads which have more than 1 to 2 motorized vehicle trips per week for the majority of the weeks during the spring/summer/fall period, even if they are designated closed on

the Forest Plan Travel Maps, plus (c) all highways and county roads and private roads which are open for motorized use

b. Open motorized trails includes: (a) all system (managed) trails which are open for motorized use on the Forest Plan Travel Maps; plus (b) all system (managed) and nonsystem (unmanaged) trails which have more than 1 or 2 motorized vehicle trips per week for the majority of the weeks during the spring/summer/fall period, even if they are designated closed on the Forest Plan Travel Maps.

c. Open roads and open motorized trails which are on the boundary of principal watersheds will be calculated as having one-half the total mileage of that road or trail in each of the watersheds it separates. Open roads and open motorized trails which form the Forest boundary will likewise have one-half of that boundary mileage counted as occurring within the Forest

B. Calculating OROMTRD for elk vulnerability (the general big game rifle seasons):

1. OROMTRD will be calculated on the basis of principal watersheds. The area in square miles of each principal watershed will be calculated. The miles of open roads and open motorized trails within the principal watershed will also be calculated. In addition, "infinitely open areas" will be determined and included in the calculation using a factor of 6 miles of open road per square mile of infinitely open area. Open road and open motorized trail density will be expressed as miles/square mile. The acreage and road and trail mileage included in the calculation will include all acres (NF and private) within a principal watershed.

a. Open roads includes: (a) all system (managed) roads which are open for motorized use on the Forest Plan Travel Maps during the general big

game rifle seasons; plus (b) all system (managed) and nonsystem (unmanaged) roads which have motorized vehicle use during the general big game rifle seasons, even if they are designated closed on the Forest Plan Travel Maps except game retrieval permits are not included; plus (c) all highways and county roads and private roads which are open for motorized use during the general big game rifle seasons.

b. Open motorized trails includes: (a) all system (managed) trails which are open for motorized use on the Forest Plan Travel Maps during the general big game rifle seasons; plus (b) all system (managed) and nonsystem (unmanaged) trails which have motorized vehicle use during the general big game rifle seasons, even if they are designated closed on the Forest Plan Travel Maps, except game retrieval permits are not included.

c. Infinitely open areas include: areas which have terrain and vegetation which allow OHV use and they are not closed to OHV use on the Forest Plan Travel Maps during the general big game hunting seasons. Game retrieval permits in areas which are closed to OHV use are not included in calculations of infinitely open areas. Calculate the total square miles for these areas, and use a factor of 6 miles of open road for each square mile of area.

d. Open roads and open motorized trails which are on the boundary of principal watersheds will be calculated as having one-half the total mileage of that road or trail in each of the watersheds it separates. Open roads and open motorized trails which form the Forest boundary will likewise have one-half of that boundary mileage counted as occurring within the Forest.

C. Calculating OROMTRD for Management Prescription Areas. Follow the same procedure as for elk habitat effectiveness, except the boundaries will be contiguous management prescription areas (and in some cases adjacent management prescription areas as directed in the management prescriptions).

D. Calculating OROMTRD for Grizzly Bear Management Units Follow the procedures outlined in the Interagency Grizzly Bear Committee Taskforce Report - Grizzly Bear/Motorized Access Management, Final, approved by the IFBC, July 21, 1994.

Roadless Areas - Areas of National Forest land which qualify for placement on the inventory of potential wilderness if, in addition to meeting the statutory definition of wilderness, they meet one or more of the following criteria:

- 1 They contain 5,000 acres or more.
2. They contain less than 5,000 acres but.
 - a. Due to physiography of vegetation, they are manageable in their natural condition.
 - b. They are self-contained ecosystems such as an island.
 - c. They are contiguous to existing wilderness, primitive areas, Administration-endorsed wilderness, or roadless areas in other Federal ownership, regardless of their size.
3. They do not contain improved roads maintained for travel by standard passenger-type vehicles, except as permitted in areas east of the 100th meridian.

ROD - Record of Decision

ROS - Recreation Opportunity Spectrum.

Rosgen Channel Types - A classification system developed by Dave Rosgen which places stream reaches into categories based on physical characteristics. This system is useful in comparing the existing classification (condition) of a stream to its natural potential.

Rotation - The number of years required to establish (including the regeneration period) and grow timber crops to a specific condition or maturity for regeneration harvest. Selected management prescriptions in the forest plan provide the basis for the rotation age.

Rotational Grazing System - Animals are moved from pasture to pasture on a scheduled basis

RPA - The Forest and Rangeland Renewable Resources Planning Act of 1974. Also refers to the National Assessment and Recommended Program developed to fulfill the requirements of this Act.

Runoff - The portion of precipitation that flows over the land surface or in open channels.

RVD - Recreation Visitor Day

RVR - Resource Value Rating.

