United States
Department of
Agriculture

Forest Service

Rocky Mountain
Region

Land and Resource Management Plan - 2002 Revision

WHITE RIVER
NATIONAL FOREST

LAND AND RESOURCE MANAGEMENT PLAN
2002 REVISION
for the
WHITE RIVER NATIONAL FOREST

Eagle, Garfield, Gunnison, Mesa, Moffat, Pitkin, Rio Blanco,
Routt, and Summit Counties, Colorado

Lead agency:
USDA Forest Service
White River National Forest
PO Box 948
Glenwood Springs, CO 81602

Responsible official:
Rick Cables, Regional Forester
USDA Forest Service
Rocky Mountain Region
PO Box 25127
Lakewood, CO 80225
(303) 275-5350

For further information contact:
Martha Ketelle, Forest Supervisor
White River National Forest
PO Box 948
Glenwood Springs, CO 81602
(970) 945-2521

E-mail address for general forest information:
Mailroom_r2_white_river@fs.fed.us

Abstract

This **Revised Land and Resource Management Plan** (**2002 Forest Plan**) was prepared according to Department of Agriculture regulations (36 CFR 219) which are based on the on the Forest and Rangeland Renewable Resources Planning Act (RPA), as amended by the National Forest Management Act of 1976 (NFMA). This plan was also developed in accordance with regulations (40 CFR 1500) for implementing the National Environmental Policy Act of 1969 (NEPA).

Because this plan revision is considered a major federal action significantly affecting the environment, a detailed **final environmental impact statement** (FEIS) has been prepared as required by NEPA and 36 CFR 219. If any provision of this plan or its application to any person or circumstances is found to be invalid, the remainder of the plan and its applicability to other persons or circumstances will not be affected.

Note to readers

The Forest Service believes that reviewers should be given notice of several court rulings related to public participation in the environmental review process. First, reviewers of Draft EISs must structure their response to the proposal to make clear the reviewer's position and contentions [*Vermont Yankee Nuclear Power Corp. v. NRDC,* 435 US 519, 53 (1978)]. In addition, environmental objections that could be raised at the Draft EIS stage but are not raised until after completion of the FEIS may be waived or dismissed by the courts [*City of Angoon v. Hodel,* 803F.2d 1016, 1022 (9th Circuit 1986) and *Wisconsin Heritages, Inc. v. Harris,* 490. Supp. 1334, 1338 (E.D. Wis. 1980)].

Please recycle this document when it is ready to be discarded.

The U. S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status (not all prohibited bases apply to all programs). People with disabilities who require alternative means for communication of program information (Braille, large print, audio tape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write: USDA, Director, Office of Civil Rights, Room 326, W. Whitten Building, 1400 Independence Ave. SW, Washington, DC 20250-9410, or call (202) 720-5964 (voice and TDD). The USDA is an equal opportunity provider and employer.

Table of Contents

READER'S GUIDE TO THE 2002 FOREST PLAN

PREFACE **P-1**

CHAPTER 1—FOREST-WIDE GOALS AND OBJECTIVES **1-1**

INTRODUCTION 1-1
GOAL 1–ECOSYSTEM HEALTH 1-3
GOAL 2–MULTIPLE BENEFITS TO PEOPLE 1-10
GOAL 3–SCIENTIFIC AND TECHNICAL ASSISTANCE 1-13
GOAL 4–EFFECTIVE PUBLIC SERVICE 1-14
GOAL 5–PUBLIC COLLABORATION 1-15
GOAL 6–AMERICAN INDIAN RIGHTS AND INTERESTS 1-16

CHAPTER 2—FOREST-WIDE STANDARDS AND GUIDELINES **2-1**

INTRODUCTION 2-1
Background 2-1
Conformance with Other Direction 2-1
Changes Between Draft and Final 2-2
SECTION ONE—PHYSICAL 2-3
AIR RESOURCES 2-3
CAVES 2-3
GEOLOGY, MINERAL, AND ENERGY RESOURCES 2-4
PALEONTOLOGICAL RESOURCES 2-4
SOILS 2-4
WATER AND RIPARIAN RESOURCES 2-6
SECTION TWO—BIOLOGICAL 2-7
ALPINE 2-7
BIODIVERSITY 2-7
RANGELAND ECOSYSTEM MANAGEMENT 2-9
SILVICULTURE 2-10
SPECIAL FOREST PRODUCTS 2-15
WILDLIFE 2-16
SECTION THREE—DISTURBANCE PROCESSES 2-32
FIRE 2-32
INSECTS AND DISEASE 2-32
NOXIOUS WEEDS 2-33
SECTION FOUR—SOCIAL 2-34
GENERAL RECREATION 2-34
DEVELOPED RECREATION 2-35
DISPERSED RECREATION 2-35
AMERICAN INDIAN RIGHTS & INTERESTS 2-36
HERITAGE RESOURCES 2-36
SCENERY MANAGEMENT 2-37
WILDERNESS RESOURCES 2-37

SECTION FIVE—ADMINISTRATIVE 2-39
TRAVEL SYSTEM INFRASTRUCTURE 2-39
AERIAL TRANSPORTATION CORRIDORS 2-40
REAL ESTATE 2-41
ROADLESS AREAS 2-43
SPECIAL USES 2-44
TRANSPORTATION AND UTILITY CORRIDORS 2-45

CHAPTER 3—MANAGEMENT AREA DIRECTION 3-1

INTRODUCTION 3-1
CATEGORY 1 3-3
ACTIVITIES ALLOWED 3-4
1.11 Pristine Wilderness 3-5
1.12 Primitive Wilderness 3-6
1.13 Semi-Primitive Wilderness 3-8
1.2 Recommended for Wilderness 3-10
1.31 Backcountry Recreation – Non-Motorized 3-12
1.32 Backcountry Recreation – Non-Motorized with Limited Winter Motorized .. 3-13
1.41 Core Areas 3-15
1.5 Wild Rivers – Designated and Eligible 3-17
CATEGORY 2 3-19
ACTIVITIES ALLOWED 3-20
2.1 Special Interest Areas – Minimal Use and Interpretation 3-21
2.2 Research Natural Areas 3-24
CATEGORY 3 3-27
ACTIVITIES ALLOWED 3-28
3.1 Special Interest Areas – Emphasis on Use and Interpretation 3-29
3.21 Limited Use Areas 3-31
3.31 Backcountry Recreation – Year-Round Motorized 3-33
3.32 Backcountry Recreation – Non-Motorized with Winter Motorized 3-34
3.4 Scenic Rivers – Designated and Eligible 3-35
3.5 Corridors Connecting Core Areas 3-37
CATEGORY 4 3-39
ACTIVITIES ALLOWED 3-39
4.2 Scenery 3-40
4.23 Scenic Byways, Scenic Areas, Vistas, and Travel Corridors 3-42
4.3 Dispersed Recreation 3-44
4.32 Dispersed Recreation, High Use 3-45
4.4 Recreation Rivers – Designated and Eligible 3-47

CATEGORY 5 3-49
ACTIVITIES ALLOWED 3-50
5.12 General Forest and Rangelands – Range Vegetation Emphasis 3-51
5.13 Resource Production – Forest Products 3-53
5.4 Forested Flora and Fauna Habitats 3-55
5.41 Deer and Elk Winter Range 3-57
5.42 Bighorn Sheep Habitat 3-60
5.43 Elk Habitat 3-61
5.5 Forested Landscape Linkages 3-70
CATEGORY 7 3-73
ACTIVITIES ALLOWED 3-73
7.1 Intermix 3-74
CATEGORY 8 3-77
ACTIVITIES ALLOWED 3-77
8.21 Developed Recreation Complexes 3-78
8.25 Ski areas – Existing and Potential 3-80
8.31 Aerial Transportation Corridors 3-84
8.32 Designated Utility Corridors – Existing and Potential 3-85

CHAPTER 4—MONITORING AND EVALUATION 4-1

MONITORING STRATEGY 4-12
Implementation Monitoring 4-23
Validation Monitoring 4-25

APPENDIX AA—NATIONAL STRATEGIC GOALS AA-1

APPENDIX BB—KEY NATIONAL AND REGIONAL POLICIES BB-1

APPENDIX CC—RELEVANT FEDERAL AND STATE STATUTES AND OTHER REGULATIONS CC-1

APPENDIX DD—FISH AND WILDLIFE MANAGEMENT IN WILDERNESS DD-1

APPENDIX EE—LIST OF SPECIES EE-1

APPENDIX FF—LATE-SUCCESSIONAL AND OLD-GROWTH FOREST STANDARD FF-1

APPENDIX GG—LIST OF ACRONYMS GG-1

APPENDIX HH- GLOSSARY HH-1

Reader's Guide to the Forest Plan

Preface

- Purpose of the Land and Resource Management Plan (Forest Plan) and why it is being revised
- How the 2001 Forest Plan and Final Environmental Impact Statement relate to other documents
- How the 2001 Forest Plan will be implemented
- Valid outstanding rights
- Activities that are exempt from National Environmental Policy Act (NEPA) requirements
- Provisions for public involvement
- The role that annual budgets play
- How forest plan amendment compares to forest plan revision
- The Forest Service Directives System
- Draft rules and policies

Chapter 1

- Forest-wide goals and objectives, and comparisons to regional and national goals
- How these goals and objectives meet the requirements of the Government Performance and Results Act
- Forest-wide goals and objectives

Chapter 2

- Introduction to forest-wide standards and guidelines
- How forest-wide standards and guidelines conform with other sources of Forest Service management direction
- Forest-wide standards and guidelines for resource management

Chapter 3

- What management areas are, and how they are defined and characterized
- Management area categories and prescriptions
- Management area-specific standards and guidelines

Chapter 4

- Monitoring Framework Overview
- Monitoring Purpose
- Information Management
- Reasons for Monitoring (Monitoring Drivers)
- Monitoring Priorities
- Annual Monitoring Workplan
- Evaluation Process
- Annual Forest Monitoring and Evaluation Report
- Monitoring Strategy

Appendices

- National strategic goals
- Key national and regional policies
- Relevant federal and state statutes, regulations, and agreements
- Policies for managing fish and wildlife in wilderness
- Proposed, threatened, and endangered species; Rocky Mountain Region (Region 2) sensitive species
- Forest-wide standard for management of late-successional and old-growth forests
- List of Acronyms
- Glossary of Terms

Preface

Background

The White River National Forest (White River NF) Land and Resource Management Plan (1984 Forest Plan) was first issued in September, 1984. Forest plans are prepared in accordance with the National Forest Management Act (NFMA), the National Environmental Policy Act (NEPA), and other laws and regulations. NFMA regulations state that each national forest's land and resource management plan be revised on a 10-year cycle or at least every 15 years (36 CFR 219.10). This 2002 Land and Resource Management Plan, 2002 Revision (2002 Forest Plan) has been prepared to meet that requirement. It sets forth the direction the White River National Forest ("the forest") will follow in the future management of National Forest System (National Forest System) lands and resources within its boundaries. The 2002 Forest Plan is accompanied by a final environmental impact statement (FEIS) which describes the extensive analysis used in its development and formulation.

Purpose of the 2002 Forest Plan revision

The 2002 Forest Plan and the final environmental impact statement (FElS) should be reviewed concurrently. Together, these two documents will provide strategic, forest-wide direction for the next 10 to 15 years.

A forest plan provides guidance for all resource management activities on a national forest. It establishes:

- Forest-wide multiple-use **goals and objectives**
- Forest-wide management requirements (also known as **standards and guidelines**)
- Direction applicable to specific management areas (provided in terms of **management area prescriptions**)
- **Monitoring and evaluation** requirements
- **Designation of lands** as suitable or not suitable for timber production and other resource management activities
- **Recommendations to Congress** for the establishment of wilderness areas; wild, scenic, and recreational rivers; and other special designations as appropriate.

Goals and objectives, standards and guidelines, management area prescriptions, and monitoring and evaluation requirements for the forest are found in Chapters 1 through 4 of this document.

Identification of suitable timber lands is shown on the timber suitability map in the map packet and summarized in the timber management section in Chapter 3 of the FEIS.

Recommendations to Congress for establishing Wilderness and other special designations will be made in the record of decision (ROD) that will accompany the 2002 Forest Plan and FEIS.

The appendices at the end of this document present national strategic goals; national and regional policies; relevant statutes and regulations; policies for managing fish and

wildlife in Wilderness; lists of proposed, endangered, threatened and sensitive species; and measures for managing late-successional and old-growth forests.

Relationship of the forest plan to other documents

The 2002 Forest Plan is a result of extensive analysis that is documented in the Final Environmental Impact Statement. The FEIS in turn, discusses the planning and analysis procedures used to develop the Forest Plan. It describes six alternative management strategies for the White River NF, and examines the environmental impacts of these alternatives on the Forest's physical, biological, social, and economic resources.

The appendices that follow chapters 1 through 4 include glossaries of technical terms and acronyms used in the 2002 Forest Plan. The appendix in FEIS Volume 2 includes a summary of the public comment on the draft forest plan and DEIS, our response to public comment. The appendices in FEIS Volume 3 include supplemental information pertinent to the analysis process for various forest resources and a list of references. The appendix in FEIS Volume 4 is the biological evaluation for the 2002 Forest Plan.

The **National Forest Management Act** (NFMA) requires that National Forest System lands be managed for a variety of uses on a sustained basis to ensure into perpetuity a continued supply of goods and services to the American people. NFMA regulations also establish extensive analytical and procedural requirements for the development, revision, and significant amendment of forest plans.

The **National Environmental Policy Act** (NEPA) ensures that environmental information is made available to public officials and citizens before decisions are made and before actions are taken. This disclosure helps public officials make decisions based on an understanding of environmental consequences, and take actions that protect, restore and enhance the environment. Essential to the NEPA process are accurate scientific analyses, expert agency input, and public involvement, all of which have been part of this plan revision process.

The Forest Plan is consistent with goals described in the amended **1992 Rocky Mountain Regional Guide**, which provides direction for national forests in Region 2 of the Forest Service. This region includes all of the national forests in Colorado. The regional guide provides strategic goals and objectives as well as specific standards and guidelines required by NFMA regulations. Among these standards and guidelines are those pertaining to timber harvest, transportation and utility corridors, and air quality. The guide also directs national forest personnel to evaluate the eligibility of all rivers in the nationwide rivers inventory for inclusion in the National Wild and Scenic River System, and to classify rivers as wild, scenic, or recreational.

Preliminary work to revise the Forest Plan began in 1994. Formal inventories of the Forest's natural and environmental resources were begun using improved scientific methods and data processing techniques that were not available when the 1984 Forest Plan was developed.

In 1996, the Forest Supervisor prepared a **monitoring and evaluation report**, which reviewed the status of National Forest System lands to assess whether conditions or public demands had changed much since inception of the 2002 Forest Plan. This report revealed that a need did exist to revise the plan.

The Forest Supervisor then solicited public comments on what the plan revision process should consider. Issues raised by the public and by other agencies were examined by an interdisciplinary (ID) team of planners and resource specialists. These issues then were incorporated into the **Identification of Purpose and Need / Development of Planning Criteria** document, which summarized how public comments and monitoring/evaluation efforts were used to indicate what areas of the existing plan were most in need of revision. After extensive review, the ID team identified six areas, called **revision topics**, on which to base the revision process: (1) biological diversity; (2) travel management; (3) recreation management; (4) roadless areas; (5) special areas; and (6) timber management.

The ID team then began preparation of a report called **Analysis of the Management Situation (AMS),** released in July 1997. Its purpose was to determine the ability of the Forest to supply goods and services in response to the public's demand for them. It also served as a foundation for formulating a broad range of reasonable alternatives to the existing plan. The AMS reviewed the current and expected level of goods and services provided by the Forest, made projections of public demands for resources, and discussed the need to establish or change management direction in response.

In 1997, the Regional Forester published in the Federal Register a **notice of intent** (NOI) to prepare an environmental impact statement for revision of the existing forest plan. This document stated that the revision would focus on changed conditions or demands in the areas addressed by the 1984 plan, and also would address concerns not covered in 1984, such as biodiversity and roadless areas.

After completing the AMS, forest planners began to formulate an array of alternatives to revise the 1984 plan. These alternative management strategies were based on the public comment received as well as on improved knowledge of the forest's resources contained in our geographic information system (GIS) database. This set of alternatives was described in depth in **Chapter 2 of the DElS**. By design, each alternative represents a potential forest plan that meets legal and administrative requirements and that can be implemented if selected.

The next step in the process was to evaluate the environmental consequences of the alternatives. A detailed discussion of these environmental effects, presented in **Chapter 3 of the DEIS**, superseded projections that were made in the AMS. As a result of the environmental effects analysis, the DEIS identified Alternative D as the **preferred alternative**.

The public was then given an opportunity to review and comment on these documents and the alternatives as directed by NEPA. We released the draft forest plan and accompanying DEIS volumes for review in August of 1999. These documents generated intense interest and scrutiny, reflecting the public importance of White River National Forest management issues both locally and nationally. We received many public requests to extend the comment period, and a six-month comment period extension was directed congressionally. Therefore, the original 90-day comment period was extended to May 9, 2001. Nearly 14,000 individual responses—including letters, postcards, public meeting transcripts, and emails—were received from the members of the public, city, county, state, tribal, and federal officials, public interest organizations, and private businesses during the formal comment period.

After the comment period closed, a specialized unit of the Forest Service, the Content Analysis Team (CAT), compiled, reviewed, and categorized all comments and then entered these comments into a database. This was used to track all respondents and their response letters. It also allowed the sorting of comments by topical category in order for CAT analysts and the ID team to systematically review and respond to comments. The ID team also continually reviewed changes in national direction, law, and policy during this time, as well as new information relevant to the analysis.

The selected alternative

Based on all of these factors, the ID team then made modifications as needed to the direction in the draft forest plan and the supporting analysis in the DEIS. These modifications are described in the FElS. The **Revised Land and Resource Management Plan, 2002 Revision** and **Final Environmental Impact Statement** are the result of this review and revision process. The FElS identifies the **selected Alternative K** chosen by the Regional Forester to guide future forest management. Finally, the Regional Forester will document the basis of this decision in a **record of decision**.

Implementing the 2002 Forest Plan

The 2002 Forest Plan provides a framework that guides our day-to-day resource management operations. It is a strategic, programmatic document that does not make project-level decisions. Those decisions are made after more detailed analysis and further public comment. NFMA requires that resource plans and permits, contracts and other instruments issued for the use and occupancy of National Forest System lands be consistent with the forest plan.

Site-specific project decisions also must be consistent with the plan unless it is modified by amendment. Additional guidance to forest management is summarized in Appendices AA through FF of this document.

Project-level decisions

There are two objectives in project planning. In agency-initiated actions, the objective is to move toward or achieve the integrated direction in the 2002 Forest Plan through the proposed action. For proposals made by others, the objective is to decide if the proposal is or could be made consistent with forest wide and management area standards. Also to be decided is whether the project is in the public's interest in terms of forest wide goals and objectives.

The following principles apply:

- Forest-wide goals and objectives guide the identification and selection of potential agency projects.
- Determining whether a project is consistent with the forest plan is based on whether it follows forest wide and management area standards.
- Projects that do not comply with standards must be found to be inconsistent with forest plan management direction, unless standards are modified through forest plan amendment. In the latter case, project approval and forest plan amendment may be accomplished simultaneously.
- Forest plan objectives, forest wide and management area guidelines, project specific outputs, and activity schedules should be used in the determination of what is consistent. Under those circumstances in which a guideline is modified or not applied as described in the forest plan, the responsible official should recognize the purpose(s) for which the guideline was developed, and provide assurance that any subsequently approved actions do not conflict with the

objective the guideline was intended to achieve. This must be documented during project analysis according to NEPA procedures.

- Resource plans and permits, contracts, and other instruments issued for the use and occupancy of National Forest System lands must be consistent with the 2002 Forest Plan, unless specifically exempted from applicability in an amendment or revision decision document. Determinations of consistency of permits, contracts, and other instruments for occupancy and use of National Forest System lands are based on whether they follow forest wide and management area standards.
- Generally, forest plan implementation—when project decisions are made—is when the irretrievable commitment of resources also is made. Therefore, before making decisions, additional environmental analysis and site-specific disclosure of environmental effects are required according to NEPA procedures.

Following are some examples of site-specific project decisions that require additional environmental analyses and disclosure as forest plan direction is carried out:

- Range allotment management plans
- Timber harvesting and related activities
- Wildlife improvement projects
- Watershed improvement projects, abandoned-mine reclamation, and Federal Facility Compliance projects (projects generating air and/or water pollutants and hazardous-material treatment or removal)
- Prescribed-burn projects in support of resource management objectives
- Decisions for winter sports development, outfitter/guide proposals and other externally generated projects involving occupancy and use of National Forest System lands
- Selection of roads and trails on which motorized and mechanized vehicle travel will be allowed, prohibited or limited
- Construction and reconstruction of trails, roads, staging areas, buildings, utilities, dams, bridges and recreation sites
- Notice of intent to operate, prospecting permits, plans of operation, surface use plans of operation (36 CFR 228 A and C), and mineral sales contracts.

Valid outstanding rights

The 2002 Forest Plan was prepared with the understanding by the Forest Service that individuals and entities may have established valid rights, unknown to the Forest Service at this time, to occupy and use National Forest System lands under laws and authorities established by Congress. The courts have established that such valid outstanding rights may be subject to some federal regulation. See Sierra Club v. Hodel, 848 F 2d.1068 (10th Circuit, 1988). This plan recognizes that such valid outstanding rights may exist and the Forest Service will certainly honor such valid outstanding rights when it is subsequently determined that the specific facts surrounding any claim to such rights meet the criteria set forth in any respective statute granting such occupancy and use. See Washington County v. The United States, 903 F. Supp. 40 (D. Utah, 1995). Upon discovery of such valid outstanding rights, amendment or modification of the forest plan may be necessary.

Resource plans and permits, contacts, cooperative agreements, and other instruments issued for the occupancy and use of National Forest System lands (hereafter "instruments") must be consistent with the Forest plan, subject to valid existing rights.

Determinations of consistency are based on whether such instruments follow forest wide and management area standards and guidelines. If inconsistency is determined, the following alternatives are available to the Forest Supervisor: modify the proposal to be consistent with the plan, reject the proposal, or amend the plan to permit the proposal (FSH 1909.12, Ch. 5.31 (a)(1)).

Operational activities exempt from NEPA

Resource inventories, action plans and schedules, and previously approved activities are not binding decisions and do not require additional environmental analysis and disclosure at the project level.

Following are some examples of operational activities that do not constitute site-specific decisions and therefore are exempt from NEPA procedures:

- Scheduling the revision of allotment management plans (FSM 2210)
- Amending grazing permits to comply with the Forest Plan (FSM 2230)
- Developing five-year wildlife action plans (FSM 2620)
- Conducting resource inventories or identifying adverse air-quality conditions in Class 1 airsheds (FSM 2580)
- Developing fire-situation reports, escaped-fire-situation analyses, fire evaluations, fire-season severity requests and fire management action plans, and dispatching fires (FSM 5120, 5130)
- Developing implementation schedules and three- to five- year plans
- Scheduling maintenance for developed recreation sites and developing heritage resource overviews, scenic byway management plans, or interpretive plans (FSM 2330, 2360, 2380, 2390)
- Developing wilderness operation and maintenance schedules (FSM 2320)
- Preparing land ownership adjustment plans (FSM 5400).

Note: Operational activities exempt from the NEPA process are not synonymous with categorical exclusions. Operational activities do not represent irreversible commitments of resources and do not, in themselves, create any environmental effects. Actions that can be categorically excluded from documentation in an environmental assessment or impact statement are described in FSM 1952.2 and FSH 1909.15. These actions may represent irreversible commitments of resources but do not individually or cumulatively have significant effects on the environment.

Exception for wheelchairs

In all management areas in which motorized uses are prohibited, an exception applies for users of motorized wheelchairs. Title V, Section 507(c) of the Americans with Disabilities Act states that: "A person is permitted to use his/her motorized wheelchair in a non-motorized area, so long as that wheelchair meets the legal definition of being designed solely for use by a mobility-impaired person and suitable for use in an indoor pedestrian area."