-S-

S&G Allotment - A sheep and goat allotment.

Sale Schedule - The quantity of timber planned for sale by time period from the area of suitable land covered by a forest plan. The first period, usually a decade, of the selected sale schedule provides the allowable sale quantity. Future periods are shown to establish that long-term sustained yield will be achieved and maintained.

Salvage Cutting - The harvest of trees that are dead, dying, or deteriorating (because they are overmature or have been materially damaged by fire, wind, insects, fungi, or other injurious agencies) before their timber becomes worthless.

Salvage Harvest - Harvest of trees that are dead, dying, or deteriorating because they are overmature or have been materially damaged by fire, wind, insects, fungi, or other injurious agents before the wood becomes unmerchantable.

Sanitation Cutting - The removal of dead, damaged, or susceptible trees, done primarily to prevent the spread of pests and pathogens and so promote forest hygiene.

Sanitation Harvest - The harvest of dead, damaged or susceptible trees done primarily to prevent the spread of pests or disease and to promote forest health.

Sapling - A young tree larger than a seedling but smaller than a pole. Size is with the range of 1.0 to 4.9 inches DBH.

Satisfactory Condition - When the desired future rangeland condition is being met or short term objectives are being achieved to move the rangeland toward the desired future condition.

Sawtimber - Trees that are 9 inches in diameter at breast height or larger and can be made into lumber.

Scoping - The ongoing process to determine public opinion, receive comments and suggestions, and determine issues during the environmental analysis process. It may involve public meetings, telephone conversations or letters.

SDI - Stand Density Index.

Second Growth - Forest growth that was established after some kind of interference with the previous forest crop, such as cutting, fire, or insect attack.

Security Cover - See grizzly bear security cover.

Sediment - Solid material, both mineral and organic, transported from its site of origin by air, water, gravity or ice.

Sedimentation - The action or process of forming or depositing excessive amounts of sediment.

Seed cut - A type of cut that prepares the seed bed and creates a new age class in an even-aged or two-aged stand under the Seed-Tree or Shelterwood Regeneration Method. Reserve trees may or may not be retained.

Seed Tree Cutting - An even-aged cutting method in which most of the mature timber from an area is removed in one cut except for a small number of desirable trees retained to provide seed or shelter for regeneration.

Seed-Tree Regeneration Method - A method of regenerating a stand in which a new age class develops from seeds that germinate in a fully-exposed microenvironment after removal of the previous stand, except for a small number of trees left to provide seed. This method creates an even-aged stand.

Seedling - A young tree less than 0.9 inches DBH.

Seed Tree Cutting - Removal in one cut of the mature timber crop from an area, except for a small number of seed bearers left singly or in small groups

Seed Tree Harvest. Removal of the mature timber crop from an area in one cut, except for a small number of seed bearers.

Selection - See "Group Selection" and "Individual (Single) Tree Selection."

Selection Cutting - The annual or periodic removal of trees (particularly mature trees), individually or in small groups, from an uneven-aged forest, to realize the yield and to maintain age stratification.

Selection System - An uneven-aged silvicultural system in which trees are removed individually or in groups, from a large area on a set temporal cycle.

Sensitivity Level - A particular degree of measure of viewer interest in scenic qualities of the landscape. Three sensitivity levels are employed, each identifying a different level of user concern for the visual environment.

Level 1 - Highest Sensitivity

Level 2 - Average Sensitivity

Level 3 - Lowest Sensitivity

Sensitive Species - Those species that (1) have appeared in the Federal Register as proposed for classification and are under consideration for official listing as endangered or threatened species or (2) are on an official state list or (3) are recognized by the U.S. Forest Service or other management agency as needing special management to prevent their being placed on federal or state lists.

Seral - The stage of succession of a plant or animal community that is transitional. If left alone, the seral stage will give way to another plant or animal community that represents a further stage of succession.

Seral Stage - The series of relatively transitory planned communities that develop during ecological succession from bare ground to the climax stage. There are five stages:

Early seral stage - The period from disturbance to crown closure of conifer stands managed under the current forest management regime. Grass, herbs, or brush are plentiful.

Mid-Seral stage - The period in the life of a forest stand from crown closure to first merchantability usually ages 15-40. Due to stand density, brush, grass, or herbs rapidly decrease in the stand. Hiding cover may be present

Late seral stage - The period in the life of a forest stand from first merchantability to culmination of mean annual increment. This is under a regime including commercial thinning, or to 100 years of age, depending on wildlife habitat needs. During this period, stand diversity is minimal, except that conifer mortality rates will be fairly rapid. Hiding than thermal cover may be present. Forage is minimal.

Mature seral stage - The period in the life of a forest stand from culmination of mean annual increment to an old-growth stage or to 200 years. This is a time of gradually increasing stand diversity. Hiding cover, thermal cover, and some forage may be present.