Public involvement

Throughout the forest plan revision process, we have been committed to an intensive program of public involvement. This means that the door is always open and that our staff are available to explain management objectives, decisions, policies or procedures, or to answer any other questions. The next round of travel management plan revision and other site-specific project planning will include public involvement and

cooperation. Similar to the partnership with the public, the Forest engages in partnerships with local, state, federal, and tribal governments. Monitoring and evaluation reports are available annually for public review.

To receive more information, or to be placed on the Forest mailing list, please write to the Forest Supervisor. The mailing address is Forest Supervisor, White River National Forest, P.O. Box 948, Glenwood Springs, CO 81602. The telephone number is (970) 945-2521.

We can also be reached via the internet. Information about the White River National Forest, as well as links to an online version of the 2002 Forest Plan and FEIS, can be found on the our web page. The web page address is:

http://www.fs.fed.us/r2/whiteriver/

The e-mail address for general correspondence (not for comments on the 2002 Forest Plan) is:

mailroom_r2_white_river@fs.fed.us

Budget formulation

Annual forest budget proposals are based on the activities and actions required to achieve the goals and objectives of the 2002 Forest Plan. Monitoring results and actual costs of carrying out the standards and guidelines will be the basis for each year's budget proposals. Costs to carry out the plan are not complete without providing for an adequate level of monitoring and evaluation of projects.

Budget execution

The annual budget must comply with the 2002 Forest Plan and any specific direction provided in the annual Appropriations Act (FSM 1930). Because actual allocations rarely provide for full funding of the plan, scheduled activities and actions for any particular year are adjusted to conform to the intent of Congress. Although budget changes themselves do not require forest plan amendment, implications of budget changes may do so. For example, a project for which funds are appropriated must be consistent with the forest plan. To assure this consistency either the project or the plan may require modification.

Forest plan amendment and revision

Forest Plan Amendment—During plan implementation, evaluation of monitoring results may reveal that the forest plan needs to be modified. Changes will be made through the plan amendment process as needed. Amendments can be either significant on non-significant as defined by 36 CFR 219.10(f). Significant amendments usually are those that affect the long-term balance of goods and services on the forest or the biological health of the forest.

Forest personnel conduct the process and forward proposed significant forest plan amendments to the Regional Forester (the responsible official) for approval. For non-significant amendments, the Forest Supervisor is the responsible official.

Forest Plan Revision—The Forest Supervisor is required to review conditions on the land at least every five years to determine if forest plan revision is necessary. If monitoring and evaluation indicate that immediate changes are needed, and these needed changes cannot be handled by amendment, then revision of the plan becomes necessary.

The plan normally will be revised on a 10-year cycle; with anticipated completion of the revision occurring 10 to 15 years after plan approval. However, a major event might suggest an acceleration of the revision, while scheduled inventories, anticipated staffing changes, or other circumstances might warrant a delay. Delaying a revision is not appropriate if monitoring and evaluation show that immediate changes in the plan are needed.

A thorough review of the forest plan should be completed before initiating a plan revision. This review includes the following:

- Results of recent monitoring and evaluation, along with pertinent research findings and recommendations
- New laws, regulations, or policies that may suggest a need to change the plan
- How well the forest is progressing toward stated desired conditions
- Demand projections for selected outputs
- Predicted and actual ecosystem responses
- Predicted and actual costs and outputs
- Emerging issues and opportunities.

Integration with the directive system

Management direction in the **Forest Service Directive System**, including the **Forest Service Manual** (FSM) and the **Forest Service Handbook** (FSH), is part of forest plan management direction and is not repeated in the Forest Plan document. Management direction also includes applicable laws, regulations and policies, although they might not be restated in the plan.

Appendices AA and BB reference the minimum resource management direction described in the directive system. Nothing precludes the development of additional minimum resource management direction, whenever appropriate. Under the following circumstances, this 2002 Forest Plan does not reference minimum resource management direction:

- The specific resource or use is not present on the Forest, or the requirement addresses a condition or problem not applicable to the Forest, or
- Planning records document a sound rationale for the exception.

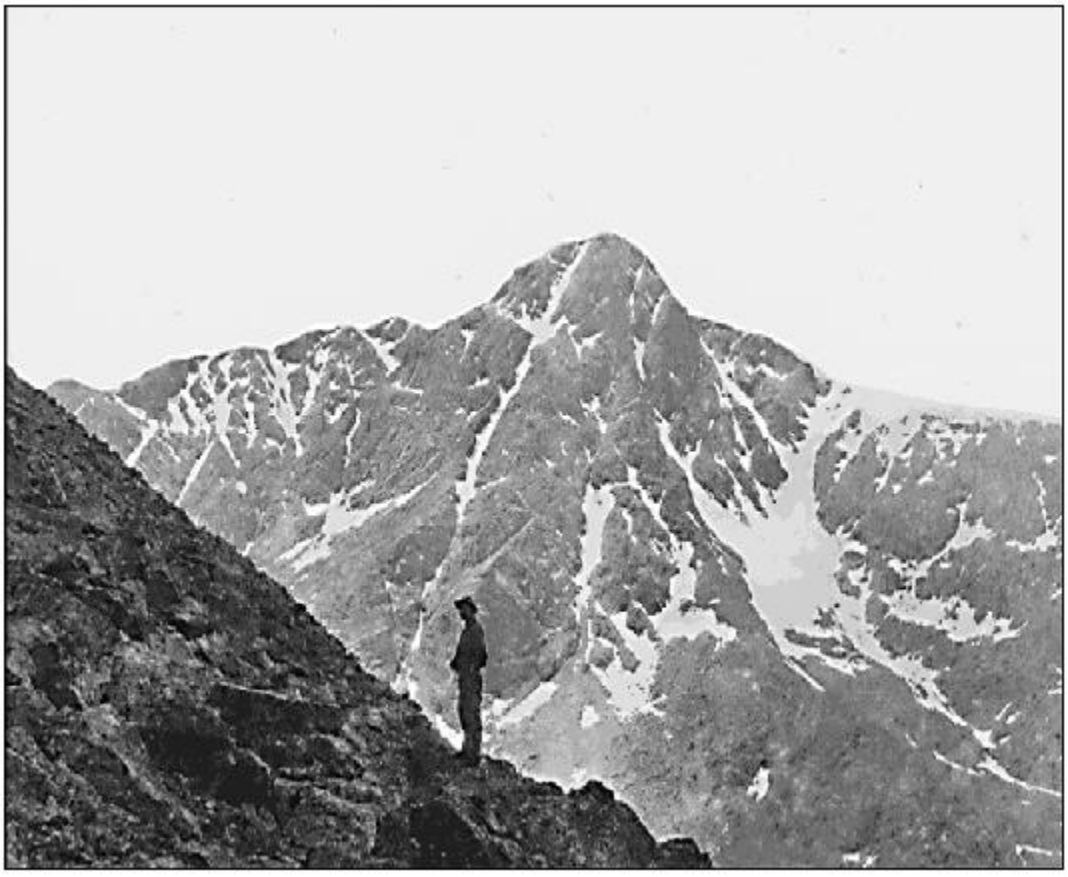
Draft rules and policies

The 2002 Forest Plan and accompanying FElS do not incorporate draft rules, regulations or policies. The documents have been prepared using scientifically based processes and analysis to best comply with existing laws and agency direction.

If new regulations or policies are finalized after the draft documents are released, the new directions will be reviewed and necessary adjustments will be made in the final documents as appropriate. Specifically, this will apply to a National Forest Transportation Policy (Road Rule) and to revised NFMA implementing regulations. If such documents become final policy within the scoping period of the draft documents, they will be considered during the preparation of the final documents.

CHAPTER ONE

Forest-wide Goals and Objectives



Mount of the Holy Cross, Holy Cross Ranger District

Chapter 1

Forest-wide Goals and Objectives

Introduction

Chapters 1 and 2 of this document provide the overall direction for managing the White River National Forest. This forest-wide direction combines regional goals (which apply to all national forests in the Rocky Mountain Region of the Forest Service) with goals, objectives, standards, and guidelines that are specific to the White River National Forest.

Additional direction for the forest is presented in Appendices AA, BB, CC, and DD. These provide a reference to national goals and policies; federal and state statutes and regulations; agreements with other organizations; and policies for managing fish and wildlife in wilderness areas.

Forest *goals* are broad statements that describe overall conditions the forest will strive to achieve. They are not amenable to direct measurement and there are no time frames for achieving them. In other words, goals describe the ends to be achieved rather than the means to these ends.

In contrast, *objectives* provide these means in the form of measurable steps, referred to as *strategies*, taken to accomplish goals. Objectives generally are achieved by implementing projects or activities. However, objectives are not targets, which are a measure of annual outputs dependent upon budgets. Budget allocations may or may not correspond to areas that have been emphasized by the forest plan.

Also contributing to forest-wide direction are the regional goals for the Rocky Mountain Region. These goals, described in detail in the *1992 Rocky Mountain Regional Guide*, are to:

1. Protect basic soil, air, water, and land resources;
2. Provide for a variety of life through management of biologically diverse ecosystems;
3. Provide for multiple uses and sustainability of national forests and grasslands in an environmentally acceptable manner;
4. Provide for scenic quality and a range of recreational opportunities that respond to the needs of forest customers and local communities;
5. In cooperation with other landowners, strive for improved land ownership and access patterns to the mutual benefit of both public and private landowners;
6. Improve the financial efficiency of all programs and projects;
7. Emphasize cooperation with individuals, organizations and other agencies while coordinating planning and project implementation; and
8. Promote rural development opportunities.

Government Performance and Results Act

In 1993, Congress passed the Government Performance and Results Act (GPRA), which strives to increase the accountability of federal agencies by measuring progress toward and achievement of agency goals and objectives. This legislation, applicable to all federal agencies, requires the preparation of periodic strategic plans and annual performance plans, both of which are focused on outcomes and results.

To implement GPRA, the Forest Service issued a strategic plan in 1997. It centered on three main goals: ensure sustainable ecosystems, provide multiple benefits for people within the capabilities of ecosystems, and ensure organizational effectiveness. The goals and objectives in the proposed revised forest plan were based on these three goals.

In 2000, the Forest Service issued an updated version of the 1997 Strategic Plan for the Forest Service. It contains four goals. The goals and objectives in the revised forest plan are based on this updated GPRA Strategic Plan. The four goals are:

1. Ecosystem health;
2. Multiple benefits to people;
3. Science and technical assistance; and
4. Effective public service.

Although the goal statements have changed slightly from the draft forest plan, the objectives have remained fairly consistent. Changes and additions to the objectives and implementing strategies were based on public comment and new information in the 2000 Forest Service GPRA Strategic Plan.

Complying with and complementing the Forest Service GPRA Strategic Plan are forest-wide goals and objectives, which comprise the rest of this chapter. The goal statements that follow are similar to those in the 2000 Strategic Plan. Each goal is accompanied by one or more corresponding objectives. Each of these objectives applies only to the management of the White River National Forest and not to any other National Forest System unit.

During implementation of the final revised land and resource management plan (2002 Forest Plan) managers use forest-wide goals and objectives as a yardstick against which they can monitor progress. Information derived from these monitoring efforts will be used to determine future management needs. It also will be employed by the Rocky Mountain Region of the Forest Service to prepare multi-forest reports that show regional progress toward meeting national goals.

Goal 1 Ecosystem Health

Promote ecosystem health and conservation using a collaborative approach to sustain the nation's forests, grasslands, and watersheds.

Conserve the Canada lynx.

Objective 1a Improve and protect watershed conditions to provide the water quality and quantity and soil productivity necessary to support ecological functions and intended beneficial uses.

Strategy ***1a.1*** Over the life of the plan, inventory and assess watershed resources, including soil productivity and aquatic and riparian health, in conjunction with project National Environmental Policy Act (NEPA) analysis, or as opportunities arise. Conduct assessments at a minimum sixth-level hydrologic unit code (HUC) scale. Catalogue assessment data under the Natural Resource Information System or other comparable database. Use the results of assessments to guide planning and management activities.

1a.2 Annually identify priority watersheds for improvements in water quality and watershed condition and designate watersheds for special protection of human health, public use, and aquatic ecosystem values. Where appropriate, prioritize watersheds for treatment in collaboration with federal, state, tribal, and private landowners.

1a.3 Over the life of the plan, monitor watershed condition in all watersheds. Evaluate degraded watersheds for improvement potential. Where restoration work has been applied, assess trends towards positive watershed condition.

1a.4 Over the life of the plan, move at least 20 percent of degraded watersheds towards positive conditions. This will be accomplished either by modifying management activities that may further compromise the health of a degraded watershed or by rehabilitating degraded resources in the watershed.

1a.5 Over the life of the plan, identify future Forest Service consumptive and non-consumptive water needs and estimate the quantity and quality of water needed to support stream and aquatic based resources and needs.

1a.6 Over the life of the plan, use collaboration with State and local governments and other interested parties, available tools, authorities, and strategies that appropriately consider state law and the interests of holders of existing water rights to achieve desired conditions for aquatic and stream-based resources. Prioritize needs based on resource values, risks, and opportunities.

Objective 1b Provide ecological conditions to sustain viable populations of native and desired nonnative species and to achieve objectives for Management Indicator Species (MIS) and focal species.

Strategy ***1b.1*** Cooperate with the U.S. Fish and Wildlife Service (USFWS) in development and implementation of conservation and recovery strategies and plans for plant and animal species listed as threatened or endangered under the Endangered Species Act (ESA).

1b.2 Cooperate with the USFWS in development and implementation of conservation strategies for proposed and candidate species that the USFWS has determined occur, or may occur, on forest lands in an effort to eliminate the need for listing under ESA.

1b.3 Develop and implement conservation strategies for the plant and animal species on the Regional Sensitive Species List whose habitat occurs on National Forest System (National Forest System) lands.

1b.4 Within 15 years, demonstrate positive trends in habitat availability, habitat quality, or other factors affecting sensitive species and Management Indicator Species.

1b.5 Within 5 years, identify caves and mines that are a high priority for surveys to determine bat use and capability.

1b.6 Develop and implement an average of at least one bat cave or mine management plan per year.

Objective 1c Help ensure viability of species of concern for the White River National Forest through implementation of the Forest Plan and recommendations made in the Species Viability reports (*See Appendix EE for the list of species of viability concern, and Forest Plan Chapter 2, Section 2, Species of Viability Concern, for forest-wide viability direction*).

Strategy ***1c.1*** Develop and implement management strategies needed to support desired population levels and trends for species identified as having a viability concern (*see Appendix EE*).

1c.2 Work with adjacent federal and state public land management agencies and respond to requests from adjacent private landowners to reduce adverse impacts to all species of viability concern on the White River National Forest through the development of conservation easements, habitat conservation plans, and land exchanges.

1c.3 Identify and collect the missing or incomplete information necessary to make a final determination of species viability for all species documented as "species that need more baseline inventory and evaluation to determine status" (*see Appendix EE*). Complete reports for five species or groups of species per year.

1c.4 Over the life of the plan, coordinate with the Colorado Department of Wildlife (CDOW) to prevent introductions of fish or other species where there is potential for negative impacts on threatened, endangered, and sensitive species or species of viability concern.

COLORADO RIVER CUTTHROAT TROUT

1c.10 Link subpopulations of cutthroat trout to create meta-populations. Expand and improve occupied habitat through activities such as removing exotic trout species from cutthroat habitat, constructing barriers to prevent invasion or reinvasion of exotic species into occupied habitat, increasing deep pool habitat, enhancing quantity of large woody debris and other physical habitat features.

1c.11 Conduct habitat survey and assessment of 40 miles of known and potential cutthroat streams per year during the life of the plan.

1c.12 In cooperation with the State of Colorado, identify potential impacts of fishing on cutthroat trout and coordinate management through road, trail, and sign placement.

BOREAL TOAD AND LEOPARD FROG

1c.14 Maintain corridors for interaction between adjacent populations of boreal toads and between adjacent populations of leopard frogs.

1c.15 Identify suitable habitat for reintroduction of boreal toads and leopard frogs and coordinate potential reintroductions with the State of Colorado.

PLANT SPECIES OF VIABILITY CONCERN

1c.16 Monitor the distribution, size, and number of individuals of each known population of the following plant species of viability concern every five years: Harrington penstemon, De Beque phacelia, sun-loving meadowrue, Leadville milk-vetch, sea pink, Colorado tansy aster, rockcress draba, tundra buttercup, altai cottongrass, Kotzebue grass-of-Parnasus, and Porter feathergrass.

FRINGED MYOTIS AND TOWNSEND'S BIG-EARED BAT

1c.17 Manage fringed myotis and Townsend's big-eared bat cave, mine, snag, tree roost, and forage habitat to maintain survival and reproductive success.

BARROW'S GOLDENEYE

1c.18 Maintain and manage occupied Barrow's goldeneye habitat to provide nest cavity snags and high levels of forage insects over time.

1c.19 Identify, retain, and enhance potential Barrow's goldeneye habitat to provide increased nesting, brood rearing, and foraging opportunities.

SAGE GROUSE AND BREWER'S SPARROW

1c.20 Manage activities in known sage grouse and Brewer's sparrow habitat to maintain or enhance habitat quality and reproductive success:

- Reduce temporary and permanent modifications to sagebrush cover type, including, but not limited to, roads, mining, oil and gas developments, and livestock and wildlife improvement developments.
- Maintain or restore native vegetation.
- Manage springs, seeps, and riparian areas to provide high levels of insect and succulent herbaceous forage during the brood-rearing seasons.

1c.21 Identify sage grouse and Brewer's sparrow sagebrush habitat on the White River National Forest within five years.

1c.22 Develop and implement sage grouse management plans in coordination with adjacent land owners and managers and the Colorado Division of Wildlife. If there is no plan developed for sage grouse management specifically for an area, apply the sage grouse and Brewer's sparrow sagebrush habitat standards and guidelines within that area.

PYGMY NUTHATCH

1c.23 Maintain and manage for pygmy nuthatch nest and roost cavity trees and snags over time. Consider the expected time of retention of snags and cavity trees, vegetation type functions and current and future management. Consider creating snags or cavity trees in areas that do not have at least the minimum number of snags.

1c.24 Maintain a diversity of vegetative and structural characteristics over time so that large ponderosa pine trees, and large trees of other species used for foraging by pygmy nuthatches are consistently maintained through time.

SPECIES THAT NEED MORE BASELINE INVENTORY AND EVALUATION TO DETERMINE STATUS

1c.25 Over the life of the plan, coordinate with the Rocky Mountain Bird Observatory, Colorado Division of Wildlife, and the Colorado Natural Heritage Program in monitoring black swift colonies on the forest.

1c.26 Complete a management plan for each known black swift colony on the forest within ten years.

1c.27 Over the life of the plan, coordinate with the Colorado Division of Wildlife, Colorado Natural Heritage Program, and other organizations in surveying and monitoring spotted bats on the White River National Forest.

1c.28 Over the life of the plan, coordinate with the Colorado Natural Heritage Program and other organizations in surveying and monitoring for the following butterfly species needing more baseline inventory and evaluation to determine viability status—Uncompahgre fritillary, Theano alpine, dark blue, white-veined arctic, indra swallowtail, and two-banded checkered skipper.

Objective 1d Increase the amount of forest and rangelands restored to or maintained in a healthy condition with reduced risk and damage from fires, insects, disease, and invasive species.

Strategy ***1d.1*** Over the life of the plan, continue to implement the Integrated Noxious Weed Management (IWM) approach. This includes prevention and detection, education and awareness, inventory, planning, integrated noxious weed management, coordination and cooperation, monitoring, evaluation, research, and technology transfer.

1d.2 Cooperatively work with federal, state, and county agencies and other non-government organizations for control of noxious weeds.

1d.3 An assessment will be completed for all proposed projects and activities to determine the risk of introduction and spread of noxious weeds. Appropriate mitigation measures will be implemented.

1d.4 Within five years of plan approval, all permits and contracts for use of National Forest System lands and resources shall include provisions necessary for the prevention of noxious weeds.

1d.5 Continue to strengthen Upper Colorado River Interagency Fire Management Unit relationships to increase wildland fire protection capabilities to provide for firefighter and public safety.

1d.6 Place high priority on fuel reduction activities in urban/wildland interface areas.

1d.7 Implement management practices, including prescribed fire, that will move landscapes towards desired vegetation composition and structure as described in the management area description and the Historic Range of Variability.

1d.8 Annually update the White River Fire Management Plan in accordance with applicable agency policy and procedures.

1d.9 Over the life of the plan, management practices that mimic ecological processes, such as fire, insect and disease, and other disturbances, will operate on forest and grassland landscapes in a manner consistent with desired conditions and management area direction.

1d.10 Over the life of the plan continue to work cooperatively with grazing permittees and other interested individuals to design and implement grazing systems that maintain or enhance ecosystem function.

1d.11 Through the life of the plan, identify those rangelands in unhealthy condition and prescribe and implement treatments and strategies that restore or enhance the health and long term sustainability of the native plant communities, soil surface conditions, and proper ecosystem functions (e.g., nutrient and energy cycles).

Objective 1e Work cooperatively with individuals, organizations, local, state, tribal, and other federal agencies to promote ecosystem health and sustainability across landscapes.

Strategy ***1e.1*** Within the first five years of plan implementation, cooperatively develop and implement a Noxious Weed Public Awareness Program at the local level.

1e.2 Throughout the life of the plan, continue to cooperatively work with federal, state, county agencies, adjacent landowners, and non-governmental organizations for the control and management of noxious weeds across jurisdictional boundaries.

CANADA LYNX

Objective O1 [ALL] Maintain or restore lynx habitat connectivity in and between LAUs, and in linkage areas.

[ALL]- applies to all management projects in lynx habitat in lynx analysis units (LAUs) in occupied habitat and in linkage areas, subject to valid existing rights. They do not apply to wildfire suppression, or to wildland fire use.

Objective VEG O1 [VEG] Mange vegetation to mimic or approximate natural succession and disturbance processes while maintaining habitat components necessary for the conservation of lynx.

Objective VEG O2 [VEG] Provide a mosaic of habitat conditions through time that support dense horizontal cover, and high densities of snowshoe hare. Provide winter showshoe hare habitat in both the stand initiation structural stage and in mature, multi-story conifer vegetation.

Objective VEG O3 [VEG] Conduct fire use activities to restore ecological processes and maintain or improve lynx habitat.

Objective VEG O4 [VEG] Focus vegetation management in areas that have potential to improve winter snowshoe hare habitat but presently have poorly developed understories that lack dense horizontal cover.

[VEG]- applies to vegetation management projects in lynx habitat within lynx analysis units (LAUs) in occupied habitat. With the exception of ***Objective VEG O3*** that specifically concerns wildland fire use, these objectives do not apply to wildfire suppression, wildland fire use, or removal of vegetation for permanent developments such as mineral operations, ski runs, roads, and the like. None of these objectives apply to linkage areas.

Objective GRAZO1 [GRAZ] Manage livestock to be compatible with improving or maintaining lynx habitat.

[GRAZ]- applies to grazing projects in lynx habitat in lynx analysis units (LAUs) in occupied habitat. They do not apply to linkage areas.

Objective HUO1 [HU] Maintain the lynx's natural competitive advantage over other predators in deep snow, by discouraging the expansion of snow-compacting activities in lynx habitat.

Objective HUO2 [HU] Manage recreational activities to maintain lynx habitat and connectivity.

Objective HUO3 [HU] Concentrate activities in existing developed areas, rather than developing new areas in lynx habitat.

Objective HUO4 [HU] Provide for lynx habitat needs and connectivity when developing new or expanding existing developed recreation sites or ski areas.

Objective HUO5 [HU] Manage human activities, such as special uses, mineral and oil and gas exploration and development, and placement of utility transmission corridors, to reduce impacts on lynx and lynx habitat.

Objective HUO6 [HU] Reduce adverse highway effects on lynx by working cooperatively with other agencies to provide for lynx movement and habitat connectivity, and to reduce the potential for lynx mortality.

[HU]- applies to human use projects, such as special uses (other than grazing), recreation management, roads, highways, and mineral and energy development, in lynx habitat in lynx analysis units (LAUs) in occupied habitat, subject to valid existing rights. They do not apply to vegetation management projects or grazing projects directly. They do not apply to linkage areas.

Objective LINKO1 [LINK] In areas of intermingled land ownership, work with landowners to pursue conservation easements, habitat conservation plans, land exchanges, or other solutions to reduce the potential of adverse impacts on lynx and lynx habitat .

[LINK]- applies to all projects within linkage areas in occupied habitat, subject to valid existing rights.

Goal 2 Multiple Benefits to People

Provide a variety of uses, products, and services for present and future generations by managing within the capability of sustainable ecosystems.

Objective 2a Improve the capability of the national forests and grasslands to provide diverse, high quality outdoor recreation opportunities.

Strategy ***2a.1*** Within five years of plan approval, perform area-specific capacity analyses and develop recreational capacity guidelines for the forest.

2a.2 By the end of the plan period, rehabilitate or reconstruct 30 percent developed recreation facility persons-at-one-time (PAOT) capacities (exclusive of trailheads) to meet agency standards.

2a3 By the end of the plan period, rehabilitate or reconstruct 20 percent trailheads to meet agency standards.

2a.4 By the end of the plan period, rehabilitate 20 percent of dispersed recreation sites to meet agency standards.

2a.5 Within 10 years of plan approval, 30 percent of National Forest System trail mileage rated poor or critical has appropriate maintenance or reconstruction conducted.

2a.6 Through the active promotion of partnerships with state and local governments, private parties, and organizations, encourage, establish, and sustain a diverse and well-balanced range of recreational services and facilities on the forest.

2a.7 By the end of the plan period, increase the number of educational and recreational visitors to heritage resource sites by 50 percent.

2a.8 Foster quality opportunities for alpine and Nordic skiing and snowboarding through partnerships. Work collaboratively with local governments and permit holders to establish long-term planning objectives and management plans for sites where future development may occur on National Forest System lands.

Objective 2b Improve the capability of wilderness and protected areas to sustain a desired range of benefits and values. Manage wilderness so that changes in the ecosystem are primarily a consequence of natural forces or within the range of natural variability and succession.

Strategy ***2b.1*** By the end of the plan period, meet forest plan desired conditions in pristine (1.11), primitive (1.12), and semi-primitive (1.13) management areas.

2b.2 Give high priority to the acquisition of non-federal lands within wilderness, as well as non-federal lands within those areas recommended for inclusion in the system.

2b.3 Over the life of the plan, complete operational fire use plans for all wilderness areas to allow the natural role of fire to be restored in the ecosystem.

2b.4 Monitor visibility and wilderness lake chemistries to assure that over the life of the plan, air-quality-related values in all wilderness areas are protected and where necessary, improved.

2b.5 Over the next five years, develop monitoring plans for all wilderness areas that identify indicators and standards for those elements critical to ecological integrity.

2b.6 Over the life of the plan, expand the forest-wide integrated noxious weed plan to includes strategies for prevention, education, detection, quick elimination of spot infestations, and control of major occurrences in all wilderness areas.

2b.7 In cooperation with the Colorado Division of Wildlife (CDOW) and USFWS, emphasize fish and wildlife management activities within wilderness that assure the protection of natural processes and conform with the Wilderness Act.

2b.8 By the end of the plan period, protect, conserve, and, if necessary, restore 50 percent of known heritage resource sites.

2b.9 Annually inventory acres and evaluate sites as agreed with State Historic Preservation Offices (SHPO) and Tribal Historic Preservation Offices.

2b.10 Within 15 years, develop preservation plans with SHPO and Tribal Historic Preservation Offices and provide interpretation for all listed National Register heritage sites and heritage districts.

2b.11 In consultation with American Indian tribes and traditional communities, develop management plans for protection of traditional cultural properties as sites are identified.

2b.12 Within 10 years, update prehistoric, ethnographic, and historic overviews.

2b.13 Within three years, develop a comprehensive heritage and implementation schedule for heritage resources.

2b.14 Over the life of the plan, manage communities of special concern (caves, riparian habitats, alpine tundra, etc.) that are characteristic of research natural areas, wild, scenic, and recreational rivers, and special interest areas on the forest for their natural conditions or values.

Objective 2c Improve the capability of national forests and rangelands to sustain desired uses, values, products, and services.

Strategy ***2c.1*** By the end of the plan period, offer for sale the allowable timber sale quantity.

2c.2 Within five years, implement national protocols for issuing miscellaneous product permits to make a range of natural resources available for collection of botanicals.

2c.3 Continue to satisfy the demand for livestock products through environmentally responsible grazing. By the end of the plan period, complete environmental analysis on 95 to 100 percent of National Forest System grazing allotments and reauthorize grazing permits where consistent with other resource considerations.

2c.4 Over the life of the plan, take advantage of opportunities to develop model projects that demonstrate new environmental protection technology and landscape-compatible design of oil and gas production facilities.

2c.5 Over the life of the plan, respond to requests for leasing, exploration, and development of mineral and energy resources in accordance with regulations and forest plan availability and specific lands decisions.

2c.6 Over the life of the plan, ensure reclamation provisions of operating plans and surface use plans of operation are completed to standard.

2c.7 Over the life of the plan, provide for mineral materials when the national forest is the only available source for these materials.

2c.8 Over the life of the plan, provide for mineral exploration and development, in accordance with laws and regulations.

2c.9 Within five years of plan approval, and each following five years, evaluate scenery management monitoring results and implement appropriate management adjustments.

2c.10 Over the life of the plan, conduct suitability analysis for all eligible wild, scenic, or recreational rivers.

2c.11 Over the life of the plan, approve special-use proposals that are consistent with desired conditions, standards, and guidelines.

2c.12 Within 10 years of plan approval, administer outfitter/guide, resort, and concessionaire permits and contracts to standard as defined by Meaningful Measures.

2c.13 Within five years of plan approval, identify potential wildlife/fish/plant viewing sites and develop strategies for protection and use.

2c.14 By the end of plan period, protect, develop and interpret 30 percent of the identified wildlife, fish, and plant viewing sites.

2c.15 Over the life of the plan, cooperate with the CDOW for wildlife and fish population management to support the achievement of desired population objectives through appropriate habitat management.

2c.16 Over the life of the plan, identify the work needed to address abandoned mine sites with an environmental degradation rating of 1, 2, or 3, including potentially responsible party searches, land line location, and site characterization. Begin work on highest-priority sites, subject to multi-jurisdictional funding (see Appendix J for definitions of these environmental degradation ratings).

2c.17 Over the life of the plan, minimize the amount and impact of air pollutants produced from land management activities.

Goal 3 Scientific and Technical Assistance

Develop and use the best scientific information available to deliver technical and community assistance to support ecological, economic, and social sustainability.

Objective 3a Increase the effectiveness of scientific, developmental, and technical information delivered to domestic and international interests.

Strategy ***3a.1*** Encourage participation of forest personnel in community and other government projects that involve management of natural resources. Invite state and local government personnel to become more involved in the design and analysis of Forest Service projects that may affect economic and social elements of the community.

3a.2 Increase the availability of Forest Service natural resource, economic, social, facility, and other information by:

a. Utilizing readily available or commonly used techniques for transferring information in response to requests;

b. Further developing the White River National Forest web site so that more natural resource, economic, social, facility, and other information can be accessed and retrieved;

c. Improving documentation of available information and posting data directories and data dictionaries on the forest web site; and

d. Improving the general availability of relevant non-Forest Service data sources by working with state and local governments, colleges and universities, and other organizations.

Goal 4 Effective Public Service

Ensure the acquisition and use of an appropriate corporate infrastructure to enable the efficient delivery of a variety of uses.

Objective 4a Improve the safety and economy of Forest Service roads, trails, facilities, and operations and provide greater security for the public and employees.

Strategy ***4a.1*** Within five years of plan approval, conduct appropriate maintenance on 25 percent of the Forest Development Transportation System each year.

4a.2 Decommission an average of 22 miles of Forest Development Transportation System roads each year.

4a.3 Within five years of plan approval, complete an average of 10 percent of high-priority facility reconstruction projects each year.

4a.4 Within five years of plan approval, maintain to standard 20 percent of buildings, bridges, and other facilities.

Objective 4b Provide appropriate access to National Forest System lands and USDA Forest Service programs.

Strategy ***4b.1*** Over the life of the plan, take advantage of opportunities in approved land ownership adjustment plans to convey, purchase, or exchange lands where needed.

4b.2 By the end of the plan period, survey and mark 21 percent of National Forest System land boundaries to standard.

Goal 5 Public Collaboration

Engage the American public, interested organizations, private landowners, state and local governments, federal agencies, and others in the stewardship of National Forest System lands.

Objective 5a Work cooperatively with individuals and organizations, local, state, tribal, and federal governments to promote ecological, economic, and social health and sustainability across landscapes.

Strategy ***5a.1*** Provide opportunities for local governmental jurisdictions and other interested parties to participate in planning and management of National Forest System lands, especially where local governmental jurisdictions or other landowners are contiguous to or may be affected by the management of these lands.

5a.2 Cooperatively work with local governments to address issues of common concern and to the extent possible maintain consistency with locally adopted master plans.

5a.3 Involve representatives from local governmental jurisdictions and other landowners adjacent to or affected by the management of National Forest System lands in the monitoring and evaluation of implemented forest plans.

5a.6 Pursue partnerships and cooperative funding for projects to enhance resources used or valued by tribes.

5a.7 Seek opportunities to use tribal technical expertise in agency actions (planning and monitoring project phases), and share agency technical expertise and information with tribal governments.

Goal 6 American Indian Rights and Interests

Engage tribal governments to work in close coordination with the White River National Forest and in collaboration with the American public, interested organizations, private landowners, state, local, and federal agencies and others in the stewardship of National Forest System lands in order to incorporate tribal resource management values into forest management activities.

Objective 6a Coordinate closely with the three Confederated Ute Tribes and work cooperatively with individuals and organizations, local, state, and federal governments to promote ecological, economic, and social health and sustainability across landscapes.

Strategy ***6a.1*** Provide opportunities for Ute tribal governmental jurisdictions to participate in planning and management of National Forest System lands.

6a.2 Cooperatively work with tribal governments to address issues of common concern when the three Confederated Ute tribal interests may be affected.

6a.3 Involve representatives from tribal governmental jurisdictions affected by the management of National Forest System lands in the monitoring and evaluation of implemented forest plans.

6a.4 Recognize the unique sovereign nation status that the three Confederated Ute Indian Tribes have with the United States government.

6a.5 Maintain and strengthen the existing relationship of government-to-government consultation between the forest and the three Confederated Ute Indian Tribes.

6a.6 Pursue partnerships and cooperative funding for projects to enhance resources used or valued by tribes.

6a.7 Seek opportunities to use tribal technical expertise in agency actions (planning and monitoring project phases), and share agency technical expertise and information with tribal governments.

Objective 6b To redeem federal trust relationship and other responsibilities by establishing government-to-government and other formal relations with American Indian tribes.

Strategy ***6b.1*** Develop consultation protocols and other formal agreements between the Forest Service and American Indian tribes, both recognized and unrecognized, with direct communication between Forest Service line officers and tribal officials.

Objective 6c Coordinate and collaborate with tribal governments to address fire protection on national forests.

Strategy ***6c.1*** Develop and coordinate fire protection plans between the Forest Service and the appropriate tribal government or intertribal organization.

6c.2 Make agreements to support both tribal and national forest fire programs by coordinating training, outreach, and other topics of mutual interest.

Objective 6d Coordinate and collaborate with tribal governments to increase awareness and knowledge of culturally significant plants, and consider potential impacts on culturally significant plants in project design and implementation.

Strategy ***6d.1*** Assure that prescribed burn plans, noxious weed control, and other management projects address and consider traditional uses of and traditional management of culturally significant plants.

6d.2 The Forest Service assesses needs for and supply of lodgepole pine (*Pinus contorta*).

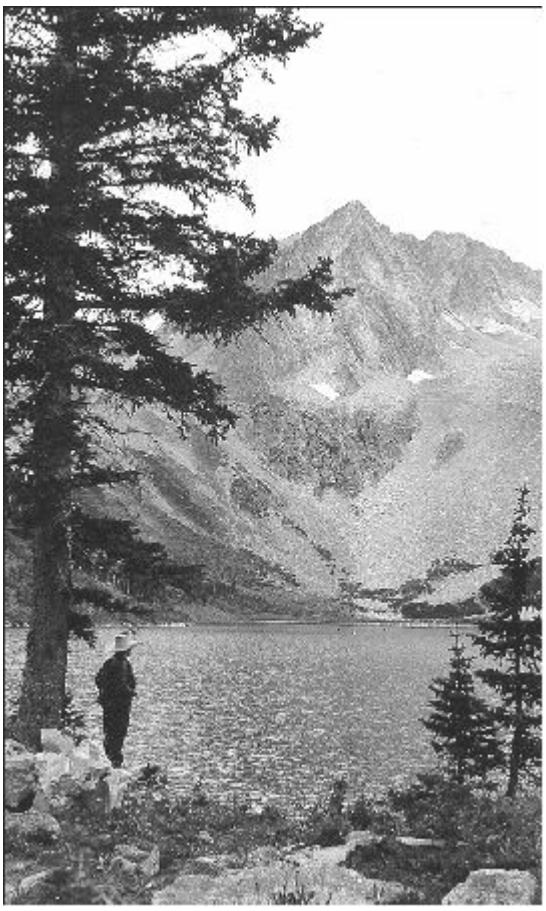
Objective 6e Provide appropriate protection and access to sacred sites, ceremonial sites, and traditional use sites.

Strategy ***6e.1*** The Forest Service consults with tribes, communities, and knowledgeable individuals when resource protection closures or travel management activities are proposed or changed.

6e.2 The Forest Service consults with tribal interests in mineral withdrawals and management activities or resource availability decisions at inventoried sacred sites.

CHAPTER TWO

Forest-wide Standards and Guidelines



Snowmass Lake, Maroon Bells-Snowmass Wilderness

Chapter 2

Forest-wide Standards and Guidelines

Introduction

Background

This chapter presents the forest-wide standards and guidelines for the White River National Forest. These standards and guidelines for the protection or management of different forest resources apply to all areas of the forest. Additional standards and guidelines specific to each management area prescription are listed in Chapter 3.

A standard is defined as a course of action that must be followed, or a level of attainment that must be reached, to achieve forest goals. Adherence to standards is mandatory. Standards are used to assure that individual projects are in compliance with the forest plan. They should limit project-related activities, not compel or require them. Deviations from standards must be analyzed and documented in a forest plan amendment. Standards are developed when:

- Applicable laws or policies do not exist, or clarification is needed of existing laws or policies.
- They are critical to the achievement of objectives.
- Unacceptable impacts may occur if a standard is not in place.

A guideline is a preferred or advisable course of action or level of attainment. Guidelines are designed to achieve desired conditions (goals). Deviation from a guideline and the reasons for doing so are recorded in a project-level National Environmental Policy Act (NEPA) document; a forest plan amendment is not required. Guidelines are developed when:

- They contribute to the achievement of goals.
- They are needed to respond to variable site conditions.
- They are needed to respond to variable overall conditions.
- Professional expertise is needed.

When forest-wide standards and guidelines conflict with management area standards and guidelines, those that are more stringent or restrictive are applied.

Standards and guidelines are implemented slightly differently for species of viability concern. See the directions on page 2-18 (Wildlife Section, Proposed, Threatened, Endangered, Sensitive Species and Species of Viability Concern heading) for details.

Conformance with other direction

This set of standards and guidelines is designed to be specific to the forest. Laws, regulations, and Forest Service directives generally are not repeated in this package, although references to particular laws or directives are included to provide needed emphasis for the protection and management of specific resources.

For example, there are references to:

- The Clean Air Act
- The Colorado Air Quality Control Act
- FSM 2467.16 (botanical collections)
- FSH 2409.26 (silvicultural systems)
- The Region 2 Wilderness Management Philosophy
- FSH 2409.18 (timber utilization standards)
- Recreation Opportunity Spectrum (ROS) User's Guide
- Several federal acts protecting heritage resources
- Landscape Aesthetics: A Handbook for Scenery Management (Agriculture Handbook 701)
- The Outfitter-Guide Administration Guidebook

The lack of specific standards and guidelines for a particular resource in this chapter does not mean that the White River National Forest does not manage or consider this resource. Nor does it indicate that the Forest Service considers a particular resource less important than those listed. The entire forest plan, including the appendices, must be read carefully to understand how all forest resources will be managed. Refer to the forest-wide desired condition and goal statements, forest-wide objectives, and to the appendices for complete information. In particular, Appendices AA through HH provide references or repeat key direction for resource management found outside the forest plan.

Changes between Draft and Final

Several sections of the standards and guidelines have been modified from what was presented in the Proposed Revised Forest Plan. These changes are the result of comments on the draft, information becoming available after the Proposed Revised Plan was complete, and internal agency review. These changes have resulted in direction that pertains to and is appropriate for the White River National Forest.

Examples of direction in this chapter that has changed between draft and final include, but are not limited to, standards and guidelines on:

- Species of Viability Concern – resulting from a re-examination of species viability as described in FEIS Chapter 3, Topic 1, Species Assessment
- Water and Riparian Resources – resulting from an update to the Watershed Conservation practices Handbook
- Canada Lynx – resulting from the Canada lynx being listed as a Threatened species under the Endangered Species Act

Section One

Physical

AIR RESOURCES

Standards

1. Meet state and federal air quality standards and comply with local, state, and federal air quality regulations and requirements either through original project design or through mitigation for such activities as prescribed fire, ski area development or expansion, mining, and oil and gas exploration and production.

2. Perform conformity determinations or apply appropriate mitigation to zero out pollutants in order to maintain conformity with the State Implementation Plan for proposed activities that will contribute to air pollutants to Environmental Protection Agency (EPA) designated non-attainment and maintenance areas.

Guidelines

1. For water bodies in both Class 1 and Class 2 wilderness areas for which the acid neutralizing capacity (ANC) is greater than 25 micro-equivalents per liter, the limit of acceptable change (LAC) from human-caused air pollution is no more than 10 percent change in ANC. For those extremely sensitive water bodies in which the ANC is less than 25 micro-equivalents per liter, the LAC is no greater than one micro-equivalent per liter.

2. For plume visibility impairment in wilderness, the LAC is a 5 percent change in contrast. The LAC for haze visibility impairment in wilderness is a 0.5 percent change in deciview or 5 percent change in light extinction.

3. Minimize the impact of smoke for each wildland fire by identifying smoke-sensitive areas, using "best available control measures," monitoring smoke impacts, and following guidance in state smoke management plans.

4. Reduce the impacts to air quality and loss of energy resources by only allowing flaring of gas from oil wells during production testing of wells. Connection to a pipeline or reinjection will be required once production is established. Exceptions will be considered on a case-by-case basis.

CAVES

Guidelines

1. Manage natural surface drainage and vegetation that may affect known caves or cave resources to protect cave micro-environments.

2. Management activities that may affect known caves will be designed to protect cave ecosystems.

3. Identified significant caves will be withdrawn from mineral entry.

GEOLOGY, MINERAL, AND ENERGY RESOURCES

Standards

1. Recommend consent to lease with appropriate lease terms or stipulations, as set forth in the *Oil and Gas Leasing Final Environmental Impact Statement for the White River National Forest* (1993).

2. In areas of moderate-to-high potential for valuable mineral deposits, perform site-specific mineral evaluations prior to making substantial capital investments, such as recreational developments.

3. Avoid development of capital investments in areas that will be jeopardized by moderate-to-high mineral potential on non-federal mineral estate ownership.

PALEONTOLOGICAL RESOURCES

Standards

1. Sensitive paleontological information will not be subject to Freedom of Information Act disclosure.

2. Prohibit the collection of vertebrate fossils on National Forest System lands without a permit.

3. Allow collection of paleontological vertebrate resources with authorization (permit or area designation) for educational and scientific purposes. Prohibit the commercial collection of fossils**.**

Guidelines

1. Identify areas of potential paleontological resources in Classes 3, 4, and 5 of the Fossil Yield Potential Classification for the presence or absence of management-relevant paleontological resources. If resources are identified, protect from disturbance or mitigate disturbances to conserve scientific, educational, interpretive, and legacy values.

2. Survey and post land boundaries where paleontological sites have sensitivity rankings of 3, 4, or 5.

SOILS

Standards

5. Manage land treatments to maintain or improve soil quality, limiting the sum of detrimental soil impacts to no more than 15 percent of an activity area.

7. Design vegetation and fuels management treatments to retain the average per-acre levels of coarse woody debris (CWD) displayed in Table 2-1. Coarse woody debris retention will help maintain long-term site productivity by reducing soil movement, retaining soil moisture, and providing microsites for new plant establishment. Where these levels do not presently exist, evaluate long-term potentials and consider treatments that could help move coarse woody debris levels towards the desired condition.

Table 2-1
Coarse Woody Debris Retention Levels by Forest Type

Forest Type[4]	Minimum Retention for Small Diameter Component[1] (Tons per acre 3 to 8 or 10 inches in diameter[2])	Minimum Retention for Large Diameter Component[1,3] (Tons per acre greater than 8 or 10 inches in diameter[2])	Total Down CWD Retention[1] (Tons per acre of materials greater than 3 inches in diameter)
Spruce-fir	8.5	1.5	**10**
Lodgepole pine	4.25	0.75	**5**
Aspen	2.5	0.5	**3**
Douglas-fir	4.25	0.75	**5**
Ponderosa pine	3.5	0.5	**4**

Notes:

[1]These amounts are to be calculated as per-acre averages for each 1,000 acres over a silvicultural landscape assessment area (see Silviculture Guideline 1).

[2]The minimum diameter of CWD is measured at the larger end of the material.

[3]The large diameter component satisfies wildlife needs for CWD retention in Table 2-2.

[4]The 8 inch minimum diameter applies to lodgepole pine and aspen while the 10-inch minimum applies to spruce-fir, Douglas-fir, and ponderosa pine types.

Guidelines

1. Conduct an onsite slope stability exam in areas identified as potentially unstable. Potentially unstable land is described as having a "high" or "very high" instability ranking or classified as "unstable" or "marginally unstable." Limit intensive ground-disturbing activities on unstable slopes identified during examinations.

2. Where there is potential for toxic contamination of soil from ground-disturbing activities, develop a contingency plan to prevent or rehabilitate soil contamination.

3. When logging over snow, conditions should allow for 1 foot of packed snow to be continuous (i.e. not patchy) and competent enough so that wheeled or tracked vehicles do not break through. When logging over frozen ground, a minimum of 3 inches of continuous frozen ground should be present.

4. To minimize soil impacts, the following practices should be followed for vegetation management activities:

- Use practices other than brush rake piling and crushing by heavy equipment to dispose of slash,
- Limit the width of skid trails to 12 feet and spacing between trails to no closer than 120 feet on average,
- Limit heavy equipment such as feller-bunchers to 3 round trip passes on designated skid trails,
- Utilize low p.s.i. (less than 7 p.s.i.) tracked equipment when available.

WATER AND RIPARIAN RESOURCES

Standards

1. In each stream currently supporting a self-sustaining fish population, ensure that projects maintain sufficient habitat, including flow, for all life history stages of native and desired non-native aquatic species.

4. Naturally occurring debris shall not be removed from stream channels unless it is a threat to life, property, important resource values, or is otherwise covered by legal agreement. Removal in designated wilderness must consider wilderness values.

Guidelines

1. When projects are implemented that can affect large woody debris, retain natural and beneficial volumes of this material for fish habitat, for stream energy dissipation, and as sources of organic matter for the stream ecosystem.

2. Keep vehicles and equipment out of streams, lakes, and wetlands except to cross at designated points, build crossings, do restoration work, or where protected by one foot of snowpack or frozen soil.