Old-growth seral stage - This stage constitutes the potential plant community capable of existing on a site given the frequency of natural disturbance events. For forest communities this stage exists from approximately age 200 until when stand replacement occurs and secondary succession begins again. Depending on fire frequency and intensity, old growth forests may have different structures, species composition, and age distributions. In forests with longer periods between natural disturbance, the forest structure will be more even-aged at late mature or early old-growth stages

Series - An aggregation of taxonomically related plant associations which take the name of (climatic) climax species that dominate, or have the potential to dominate, the principal vegetative layer in a time frame appropriate to the vegetative or taxonomic group under consideration. See Subseries.

Severely Burned - The main effect of burning is organic matter and nutrient loss. Severely burned is detrimental if it adversely affects site productivity or hydrologic function

Shade-Tolerant Plants - Plants that grow well in shade.

Shelterwood Regeneration Method - A method of regenerating a stand in which a new age class develops beneath the partially-shaded microenvironment provided by the residual trees. The method creates an even-aged stand

Shelterwood Removal Cut - A type of cut that releases established regeneration from competition with seed trees while retaining some trees needed for shelter under the Shelterwood Regeneration Method. Reserve trees may or may not be retained.

Shrub - A plant that has persistent, woody stems and a relatively low growth habit, and that generally produces several basal shoots instead of a single bole. It differs from a tree by its low stature and nonarborescent form.

Sight Distance - The distance at which 90 percent or more of a deer or elk is hidden from an observer. Hiding cover exists when 90 percent or more of a standing deer or elk is hidden at a distance of 200 feet or less.

Significance - As used in NEPA, requires consideration of both context and intensity.

Silvicultural System - The cultivation of forests; the result is a forest of a distinct form. Silvicultural systems are classified according to harvest and regeneration methods and the type of forest that results

Silviculture - The art and science that promotes the growth of single trees and the forest as a biological unit.

Single-Tree Selection - See "Individual (Single) Tree Selection "

Site - A small area or parcel of land considered in terms of its environment

Site Development Scale:

Site Development Level 1: Minimum Site Modification - Rustic or rudimentary improvements designed for protection of the site rather than comfort of the users. Use of synthetic materials excluded. Minimum controls are subtle. No obvious regimentation. Spacing informal and extended to minimize contacts between users. Motorized access not provided or permitted.

Site Development Level 2. Little Site Modification - Rustic or rudimentary improvements designed primarily for protection of the site rather than the comfort of the users. Use of synthetic materials avoided. Minimum controls are subtle. Little obvious regimentation. Spacing informal and extended to minimize contacts between users. Motorized access provided or permitted. Permitted access over primitive roads. Interpretive services informal, almost subliminal.

Site Development Level 3: Site Modification Moderate - Facilities about equal for protection of site and comfort of users. Contemporary or rustic design of improvements is usually based on use of native materials. Inconspicuous vehicular traffic controls usually provided. Roads may be hard surfaced and trails formalized. Development density about 3 family units per acre. Primary access may be over high standard roads. Interpretive services informal, but generally direct

Site Development Level 4: Site Heavily Modified - Some facilities designed strictly for comfort and convenience of users. Luxury facilities not provided. Facility design may incorporate synthetic materials. Extensive use of artificial surfacing of roads and trails. Vehicular traffic control usually obvious. Primary access usually over paved roads. Development density 3 to 5 family units per acre. Plant materials usually native. Interpretive services often formal or structured.

Site Development Level 5: High Degree of Site Modification - Facilities mostly designed for comfort and convenience of users and usually include flush toilets; may include showers, bathhouses, laundry facilities, and electrical hookups. Synthetic materials commonly used. Formal walks or surfaced trails. Regimentation

of users is obvious. Access usually by high-speed highways. Development density 5 or more family units per acre. Plant materials may be foreign to the environment. Formal interpretive services usually available. Design formalized and architecture may be contemporary. Mowed lawns and clipped shrubs not unusual.

Site Preparation - The general term for removing unwanted vegetation, slash, roots, and stones from a site before reforestation. Naturally occurring wild-fire, as well as prescribed fire can prepare a site for natural regeneration.

Site Productivity - Production capability of specific areas of land.

Size Class - One of the three intervals of tree stem diameters used to classify timber in the Forest Plan data base. The size classes are: Seedling/Sapling (less than 5 inches in diameter); Pole Timber (5 to 7 inches in diameter), Sawtimber (greater than 7 inches in diameter)

Skidding - Hauling logs by sliding, not on wheels, from stump to a collection point.

Skid Trail - Narrow path on which logging equipment travels when moving logs from the forest to a designated landing location.

SL - Standard Service Level.

Slash - The residue left on the ground after timber cutting and/or accumulating there as a result of storm, fire, or other damage. It includes unused logs, uprooted stumps, broken or uprooted stems, branches, twigs, leaves, bark and chips.