3. Maintain existing federal water rights. Take appropriate action to use and protect water rights, including but not limited to changing uses to meet federal needs for water. If the water rights are not needed to meet national forest purposes, sell, lease, or exchange these federal water rights.

Section Two

Biological

ALPINE

Standards

1. Prohibit new structural facilities in alpine wetlands, streams, and riparian areas except when needed to reduce existing resource impacts.

Guidelines

1. Campfires are prohibited above treeline to protect fragile alpine soils and vegetation. Barbeques and grill which are operated to cause no impacts to soils and vegetation may be permitted in appropriate places and facilities by permit.

2. Minimize new roads, trails, and livestock driveways in alpine ecosystems.

3. Minimize soil excavation and disturbance in alpine ecosystems.

4. Minimize the size and number of structures in alpine ecosystems.

5. Manage public uses to minimize resource damage in alpine ecosystems.

BIODIVERSITY

Standards

1. Use genetically local (at the ecological subsection level) native plant species for revegetation efforts when technically and economically feasible. Use seed mixtures and mulch that are noxious weed-free. To prevent soil erosion, non-persistent, non-native annuals or sterile perennial species may be used while native perennials are becoming established.

2. Develop prescriptions during project planning to identify the amount, size(s), and distribution of downed logs and snags to be left onsite, as well as live, green replacement trees for future snags. On forested sites, retain snags and downed logs (where materials are available) in accordance with the average minimums specified in **Table 2-2**.

Table 2-2
Minimum requirements for snag, snag recruitment, and woody debris retention

	Snags				***Large Snags***			***Downed Logs***	
Forest Type	**Minimum diameter at DBH** (inches)	**Retention density** (number per acre)	**Recruitment density** (number per acre)	**Minimum snag height** (feet)	**Minimum diameter at DBH** (inches)	**Retention density** (number per five acres)	**Minimum snag height** (feet)	***Minimum diameter** (inches)	**Retention density** (linear feet per acre)
Spruce-fir	10	3	3	25	20	1	50	10	150
Lodgepole pine	8	3	3	25	20	1	50	8	100
Aspen	8	3	3	25	20	1	50	8	50
Douglas-fir	10	3	3	25	20	1	50	10	100
Ponderosa pine	10	3	3	25	20	1	50	10	50

Note: These amounts are to be calculated as per-acre averages for each 1,000 acres over a silvicultural landscape assessment area (see Silviculture Guideline #1). The retention density of large snags is a portion of the retention density of all snags. *The minimum diameter of downed logs is measured at the larger end of the log.

3. If no snags meet the minimum diameter and height requirements, use the largest snags available.

4. Manage late-successional and old-growth forests according to the map, table, and explanation found in Appendix FF of this document.

Guidelines

1. Favor native and desirable non-native plant and animal species over undesirable exotic species during management plan implementation activities. Within designated wilderness, use genetically local native species preferentially.

2. Because of the ecological importance of the aspen vegetative type on the forest, analyze aspen's historical spatial and structural occurrence in the landscape during project design. Compare proposed changes to reference landscape conditions where such conditions have been developed. Make comparisons within the same ecological landtype association. Reference landscape conditions should provide a baseline depiction of the following spatial attributes:

- Landscape composition.
- Landscape configuration.
- Patch and size distribution.
- Distance between patches.

The intent is to maintain or enhance these attributes when compared to the reference landscape. An interdisciplinary team has the latitude during project design to propose how much to change each spatial attribute when comparing the landscape of interest to the reference landscape.

3. The following are high priorities for aspen regeneration:

- Decadent stands (stands with significant amounts of canker, stem decay, and root disease);
- Stands with less than 10 feet per acre basal area of aspen in a conifer stand;
- Isolated clones, low-elevation stands, and stands that are heavily used by animals; and
- Cost-efficient stands that contribute to aspen distribution.

4. Base priorities for conserving potential or existing late-successional stands on values for maintaining biotic diversity, and evaluate factors of size, adjacency between late-successional stands, and degree of habitat variation between such late-successional stands and intervening vegetation. Also consider the following:

- Conserve older, unmanipulated stands over younger, manipulated stands;
- Favor stands with limited access by humans or livestock; and
- Provide potential for reintroduction of plant and animal species that have become locally eliminated.

RANGELAND ECOSYSTEM MANAGEMENT

Standards

1. For animal damage control activities conducted by other governmental entities, cooperate by providing mitigation measures to protect national forest resources. Mitigation measures emphasize protection of public safety; proposed, threatened, endangered, and sensitive species, water quality, and other resource values.

2. Allow continuous season-long grazing in an allotment only where determined to achieve or maintain the desired ecosystem conditions.

Guidelines

1. Identify desired plant communities and designate key areas to evaluate whether the existing plant communities are at, moving toward, or moving away from desired conditions in site-specific analyses required for allotment management plans.

2. During range allotment planning, develop site-specific herbaceous vegetation utilization, vegetation residue, streambank disturbance, and woody species utilization guidelines. In the absence of updated planning and approved decision documents, the following allowable use and riparian vegetation residue guidelines and mitigation measures will apply. These utilization guidelines are applicable at the time the livestock leave the unit and include use by both domestic livestock and wildlife. **Table 2-3** shows the maximum allowable use guidelines for cattle allotments. Sheep allotment utilization guidelines are given by narrative description. **Table 2-4** provides riparian residue guidelines for both cattle and sheep.

Table 2-3
Maximum allowable use guidelines (percent utilization by weight) for cattle allotments

	If existing rangeland condition is:*	
Type of management	**Satisfactory**	**Unsatisfactory**
Season long	40	30
Deferred rotation		
Units grazed > 30 days	45	35
Units grazed < 30 days	55	45
Rest rotation		
Units grazed > 30 days	45	35
Units grazed < 30 days	55	45

Notes:

Rangeland condition is defined as the present state of vegetation on a range site in relation to the climax (natural potential) plant community.

Sheep allotments

The following visual description of post-grazing conditions should be used to determine the proper measure of allowable use on sheep allotments:

- After sheep have completed using an area, there should be only moderately visible signs that they have used the area. One should have to walk or ride through the area to see where use has been made. Although bedgrounds may show more evidence of use than areas sheep have only

grazed through, one should still have to walk or ride through the bedground to determine that animals had bedded there.

- Soil and vegetation should be restored to at least the pre-grazing condition by the return to the same point in the next grazing cycle.
- Forage should show that it has been topped and selectively grazed. Favored forbs such as *Angelica spp.*, cow parsnip, Porter lovage and *Senecio spp.* may be stripped of their leaves, but in most cases, the stem is standing.

Table 2-4
Riparian vegetation residue guidelines

Remove livestock from riparian areas when the average stubble height of Carex species reach:

	If existing rangeland condition is:	
Type of management	**Satisfactory**	**Unsatisfactory**
Spring Use (up to July 15)	3 inches	4 inches
Summer/fall use (after July 15)	4 inches	6 inches

Note: Measurements are of plant heights.

3. The following should be applied to all riparian habitats:

- Avoid season long grazing in riparian areas and wetlands.
- Implement short-duration grazing (generally less than 20-30 days) as feasible to provide opportunity for re-growth and avoid utilization of woody species.
- Remove livestock from a grazing unit when stream bank disturbance (trampling and exposed soils) from the current year's livestock grazing reaches 20 to 25 percent of the key area stream reach.
- Design grazing systems to limit utilization on woody species. No more than 50 percent of the twigs of woody species should be browsed during one growth cycle.
- Limit utilization of herbaceous species to 40-45 percent of weight.
- Keep stock driveways out of riparian areas except to cross. Rehabilitate or relocate stock driveways that are causing damage to riparian areas.

SILVICULTURE

Standards

1. The scientifically defined silviculture systems, shown by forest cover type in **Table 2-5**, which meet the management objectives for the landscape or individual stands of trees within a landscape setting are acceptable. Both even-aged and uneven-aged management systems can be used and applied at scales ranging from a few acres to many hundreds of acres. These silvicultural systems are to be applied in a manner that will ensure natural regeneration where artificial regeneration is not necessary for other resource objectives. Tree stand vegetation management treatments are to be approved by certified silviculturists.

Table 2-5
Appropriate silviculture systems by forest cover type

Forest cover type	Even-aged	Two-aged	Uneven-aged
Ponderosa pine	Shelterwood, clearcut, and seed-tree	Irregular shelterwood	Group selection and single-tree selection
Mixed conifer	Shelterwood, clearcut, and seed-tree	Irregular shelterwood	Group selection and single-tree selection
Aspen	Coppice[1]	Coppice with standards[2]	Group selection[3]
Lodgepole pine	Shelterwood, clearcut, and seed-tree	Irregular shelterwood	Group selection
Engelmann spruce Subalpine-fir	Shelterwood and clearcut	Irregular shelterwood	Group selection and single-tree selection

Notes:

[1]Coppice is a vegetation reproduction method with clearfelling or clearcutting. Clearfelling (clearcutting) stimulates sprouting from the residual roots.

[2]"Standards" are selected overstory trees reserved for a longer rotation at the time each crop of coppice material is cut.

[3]Use of group selection as an appropriate silviculture system in aspen is currently under study to determine regeneration success, but is authorized on a test basis.

[4]. Clearcuts are acceptable systems for Ponderosa Pine and Englemann spruce, but not standard practice except to meet specific resource or stand requirements.

2. When trees are harvested to meet timber production objectives, assure that the technology and knowledge exists to adequately restock these areas with trees within five years after final harvest. Minimum restocking levels are defined in **Table 2-6**.

Table 2-6
Standards for the required minimum numbers of seedlings for adequate restocking of a regeneration site.

	Growing stock: all live trees							
Species	**Spruce-fir**	**Aspen**	**Douglas-fir**	**Lodgepole pine**	**Ponderosa pine**	**Piñon-juniper**	**Other softwood**	**Other hardwood**
Trees per acre	150	300	150	150	150	120	150	300

3. No minimum seedling height requirements are specified. Seedlings must have survived a minimum of one year and be expected (on the basis of research and experience) to be able to produce the desired future stand condition specified for this area in the forest plan. The number of seedlings in **Table 2-6** represents the minimum number of seedlings required to produce a merchantable timber stand at rotation age without intermediate treatments, taking into consideration natural mortality.

4. Five years after final harvest means five years after clearcutting, five years after the final overstory removal in the shelterwood and seed tree system, or five years after selection cutting. The requirement for adequate restocking within five years is initiated by the final harvest. The timing of the first-year and third-year restocking surveys is initiated by the reforestation treatment.

5. The maximum size of openings created by even-aged management will be 40 acres regardless of forest type, with the following exceptions:

- When proposals for larger openings are approved by the Regional Forester after a 60-day public review;
- When larger openings are the result of natural catastrophic conditions; or
- When the area that is cut does not meet the definition of created openings.

6. The size of the uncut forest areas between openings must be based on the management objectives for the landscape being analyzed. If these objectives include creating a mix of vegetation types to benefit the kinds of wildlife associated with early successional stages and edges, the uncut units can be small. If the objectives include provisions for old-growth-associated species, the uncut units should be large enough to function as an ecological system not overly influenced by the edge.

7. Where disease can spread from an uncut stand to a newly regenerated stand, it is desirable to cut the adjacent infected stand before the newly regenerated stand reaches a height of six feet.

8. When trees are to be harvested on other than suitable lands, exceptions to the five-year restocking standards are appropriate as documented in project decisions when the harvest meets one of the following:

- Where it provides permanent openings that serve specific management direction;
- Where provided for in specific management practices and prescriptions; or
- Where it is desirable to delay the onset of regeneration and crown closure to meet specific desired conditions and management objectives.

9. In order to assure that adequate restocking of openings created as a result of final harvest is accomplished, at a minimum stocking surveys are conducted at the end of the first and third growing seasons following reforestation treatment. Adequate stocking cannot be certified until after the third growing season survey.

10. Utilization standards for live and dead trees are shown in **Table 2-7.** These standards apply forest-wide (FSH 2409.18, Ch. 50).

Table 2-7
Timber utilization standards

Type of product	Minimum diameter at breast height (inches)	Top diameter (inches)	Minimum length (feet)	Merchantability factor
Live trees				
Coniferous sawtimber	7-8	5-7	8-10	10.67
Aspen sawtimber	7-8	5-7	8	8
Products other than sawtimber	5	4	6.5	variable
Dead trees				
Sawtimber	7-12	7-10	6-18	10.67
Products other than sawtimber	5	4	variable	variable

11. Artificially created openings will no longer be considered openings when the trees in the openings have reached a height and density that meets the objective established for the management area. Considerations in determining when an opening is no longer an opening include:

- The desired future conditions planned for the management area;
- Visual sensitivity of the area;
- The character of the landscape;
- Abundance, quality and need for cover for big game animals;
- Other vegetation that may be present (such as tall shrubs);
- Forest health;
- Need for seed sources;
- Need for interior forest area;
- Production of wood fiber; and
- Watershed and riparian area protection.

Table 2-8 illustrates some guidelines that could be considered in developing local standards for management areas.

Table 2-8
Guidelines for when an opening is no longer considered an opening.

Forest cover type	Trees per acre	Height of trees
Ponderosa pine and mixed conifer		
Big game cover	200	6 feet
High and moderate scenic integrity objectives	200	25% of the height of the adjacent stand
Lodgepole pine and spruce-fir		
Big game cover	300	6 feet
High and moderate scenic integrity objectives	150	25% of the height of the adjacent stand
Aspen		
Big game cover	500	6 feet

12. Restrict activities in the ponderosa pine cover type to managing for two-aged or uneven-aged silvicultural systems.

Guidelines

1. The landscape should be the primary unit of analysis for silviculture. A landscape is defined here to mean a distinct landform, such as a mesa or an "Order IV" watershed. There is a great variety of landscape types within the Rocky Mountain Region. Some landscapes are "fine-grained" and are characterized by many small areas in various stages of plant succession. Other landscapes are "large-grained"—forested areas with large, unbroken expanses of trees with few openings. Some areas in the region have become a patchwork of forest and open places as a result of human use before national forest establishment, past Forest Service management practices, or natural disturbances (wind, fire, insect activity, and earth movement).

2. In most circumstances, rely on or make primary use of those silviculture systems that ensure regeneration of forest stands through natural seeding and suckering.

3. Use artificial regeneration methods when it is not possible to rely on the natural sequence of events or environmental conditions to regenerate the forests within five years or earlier.

4. 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 growing conditions (as commonly measured by site index).

5. Leave large woody debris on harvested or thinned sites to help retain moisture, trap soil movement, provide microsites for establishment of forbs, grasses, shrubs, and trees, and to provide habitat for wildlife (*See Soils Standard 7 and Table 2-1*).

6. Where appropriate, reduce competition between desired trees and other vegetation.

7. If the silviculture system being applied to a particular area of the landscape is uneven-aged, harvest trees designated for non-commercial or commercial timber production based on the desired density as determined by age class or size, and the objective for the area.

8. Maintain some aspen stands, even at the expense of spruce-fir or other late-successional stands.

9. These standards and guidelines should be applied at the watershed and landscape level, as well as to individual stands of trees. The standards and guidelines must be applied in such a way as to perpetuate this range of environmental conditions while supplying goods and services to people.

10. Where feasible and appropriate, use broadcast 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.

11. The choice of silviculture system should be one that allows emulation of the pattern, timing, and frequency of natural disturbances found in the landscape being treated (FSH 2409.26).

12. Regeneration harvest of even-aged timber stands (sites) should not be undertaken until the stands have generally reached or surpassed 95 percent of the culmination of the mean annual increment measured in cubic feet. Exceptions may be made in cases in which resource management objectives or special resource considerations require earlier harvest, such as:

- Stands that are in imminent danger from insect or disease attack
- Wildlife habitat improvement
- Scenery resource enhancement or rehabilitation
- Ecosystem restoration
- Areas managed for Christmas tree production.

13. Altering more than one-third of the edge of a natural opening will be avoided whenever an artificially created opening lies adjacent to a natural opening. Additional edge should not be created until previously treated areas are considered closed according to.

SPECIAL FOREST PRODUCTS

Standards

1. *Plant Collecting*—The following do not apply to the harvest of trees for timber, fuelwood, or Christmas trees.

- *Sensitive Plant Collections* –Permits are required to collect Region 2 sensitive plants or plant parts. Such collection must not jeopardize the continued vigor or existence of a plant population.
- *Commercial* – Collecting of plants or plant parts for any commercial purpose requires a commercial use permit issued by the ranger district in which the collecting activity is proposed. Commercial permits will be issued or denied after review of a proposal presented by the collecting party. No commercial permits will be issued in Management Areas 1.11, 1.12, 1.13, 1.2, 1.41, and 2.2.
- *General Botanical Collections* – Botanical collection permits may be issued to authorize collection of species other than threatened, endangered, or sensitive. No botanical collection permits will be issued in Management Areas 1.11, 1.12, 1.13, 1.2, 1.41, and 2.2.
- *Traditional Uses* – Consider American Indian traditional cultural plant use when designing projects and management activities.

Guideline

1. Make fuelwood, Christmas trees, herbs, mushrooms, plants, and plant parts, and other special forest products available for personal and commercial use where consistent with management area direction and desired conditions.

WILDLIFE

GENERAL

Standards

1. Seasonal restrictions will be applied to reduce disturbance in key wildlife habitats.

2. Restrict actions within 500 feet of cave and mine bat roosts to those that will not negatively alter the vegetative and structural characteristics of roosts or impede the movement of bats. When closing mines or caves in the course of establishing resource protection, or in response to safety concerns, minimize disturbance to resident or seasonal bat or other cave-dependent species endemic to the cave or mine and maintain microclimate conditions important to those species. Where bat concentrations are located outside of caves or mines, human disturbance will be managed to protect those populations.

3. Restrict the release of the location of bat roosts to administrative purposes only in order to minimize disturbance to roosting bats.

4. Retain all snags and trees known to be used consistently as bat roosts.

5. Protect known active and inactive raptor nest areas. The extent of the protection will be based on proposed management activities, human activities existing before nest establishment, species, topography, vegetation cover and other factors. A no-disturbance buffer around active nest sites will be required from nest-site selection to fledging (generally March through July). Exceptions may occur when individuals are adapted to human activity.

6. In riparian areas, vegetation cover will be managed to provide suitable wildlife habitat along a minimum of 80 percent of the length of riparian zones within the project area. New corridor interruptions will be spaced to minimize interruptions to habitat connectivity.

7. Vegetation treatments and new roads and trails will not reduce the elk habitat effectiveness index below 0.40 by Data Analysis Unit (DAU), or further reduce effective habitat in DAUs that are already at or below 0.40 on National Forest System lands.

8. Discourage land use practices and development that adversely alter the character of peregrine falcon hunting habitat or prey base within ten (10) miles of the nest site and the immediate habitats within one (1) mile of the nesting cliff.

9. Human activities will be restricted within one-half (½) mile of occupied peregrine falcon areas between March 15 and July 31 for nest sites, or July 1 to September 15 for hack sites. Protection distance may vary depending on local topography, potential for disturbance, and location of important habitat components.

Guidelines

1. Structures such as fences, major highways, bridge upgrades or replacements, and canals should be designed and built taking wildlife movement into consideration.

2. Human use of caves and federally owned mines identified as having bat populations should be restricted based on the following dates, depending upon the type of bat use occurring:

- *Maternity sites* – April 15 through September 1
- *Swarming sites* – August 15 through October 15; one-half hour before sunset to one-half hour after sunrise
- *Winter hibernaculum* – October 15 through May 15

3. Apply protective measures at mining or oil and gas development ponds and pits in order to minimize the likelihood of wildlife mortality from using these areas as water or foraging sources.

4. Retain access to drinking water for bats in areas with limited open water resources.

PROPOSED, THREATENED, ENDANGERED, SENSITIVE SPECIES, AND SPECIES OF VIABILITY CONCERN

Note: For lists of federally listed threatened and endangered species and Forest Service Region 2 sensitive species, and White River National Forest species of viability concern, see Appendix EE.

The following direction applies to implementation of standards and guidelines for all species of viability concern on the White River National Forest. Specifically, this applies to the Forest Plan sections on: proposed, threatened, endangered and sensitive species, species of viability concern – aquatic, species of viability concern – plants, and species of viability concern – terrestrial

The direction found in the standards and guidelines in these sections is intended to ensure the viability of all species of concern. Specifically:

Standards: All standards must be met

Guidelines: The intent of guidelines must be met. Many guidelines have two components, a quantitative part (distance, %, etc), and a statement of intent. If the quantitative part cannot be met, it must be documented in the appropriate NEPA document. The NEPA document must show how the intent of the guideline is met, or how progress is made towards the conditions described in the guidelines.

PROPOSED, THREATENED, AND ENDANGERED SPECIES AND SENSITIVE SPECIES

Standards

1. Review the forest plan as necessary to determine consistency with new information concerning proposed, threatened, and endangered species (PTES) species. Where appropriate, the plan will be amended to incorporate direction resulting from new information, such as new species listed as PTES; new recovery plans, conservation agreements or conservation strategies; newly described habitats or occurrences for PTES species; newly designated critical habitats; or regional documents that contain new management direction for PTES species.

2. Restrict activities to avoid disturbing proposed, threatened, or endangered species during breeding, young rearing, or at other times critical to survival. Exceptions may occur when individuals are adapted to human activity, or the activities are not considered a threat.

3. Activities will be managed to avoid disturbance to sensitive species that would result in a trend toward federal listing or loss of viability. The protection will vary depending on the species, potential for disturbance, topography, location of important habitat components, and other pertinent factors. Special attention will be given during breeding, young rearing, and other times that are critical to survival of both flora and fauna.

Canada Lynx

[ALL]- applies to all management projects in lynx habitat in lynx analysis units (LAUs) in occupied habitat and in linkage areas, subject to valid existing rights. They do not apply to wildfire suppression, or to wildland fire use.

[VEG]- applies to vegetation management projects in lynx habitat within lynx analysis units (LAUs) in occupied habitat. With the exception of ***Objective VEG O3*** that specifically concerns wildland fire use, these objectives do not apply to wildfire suppression, wildland fire use, or removal of vegetation for permanent developments such as mineral operations, ski runs, roads, and the like. None of these objectives apply to linkage areas.

[GRAZ]- applies to grazing projects in lynx habitat in lynx analysis units (LAUs) in occupied habitat. They do not apply to linkage areas.

[HU]- applies to human use projects, such as special uses (other than grazing), recreation management, roads, highways, and mineral and energy development, in lynx habitat in lynx analysis units (LAUs) in occupied habitat, subject to valid existing rights. They do not apply to vegetation management projects or grazing projects directly. They do not apply to linkage areas.

[LINK]- applies to all projects within linkage areas in occupied habitat, subject to valid existing rights.

Standards

S1 [ALL]. New or expanded permanent developments and vegetation management projects must maintain habitat connectivity in an LAU and / or linkage area.

S1 [LAU]. Changes in LAU boundaries shall be based on site-specific habitat information and after review by the Forest Service Regional Office.

S1 [VEG]. Unless a broad scale assessment has been completed that substantiates different historic levels of stand initiation structural stages limit disturbance in each LAU as follows: If more than 30 percent of the lynx habitat in an LAU is currently in a stand initiation structural stage that does not yet provide winter snowshoe hare habitat, no additional habitat may be regenerated by vegetation management projects.

Where and to what this applies: Standard **S1 [VEG]** applies to all vegetation management projects that regenerate forested stands, except for fuel treatment projects within the wildland urban interface (WUI) as defined by HFRA, subject to the following limitation: Fuel treatment projects within the WUI that do not meet Standards S1 [VEG], S2 [VEG], S5 [VEG], or S6 [VEG]shall occur on no more than 3 percent (cumulatively) of lynx habitat on each administrative unit (National Forest or administratively combined National Forests). In addition, fuel treatment projects may not result in more than three adjacent LAUs exceeding the standard.