Small Game - Birds and small mammals typically hunted or trapped.

Snag - A standing dead tree greater than 20 feet tall from which the leaves and most of the limbs have fallen

Snowmachine - Any motorized vehicle which is used for over snow travel

Soil - The unconsolidated mineral material on the immediate surface of the earth that serves as a natural medium for the growth of land plants.

Soil Compaction - The reduction of soil volume. For instance, the weight of heavy equipment on soils can compact the soil and thereby change it in some ways, such as its ability to absorb water. Compaction is generally evaluated from 5 to 30 centimeters below the mineral soil surface. Substantial compaction in any 5-centimeter increment in the top 30 centimeters of soil is considered to be detrimental. Compaction that doubles the soil strength or that decreases soil porosity by 10 percent or more from undisturbed values is considered to be substantial. In soils with sand or sandy loam textures and less than 50% very fine sand (0.05-0.10 mm) in the sand fraction (0.05-2.0 mm), the porosity must be reduced more than 12% to be considered substantial compaction. Infiltration is another alternative for determining compaction. Forests are encouraged to develop infiltration guidelines that relate to detrimental compaction.

Soil Displacement - Detrimental displacement is the loss of either 5 centimeters or one-half of the humus-enriched top soil A-horizon, whichever is less, from an area that is 1 meter by 1 meter or larger.

Soil Disturbance - Detrimentally disturbed soil is soil that has been detrimentally displaced, compacted, puddled, or severely burned. At least 85% of the total area within an activity areas must have soil that is in satisfactory condition. Stated another way, no more than a total of 15% of an activity area may have detrimentally disturbed soil. Some examples of management options limiting the effects of soil disturbance and mitigation measures are listed in Exhibit 1.

Soil and Water Conservation Practices (SWCPs) - See Best Management Practice.

Soil Cover - Refers to ground cover, which consists of vegetation, litter, and rock fragments larger than three-fourths inch in diameter in contact with the soil. Also, it includes perennial canopy cover that is within 3 to 30 feet of the ground.

Soil Disturbance/Disturbed Soil - Soil that has been detrimentally displaced, compacted, puddled, or severely burned. No more than 15% of an activity area may have disturbed soils.

Detrimentially displaced. the loss of either 2 inches or one-half of the humus-enriched top soil (A-horizon), or both, from an area of 1 square meter or larger.

Detrimental compaction/puddling. decreases in soil porosity by 10% or more from undisturbed values, or doubling of the soil strength, in any 2 inch increment in the top foot of soil.

Soil Hydrologic Function - Is the inherent capacity of a soil to intake, retain and transmit water.

Soil Organic Matter - Is the organic fraction of soil. Includes plant, animal and microbial residues, fresh and at all stages of decomposition, and the relatively resistant soil humus.

Soil Productivity - The capacity of a soil to produce a specific crop. Productivity depends on adequate moisture and soil nutrients, as well as favorable climate.

Soil Puddling - Puddling is generally evaluated at the mineral soil surface. Visual indicators of detrimental puddling include clearly identifiable ruts with berms or hoof prints in mineral soil, or in an Oa horizon of an organic soil. Detrimental puddling may occur in conjunction with detrimental compaction. The guidelines for soil compaction (section b) are to be used when this occurs. Detrimentially puddled soils are not always detrimentally compact. Infiltration and permeability are affected by detrimental soil puddling. Forests are encouraged to develop infiltration and/or permeability guidelines that relate to detrimental puddling.

Soil Quality - Refers to the maintenance or improvement of long term soil productivity and soil hydrologic function.

Soil Survey - The systematic examination of soils in the field and laboratory, including description, classification, interpretation of productivity and mapping.

Spatial scale - The level of resolution in space perceived or considered.

Special forest products - Nontimber renewable plant products (such as mushrooms, berries, flowers, etc.).

Special Use Permit - A permit issued to an individual or group by the USDA Forest Service for use of National Forest land for a special purpose. Examples might be a Boy Scout Jamboree or a mountain bike race.

Species - A fundamental category of plant or animal classification

Species Composition - The proportions of various plant or animal species in relation to the total on a given area. Plant species may be expressed in terms of cover, density, weight, and so on.

Stand - A community of trees or other vegetation sufficiently uniform in composition, constitution, age, spatial arrangement or condition to be distinguishable from adjacent communities and so form a silvicultural or management entity.

Stand Exam - The activity of looking at a stand in the field to obtain measure of stand conditions, physical site factors, and other environmental data to help determine future management of the stand.

Stand Replacement Fire - Fire which kills all or most living overstory trees in a forest and initiates regrowth at an earlier successional stage.

Standard - a condition of land, normally a maximum or minimum condition, that is measurable. A standard can also be expressed as a constraint on management activities or practices. Deviation from compliance with a standard requires a Forest Plan amendment.