S2 [VEG]. Timber management projects shall not regenerate more than 15 percent of lynx habitat on NFS lands within an LAU in a ten-year period. This 15 percent includes the entire stand within an even-age regeneration area, and only the patch opening areas within group selections. Salvage harvest within stands killed by insect epidemics, wildfire, etc. does not add to the 15 percent unless the harvest treatment would cause the lynx habitat to change to an unsuitable condition.

Where and to what this applies: Standard **S2 [VEG]** applies to all timber management projects that regenerate forested stands, except for fuel treatment projects within the wildland urban interface (WUI) as defined by HFRA, subject to the following limitation: Fuel treatment projects within the WUI that do not meet Standards S1 [VEG], S2 [VEG], S5 [VEG], or S6 [VEG]shall occur on no more than 3 percent (cumulatively) of lynx habitat on each administrative unit (National Forest or administratively combined National Forests). For fuel treatment projects within the WUI see guideline G10 [VEG].

S5 [VEG]. Precommercial thinning practices and similar activities intended to reduce seeling / sapling density are subject to the following limitations from the stand initiation structural stage until the stands no longer provide winter snowshoe hare habitat.

Precommercial thinning may occur only:

1. Within 200 feet of administrative sites, dwellings, or outbuildings; or
2. For research studies or genetic tree tests evaluating genetically improved reforestation stock; or

3. For conifer removal in aspen, or daylight thinning around individual aspen trees where aspen is in decline; or
4. Based on new information that is peer reviewed and accepted by the regional / state levels of the Forest Service and Fish and Wildlife Service, where a written determination states:
   a. That a project is not likely to adversely affect lynx; or
   b. That a project is likely to have short term adverse effects on lynx or its habitat, but would result in long-term benefits to lynx and its habitat.
5. In addition to the above exceptions (and above and beyond the three percent limitation for fuels projects within the WUI), precommercial thinning may occur provided that:
   a. The additional precommercial thinning does not exceed one percent of the lynx habitat in any LAU for the life of this amendment, and the amount and distribution of winter snowshoe hare habitat within the LAU must be provided through appropriate site-specific analysis and consultation; and
   b. Precommercial thinning in LAUs with more than 30 percent of the lynx habitat currently in the stand initiation structural stage is limited to areas that do not yet provide winter snowshoe hare habitat; and
   c. Projects are designed to maintain lynx habitat connectivity and provide snowshoe hare habitat over the long term; and
   d. Monitoring is used to determine snowshoe hare response.

Exceptions 2 and 3 may not occur in any LAU in which S1 [VEG] is exceeded (i.e., more than 30 percent of LAU in stand initiation structural stage).

Note: This standard is intended to provide snowshoe hare habitat while permitting some thinning, to explore methods to sustain snowshoe hare habitat over time, reduce hazardous fuels, improve forest health, and increase timber production. Project design should focus on creating irregular shapes for thinning units, creating mosaics of thinned and unthinned areas, and using variable density thinning, etc.

Where and to what this applies: Standard **S5 [VEG]** applies to all precommercial thinning projects, except for fuel treatment projects that use precommercial thinning as a tool within the wildland urban interface (WUI) as defined by HFRA, subject to the following limitation: Fuel treatment projects within the WUI that do meet Standards S1[VEG], S2[VEG], S5[VEG], or S6[VEG] may occur on no more than three percent (cumulatively) of lynx habitat on each administrative unit (a National Forest or administratively combined National Forests) for the life of this amendment.

S6 [VEG]. Vegetation management projects that reduce winter snowshoe hare habitat in multi-story mature or late successional conifer forests may only occur only

1. Within 200 feet of administrative sites, dwellings, outbuildings, recreation sites, and special use permit improvements, including infrastructure within permitted ski area boundaries; or
2. For research studies or genetic tree tests evaluating genetically improved reforestation stock; or
3. For incidental removal during salvage harvest (e.g., removal due to location of skid trails); or
4. Where uneven-aged management (single tree and small group selection) practices are employed to maintain and encourage multi-story attributes as part of gap dynamics. Project design must be consistent with VEG O1, O2, and O4, except where impacts to areas of dense horizontal cover are incidental to activities under this exception (e.g. construction of skid trails).

Exceptions 2 and 4 may not occur in any LAU where S1 VEG is exceeded.

Where and to what this applies: Standard **S6 [VEG]** applies to all vegetation management practices within multi-story mature or late successional conifer forests, except for fuel treatment projects within the wildland urban interface (WUI) as defined by HFRA, subject to the following limitation: Fuel treatment projects within the WUI that do meet Standards S1[VEG], S2[VEG], S5[VEG], or S6[VEG] may occur on no more than three percent (cumulatively) of lynx habitat on each administrative unit (a National Forest or administratively combined National Forests) for the life of this amendment.

S1 [LINK]. When highway or forest highway construction or reconstruction is proposed in linkage areas, identify potential highway crossings.

Guidelines

G1 [ALL]. Methods to avoid or reduce effects on lynx should be used when constructing or reconstructing highways or forest highways across federal land. Methods could include fencing, underpasses or overpasses.

G1 [VEG]. Vegetation management projects should be planned to recruit a high density of conifers, hardwoods, and shrubs where such habitat is scarce or not available. Priority for treatment should be given tot stem-exclusion, closed-canopy structural stage stands to enhance habitat conditions for lynx or their prey (e.g. mesic, monotypic lodgepole stands). Winter snowshoe hare habitat should be near denning habitat.

G4 [VEG]. Prescribed fire activities should not create permanent travel routes that facilitate snow compaction. Constructing permanent firebreaks or ridges or saddles should be avoided.

G5 [VEG]. Habitat for alternate prey species, primarily red squirrel, should be provided in each LAU.

G10 [VEG]. Fuel treatment projects within the WUI as defined by HFRA should be designed considering Standards S1[VEG], S2 [VEG], S5 [VEG], and S6 [VEG] to promote lynx conservation debris, piles, or residual trees to provide denning habitat in the future.

G1 [GRAZ]. In fire and harvest created openings, livestock grazing should be managed so impacts do not prevent shrubs and trees from regenerating.

G2 [GRAZ]. In aspen stands, livestock grazing should be managed to contribute to long-term health and sustainability of aspen.

G3 [GRAZ]. In riparian areas and willow carrs, livestock grazing should be managed to contribute to maintaining or achieving a preponderance of mid or late seral stages, similar to conditions that would have occurred under historic disturbance regimes.

G4 [GRAZ]. In shrub-steppe habitats, livestock grazing should be managed in the elevation ranges of forested lynx habitat in LAUs, to contribute to maintaining or achieving a preponderance of mid or late seral stages, similar to conditions that would have occurred under historic regimes.

G1 [HU]. When developing or ski areas, provisions should be made for adequately sized inter-trail islands that include coarse woody debris, so winter snowshoe hare habitat is maintained.

G2 [HU]. When developing or expanding ski areas, lynx foraging habitat should be provided consistent with ski area's operational needs, especially where lynx habitat occurs as narrow bands of coniferous forest across mountain slopes.

G3 [HU]. Recreation development and recreational operational uses should be planned to provide for lynx movement and to maintain the effectiveness of lynx habitat.

G4 [HU]. Remote monitoring of mineral and energy development sites and facilitates should be encouraged to reduce snow compaction.

G5 [HU]. A reclamation plan should be developed (e.g., road reclamation and vegetation rehabilitation) for closed mineral and energy development sites and facilities that promote the restoration of lynx habitat.

G6 [HU]. Methods to avoid or reduce effects to lynx habitat connectivity should be used when upgrading unpaved roads to maintenance level 4 or 5, where the result would be increased traffic speeds and volumes, or contribute to development or increases in human activity.

G7 [HU]. New permanent roads should not be built on ridge-tops and saddles, or in areas identified as important for lynx habitat connectivity. New permanent roads and trails should be situated away from forested stringers.

G8 [HU]. Cutting brush along low-speed, low-traffic volume roads should be done to the minimum level necessary to provide for public safety.

G9 [HU]. If project level analysis determines that new roads adversely affect lynx, then public motorized use should be restricted. Upon project completion, these roads should be reclaimed or decommissioned, if not needed for other management objectives.

G10 [HU]. Designated over-the-snow routes or designated play areas should not expand outside baseline areas of consistent snow compaction, unless designation serves to consolidate use and improve lynx habitat. This may be calculated on an LAU basis, or on a combination of immediately adjacent LAUs. This does not apply inside permitted ski area boundaries, or winter logging, to rerouting trails for public safety, to access private inholdings, or to access regulated by Guideline G12 [HU].

G11 [HU]. When developing or expanding ski areas and trails, consider locating access roads and lift termini to maintain and provide lynx security habitat.

G12 [HU]. Winter access for non-recreation special uses and mineral exploration and development should be limited to designated routes or designated over-the-snow routes.

G1 [LINK]. National Forest System lands should be retained in public ownership.

G2 [LINK]. Livestock grazing in shrub-steppe habitats should be managed to contribute to maintaining or achieving a preponderance of mid or late seral stages, similar to

conditions that would have occurred under historic disturbance regimes.

Bald Eagle

Standards

1. If a winter roost or nest site is discovered, write a management plan to ensure that the necessary habitat components are maintained.

2. Human activities should be prohibited within 250 yards of bald eagle winter roosting areas between November 15 and March 1. Human activities should be prohibited within 400 yards of an active nest between February 1 and August 15.

Southwestern Willow Flycatcher

Standard

1. Rely on the riparian vegetation residue guidelines (**Table 2-3**) and implement *Range Guideline #3* as a standard within potential flycatcher habitat to improve the habitat for this species. The rationale for this approach lies in restricting the use of herbaceous forage to obtain a concurrent decrease in the amount of grazing on woody vegetation, resulting in increased amounts and density of woody vegetation in those riparian areas that can support woody vegetation.

Mexican Spotted Owl

Standards

1. Do not allow any even-aged timber management within canyons considered as having identified potential habitat and within one-half (½) mile of the canyon's rim.

2. Allow uneven-aged timber management only if the resulting timber stand contains the necessary habitat components.

3. Develop a vegetation/fire management strategy within the potential habitat that will reduce the risk of catastrophic loss of habitat.

4. If any nests are discovered, limit the amount of human disturbance around the nest through such measures as special area closures, seasonal restrictions, or re-routing of trails.

Uncompaghre Fritillary Butterfly

Standards

1. Before any ground disturbing activity (such as trail building), or livestock driveways or bedding grounds are allowed in potential Uncompagre fritillary butterfly habitat, a survey shall be conducted to determine the existence of the species. Potential habitat and survey protocols are found in the Recovery Plan. Avoid actions that would negatively impact the species know habitat or populations.

2. If any new Uncompagre fritillary butterfly populations are discovered, a "no-collecting" regulation shall be placed on the area.

SPECIES OF VIABILITY CONCERN, AQUATIC

Colorado River Cutthroat Trout

Standards

1. For management activities that have the potential to impact occupied cutthroat trout habitat, tributaries of occupied cutthroat trout habitat, or identified reintroduction areas, maintain or enhance existing cutthroat trout habitat. At minimum and where necessary:

- Reduce sediment from existing roads and trails.
- Maintain pool depths.
- Maintain riparian vegetation.
- Retain large woody debris in streams.

2. When implementing management activities in 6th field Hydrologic Unit Codes (sub-watersheds) containing cutthroat trout identified as recovery populations in the Colorado River Cutthroat Recovery Plan, maintain or reduce existing net density of roads (open or closed) to restore or prevent alteration of the hydrologic function of the sub-watershed. Temporary roads must be decommissioned upon project completion.

Guidelines

1. Restrict construction of new roads within 350 feet of occupied cutthroat streams or within 150 feet from the edge of the current or historic floodplain, whichever is greater, to maintain hydrologic function and limit road-related stream sediment.

2. Reroute roads adjacent to cutthroat trout streams and their tributaries, when possible, to reduce direct impacts to cutthroat habitat, or to improve hydrologic function.

3. In sub-watersheds with occupied cutthroat trout habitat, methods for decommissioning roads should emphasize restoring hydrologic function.

4. Where impacts on cutthroat habitat associated with livestock grazing are identified, such as hedged shrubs and collapsed banks, consider actions to reduce or remove impacts such as, but not limited to:

- Altering the timing of grazing.
- Altering the timing of livestock crossings of occupied cutthroat stream until after fish have emerged from gravel.
- Excluding sensitive or problem areas.

5. To minimize sedimentation, channel instability, and direct disturbance of spawning areas, alter routes of sheep bands or other trailed livestock. Limit sheep crossings and cattle driveways to designated locations or roads to avoid crossing occupied cutthroat streams and tributaries.

Boreal Toad and Leopard Frog

Standards

1. Allow no loss or reduction in habitat quality of occupied or known historic boreal toad or leopard frog habitat.

2. Maintain adequate vegetation cover around occupied boreal toad or leopard frog breeding ponds when implementing management activities to minimize avian predation on newly metamorphosed frogs and toads.

3. Use only chemical herbicides shown to have no effect on boreal toads or leopard frogs, or use other vegetation management techniques, within 300 feet of occupied or known historic boreal toad sites.

4. Do not use fish toxins with the potential to harm boreal toads or leopard frogs in occupied boreal toad and leopard frog habitats.

Guidelines

1. To prevent direct mortality to boreal toads, restrict the following activities to periods when toads are inactive (generally late fall to early spring):

- Management-ignited fire treatments within 3 miles of occupied boreal toad breeding sites.
- Vegetation management using heavy, ground-based equipment within 1.5 miles of occupied boreal toad breeding sites.

2. Restrict construction of new roads and trails within 300 feet of occupied or known historic boreal toad and leopard frog breeding sites to prevent direct mortality and disturbance of adjacent vegetation during construction and trail use.

3. Where impacts to occupied or known historical boreal toad or leopard frog breeding sites associated with livestock grazing are identified, consider actions to reduce or remove impacts such as, but not limited to:

- Fencing,
- Modification of season of use, or
- Provision of alternate water sources at a sufficient distance.

4. Where roads or trails are located within 300 feet of occupied or historical boreal toad or leopard frog breeding sites, consider reclaiming, redirecting, or redesigning trails and user traffic to minimize direct mortality and disturbance of adjacent vegetation.

SPECIES OF VIABILITY CONCERN, PLANT

Standards

1. Survey for the following plant species of viability concern in the identified areas prior to any activities that might impact them:

    - Harrington penstemon in sagebrush areas in the Eagle and Frying Pan River drainages;
    - De Beque phacelia in the Wasatch Geologic Formation;
    - Sun-loving meadowrue in the Parachute Creek Geologic Formation;
    - Leadville milk-vetch; Sea pink; Rockcress draba; Tundra buttercup, and Colorado tansy aster in suitable alpine areas;
    - Altai cottongrass, Kotzebue grass-of-Parnasus, and Porter feathergrass in suitable riparian and wetland areas.

Avoid disturbances that would significantly affect species viability or trend the species towards federal listing.

SPECIES OF VIABILITY CONCERN, TERRESTRIAL

Fringed Myotis and Townsend's Big-Eared Bat

Standards

1. Conduct surveys of known caves and mines before implementation of projects that have the potential to impact fringed myotis and Townsend's big-eared bat habitat.

- For projects that include the application of insecticide, the survey area includes the project area and a two-mile radius around the project area.
- For projects that do not include the application of insecticide, the survey area includes the project area and a one quarter-mile radius around the project area.

2. Prohibit aerial application of insecticides within two miles of occupied or suspected Townsend's big-eared bat and fringed mytosis roosts to retain forage sufficient for bat survival and reproductive success, and to minimize exposure of the insecticide to individual bats. Use other methods of insecticide application to treat small areas such as campgrounds and administrative sites.

Guidelines

1. Where necessary to retain forage sufficient for bat survival and reproductive success, restrict application of insecticides within 10 miles of occupied or suspected Townsend's big-eared bat and fringed myotis maternity roosts and hibernacula.

2. Restrict activities that may disturb roosting bats within one quarter mile of occupied or suspected Townsend's big-eared bat and fringed myotis maternity roosts and hibernacula to maintain survival and reproductive success. Apply restrictions as appropriate according to the following dates:

- Maternity roosts—April 15 to September 15
- Hibernacula—October 15 to May 15

Barrow's Goldeneye

Standards

1. Conduct surveys to identify occupied and potential Barrow's goldeneye habitat prior to project implementation that may have the potential to impact Barrow's goldeneye or their habitat.

2. Retain sufficient numbers of snags ≥18 inches DBH within one-third mile of occupied and suspected Barrow's goldeneye brood-rearing habitat in order to provide adequate nest cavity snags.

3. Manage or restrict animal introductions that have the potential to impact forage insects in lakes and reservoirs within occupied or suspected Barrow's goldeneye brood rearing, molting, or staging habitat to maintain existing forage insects.

4. Restrict pesticide applications to those that do not have the potential to impact aquatic invertebrates in occupied and suspected Barrow's goldeneye brood rearing and molting areas.

Guidelines

1. When implementing vegetation management activities in occupied or potential Barrow's goldeneye breeding habitat, provide through time sufficient densities of snags ≥18 inches DBH within one-third mile of occupied or potential brood-rearing areas. Where density and number of snags is determined to be insufficient in order to provide nest cavities, consider installing nest boxes.

2. Restrict management activities that have the potential to impact Barrow's goldeneye habitat or disturb individuals in occupied or suspected nesting, brood-rearing, and molting areas to maintain survival and reproductive success. Activities that may be restricted include, but are not limited to:

- Prescribed fire
- Timber harvest
- Livestock management

Apply restrictions to minimize disturbance, as appropriate, according to the following dates:

- Nesting—April 1 to July 15.
- Brood -rearing—June 1 to August 30.

Sage Grouse and Brewer's Sparrow

Standards

1. For management activities in sage grouse and Brewer's sparrow habitat, retain or enhance existing habitat by:

- Managing for native vegetation,
- Retaining a minimum of five percent of sagebrush over 48 inches in height where site characteristics allow, and
- Maintaining a minimum of 20 percent canopy cover of sagebrush.

2. Restrict the use of insecticides in sage grouse and Brewer's sparrow sagebrush habitat to maintain adequate forage insects.

3. Maintain and manage such that a minimum of 15 percent continuous canopy cover of herbaceous plants averaging at least 7 inches in height is retained in sage grouse nesting habitat during the sage grouse nesting and early brood-rearing season (generally from April 1 to July 31). If the herbaceous vegetation in an area cannot provide an average of at least 7 inches in height, maintain 15 percent continuous herbaceous plant canopy cover of the highest average height possible.

4. Restrict activities that have the potential to impact sage grouse and Brewer's sparrow breeding activities from April 1 to July 31 in areas where breeding is known or suspected in order to minimize any negative impacts to reproductive success or survival.

Guidelines

1. Within a project area or 1,000 acres, whichever is greater, restrict burning of sagebrush patches larger than five acres to less than 15% of sage grouse and Brewer's sparrow habitat over a ten-year period to maintain an adequate seed source for sagebrush regeneration.

2. If restoration of habitat in occupied sage grouse habitat is deemed necessary, design treatments to meet the goals as recommended in area specific sage grouse management plans (e.g., Greater-sage grouse conservation plan, Middle Park, Colorado, January 2001). If there is not a specific sage grouse management plan for the area, desing treatements to meet the goals as described in the current literature on sage grouse habitat (e.g., Connelly et al 2000).

3. When implementing vegetation management activities in sage grouse and Brewer's sparrow sagebrush habitat:

- Design and implement the activities so that a mosaic distribution of open and closed canopy areas will result.
- Incorporate actions to remove invading conifers in order to maintain and expand the sagebrush cover type.
- Incorporate actions to reduce or eliminate non-native plant species and promote the re-establishment of native plant species.
- Limit the use of herbicides in sagebrush areas to direct application when eliminating or reducing non-native plants in sagebrush areas in order to minimize impacts to sagebrush.

4. Limit the installation of new fences, power lines, and other structures in sage grouse and Brewer's sparrow sagebrush habitat to reduce possible raptor perches and maintain sagebrush.

5. Manage livestock activity in known or suspected sage grouse nesting areas from April 15 to June 15 to reduce the likelihood of livestock trampling of sage grouse nests. Actions to consider include, but are not limited to:

- Limiting or prohibiting livestock driving.
- Using pastures or areas during the nesting season that are not sage grouse nesting areas.
- Providing mineral supplements and water sources away from sage grouse nesting areas.

6. Manage livestock activity in known or suspected Brewer's sparrow nesting areas to reduce the likelihood of cowbird presence in Brewer's sparrow nesting areas. Actions to consider include, but are not limited to:

- Rotating livestock use by alternating years or seasons.
- Minimizung the intensity or number of livestock concentration areas.

7. Manage developments and activities within or adjacent to springs, seeps, and riparian areas that may reduce water availability or soil moisture in order to maintain or improve sage grouse brood foraging habitat. Actions to consider include but are not limited to:

- Livestock enclosures
- Natural barriers to ungulates
- Limiting or prohibiting water diversions

Pygmy Nuthatch

Standards

1. In current and potential ponderosa pine cover types, and in other cover types where pygmy nuthatches are actively nesting or winter roosting, develop prescriptions during project planning to identify the amount, size(s), and distribution of snags and cavity trees to be left on-site, as well as live, green replacement trees for future snags and cavity trees under the following requirements:

- Conduct avian and cavity surveys before projects are implemented that have the potential to impact pygmy nuthatch nest or winter roost snags and cavity trees.
- Protect any known or suspected pygmy nuthatch nest and winter roost cavity trees and snags.
- On forested sites, retain ponderosa pine snags (where materials are available) in accordance with the average minimums specified in the Table 2-1.
- Where sufficient ponderosa pine snags or cavity trees are not available, select and manage for the snag or cavity tree species that pygmy nuthatches are using in the area, or for Douglas fir, aspen, or lodgepole pine snags or cavity trees.

Guidelines

1. Manage for a diversity of tree density, size, age, and height classes, and for a diversity of herbaceous and shrub vegetation in current and potential ponderosa pine cover type areas in order to provide a wide distribution of foraging substrates for pygmy nuthatches and other birds. Emphasize retention and management of live ponderosa pine for pygmy nuthatch nest and winter roost cavities, perches, and foraging sites.

SPECIES REQUIRING MORE BASELINE INVENTORY AND EVALUATION TO DETERMINE STATUS

Standards

1. Maintain adequate water flow and vegetation at black swift colonies in order to maintain nesting activity and reproductive success.

2. Restrict action at black swift colony sites in order to maintain habitat characteristics, survival and reproductive success at the sites. Actions that may be restricted include, but are not limited to:

- Rock climbing
- Ice Climbing
- Caving
- Hiking

3. Conduct surveys of potential black swift habitat before implementation of projects that have the potential to impact black swift habitat or nesting activities.

4. Conduct surveys for the following butterfly species needing more baseline inventory and evaluation before implementation of projects that may result in not maintaining a viable population in occupied habitat: theano alpine, dark blue, white-veined arctic, indra swallowtail, and two-banded checkered skipper. Prohibit actions that may result in the extirpation of the species in an area that is occupied. Actions that may be restricted include but are not limited to:

- Recreation use and development outside of established routes.
- Livestock grazing
- Vegetation treatments
- Butterfly collecting
- Road and trail construction

Guideline

1. Limit recreational and other activities during the breeding period within 500 feet of known concentrations of spotted bat maternity roosts or hibernacula in order to minimize impacts on reproduction and survival.

Section Three

Disturbance Processes

FIRE

Standards

1. Decisions made concerning vegetation management activities including "no action" will minimize exposure of firefighters and the public to fire hazards.

2. All ignitions will receive an appropriate management response (suppression or fire use) according to the White River Fire Management Plan. The fire management map illustrates how areas are allocated to each fire management category based on Management Area direction.

Guidelines

1. Where feasible and appropriate, utilize prescribed fire to accomplish resource management goals and objectives.

2. Minimize ground-disturbing activities associated with fire management actions.

3. Fire management activities should be designed to sustain ecosystems including the interrelated ecological, economic and social components.

4. Ignitions in areas covered by specific fire use plans (prescriptions) should be managed to accomplish resource management objectives.

INSECTS AND DISEASE

Guidelines

1. Plan management activities with consideration for potential insect or disease outbreaks. Design management to meet or enhance management area objectives.

2. Manage vegetation in high-use recreation areas to provide for public safety and to improve forest health as needed to maintain or improve the desired recreation setting(s).

3. Use integrated pest management techniques, including silvicultural treatments, to meet management area objectives. Treatment activities should be based on the desired condition of the management area, the values of and risks to wildlife habitat, and adjacent private lands as well as public lands. Priority should be given to areas in which values to be protected exceed the cost of protection.

4. Project plans should consider existing infestations of insects or disease within a project area. Activities should be designed to minimize the risk of spreading the infestation while still providing habitat for those wildlife species dependent upon the presence of insects and disease.

5. Control natural insect and disease outbreaks in wilderness only when justified by predicted loss of resource values outside of wilderness.

NOXIOUS WEEDS

Standards

1. For all proposed projects or activities, determine the risk of noxious weed introduction or spread and implement appropriate prevention and mitigation measures.

2. Manage noxious weeds and other undesirable exotic species of plants according to the Integrated Weed Management Principles.

3. Use only certified noxious weed-free hay, straw, seed, or mulch for feed or revegetation projects on National Forest System lands.

4. Include provisions that are necessary to prevent the spread of and to control the introduction of noxious weeds in contracts and permits for use of National Forest System lands and resources.

Guidelines

1. Maintain the noxious weed program that addresses the following Integrated Weed Management components:

- Education and awareness
- Prevention
- Inventory
- Planning
- Integrated treatment
- Monitoring and evaluation
- Reporting
- Management activities
- Coordination and cooperation with federal, state, and local governments and adjacent private landowners.

2. Priorities for controlling noxious weeds are:

- Preventing the introduction of new invaders
- Conducting early treatment of new infestations
- Containing and controlling established infestations.

3. When setting priorities for the treatment of noxious weeds, give consideration to the following:

- Rate of spread of the species
- Potential for environmental degradation
- Invasions found within remote areas and special management areas such as research natural areas and wilderness
- Probability that the treatment(s) will be successful.

4. Implement the White River National Forest's Noxious Weed Implementation Guide.

Section Four
Social

GENERAL RECREATION

Standards

1. Prohibit camping within 100 feet of lakes and streams and system trails, unless exceptions are justified by terrain or specific design that protects the riparian and aquatic ecosystems.

2. A person is permitted to use his/her wheelchair in a non-motorized area so long as the wheelchair meets the legal definition of wheelchair, "a device designed solely for use by a mobility-impaired person for locomotion that is suitable for use in an indoor pedestrian area." (Title V, Section 507(c)(2) of the Americans with Disabilities Act).

3. At special recreation features, maintain enough water in streams to sustain the water-dependent recreation values and protect stream flows. Use the following categories to rank streams and stream reaches based on the recreation features and values described:

- *High-priority features*—waterfalls; scenic areas and overlooks; special event areas (rafting, kayaking, visitor centers); scenic byways; native threatened, endangered, and sensitive species; rivers designated under the Wild and Scenic Rivers Act; rivers eligible for wild, scenic, or recreational designation; wilderness water resources under threat of degradation; and similar features where flowing water is critical to a quality recreational experience.
- *Moderate-priority features*—recreation areas including roads, trails, campgrounds, and picnic grounds next to streams where flowing water contributes to a quality recreational experience and to aesthetic values.

4. Make outfitter and guide permits available based on need, administrative capability, and a suitable mix of guided and non-guided public capacity as determined by a forest-wide capacity study. This mix may vary by type of activity and/or season of use. Capacity validations will be made on an area-specific basis when the general forest-wide capacity determination does not adequately address the management situation.

Guidelines

1. Management activities should be consistent with guidance in the ROS User's Guide for the adopted summer and winter ROS classes on the ROS maps.

2. Satisfy demand for recreation services that are supplied by private-sector permittees at authorized sites or areas before new sites or areas are permitted.

3. Set the maximum camping stay limit at 14 days within a consecutive 30-day period unless otherwise reduced or extended in a special order.

DEVELOPED RECREATION

Standard

1. All new or reconstructed recreation facilities will provide a range of universally accessible opportunities within the limits of the site characteristics and ROS classification.

Guidelines

1. Each ranger district should document deferred maintenance and rehabilitation needs and associated costs, and update at intervals not exceeding two years.

2. Provide readily available off-site and on-site information on recreation opportunities for developed sites.

3. When campground occupancy is less than 20 percent of practical capacity during the use season, conduct analysis to decide future management of the campground.

4. Design recreation facilities to blend with the elements found in the natural landscape.

5. Developed recreation sites, both publicly and privately developed on National Forest System lands, should be withdrawn from mineral entry.

6. Current recreation residences may continue to be allocated as recreation special-use development areas unless environmental analyses show a higher need for these lands.

7. Assure that facilities provided at trailheads are consistent with the recreation setting and provide for parking, trailhead panels for trail information, and appropriate sanitation facilities.

8. Design and manage developed recreation sites according to the Recreation Opportunity Spectrum (ROS) class and the scenic integrity objective(s) as mapped.

DISPERSED RECREATION

Guidelines

1. Close, rehabilitate, or otherwise mitigate dispersed sites when:

- Campsite condition reaches Cole Class 4 or 5, or
- There are social use conflicts, or
- Unacceptable environmental damage is occurring.

2. Manage recreation use to stay within an area's capacity as determined by a forest-wide capacity analysis. Complete a site-specific capacity analysis when the forest-wide analysis does not meet management needs.

3. Proposed activities should meet a scenic integrity objective of high in the foreground of the following trails: Continental Divide National Scenic Trail, American Discovery Trail, and the Colorado Trail.

AMERICAN INDIAN RIGHTS & INTERESTS

Standard

1. Protect important cultural areas for current and future tribal use by recognizing the cultural landscape and geographic diversity left by Ute ancestors and acknowledging intellectual property rights.

2. Protect sensitive and proprietary traditional tribal knowledge.

Guidelines

1. Consult with American Indian people when projects have the potential to affect cultural rights and practices to help ensure the protection, preservation, and use of areas that are culturally important to tribes.

2. When possible, avoid physically affecting the integrity of traditional cultural properties including forest products collecting places.

3. Use the *Forest Service National Resource Book on American Indian and Alaska Native Relations* when developing an agency/tribe consultation process.

4. Follow applicable Forest Service policy addressing tribal treaty rights and federal trust responsibilities.

5. Identify the three Confederated Ute Indian traditions of gathering herbs, medicinal and edible plants, and other materials for religious purposes and make provisions for those who wish to gather such plants and materials.

HERITAGE RESOURCES

Standards

1. Conduct all land management activities in such a manner as to comply with all applicable federal, state and local regulations. Many heritage resources values can be protected effectively through application of the provisions of these regulations:

- National Historic Preservation Act of 1966 (PL 89-665, as amended)
- Native American Grave Protection and Repatriation Act (NAGPRA) (PL 101-601)
- American Indian Religious Freedom Act of 1978 (PL 96-341)
- Religious Freedom Restoration Act of 1993 (PL 103-141).

2. Leave human remains undisturbed unless there is an urgent reason for their disinterment. In case of accidental disturbance of historic graves, or reinterment, follow the appropriate tribal policies, state policies and forest policies. Forest policies are contained in the *Burial Policy for the White River National Forest*, as well as the Southern Ute Indian Tribe's *Burial Policy for the Protection of Burial Sites, Human Remains and Funerary Objects*.

Guidelines

1. Protect heritage resources from damage by project activities or vandalism through project design, specified protection measures, monitoring and coordination.

2. Manage sites on the National Historic Register according to approved management plans or annual operating plans.

SCENERY MANAGEMENT

Guidelines

1. Management activities should be designed and implemented to achieve, at minimum, the level of scenic integrity shown on the scenic integrity objective map. See the scenery section in Chapter 3 of the FEIS for definitions of scenic integrity levels.

2. Rehabilitate all existing projects and areas that do not meet the scenic integrity objectives. Set priorities for rehabilitation considering the following:

- Relative importance of the area and the amount of deviation from the scenic integrity objectives;
- Foreground of high public use areas has highest priority;
- Length of time it will take natural processes to reduce the visual impacts so that they meet the scenic integrity objective(s);
- Length of time it will take rehabilitation measures to meet the scenic integrity objectives; and
- Benefits to other resource management objectives to accomplish rehabilitation.

3. Plan, design, and locate vegetation manipulation on a scale that retains the color and texture of the landscape character, borrowing directional emphasis of form and line from natural features.

4. Choose facility and structure design, scale, color of materials, location, and orientation to meet the scenic integrity objective on the Scenic Integrity Objective Map.

5. Facilities, structures, and towers with exteriors consisting of galvanized metal or other reflective surfaces will be treated or painted dark non-reflective colors that blend with the forest background to meet an average neutral value of 4.5 or less as measured on the Munsell neutral scale.

6. Rehabilitate areas classified as "unacceptable alteration" in the existing scenic integrity inventory to the scenic integrity objective on the Scenic Integrity Objective Map.

WILDERNESS RESOURCES

Note: The following standards and guidelines apply only to units of the National Wilderness Preservation System within the boundaries of the forest.

Standards

1. No hay, straw, or unprocessed feed allowed.

2. Maximum group size:

- *White River National Forest Wilderness Areas* (except Maroon Bells-Snowmass) – no more than 15 people per group with a maximum combination of 25 people and pack or saddle animals in any one group.
- *Maroon Bells-Snowmass Wilderness* – no more than 10 people per group with a maximum combination of 25 people and pack or saddle animals in any one group.
- Parties that are larger than established limits may be allowed under permit on a case-by-case basis when compatible with other wilderness management objectives.

- The maximum group size may be lowered where biological and physical resource capability cannot support that level of use.

3. Prohibit campfires above treeline to protect alpine ecosystems. Prohibit campfires and fuel burning below treeline when the use of dead or downed wood for fuel is likely to cause unacceptable vegetative condition, soil nutrient loss, and/or erosion.

4. Manage historic structures, including eligible or listed National Register of Historic Places sites to be compatible with the desired condition for the management area.

5. Emphasize minimum impact suppression techniques in all wilderness wildland fire responses.

6. Prepare wildland fire use plans to allow fire to function as nearly as possible in its natural ecological role.

Guidelines

1. Recreational livestock should be prohibited within 100 feet of lakeshores and streambanks, except during watering and through travel unless exceptions are justified by terrain.

2. Management actions, which may include a permit system for day use and/or overnight use, area closures, and/or other actions, should be implemented to manage use levels and use patterns when conditions are outside the standards and guidelines established for the management area prescription.

3. Where resource or social impacts have been identified, minimize human impacts by:

- Designating and managing both non-outfitted and outfitted camps;
- Encouraging the use of self-contained stoves and discouraging the use of wood-fueled fires;
- Using a permit system;
- Limiting party size and pack animals; or
- Utilizing methods to reduce harassment of people, livestock, and wildlife by dogs.

4. Fish and wildlife management activities should emphasize the protection of natural processes. Implement policies and guidelines adopted by the International Association of Fish and Wildlife Agencies and the Forest Service (see Appendix DD).

5. Manage recreation use to stay within an area's capacity as determined by a forest-wide capacity analysis. Site-specific capacity analysis will be completed when the forest-wide analysis does not meet management needs.

Section Five

Administrative

TRAVEL SYSTEM INFRASTRUCTURE

Standards

1. Newly acquired facilities will not be retained unless sufficient maintenance funding is available or cooperative maintenance can be secured and a substantial government benefit can be demonstrated.

2. Close and rehabilitate temporary roads when no longer needed for project purposes.

3. Designated or new travelways are open to appropriate motorized or mechanized use unless a documented decision shows that:

- Motorized use conflicts with forest plan objectives;
- Motorized use is incompatible with the recreation opportunity spectrum classification;
- Travelways are in areas closed to motorized or mechanized use;
- Travelways are not designated routes;
- Motorized use creates user conflicts that result in unsafe conditions unrelated to weather conditions;
- Physical characteristics of travelway(s) preclude any form of motorized use;
- Travelways do not serve an existing or identified future public need;
- Financing is not available for maintenance necessary to protect resources; or
- A seasonal restriction has been issued.

4. On lands that are snow-free, prohibit motorized and mechanized travel outside of designated travelways. Exemptions are only allowed by an order signed by the Forest Supervisor or Regional Forester for:

- Administrative, emergency, law enforcement, or land management needs; or
- Special use permits and contracts.

5. Permit motor vehicle travel up to 300 feet from designated travelways for direct access to campsites, parking, firewood cutting, or gathering forest products provided that:

- Minimal resource damage occurs;
- Such access is not otherwise prohibited.

6. Motor vehicles designed for over-snow use are permitted:

- In areas compatible with forest plan management prescriptions, Recreational Opportunity Spectrum (ROS) classifications, and the travel management plan; or
- On designated routes only through areas of restriction.

Guidelines

1. Consider seasonal restrictions for travelways if:

- Use causes unacceptable damage to soil and water resources due to weather or seasonal conditions;
- Use causes unacceptable wildlife conflict or habitat degradation;
- Use results in unsafe conditions due to weather conditions;
- The area accessed has a seasonal need for protection or non-use; or
- It is necessary to resolve conflicts between users.

2. Emphasize providing a wide range of motorized, mechanized, and non-motorized recreation opportunities and difficulty levels.

3. Emphasize maintenance and reconstruction of the existing road and trail system to standard.

4. Consider road decommissioning:

- In order to meet density requirements;
- When there is no longer any need for the road;
- When environmental degradation is occurring;
- When the cost of continued maintenance exceeds available funding;
- When alternative routes may be available; and
- To protect natural or cultural resources.

5. Maintain the following strategy for trail construction:

- Construct near human populations;
- Construct loop trails where feasible;
- Protect habitats and wilderness;
- Feature attractions or interpretive opportunities;
- Look for accessibility or universal design opportunities; and
- Coordinate with trail systems developed by municipalities, counties, states, other federal agencies, and partners.

6. Emphasize public safety in the development and use of the travel system.

7. Design roads to minimize visual and environmental impacts where possible.

8. Public access restrictions may be imposed for health, safety, or other considerations.

9. Maintenance level 3, 4, and 5 roads will continue to be managed for public access with passenger cars.

AERIAL TRANSPORTATION CORRIDORS

Guidelines

1. The exterior surfaces of suspended aerial trams, gondolas, cabriolets, and supporting towers should be painted or treated with dark non-reflective colors that blend with the summer background. Windows should be darkened or treated to reduce reflectivity.

REAL ESTATE

Standards

1. In land adjustment activities, give priority to acquiring lands that contain habitat identified by the U.S. Fish and Wildlife Service as necessary for the recovery of federally listed threatened and endangered species.

2. In land adjustment activities (including land exchange, purchase, sale, donation), consider the following:

- Evaluate and balance the overall combination of all resource values and factors including wildlife habitat, fisheries habitat, riparian areas, wetlands, cultural resources, recreation opportunities, scenic value, watershed protection, timber resources, rangelands, public access, better federal land management, and other factors.
- Evaluate the effect of land adjustments on sensitive species habitat. Avoid land adjustments which could result in a trend toward federal listing or a loss of population viability for any sensitive species. Sensitive species habitat can be conveyed if conveyance would not result in a trend toward federal listing or adversely affect the population viability of the species, or if effects could be mitigated.
- Acquisition of lands that contain resource values identified during scoping as important in contributing toward National Forest System resource management goals and objectives as stated in the forest plan. Examples include wetlands, riparian areas, essential wildlife habitat, threatened or endangered species habitat, sensitive species habitat, significant cultural resources, timber lands, rangelands, or other areas.

3. Retain existing access rights where needed to meet forest plan goals and objectives.

4. Actively pursue access rights where needed to meet forest plan goals and objectives.

5. Obtain reasonable public and administrative access to all National Forest System lands in the following ways:

- Require reciprocal grants, where needed, when granting rights-of-way easements across National Forest System lands.
- Reserve in land disposal action, existing and designated inventoried rights-of-way that are needed for implementation of the management plan and to protect them for future construction and occupancy.

Guidelines

1. In land adjustment activities (including land exchange, purchase, sale, donation), consider the following:

- Reduction of Forest Service administrative costs and improvement of management efficiency. Included are reducing miles of landline boundaries and number of corners; special uses; title claims; rights-of-way grants and easements; numbers of allotments and intermingled ownership livestock pastures; and other factors that decrease administrative costs and improve management efficiency.
- The conveyance or acquisition would reduce conflicts between Forest Service and private landowner objectives, especially when conflicts are adversely affecting National Forest System management.

2. When considering opportunities to acquire non-federal lands by purchase or exchange where lands are valuable for National Forest System purposes, evaluate the following:

- Designated wilderness and other areas classified by Congress;
- Lands with historical or important heritage resources, outstanding scenic values, or critical ecosystems when these resources are threatened by change of use, or when management may be enhanced by public ownership;
- Lands with water frontage, such as lakes, streams, flood plains, wetlands and associated riparian ecosystems;
- Key wildlife habitat, fishery management areas and habitat for threatened, endangered, or sensitive species;
- Lands with important value for outdoor recreation purposes and lands needed for scenic condition protection;
- Lands needed to bring existing National Forest System lands into consolidated geographical units, or to reduce the miles of interior boundaries and number of interior corners;
- Lands or rights-of-way needed to meet resource management goals and objectives
- Lands that maintain or stabilize the economics of local government;
- Lands that will add significantly to available national forest goods and services;
- Lands where the national forest program will provide the best insurance against existing or potential uses that are incompatible with effective watershed management; and
- Lands that are suitable, and will be used for other national forest programs in addition to watershed protection.

3. Avoid land acquisition where it is likely that the lands could go to patent under the *1872 Mining Law*, unless the minerals will be donated to the United States.

4. Evaluate the following when considering opportunities to convey lands:

- Important or unique resources (such as wetlands, flood plains, essential big-game winter range, threatened, endangered, or sensitive species habitat, and important historical or heritage resources) may be disposed of, but mitigation and compensation values gained in acquired lands are to be considered;
- Lands in developed areas that have lost or are losing their national forest character;
- Lands within, and immediately adjacent to, expanding communities to assist public and private projects that have the mutual concurrence of federal, state, and local governments;
- Land conveyance to states, counties, cities, or other federal agencies when it serves a greater public interest;
- Lands that will contribute to community growth, development, and economic prosperity;
- Lands suitable for development by the private sector, if development (such as residential, agricultural, industrial, or recreational) does not adversely affect management of adjoining National Forest System lands;
- Lands isolated from other National Forest System lands;
- Reserved or acquired road rights-of-way parcels that are substantially surrounded by lands not owned by the United States, and are no longer needed for rights-of-way purposes;
- Parcels intermingled with mineral or homestead patents;
- Lands encumbered by special-use permits and occupied by substantial structural improvements that no longer serve a greater public need; and
- Lands encumbered with occupancy trespass cases and encroachments involving substantial structural improvements.

ROADLESS AREAS

Guidelines

For management areas 1.11, 1.12, 1.13, 1.2, 1.31, 1.32, 1.5 (all the 1.s), 2.2, no additional guidance for inventoried roadless areas is necessary as these do not allow for motorized summer travel and therefore roads construction will not be allowed in these management areas. These are the most restrictive management areas for development.

For management areas 2.1, 3.1, 3.31, 3.32, 3.4, 4.2, 4.23, 4.3, 4.32, 4.4, 5.5, 5.41, 5.42 the following guideline will be applied:

- Inventoried Roadless Guideline. Management activities in inventoried roadless areas should emphasize long-term maintenance of roadless characteristics and: habitat improvement for threatened, endangered, proposed, or sensitive species; or maintenance and restoration of ecosystem composition and structure such as reducing the risk of uncharacteristic wildfire effects or threat of insect or disease epidemics.

For the 5.12, 5.13, 5.4, and 5.43 management areas the following guideline will be applied:

- Inventoried Roadless Guideline. Minimize road construction in inventoried roadless areas, emphasizing temporary roads over permanent roads. Roads will only be constructed when necessary to meet management area objectives and only after other options have been examined for feasibility.

For the 7.1, 8.21, 8.25, 8.32 management area prescriptions there would be no inventoried roadless guideline in the Forest Plan. Direction for inventoried roadless management would rely on existing laws and directives.

SPECIAL USES

Standard **1.** Do not approve new uses and phase out current uses when existing permits expire where the primary use is storage or disposal of hazardous materials, including landfills.

TRANSPORTATION AND UTILITY CORRIDORS

Standards

1. Do not plan transportation and utility corridors through research natural areas or wild rivers unless required by the acts, or in designated wilderness unless authorized by the President.

2. Consider valid outstanding rights that may conflict with the occupancy and use of corridors.

3. Do not authorize conflicting uses or activities within transportation and utility corridors.

4. Coordinate the location of major transportation and utility corridors between national forests and other appropriate agencies.

5. Conserve corridors identified in the forest plan for future construction and occupancy.

6. For permit issuance or reissuance, require burial of electrical utility lines of 33 kilovolts or less and telephone lines, unless one or more of the following applies:

- Scenic integrity objectives of the area can be met using an overhead line;
- Burial is not feasible due to geologic hazard or unfavorable geologic conditions;
- Greater long-term site disturbance would result; or
- It is not technically feasible.

7. Proposals to utilize designated utility corridors will be authorized without alternative route analysis, subject to site-specific environmental analysis.

Guidelines

1. Use *National Forest Landscape Management*, *Volume 2, Chapter 2, Utilities* for principles and concepts.

2. Consolidate occupancy of transportation or utility corridors and sites wherever feasible and compatible.

3. Management activities within linear corridors should be compatible to the extent possible with the goals of the individual management areas adjacent to the corridor.

CHAPTER THREE

Management Area Direction

Vail Pass in1940

Chapter 3

Management Area Direction

Introduction

The 1984 Land and Resource Management Plan (1984 Forest Plan) for the White River National Forest included specific direction on how to manage different land areas. These *management areas* also are used in the final revised Land and Resource Management Plan (2002 Forest Plan) to define where different management activities may be carried out and to show where different kinds of public uses occur. Each area is defined by a primary emphasis and set of elements—that is, a *management area prescription*—that guides the activities taking place within it. All of the National Forest System lands administered by White River National Forest personnel are managed according to these prescriptions.

Management areas are grouped into eight major categories. Within each category are different management area prescriptions that share a related management emphasis. Each prescription is identified by number and is further defined in terms of the following elements:

Theme
A short summary of the management emphasis.

Management area description
The general environment in which the management area is located.

Desired condition
A description of the area and the opportunities available to achieve that condition in the future.

Management area standards and guidelines
Management direction specific to each management area, beyond that provided by the forest-wide standards and guidelines (*see Chapter 2*). If there is a conflict between the two levels, the more restrictive direction applies.

Each of the seven forest management alternatives described in Chapter 2 of the Final Environmental Impact Statement (FEIS) consists of the same basic set of forest-wide and management-area -specific standards and guidelines. The alternatives differ from one another through their management area *allocation.* Each alternative uses a different combination, size, and distribution of management areas prescriptions across the White River National Forest. This process is analogous to county zoning, in which different land areas are designated for different purposes and mapped as such.

To view the allocation of management areas in each alternative, see the management area maps in the accompanying map packet. These maps show that, in a given alternative, particular management areas can occur more than once and can appear in many different locations on the forest.

In addition, management areas can overlap, such as when a research natural area is located within designated wilderness. Each management area prescription contains

standards and guidelines specific to that management area; however, when this overlap occurs, the more restrictive standards and guidelines apply.

For each management area prescription, one or more recreation opportunity spectrum (ROS) categories may apply. Likewise, scenic integrity objective (SIL) levels within each management area prescription may vary, depending on the primary uses and desired future conditions of particular allocations. Each management area description in this chapter lists which ROS and SIL categories are found within the prescription allocations. The accompanying map set shows the location of specific ROS and SIL scenic integrity level categories across the White River National Forest. For a description of ROS and SIL categories, see the Glossary, Appendix HH.