Standard Service Level (SL) - Management level designed to enhance the recreation experience, ensure public safety, correct resource damage, and maximize the longevity and serviceability of recreation facilities

Standards and Guidelines - Requirements found in a Forest Plan which impose limits on natural resource management activities, generally for environmental protection.

State Air Quality Regulations - The legal base for control of air pollution sources in that State. Prescribed burning is generally covered under these regulations.

State Implementation Plan - A State plan that covers implementation, maintenance, and enforcement of primary and secondary standards in each air quality control Region, pursuant to section 110 of the Clean Air Act.

Stocking - A measure of the proportion of the area in a stand actually occupied by trees expressed in terms of stocked quadrats or percent of canopy closure (as distinct from their stand density).

Stocking level - The number of trees in an area as compared to the desirable number of trees for best results, such as maximum wood production.

Storage - One of the ways functions are described; resources which are conserved within the system (i.e., sediments and water retained in wetlands, carbon and other nutrient storage in down woody material).

Structure - How the parts of ecosystems are arranged, both horizontally and vertically. These parts include vegetation patches, edge, fragmentation, canopy layers, snags, down wood, steep canyons, rocks in streams, and roads. For example, structure might reveal a pattern, mosaic or total randomness of vegetation.

Subregion - One of the hierarchy levels used for RPA assessments and statewide planning, encompassing hundreds to thousands of square miles.

Subsection - An ecological unit of land that has uniform climatic and geologic characteristics. Seven subsections have been delineated within the Targhee National Forest.

Succession - The natural replacement, in time, of one plant community with another. Conditions of the prior plant community (or successional stage) create conditions that are favorable for the establishment of the next stage.

Succession, Plant - The process of vegetational development whereby an area becomes successively occupied by different plant communities of higher ecological order.

Successional Stage - See Seral Stage.

Suitability - The appropriateness of applying certain management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the opportunity cost of uses foregone.

Suitability for Timber Production - Timber harvest, other than salvage sales or sales to protect other multiple-use values, cannot occur on lands not suited for timber production.

Suitable Forest Land - See Timber Classification

Suitable Habitat - The biological and physical components necessary to meet some or all of the life needs of a species.

Suitable Range - Rangeland that is accessible and used by grazing animals, that produces forage or has inherent forage producing capabilities, and that can be grazed on a sustained yield basis under reasonable management goals. (cf. unsuitable range.)

Suppression - The action of extinguishing or confining a fire

Surface Resources - Renewable resources that are on the surface of the earth, such as timber and forage, in contrast to ground water and minerals which are located beneath the surface.

Sustainability - The ability of an ecosystem to maintain ecological processes and functions, biological diversity, and productivity over time.

Sustainable - The yield that a renewable resource can produce continuously at a given intensity of management is said to be sustainable.

Sustainable Development - The use of land and water so sustain production indefinitely without environmental deterioration, ideally without loss of native biodiversity.

Sustainable Ecosystem Management - Management directed towards developing or maintaining a synergistic complex of plants and animals which can be perpetuated indefinitely.

Sustained-Yield - The yield that a renewable resource can produce continuously at a given intensity of management.

Swing Allotment - Any cattle or sheep allotment without a permanent permittee, that is open and available for grazing on a temporary basis to existing Targhee permittees. The intent of a "swing" allotment is to provide a place for grazing animals that are moved from their "permanent" allotment because of unplanned events and situations. A "swing" allotment may or may not have an allotment management plan and usually is not grazed by the same permittee on a yearly basis. An example of a "swing" allotment is an allotment that is

grazed by a band of sheep, that had to be removed from their "permanent" allotment because of Grizzly Bear conflicts, for a portion or all of their permitted grazing season.

-T-

Target - A National Forest's annual goal for accomplishment for natural resource programs. Targets represent the commitment of the Forest Service has with Congress to accomplish the work Congress has funded, and are often used as a measure of the agency's performance.

Technically Suitable Forest Land - See Timber Classification.

Tentatively Suitable Forest Land - Forest land that is producing or is capable of producing crops of industrial wood and (a) has not been withdrawn by Congress, the Secretary, or the Chief, (b) existing technology and knowledge is available to ensure timber production without irreversible damage to soils productivity, or watershed conditions; and (c) existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that it is possible restock adequately within 5 years after final harvest, and (d) adequate information is available to project responses to timber management activities.

Thermal Cover - Cover used by animals to moderate the effects of weather. Thermal cover may represent protection from heat or cold. Thermal cover requirements vary with species and the prevailing climate.

Thinning - An intermediate cutting made in an immature stand primarily to maintain or accelerate diameter increment and also to improve the average form of the remaining trees without permanently breaking the canopy. An intermediate cutting.

Threatened Species - Any species listed in the Federal Register which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Timber Base - The lands within the Forest capable, available and suited for timber production.

Timber Classification - The classification of forested lands into land management alternatives according to how the land relates to management of the timber resource there.

Nonforest Land - Lands never having or incapable of having greater than 10 percent of the area occupied by forest trees and lands formerly forested and currently developed for nonforest use.

Forest Land - Land at least 10 percent occupied by forest trees of any size or formerly having had such tree cover and not currently developed for nonforest use. Lands developed for nonforest use include areas for crops, improved pasture, residential, or administrative areas, improved roads of any width and adjoining road clearing and powerline clearing of any width. The term occupancy when used to define forest land will be measured by canopy cover of live forest trees at maturity. The minimum area for classification of forest land is 1 acre. Unimproved roads, trails, streams and clearings in forest areas are classified as forest if they are less than 120 feet in width.

Suitable Forest Land - Land that is managed for timber production on a regulated basis.

Unsuitable Forest Land (Not Suited) - Forest land that is not managed for timber production because: (1) the land has been withdrawn by Congress, the Secretary or the Chief; (2) technology is not available to prevent irreversible damage to soils, productivity or watershed conditions; (3) there is not reasonable assurance that lands can adequately be restocked within 5 years after final harvest based on existing technology and knowledge; (4) there is at present, a lack of adequate information to responses to timber management activities; or (5) timber management is inconsistent with or not cost-efficient in meeting management requirements and multiple-use objectives specified in the Forest Plan.

Tentatively Suitable (Commercial Forest Land) - Forest Land which is producing or is capable of producing crops of industrial wood and (1) has not been withdrawn by Congress, the Secretary or the Chief; (2) existing technology and knowledge is available to ensure timber production without irreversible damage

to soils, productivity, or watershed conditions, and (3) existing technology and knowledge provides reasonable assurance that adequate restocking can be attained within 5 years after final harvesting.

Timber Harvest Schedule - See "Sale Schedule."

Timber Production - The purposeful growing, tending, harvesting, and regeneration of regulated crops of trees for cutting into logs, bolts, or other round sections for industrial or consumer use. For purposes of forest planning, timber production does not include fuelwood or harvests from unsuitable lands.

Timber Sale Program Quantity (TSPQ) - The volume of timber planned for sale during the first decade of the planning horizon. It includes the allowable sale quantity (chargeable volume) and any additional material (nonchargeable volume) planned for sale. The timber sale program quantity usually is expressed as an annual average for the first decade.

Timber Stand Improvement (TSI) - Measures such as thinning, pruning, release cutting, prescribed fire, girdling weeding, or poisoning of unwanted trees aimed at improving growing conditions of the remaining tree.

Timelag - An indication of the rate a dead fuel gains or loses moisture due to changes in its environment. The time necessary for a fuel particle to gain or lose approximately 63 percent of the difference between its initial moisture content and its equilibrium moisture content. Fuels are usually grouped into the following groups:

Classification	Diameter (Inches)
1 hour	0-1/4
10 hour	1/4-1
100 hour	1-3
1,000 hour	3-8

Total Motorized Access Route Density (TMARD) - Includes all open and restricted roads and motorized trails. Density may be displayed as follows: 1) Density (miles/square mile) for an analysis area (such as a watershed or a management prescription area). 2) Density is displayed as a percentage of the analysis area in a defined density category (example 20% >2.0 miles per square mile).

Tractor Logging - A logging method that uses tractors to carry or drag logs from the stump to a collection point.

Trail -

All created or evolved travel (access) routes that do not qualify as a road, they are used for both motorized and nonmotorized modes of travel. For motorized travel, they are generally routes for vehicles less than 50 inches wide and which have a dry weight of 600 pounds or less. They are not reasonably and prudently drivable with a conventional passenger car or pickup.

System Trail/Managed Trail: A trail which is part of the official Forest Transportation Management System; these trails usually have a number and a name; they are usually on the Forest travel plan maps.

Nonsystem Trail/Unmanaged Trail/Ghost Trail: A trail which is not part of the official Forest Transportation Management System; these trails usually do not have a number or a name; they are not on the Forest travel plan maps.

Open Motorized Trail: A trail without restriction on motorized use and is used by motorized vehicles. Trails used by 3-wheelers, 4-wheelers, and motorized trail bikes are examples of this type of access route.

Restricted Motorized Trail: A trail on which motorized use is restricted seasonally or yearlong. Motorized use is legally restricted. Motorized administrative use by personnel of resource management agencies is acceptable at low intensity levels as defined in existing cumulative effects analysis models. This includes contractors and permittees in addition to agency employees.

Trail Maintenance - There are five levels of trail maintenance which are defined as follows:

Level 1: Trails maintained for primitive experience level. Custodial care only. No tread maintenance. Drainage functional and not likely to fail. Trailsides not brushed but tread is kept passable. Small slides may remain except for those with erosion potential. Structures maintained as needed. Signing may be deferred.