The overall theme of each alternative was used to guide the allocation process. Depending on this theme, an alternative can include some management areas while excluding others and can vary significantly from other alternatives in the size, location and frequency of management areas it contains. See **Table 14** in Chapter 2 of FEIS Volume 1 for the total acreage, by alternative, of each management area on the forest.

The categories used in this chapter were developed for forest plan revisions in Regions 1, 2, and 4 of the Forest Service. Since the release of the 1984 Forest Plan, the identification system used for management area prescriptions has changed. Some new management areas have been developed, and some have been dropped. **Table 2** in Chapter 1 of FEIS Volume 1 illustrates these changes.

Each management area category is presented separately, with an introductory description and an accompanying table that shows the kinds of activities that generally are allowed or prohibited within each prescription. This table is helpful for understanding similarities and differences among prescriptions within a category. The reader should note that the overview found in these tables does not represent site-specific decisions and that each management area may contain exceptions to the rule.

In all management areas in which motorized uses are prohibited, an exception applies for users of motorized wheelchairs. Title V, Section 507 of the *Americans with Disabilities Act* states:

> A person is permitted to use his/her motorized wheelchair in a non-motorized area, so long as that wheelchair meets the legal definition of being designed solely for use by a mobility-impaired person and suitable for use in an indoor pedestrian area.

If a specific resource is not addressed in a management area prescription, this indicates that the forest-wide standards and guidelines in Chapter 2 provide adequate direction. In addition, federal and state laws and regulations and the Forest Service Directives System always apply, although they are not specifically identified in management area direction.

Category 1

Introduction

Category 1 includes all management area options for designated wilderness and other minimal-use management areas. Ecological processes such as fire, insects, and disease essentially are allowed to operate relatively free from the influence of humans. Diversity resulting from natural succession and disturbance predominates and non-native vegetation is rare. Users must be self-reliant and should expect low levels of contact with other people. Few if any human-made facilities are present. Few if any structural improvements exist. Travel is non-mechanized with rare exceptions. Typical types of areas are designated wilderness, roadless areas, and backcountry lands. A minor amount of motorized use may be needed to restore desired conditions in core restoration areas.

Role of Historic Range of Variability in Desired Future Conditions

Natural processes are the primary factor affecting landscape pattern in these management areas. Due to past management activities, such as fire suppression and other human uses, some localized areas have ecological conditions that are outside of their historic range. It may be decades or centuries until such conditions are restored as a result of natural processes. Some ecological conditions, however, can be maintained or restored to historic levels using management activities allowed in wilderness and backcountry areas. These tools and conditions include: prescribed and wildland fire (to restore ecological values), wildlife and fisheries enhancement projects (to restore or re-establish historic populations of native species), and noxious weed control (to establish natural conditions). These tools will be used, when appropriate according to Management Area direction, to meet ecological objectives within HRV conditions.

Management activities that generally are allowed in Category 1 are shown in **Table 3-1** by prescription.

Table 3-1
Generally allowed activities and allocations in Category 1

		Activities allowed					
Management area prescription		**Timber harvest**	**Motorized recreation**	**Mechanized recreation**	**Oil & gas leasing**	**Locatable minerals**	**Developed recreation**
1.11	Pristine wilderness	no	no	no	no	no	no
1.12	Primitive wilderness	no	no	no	no	no	no
1.13	Semi-primitive wilderness	no	no	no	no	no	no
1.2	Recommended for wilderness	no	no	no	no	no	no
1.31	Backcountry recreation – non-motorized	yes	no	yes	yes	no	yes
1.32	Backcountry recreation with limited winter motorized	yes	Summer no; winter yes	yes	yes	no	yes
1.41	Core areas	no	no	no	yes	no	no
1.5	Wild rivers – designated and eligible	no	no	yes	no	decision by area	no

Notes:

1. None of the timber harvest that occurs in Category 1 contributes to the allowable sale quantity.
2. Grazing is allowed in all prescriptions in Category 1.
3. Developed recreation sites include trailheads.

1.11 Pristine Wilderness

Theme

Pristine wilderness areas are managed to protect and perpetuate their essentially pristine conditions. Natural processes and conditions are not measurably affected by human use. Opportunities for solitude and self-reliance are excellent.

Management area description

Ecological processes are minimally affected by the action of users. The structure, composition, function, and spatial distribution of vegetative types is the result of natural successional processes. Plant species are indigenous to the immediate area, with exotic plants being extremely rare. Management actions are focused on sustaining and enhancing the natural ecosystem. Recreation opportunities offer primitive and unconfined experiences that feature solitude and cross-country travel. Trails may exist but are not maintained or designated as National Forest Development Trails (FDT).

Desired condition

These areas provide the most outstanding opportunity for solitude and isolation. Structures and facilities are present only as necessary for resource protection when less obtrusive measures have been unsuccessful. User-created trails or game trails may exist but are not maintained or designated on maps or trail guides. Indirect methods of accomplishing management objectives predominate. Exceptions are allowed to insure impacts are contained and do not persist. For information on HRV see the Introduction to Category 1 on page 3-4.

The recreation opportunity spectrum (ROS) for this management area is pristine year-round. Scenery is managed to provide a scenic integrity objective of very high.

Standards and guidelines

INFRASTRUCTURE

Standards

1. Do not allow facilities or signs.

2. Do not construct or reconstruct trails. Where resource damage exists from concentrated use of cross-country travelways take measures to correct problems.

RECREATION

Guidelines

1. A low incidence of contact with other groups or individuals should be provided within the following guidelines:

a. No more than two other parties encountered during cross-country travel per day on 80 percent of the days during each use season.

b. No other party within sight or sound of campsites should be encountered on 80 percent of the days in the summer and fall use seasons.

2. Density of campsites will be low, not to exceed one site per acre. Most sites will be Cole Condition Class 1 and 2. Very few Class 3 sites will exist. Close and restore all other campsites.

SPECIAL USES

Standard

1. Do not authorize outfitter-guide assigned campsites for longer than 14 days.

1.12 Primitive Wilderness

Theme

Areas designated as primitive wilderness are managed to protect natural conditions and to offer a moderately high degree of solitude.

Management area description

An essentially unmodified natural environment characterizes the area. In a few areas where moderate levels of use are concentrated, natural conditions may be affected by the actions of users. Highly constructed and maintained trail corridors will support access to popular destinations and travel routes. Moderate to high occasions of solitude while traveling and camping outside the trail corridors will be likely. Plant species are predominately native and indigenous to the immediate area.

Desired condition

Some designated campsites may be available. The opportunity exists for a moderate-to-high level of risk and challenge. There is a low incidence of contact while traveling cross-country. Somewhat more frequent encounters should be expected when on trails. Concentration of campsites is moderately high at trail junctions and popular destination points. The number of sites accommodates moderate use with no new sites forming over time. Outfitter and range permittee camps may be allowed. Pre-existing rights (such as mineral and water) may exist and be in operation. Maintained trails exist. Trail and bridge construction incorporate natural designs and native materials that complement the surrounding landscape whenever possible. The minimum number of signs needed to provide for resource protection and direction at major trail intersections is used. For information on HRV see the Introduction to Category 1 on page 3-4.

The recreation opportunity spectrum (ROS) for this management area is semi-primitive non-motorized or primitive year-round. Scenery is managed to provide a range of scenic integrity objectives from high to very high.

Standards and guidelines

INFRASTRUCTURE

Guidelines

1. The following actions should be taken when needed:

a. Minimize trail impacts to scenic resources.
b. Eliminate duplicate trails.

2. Bridges may be necessary for user safety or to protect streamside areas but should not be provided merely for user convenience.

RECREATION

Guidelines

1. An incidence of contact with other groups or individuals should be provided within the following guidelines:

a. No more than 12 other parties encountered per day on a Forest Development Trail on 80 percent of the days during each use season.
b. No more than six other campsites within sight or sound of campsites on 80 percent of the days during each use season.

2. A minimal number of signs should be provided for resource protection and directions at trail junctions.

3. Manage campsites as follows:

a. Density of sites will be moderate, not to exceed three sites per acre or six sites per linear mile of trail.
b. Many sites at destination locations will be Cole Condition Class 2 to 3, with some Class 4.
c. Manage Cole Condition Class 5 sites as either designated sites or rehabilitate to a lower condition class.

SPECIAL USES

Guideline

1. Keep a minimum distance of three-fourths of a mile between outfitter-guide camps.

1.13 Semi-Primitive Wilderness

Theme

Semi-primitive wilderness areas are managed to protect natural conditions and provide access to primitive or pristine areas. Encounters with other users may be frequent due to concentrated use. Past human use of the area is evident.

Management area description

These areas are managed to emphasize sustaining and protecting natural conditions. Management actions to mitigate visitor use impacts of the resource are noticeable. Encounters with other users may be frequent due to concentrated use. Human use and activities within the area are evident.

Desired condition

Trail and bridge construction incorporate natural designs and native materials that complement the surrounding landscape whenever possible. Pre-existing rights (such as mining and water) may exist and be in operation.

Sustaining and protecting natural conditions is emphasized. Day-use opportunities are common within this management area. Campsites are restricted to designated sites. Contact with other people is likely. The area provides low-to-moderate opportunities for solitude during the primary use season. Travel is primarily along a well-defined trail system. Trail tread is very evident and trails normally are cleared of downed timber. There is the opportunity for a moderate level of risk and challenge. For information on HRV see the Introduction to Category 1 on page 3-4.

The recreation opportunity spectrum (ROS) for this management area is semi-primitive non-motorized year-round. Scenery is managed to provide a range of scenic integrity objectives from moderate to high.

Standards and guidelines

DOMESTIC LIVESTOCK GRAZING

Standard

1. Minimize trailing of permitted livestock except where no feasible alternative access to an allotment exists.

RECREATION

Guidelines

1. Restrict overnight camping to designated sites.

2. A moderate incidence of contact with other groups or individuals should be provided within the following guideline:

a. No more than 20 other parties encountered on a Forest Development Trail per day on 80 percent of the days in each use season.

3. Manage campsites as follows:

a. Concentrate use in Cole Condition Class 3 and 4 sites.

b. Manage Cole Condition Class 5 sites as either designated sites or rehabilitate to a lower condition class.

4. Except for through-travel use, prohibit or restrict recreational livestock.

SPECIAL USES

Standard

1. Do not authorize outfitter-guide assigned campsites for longer than 14 days.

1.2 Recommended for Wilderness

Theme

Areas that the Forest Service has recommended or will recommend to Congress for inclusion in the National Wilderness Preservation System are managed to protect their wilderness characteristics until Congressional action is taken. Non-conforming activities may be limited or restricted.

Management area description

These are areas that the Forest Service has independently found suitable for inclusion in the National Wilderness Preservation System. Areas are managed to protect wilderness characteristics until Congressional action is taken. These areas are in the roadless area inventory. They are capable and available for wilderness designation. Uses, levels of use, and management actions will vary from area to area. However, no activities that jeopardize the eligibility of these areas for Congressional designation as wilderness are allowed.

Desired condition

Generally, opportunities for primitive recreation are provided, with moderate-to-high degrees of solitude available. The effects of past human use may be evident in some areas. For information on HRV see the Introduction to Category 1 on page 3-4.

The recreation opportunity spectrum (ROS) for this management area is primitive or semi-primitive non-motorized year-round. Scenery is managed to provide a range of scenic integrity objectives from moderate to high.

Standards and guidelines

HERITAGE RESOURCES

Standard

1. Manage historic structures, including eligible or listed National Register of Historic Places (NHRP) sites to be compatible with the wilderness setting.

INFRASTRUCTURE

Standards

1. Management actions or proposed new uses that would be the basis for not recommending the area for classification or would alter the wilderness characteristics will not be allowed.

2. Motorized and mechanized travel is prohibited except when authorized by special use permit or for administrative or emergency purposes.

INSECTS AND DISEASE

Guideline

1. Accomplish pest management under the same guidelines as would be used for established wilderness.

MINERAL AND ENERGY RESOURCES

Standards

1. These areas are not available for oil and gas leasing.

2. These areas are withdrawn from locatable mineral entry.

RECREATION

Guidelines

1. An incidence of contact with other groups or individuals should be provided within the following guidelines:

a. No more than 12 other parties encountered on a Forest Development Trail per day on 80 percent of the days during each use season.

b. No more than six other campsites within sight or sound of campsites on 80 percent of the days during each use season.

2. A minimal number of signs should be provided for resource protection and directions at trail junctions.

3. Manage campsites as follows:

a. Density of sites will be moderate, not to exceed three sites per acre or six sites per linear mile of trail.

b. Many sites at destination locations will be Cole Condition Class 2 to 3 with occasionally Class 4.

c. Manage Cole Condition Class 5 sites as either designated sites or rehabilitate to a lower condition class.

SPECIAL USES

Guideline

1. Keep a minimum distance of three-fourths of a mile between outfitter-guide camps.

VEGETATION MANAGEMENT

Standards

1. These areas are not part of the suitable timber base.

2. Timber harvest is prohibited.

1.31 Backcountry Recreation – Non-motorized

Theme

Backcountry, non-motorized recreation areas are managed to provide recreation opportunities in a natural-appearing landscape.

Management area description

These areas, usually 2,500 acres or larger, are generally unroaded or may have some evidence of past roads. They are natural or natural-appearing with little evidence of recent human-caused disturbance. They are important for providing non-motorized recreation near the primitive end of the recreation opportunity spectrum.

Desired condition

A variety of year-round non-motorized recreation opportunities are provided in a natural or natural-appearing setting. Improvements such as trailheads, trails, signs, bridges, fences, huts, or shelters that enhance the recreational opportunities may be present. Trails provide challenging hiking, horseback riding, cross-country skiing, snowshoeing, or mountain biking opportunities. No road building occurs within the area. Noise from motorized use is a rare exception away from the area boundary. For information on HRV see the Introduction to Category 1 on page 3-4.

The recreation opportunity spectrum (ROS) for this management area is semi-primitive non-motorized year-round. Scenery is managed to provide a range of scenic integrity objectives from moderate to very high.

Standards and guidelines

INFRASTRUCTURE

Standard

1. Motorized travel is prohibited except when authorized by special use permit for administration of permitted facilities, for Forest Service administration, or for emergency purposes.

Guidelines

1. Existing unclassified roads should be converted to trails or closed and decommissioned.

2. Structures should be made of native and natural appearing materials.

SPECIAL USES

Guideline

1. Competitive contest and group events are discouraged, but may be permitted on a case-by-case basis.

VEGETATION MANAGEMENT

Standard

1. These areas are not part of the suitable timber land base.

1.32 Backcountry Recreation – Non-motorized with Limited Winter Motorized

Theme

Areas are managed to provide backcountry recreation opportunities in a natural-appearing landscape. Summer use is non-motorized. Over-the-snow vehicles are restricted to designated routes and play areas or may be allowed by permit only during the snow season. Sounds from people and over-the-snow vehicles are not uncommon.

Management area description

Summer – A variety of non-motorized recreation opportunities will be provided. Unique non-motorized hunting and wildlife viewing opportunities may exist away from major travelways where seclusion and cover areas exist. Other compatible activities may occur in the area.

Encounters between individuals or parties are most common on travelways. Seasonal closures for resource protection may occur. Fewer contacts and improved opportunities for solitude occur away from trails. Sounds from people may be common near travelways.

Winter – A variety of motorized and non-motorized over-the-snow recreation opportunities may be provided. Opportunities may include groomed routes where partners or other funds are available to assist in their management as well as snowcat skiing areas with limited motorized access. Other compatible activities may occur in the area.

Encounters between individuals or parties are common on travelways and in snow play areas. Contacts with other people are expected and opportunities for solitude are limited. Sounds from people and over-the-snow vehicles are common throughout the area.

Desired condition

The landscape is primarily natural and relatively undisturbed by humans. Trails provide challenging hiking, horseback riding, mountain biking, and other non-motorized recreational opportunities. Some areas are open to over-the-snow vehicles in the winter. No road building occurs within the area and new trail construction is rare. Dispersed camping occurs throughout the area.

Facilities should be limited to those necessary to protect resources, provide for safety, or enhance recreational experiences. Existing improvements such as trails, bridges, fences, shelters, huts, signs, or water diversions will be blended into the landscape, where feasible, or removed if no longer useful. Educational and interpretive activities include protection of threatened, endangered, and sensitive species, sensitive habitats, and overall biodiversity and user ethics. Opportunities to view wildlife exist, but are not encouraged through management activities. For information on HRV see the Introduction to Category 1 on page 3-4.

The recreation opportunity spectrum (ROS) for this management area is primitive or semi-primitive non-motorized in the summer and semi-primitive motorized in the winter. Scenery is managed to provide a range of scenic integrity objectives from moderate to very high.

Standards and guidelines

INFRASTRUCTURE

Standards

1. Over-the-snow vehicles are allowed, but they are restricted to designated routes and snow play areas. In some areas, use is further restricted by permit only.

2. Motorized travel is prohibited during snow-free periods except when authorized by special use permit or for administrative or emergency purposes.

Guidelines

1. Existing unclassified roads should be converted to trails or closed and decommissioned.

2. Structures will be of native materials and/or natural appearing.

SPECIAL USES

Guideline

1. Competitive contest and group events are discouraged, but may be permitted on a case-by-case basis.

VEGETATION MANAGEMENT

Standard

1. These areas are not part of the suitable timber land base.

1.41 Core Areas

Theme

This prescription is applied to areas identified for management as "core reserves." It emphasizes maintenance of biological diversity. Core reserves are areas of unroaded land that have been shaped primarily by natural forces. They are managed to perpetuate the current plant and animal species and natural processes found therein. Natural disturbance regimes are maintained or re-established where feasible. Human uses are allowed as long as they are compatible with maintaining the current biological diversity.

Management emphasis is to maintain existing habitats, which are shaped primarily by natural processes. Recreational activities may occur in these areas, but they are of minimal impact.

Management area description

These areas usually are larger than 2,500 acres. They generally contain little or no evidence of human development. These are natural-appearing areas in which biological processes and ecosystems function with little or no human influence. There is a very high probability of experiencing solitude, closeness to nature, and tranquility. There is a high degree of self-reliance, challenge, and risk. Limited recreational pursuits are allowed to occur in these areas.

Desired condition

The maintenance of current biological diversity and preservation of habitat for all native species of plants and animals—especially threatened, endangered, and sensitive species—is emphasized.

The landscape is predominantly natural and relatively undisturbed by humans. Vegetational composition and structure are influenced by biological processes and conditions with minimal human influence. The maintenance of biological diversity is emphasized. These areas are unroaded.

Natural ecological processes will be the principal dynamic forces that serve to maintain and restore ecosystem characteristics in conditions that reflect little modification by humans. For information on HRV see the Introduction to Category 1 on page 3-4.

The recreation opportunity spectrum (ROS) for this management area is primitive or semi-primitive non-motorized year-round. Scenery is managed to provide a range of scenic integrity objectives from moderate to very high.

Standards and guidelines

BIODIVERSITY

Standard **1.** Natural processes within the context of the range of natural variability (such as insects, disease, and fire) will be allowed to predominate.

INFRASTRUCTURE

Standards **1.** Motorized and mechanized travel is prohibited except when authorized by special use permit or for administrative or emergency purposes.

2. Do not construct new roads or trails.

Guideline **1.** Existing unclassified roads should be converted to trails or closed and decommissioned.

INSECTS AND DISEASE

Standard **1.** Insects and disease and other natural processes will be acceptable as long as they remain or are expected to remain within the management area boundaries. They will be evaluated for control when they threaten resource values outside of the core reserves.

MINERAL AND ENERGY RESOURCES

Standard **1.** Pursue acquisition of existing mining claims and withdraw from mineral entry areas necessary to meet the objectives of the management area.

VEGETATION MANAGEMENT

Standard **1.** These lands are not part of the suitable timber land base.

Guideline **1.** Vegetation management will be used only when fire, insects, or disease threaten resource values outside of the core reserves.

1.5 Wild Rivers – Designated and Eligible

Theme

Wild rivers and adjacent areas are managed to protect and perpetuate eligible and designated wild river segments.

Management area description

These areas have been identified as being eligible for designation due to the presence of one or more outstandingly remarkable features, including scenic, recreational, geologic, wildlife, or fisheries values. For descriptions of each of the rivers found eligible, see Appendix F of FEIS Volume 4. The actual width of the area may vary in order to protect the outstanding values. Interim protection for eligible streams includes the bed, bank, and one-quarter mile on either side of the ordinary high-water mark.

Areas are managed to protect and perpetuate eligible river segments in their current condition so that their wild river qualities are not diminished. Existing uses, levels of use, and management actions will vary from area to area.

Desired condition

The river corridor is natural and essentially primitive in character. Vegetational composition and structure are influenced by biological processes and conditions. Each stream's outstanding features, free-flowing characteristics, and potential classification are protected until a suitability study and final recommendation regarding river designation is made.

A variety of plant communities, structural stages, and associated wildlife are present in patterns maintained primarily through ecological processes. The variety and arrangement of plant communities and structural stages is dependent on the timing of natural disturbances such as fire, insects, disease, and storms. Riparian communities and aquatic ecosystems are healthy, with little or no evidence of disturbance. The health and wild nature of riparian and aquatic resources are emphasized to enhance their values as components of the experience.

Few new improvements are anticipated. Those that occur are designed to be minimally intrusive on the landscape.

Recreational opportunities vary across the area, depending on their compatibility with the outstandingly remarkable values. Encounters between individuals or parties are generally infrequent except on the few travelways open for use. Contacts and sounds associated with people are generally infrequent away from trails. For information on HRV see the Introduction to Category 1 on page 3-4.

The recreation opportunity spectrum (ROS) for this management area is primitive, semi-primitive non-motorized, or semi-primitive motorized year-round. Scenery is managed to provide a range of scenic integrity objectives from high to very high.

Standards and guidelines

INFRASTRUCTURE

Standard

1. Motorized travel is prohibited.

Guidelines

1. Do not place bridge piers in the waterway.

2. Construct bridges only where no safe opportunity exists to cross streams or gorges.

3. Provide the minimum number of signs necessary to identify area use requirements, foster safety, and provide route information.

INSECTS AND DISEASE

Guideline

1. Insect and disease management activities and methods should focus on enhancing or protecting wild river values.

MINERAL AND ENERGY RESOURCES

Standards

1. These areas are not authorized for new oil and gas development.

2. These areas are withdrawn from locatable mineral entry.

NATIONAL RIVER SYSTEM

Standards

1. All existing facilities, management actions, and uses will be allowed to continue until a decision is made on inclusion into the National Wild and Scenic River System provided that these facilities, actions, and uses do not alter the wild river characteristics.

2. Proposed new uses, management actions, or facilities on National Forest System lands are not allowed if they alter the recreation characteristics of the land and physical resources, or affect the eligibility, potential classification, or potential suitability of the area.

3. When significant action may threaten the river values, a suitability study will be initiated to determine recommendation for inclusion in the National Wild and Scenic River System.

4. To the extent that the Forest Service is authorized under law to control stream impoundments and diversions, the free-flowing characteristics of the study river cannot be modified by new structures that were not part of conditions when eligibility was determined.

RECREATION

Standard

1. No new developed recreation facilities will be permitted other than those associated with system trails or those needed to prevent resource degradation from recreation use.

Guidelines

1. Provide for primitive and semi-primitive non-motorized recreation in an unmodified setting.

2. Outfitting and guiding may be permitted where it will not degrade the values of the river segment.

SCENERY MANAGEMENT

Guideline

1. Accomplish vegetative alteration outside the management area, but visible from within the area, in a manner that is consistent with existing scenic quality objectives for the river segment.

VEGETATION MANAGEMENT

Standard

1. These areas are not part of the suitable timber land base.

Category 2

Introduction

Category 2 includes research natural areas and minimal-use special areas. These areas provide for conservation of representative or particularly rare and narrowly distributed ecological settings or components. They help ensure conservation of ecosystems or ecosystem components that may provide important functions, ensuring the overall sustainability of larger landscapes. Human influences on ecological processes are limited to the degree possible, but sometimes are evident. The type of human use varies, but generally is not intensive. Travel generally is non-motorized. Since some of these areas are intensively managed for a particular objective, they may act as natural reference areas under an adaptive management philosophy. These areas often are formally designated.