Level II: Trails maintained for near-primitive experience level. Tread maintained for public safety. Logs or similar rustic structures may be provided at stream crossing. Drainage same as Level I. Signing at a minimum level commensurate with level of trail use

Level III: Trails maintained for intermediate experience level. Tread maintained for public safety and user convenience. Drainage same as level I. Trailsides brushed out at Handbook standards. Signing same as Level II.

Level IV Trails maintained at relatively high standards to provide for public safety and convenience. Tread relatively smooth, firm and may require stabilization. Signing at high level, all other elements same as Level III. These trails are generally maintained for family or senior citizen use.

Level V. Trails maintained for high use and experience levels, including special purposes such as VIS trails, bicycle trails, trails to major vista points, trails for the handicapped, etc. Basic care same as Level IV but patching of paved tread may be needed annually. Trailsides maintained to meet high visual quality standards by brushing and cleanup of debris beyond the trail limits. Vistas are maintained.

Transportation Analysis - Conduct a systematic analysis to determine the transportation facilities and management needed to meet land and resource management objectives.

Transportation System or Network - All existing and proposed roads, trails, airfields, and other transportation facilities wholly or partly within or adjacent to and serving the National Forests and other areas administered by the Forest Service or intermingled private lands.

Treatment Area - The site-specific location of a resource improvement activity.

Tree Opening - An opening in the forest cover created by even-aged silvicultural practices.

TSI - Timber Stand Improvement

TTS - Tentative Timber Suitability

Underburn - A burn by a surface fire that can consume ground vegetation and "ladder" fuels.

Understory - The trees and woody shrubs growing beneath the overstory in a stand of trees.

Uneven-aged - The condition of a forest, crop, or stand composed of intermingling trees that differ markedly in age. In practice a minimum age difference of 25 percent of the length of the rotation usually is used.

Uneven-Aged Management - Actions that maintain a forest or stand of trees composed of intermingling trees that differ markedly in age. Cutting methods that develop and maintain uneven-aged stands are single-tree selection and group selection.

Uneven-aged Stand - A stand of trees of three or more distinct age classes, either intimately mixed or in small groups.

Uneven-aged System - A planned sequence of treatments designed to maintain and regenerate a stand with three or more age classes (see Single-Tree Selection, and Group Selection Regeneration Methods).

Unregulated Harvest - Tree harvest that is not part of the allowable sale quantity (ASQ). It can include the removal of cull or dead material or non-commercial species. It also includes volume removed from nonsuitable areas for research, to meet objectives other than timber production (such as wildlife habitat improvement), or to improve administrative sites such as campgrounds.

Unsatisfactory Rangeland Condition - Unsatisfactory rangeland condition is when the desired future rangeland condition is not being met and short term objectives are not being achieved to move the rangeland toward the desired future condition. (cf. satisfactory range condition.)

Unsuitable Range - Rangeland which has no current value or which should not be used because of physical or biological restrictions, or lack of improvements that would allow use.

Unsuitable Forest Land (Not Suited) - See Timber Classification.

Use, allowable - An estimate of proper range use by grazing animals. It can also mean the amount of forage planned to be used to accelerate range rehabilitation.

Utility and Transportation Corridors - A strip of land, up to approximately 600 feet in width, designated for the transportation of energy, commodities, and communications by railroad, State highway, electrical power transmission (66 KV and above), oil and gas and coal slurry pipelines 10 inches in diameter or larger, and telecommunication cable and electronic sites for interstate use. Transportation of minor amounts of power for short distances, such as short feeder lines from small power projects including geothermal or wind, or to serve customer subservice substations along the line, are not to be treated within the Forest Plan effort.

-V-

Vacant Allotment - An allotment that is available for grazing but is not grazed.

Variability (Range of, Natural, Historic) - The spectrum of conditions possible in ecosystem composition, structure and function considering both temporal and spatial factors. Natural range of the spatial, structural, compositional and temporal characteristics of ecosystem elements specified to represent "natural" conditions. The flux in composition, structure, and function of an ecosystem over the long term in a landscape.

Vegetation - Collectively, the plants growing in a given area

Vegetation Management - Activities designed primarily to promote the health of forest vegetation for multiple-use purposes

Vegetative Structural Stage - A method of describing the growth stages of a stand of living trees. It is based on tree size (DBH = diameter at breast height) and total canopy cover. The stages are: Grass/forb/shrub (VSS 1) = 0-1 inch DBH; Seedling/sapling (VSS 2) = 1-5 inches DBH, Young Forest (VSS 3) = 5-12 inches DBH, Mid-aged Forest

(VSS 4) = 12-18 inches DBH, Mature Forest (VSS 5) = 18-24 inches DBH, Old Forest (VSS 6) = 24+ inches DBH.

Vegetation Type - A plant community with distinguishable characteristics. See Cover Type.

Viable Population - A number of individuals of a species sufficient to ensure the long-term existence of the species in natural, self-sustaining populations adequately distributed throughout their region.

Viewshed - An expansive landscape or panoramic vista seen from a specific viewpoint, such as a road.

Vigor - The relative robustness of a plant in comparison to other individuals of the same species. It is reflected primarily by the size of a plant and its parts in relation to its age and the environment in which it is growing.

Visual Quality Objectives (VQO's) - A set of measurable goals for the management of forest visual resources used to measure the amount of visual contrast with the natural landscape caused by human activities. The following are VQO's:

Preservation - Ecological change only here

Retention - Human activities should not be evident to the casual Forest visitor.

Partial Retention - Human activity may be evident but must remain subordinate to the characteristic landscape

Modification - Human activity may dominate the characteristic landscape but must, at the same time, follow naturally established form, line, color, and texture. It should appear as a natural occurrence when viewed in foreground or middleground.

Maximum Modification - Human activity may dominate the characteristic landscape but should appear as a natural occurrence when viewed as background.

Visual Resource - A part of the landscape important for its scenic quality. It may include a composite of terrain, geologic features, or vegetation.

-W-

Watershed - The area of land above a given point on a stream that contributes water to the streamflow at that point. Also the land that contributes water to a lake or reservoir.

Watershed Improvement Needs (WIN) Inventory - A broad, reconnaissance inventory oriented primarily to problem identification rather than specific project design. It forms the basis for identifying potential soil and water resource restoration project areas and assigning priority for detailed planning and treatment.

Watershed Information System (WIS) - Inventory of Forest Service water rights and uses. The inventory includes such information as location of water right or use, the amounts of water involved, status of the use or right, purpose, etc.

Water Table - The upper surface of groundwater. Below it, the soil is saturated with water.

Water Yield - The runoff from a watershed, including groundwater outflow.

Weeding - A release treatment in stands not past the sapling stage that eliminates or suppresses undesirable vegetation regardless of crown position.

Wet Areas - Often referred to as "moist sites," they are very important components of elk summer range. These sites, often occurring at the heads of drainages, may be wet sedge meadows, bogs, or seeps.

Wetlands - Areas that are inundated by surface or ground water with a frequency sufficient, under normal circumstances, to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands include wet meadows, springs, seeps, bogs, etc.

Wild and Scenic River - Rivers and their immediate environs designated by congressional action that are managed to be free of impoundments, diversions and unpolluted

Wilderness - Areas designated by congressional action that are managed for primeval characteristics, solitude or unconfined primitive recreation,

natural conditions and where the imprint of man is substantially unnoticeable.

Wilderness Act (1964) - The Wilderness Act allows preservation of designated areas of federal land under the National Wilderness Preservation System for the benefit of present and future generations. The land must be primarily affected by the forces of nature (not man), have outstanding opportunities for solitude or primitive recreation, be at least 5000 acres in size, and may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

Wildfire - Any wildland fire not designated and managed as a prescribed fire within an approved prescription and occurring in natural fuels.

Wildlife - All undomesticated mammals, birds, reptiles and amphibians living in a natural environment. Does not include feral animals, such as wild horses and burros.

Wildlife Habitat Diversity - The distribution and abundance of different plant and animal communities and species within a specific area.

WIN - Watershed Improvement Needs Inventory.

Windthrow - Trees that have been uprooted by the wind.

WIS - Watershed Information System.

Wood Fiber Production - The growing, tending, harvesting and regeneration of harvestable trees.

Woody Plant - Perennial plants that have stems consisting of wood (shrubs, trees, and vines)

Woody Residue/Residue - Organic materials such as plant stems and branches having a minimum diameter of 3 inches (small end). Included are both natural materials and management induced post-harvest materials/slash.

-X-

Xeric - Refers to a habitat characterized by dry soil conditions.

-Y-

Yield - The amount of forest produce that may be harvested periodically from a specified area over a stated period in accordance with the objectives of management.

-Z-

ZOI (Zone of Influence) - The are influenced by Forest Service management activities.

Zoning - The demarcation of a planning area into zones, which the establishment of regulations to govern the types of activities and uses within each zone.

Zoological Area - A protective area designated for its authentic, significant and interesting evidence of important animals, animal groups and animal communities.

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Decomposition Class (cont.)

Log Characteristics	Log decomposition class				
	1	2	3	4	5
Bark	intact	intact	trace	absent	absent
Twigs < 3 cm	present	absent	absent	absent	absent
Texture	intact	intact to partly soft	hard, large pieces	small, soft, blocky pieces	soft and powdery
Shape	round	round	round	round to oval	oval
Color of wood	original color	original color	original color to faded	light brown to faded brown or yellowish	faded to light yellow or gray
Portion of log on ground	log elevated on support points	log elevated on support points but sagging slightly	log is sagging near ground	all of log on ground	all of log on ground

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