Role of Historic Range of Variability in Desired Future Conditions

Natural processes are the primary factor affecting landscape pattern in these management areas. Special Areas (2.1) and Research Natural Areas (2.2) were both identified based on ecological or physical traits or conditions. The Desired Future Condition of these areas includes maintaining or restoring the ecological values for which they were identified. If the conditions are outside of historical range, as defined in the HRV (FEIS Volume 4 Appendix D), management activities may be designed to move specific resources to historical conditions. For example, prescribed fire may be used in some Research Natural Areas to reestablished disturbance regimes.

Management activities in these areas will emphasize the maintenance of or the restoration of historical conditions. Management activities are limited in Research Natural Areas and therefore natural processes will be the primary agent of change. There will be more opportunity for management activities in Special Areas, and they will result in maintenance or enhancement of specific ecological or physical conditions.

Management activities that generally are allowed in Category 2 are shown in **Table 3-2**, by prescription.

Table 3-2
Generally allowed activities and allocations in Category 2

		Activities allowed					
Management area prescription		**Timber harvest**	**Motorized recreation**	**Mechanized recreation**	**Grazing**	**Locatable minerals**	**Developed recreation**
2.1	Special interest areas – minimal use & interpretation	yes	decision by area	decision by area	decision by area	withdraw from mineral entry as needed	yes
2.2	Research natural areas	no	no	no	no	no	no

Notes:

1. None of the timber harvest that occurs in Category 2 contributes to the allowable sale quantity.
2. For Management Area 2.1, individual special interest areas may have different objectives, and activities may be allowed according to these objectives.
3. Developed recreation sites include trailheads.

2.1 Special Interest Areas – Minimal Use and Interpretation

Theme

Special interest areas (SIAs) are managed to protect or enhance areas with unusual or unique ecological, zoological, geological, scenic, historic, or prehistoric characteristics. Management emphasis is on protecting or enhancing (and where appropriate, developing and interpreting for public education and recreation) areas with unusual characteristics.

Management area description

These areas are managed to maintain their special interest values. The setting usually is natural, but will vary depending on the area. Typically, SIAs have been designated as botanical, geological, historical, paleontological, scenic, or zoological areas. Special interest areas also may be designated to protect and manage threatened, endangered and sensitive species, or other elements of biological diversity; or for their emotional significance, scenic values, or public popularity. SIAs vary in size from small to fairly large. In addition, places such as caves, hot springs, cultural resource sites, 14,000-foot peaks, significant views, state-designated historic sites, and potential developed sites could be considered for SIA designation.

Vegetation, terrestrial and aquatic habitat, soil productivity, and water quality will usually, but not always, appear natural (relatively pristine or pre-settlement). Vegetative manipulation may be used to maintain or restore natural conditions, to protect threatened, endangered, and sensitive species, or to protect other values for which the SIA was proposed or designated. Management implementation guidelines ensure protection of the values for which the area was proposed or designated.

Special areas are found throughout the forest where unique or special characteristics occur. They include cultural, historical, scientific, and scenic values throughout a variety of ecosystems and forest conditions. Plant and animal species and communities will vary depending upon the characteristics of each area.

The rare or outstanding values of the areas are the primary consideration. Other resource values and uses are secondary to the protection, maintenance, and restoration of an area's special values for public education, enjoyment, and study.

For a detailed description of special interest areas, see Appendix H of the FEIS Volume 4.

Desired condition

The setting usually is natural but will vary depending on the area. Evidence of human activities, including interpretation and habitation, is consistent with the characteristics for which the area was established. Encounters between individuals or parties, as well as access to the SIA, depend on the objectives for designation. These areas are managed to maintain their special interest values. Vegetation, terrestrial and aquatic habitat, soil productivity, and water quality usually appear nearly natural. For information on HRV see the Introduction to Category 2 on page 3-20.

The recreation opportunity spectrum (ROS) for this management area is primitive, semi-primitive non-motorized, semi-primitive motorized, or roaded natural year-round. Scenery is managed to provide a range of scenic integrity objectives from moderate to very high.

Standards and guidelines

BIODIVERSITY

Standard **1.** Maintain or restore the natural (or near-natural) conditions and protect the habitat of threatened, endangered, or sensitive species as well as the values for which the special interest area was established.

GEOLOGY

Standard **1.** Appropriate authorizations are required for the collection of paleontological materials.

INFRASTRUCTURE

Guidelines **1.** Regulate motorized and mechanized travel where necessary to protect the values for which the individual area was proposed or established.

2. Facilities are present to the extent needed to maintain the area or to accommodate visitor use.

MINERAL AND ENERGY RESOURCES

Standard **1.** These areas are withdrawn from locatable mineral entry when such action is deemed necessary to meet the objectives for which the area was proposed or established.

Guideline **1.** Appropriate authorizations are required for the collection of rocks and minerals.

DOMESTIC LIVESTOCK GRAZING

Guideline **1.** Allow livestock grazing and associated range improvements if they do not conflict with the purpose for which the area was proposed or established.

REAL ESTATE

Standard **1.** Retain all National Forest System lands.

RECREATION

Guideline **1.** Recreation use is allowed for interpretation, education and inspiration when it does not threaten the values for which the individual area was proposed or established.

SPECIAL USES

Standard **1.** Authorize scientific or other activities that are compatible with the special interest area through special use permits containing terms that protect or enhance the area's values.

VEGETATION MANAGEMENT

Standards

1. These areas are not part of the suitable timber land base.

2. Allow vegetation management practices necessary to meet specific resource objectives of maintaining the values for which the individual area was proposed or established.

2.2 Research Natural Areas

Theme

Research natural areas (RNAs) form a network of ecological reserves designated for non-manipulative research, education, and the maintenance of biodiversity. This prescription is applicable both to designated RNAs and areas that are proposed for designation.

Management area description

RNAs are selected to preserve a spectrum of relatively pristine areas that represent a wide range of natural variability within important natural ecosystems, environments (including coniferous forest, shrubland, grassland, alpine, aquatic, and geological environments) and areas that have special or unique characteristics of scientific importance. The setting is natural.

RNAs are also selected for one or more of the following reasons:

- To serve as reference areas for evaluating the range of natural variability and the impacts of management in similar environments.
- To protect and maintain representative or key elements of biological diversity at the genetic, species, population, community, or ecosystem levels.
- To serve as areas for the study of ecosystems and ecological processes including succession.
- To provide on-site and extension educational activities.
- To serve as baseline areas for measuring ecological change.

For a description of each of the RNAs, see Appendix G of FEIS Volume 4. Individual RNAs are designated in the Record of Decision for the 2002 Forest Plan. Establishment records for each designated RNA will be completed during forest plan implementation.

Desired condition

RNAs are managed to maintain natural, relatively pristine, or pre-settlement conditions by allowing ecological processes to prevail with minimal human intervention. Under some circumstances, deliberate manipulation may be used to maintain the ecosystem or the unique features for which the RNA was established, or to reestablish natural ecological processes. Non-motorized and non-mechanized recreation and scientific and educational uses are allowed on designated forest system trails that existed prior to RNA establishment. Construction of new trails is prohibited unless necessary to correct resource damage occurring on existing system trails. Roads that are not necessary for scientific or educational purposes are closed and obliterated. New or expanded recreational uses are not encouraged. Existing outfitter-guide permitted use is allowed to continue within RNAs, subject to the normal permit processes that apply to all National Forest System lands. Permits for new uses might not be issued in the future. For information on HRV see the Introduction to Category 2 on page 3-20.

The recreation opportunity spectrum (ROS) for this management area is primitive or semi-primitive non-motorized year-round. Scenery is managed to provide a range of scenic integrity objectives from high to very high.

Standards and guidelines

INFRASTRUCTURE

Guideline **1.** Prohibit motorized and mechanized use, except when it provides necessary access for scientific, administrative, emergency, or educational purposes.

MINERAL AND ENERGY RESOURCES

Standard **1.** These areas are withdrawn from locatable mineral entry.

Guideline **1.** When these areas occur outside of areas designated as unavailable in the *Oil and Gas Leasing EIS*, they are available with a no surface occupancy stipulation, as long as exploration does not affect underground resources for which the area was established.

DOMESTIC LIVESTOCK GRAZING

Standard **1.** Livestock grazing is not permitted, except for recreational livestock grazing that does not conflict with the values for which the RNA was established.

VEGETATION MANAGEMENT

Standards **1.** These areas are not part of the suitable timber land base.

2. Timber harvest is prohibited.

Category 3

Introduction

Category 3 contains management areas that balance ecological values with human occupancy—consideration is given to both. Resource management activities may occur, but natural ecological processes and resulting patterns normally predominate. Although these areas are characterized by primarily natural-appearing landscapes, an array of management tools may be used to restore or maintain relatively natural patterns of ecological processes. This results in some evidence of human activities. Users expect to experience some isolation from the sights and sounds of people in a setting that offers some challenge and risk. Restrictions on motorized travel may vary from area to area, or from season to season.

Role of Historic Range of Variability in Desired Future Conditions

Natural processes are the primary factor affecting landscape pattern in these management areas. There are, however, areas where recreation or other multiple uses predominate and historical conditions are altered and may remain in such a condition. These are primarily small in scale and do not dominate the landscape. Examples may include developed recreation sites, trailheads, mineral development activity, and non-ski-based resorts. Such activities are generally small in scale and do not change the character of large landscape areas.

In other areas, however, historic conditions will predominate, and active management will result in maintaining or trending toward HRV conditions through use of tools such as prescribed fire, noxious weed control, and aquatic ecosystem restoration. These management areas may be assigned to large geographic areas where natural processes are the primary agent of change. Vegetation management activities in these management areas will consider and emphasize HRV conditions, and may also emphasize other resource objectives such as visual resources or recreation resources.

Management activities that generally are allowed in Category 3 are shown in **Table 3-3,** by prescription.

Table 3-3
Generally allowed activities and allocations in Category 3

Management area prescription		Activities allowed			
		Motorized recreation	**Oil & gas leasing**	**Locatable mineral**	**Non-ski areas**
3.1	Special interest areas – emphasis on use and interpretation	yes	yes	decision by area	no
3.21	Limited use	yes	yes	decision by area	no
3.31	Backcountry year-round motorized	yes	yes	yes	yes
3.32	Backcountry non-motorized with winter motorized	summer no; winter yes	yes	yes	no
3.4	Scenic rivers – designated and eligible	yes	no	no	yes
3.55	Corridors connecting core areas	yes	yes	decision by area	no

Notes:

1. Timber harvest is allowed in all prescriptions in Category 3. However, none of the timber harvest that occurs in Category 3 contributes to the allowable sale quantity.
2. Grazing is allowed in all prescriptions in Category 3.
3. Developed recreation sites are allowed in all prescriptions in Category 3. Developed recreation sites include trailheads.
4. Mechanized travel is allowed on all prescriptions in Category 3.

3.1 Special Interest Areas – Emphasis on Use and Interpretation

Theme

Special interest areas (SIAs) are managed to protect or enhance their unusual characteristics. Management emphasis is on protecting or enhancing (and, where appropriate, developing and interpreting for public education or recreation) areas with unusual characteristics.

Management area description

These areas are managed to maintain their special interest values. Typically, SIAs have been designated as botanical, geological, historical, paleontological, scenic, or zoological areas. Special Interest Areas may also be designated to protect and manage threatened, endangered and sensitive species, or other elements of biological diversity; or for their emotional significance, scenic values, or public popularity. Management implementation guidelines will be developed for each SIA to ensure protection of the values for which the area was designated.

SIAs can vary in size from small to fairly large. In addition, places such as caves, hot springs, cultural resource sites, 14,000-foot peaks, significant views, state-designated historic sites, and potential developed sites could be considered for designation.

Vegetation, terrestrial and aquatic habitat, soil productivity, and water quality will usually appear to be nearly natural (relatively pristine or pre-settlement) in these areas. Vegetational manipulation may be used to maintain or restore natural conditions in order to protect threatened, endangered, and sensitive species, or to protect other values for which the SIA was proposed or designated.

For a detailed description of special interest areas, see Appendix H of the FEIS.

Desired condition

The setting usually is natural but will vary depending on the area. Evidence of human activities or habitation is consistent with the characteristics for which the area was established. Encounters between individuals or parties depend on the objectives for designation. These areas are managed to maintain their special interest values. Vegetation, terrestrial and aquatic habitat, soil productivity, and water quality usually, but not always, appear nearly natural. For information on HRV see the Introduction to Category 3 on page 3-28.

The recreation opportunity spectrum (ROS) for this management area is semi-primitive non-motorized, semi-primitive motorized, roaded natural, or rural year-round. Scenery is managed to provide a range of scenic integrity objectives from low to very high.

Standards and guidelines

BIODIVERSITY

Guideline **1.** Maintain or restore the natural or sensitive species habitat for the values for which the area was established.

INFRASTRUCTURE

Standard **1.** Construct new roads or trails only when necessary for interpretive or educational purposes, or to correct resource damage occurring from existing roads or trails.

Guideline **1.** New facilities may be constructed to enhance the values for which the SIA was designated, for interpretive or educational purposes, or to correct resource damage.

MINERAL AND ENERGY RESOURCES

Standard **1.** These areas will be withdrawn from locatable mineral entry when such action is deemed necessary to meet the objectives of the area.

DOMESTIC LIVESTOCK GRAZING

Guideline **1.** Allow livestock grazing and livestock improvements if they do not conflict with the values for which the area was proposed or designated.

REAL ESTATE

Standard **1.** Retain all National Forest System lands.

RECREATION

Guideline **1.** Encourage recreation use for interpretation and education when it does not threaten the values for which the area was proposed or designated.

SPECIAL USES

Standard **1.** Authorize scientific or other activities that are compatible with the SIA through special use permits containing terms that protect or enhance the area.

VEGETATION MANAGEMENT

Standards **1.** These areas are not part of the suitable timber land base.

2. Allow vegetation manipulation when necessary to reduce fuel loads, maintain or restore natural conditions, or enhance other values for which the individual area was proposed or established.

3.21 Limited Use Areas

Theme

The management emphasis is to provide areas in which limited extractive or manipulative uses may occur while maintaining habitats for native and desired non-native species that exist in the area.

Management area direction

These areas usually are surrounding or adjacent to a core area. They have minimal impact from human use. There is a high probability of experiencing solitude, closeness to nature, and tranquility. These areas require self-reliance because of the level of challenge and risk.

Natural processes generally predominate, except for fires that may need to be contained or confined when human life, health, or safety is threatened.

Desired condition

Management activities are designed to maintain or enhance biological diversity and to preserve the habitat of all native species of plants and animals, especially threatened and endangered species. For the most part, the landscape appears natural. Insect and disease losses generally are accepted. A variety of fire sizes and shapes result from natural and human ignitions. For information on HRV see the Introduction to Category 3 on page 3-28.

The recreation opportunity spectrum (ROS) for this management area is primitive, semi-primitive non-motorized, or semi-primitive motorized year-round. Scenery is managed to provide a range of scenic integrity objectives from moderate to very high.

Standards and guidelines

BIODIVERSITY

Standard **1.** Range of natural variability data will be used to establish objectives for vegetation pattern, structural composition, and patch size.

GENERAL BIOLOGICAL

Standard **1.** All resource management activities will be compatible with the maintenance of biological diversity.

Guideline **1.** Management activities should replicate biological processes found in the area and strive to replicate natural vegetation patterns and patch size.

INFRASTRUCTURE

Standards **1.** Over-the-snow vehicles are permitted but they are restricted to designated routes and snow play areas.

Guideline **1.** Travelways open to motorized travel will not exceed an average travelway density of one mile per square mile.

MINERAL AND ENERGY RESOURCES

Standard **1.** These areas will be withdrawn from mineral entry when such action is deemed necessary to meet the objectives of the management area.

VEGETATION MANAGEMENT

Standards **1.** These areas are not part of the suitable timber land base.

2. Allow vegetation management practices that are necessary to meet the specific biodiversity goals of the management area.

3.31 Backcountry Recreation – Year-round Motorized

Theme

Backcountry motorized recreation areas are managed to provide summer motorized recreation on roads and trails and winter motorized recreation throughout the area in a natural-appearing landscape.

Management area description

These areas are generally greater than 2,500 acres in size and may contain primitive roads and a motorized trail system. They are managed to provide a variety of uncrowded, motorized recreation opportunities in a natural or natural-appearing setting. Skiers should expect to encounter over-the-snow vehicles.

Vegetational composition and structure are influenced by biological processes and conditions. Vegetation may be altered to enhance recreation opportunities. Alterations are small and not generally evident to visitors.

Recreational users will find varied levels of difficulty on off-highway-vehicle roads and trails. Roads are primitive with native surfaces. Improvements to enhance recreation opportunities may include parking areas and interpretive, informational, and directional signs, but improvements are minimal.

Desired condition

A variety of motorized recreation opportunities are provided. For information on HRV see the Introduction to Category 3 on page 3-28.

The recreation opportunity spectrum (ROS) for this management area is semi-primitive year-round. Scenery is managed to provide a range of scenic integrity objectives from moderate to high.

Standards and guidelines

BIODIVERSITY

Guideline **1.** Management activities should replicate biological processes and strive to replicate natural vegetation patterns and patch size.

INFRASTRUCTURE

Guideline **1.** Some trails may be restricted to non-motorized use.

SPECIAL USES

Guideline **1.** Competitive and group events may be permitted on a case-by-case basis.

VEGETATION MANAGEMENT

Standards **1.** These lands are not part of the suitable timber land base.
2. Vegetation management practices will be used to meet specific resource objectives other than wood production.

3.32 Backcountry Recreation – Non-motorized with Winter Motorized

Theme

Backcountry, non-motorized recreation areas are managed to provide recreation opportunities in a natural-appearing landscape. Summer use is non-motorized. Over-the-snow vehicles are allowed during the snow season.

Management area description

These areas usually are 2,500 acres or larger and generally are unroaded, but may contain evidence of past roads. They are natural or natural-appearing with little or no evidence of recent human-caused disturbance. During snow-free periods, they are important for providing non-motorized recreation near the primitive end of the recreation opportunity spectrum.

Improvement such as trailheads, trails, signs, bridges, fences, or shelters that enhance the recreation opportunities may be present. Trails provide challenging hiking, horseback riding, or mountain biking opportunities. The potential to view wildlife is high.

Desired condition

A variety of uncrowded, summer, non-motorized recreation opportunities are provided in a natural or natural-appearing setting. For information on HRV see the Introduction to Category 3 on page 3-28.

The recreation opportunity spectrum (ROS) for this management area is primitive or semi-primitive non-motorized in the summer and semi-primitive motorized in the winter. Scenery is managed to provide a range of scenic integrity objectives from moderate to very high.

Standards and guidelines

BIODIVERSITY

Guideline **1.** Management activities should replicate biological processes and strive to replicate natural vegetation patterns and patch size.

INFRASTRUCTURE

Standard **1.** Motorized travel is prohibited during snow-free periods except when authorized by special use permit or for administrative or emergency purposes.

SPECIAL USES

Guideline **1.** Competitive and group events may be permitted on a case-by-case basis.

VEGETATION MANAGEMENT

Standards **1.** These areas are not part of the suitable timber land base.
2. Vegetation management practices will be used to meet specific resource objectives other than wood production.

3.4 Scenic Rivers – Designated and Eligible

Theme

Scenic rivers are managed to protect and perpetuate eligible and designated scenic river segments.

Management area description

These areas have been identified as being eligible for scenic river designation due to the presence of one of more outstandingly remarkable features that include scenic, recreational, geologic, wildlife, or fisheries values. For descriptions of eligible rivers, see Appendix F of the FEIS.

Areas are managed to protect and perpetuate eligible river segments in their current condition so that their scenic river qualities are not diminished. Existing uses, levels of use, and management actions will vary from area to area. The actual width of an area may vary in order to protect the outstanding values. Interim protection for eligible streams includes the bed, bank, and one-quarter mile on either side of the ordinary high-water mark.

Encounters between individuals or parties generally are frequent on the travelways open for use. Contacts and sounds associated with people are generally infrequent away from trails.

Desired condition

Recreational opportunities vary across an area, depending on their compatibility with the outstandingly remarkable values. The setting provided by vegetation continues to appear natural. Areas that are not of the desired appearance will be improved or restored. Ecological changes may affect the area's appearance.

Evidence of human activities or habitation resulting from mining, milling, or grazing generally diminishes over time. Existing improvements such as primitive roads, trails, bridges, fences, shelters or signs are removed except where they are needed. Facilities and permitted structures blend with the landscape and may be present. Few new improvements are anticipated, however, those that occur are designed to be minimally intrusive in the landscape.

A variety of plant communities, structural stages, and associated wildlife are present in patterns maintained primarily through ecological processes. The variety and arrangement of plant communities and structural stages are dependent on the timing of natural disturbances such as fire, insects, disease, and storms. For information on HRV see the Introduction to Category 3 on page 3-28.

The recreation opportunity spectrum (ROS) for this management area is semi-primitive non-motorized, semi-primitive motorized, or roaded natural year-round. Scenery is managed to provide a range of scenic integrity objectives from moderate to very high.

Standards and guidelines

INFRASTRUCTURE

Standard

1. Motorized and mechanized travel over snow may be permitted when it does not threaten the values for which the area was proposed or designated.

INSECTS AND DISEASE

Guideline

1. Insect and disease management activities and methods focus on enhancing or protecting scenic river values.

MINERAL AND ENERGY RESOURCES

Standards

1. These areas are not authorized for new oil and gas leasing.

2. These areas are withdrawn from locatable mineral entry.

NATIONAL RIVER SYSTEM

Standards

1. All existing facilities, management actions and uses will be allowed to continue until a decision is made on inclusion into the national wild and scenic river system provided that these facilities, actions, and uses do not alter the scenic characteristics.

2. Proposed new uses, management actions, or facilities on National Forest System lands are not allowed if they alter the characteristics of the land and physical resources, or affect the eligibility, potential classification, or potential suitability of the area.

3. When significant action may threaten the river values, a suitability study will be initiated to determine recommendation for inclusion in the National Wild and Scenic Rivers System.

4. To the extent that the Forest Service is authorized under law to control stream impoundments and diversions, the free-flowing characteristics of the study river cannot be modified by new structures that were not part of conditions when eligibility was determined.

RECREATION

Guideline

1. Developed recreation facilities are allowed as long as they are visually compatible with the landscape.

SCENERY MANAGEMENT

Guideline

1. Activities outside the area, but visible from within, should be accomplished in such a manner that is consistent with existing scenic quality objectives for the river segment.

VEGETATION MANAGEMENT

Standard

1. These areas are not part of the suitable timber land base.

2. Vegetation management practices necessary to meet specific scenic river values will be allowed.

3.5 Corridors Connecting Core Areas

Theme

Management areas in this prescription are managed to protect migration and dispersal areas for wildlife. These areas provide safe connections between core areas.

Management area description

These types of areas may connect core areas (1.41) and limited-use areas (3.21), or they may stand alone. They have light or minimal impact from human use. Natural processes generally predominate.

Desired condition

The landscape is primarily natural-appearing. There is a high probability of experiencing solitude, closeness to nature, and tranquility. There are high degrees of self-reliance, challenge, and risk. Facilities are rustic and exist primarily for site protection. Improvements to enhance recreation use, such as signs, may be present within the area but are of a rustic nature. Dispersed recreation may occur throughout the area.

The maintenance of wildlife migration and dispersal areas to ensure connection between core areas is emphasized. These areas are managed to maintain biological diversity and preserve the habitat of native plant and animal species, especially threatened, endangered, and sensitive species.

Vegetational composition and structure are influenced by biological processes and conditions. Prescribed fire is used where appropriate to create or renew habitat and may be used to mimic natural disturbance regimes. Protecting sensitive species habitats in all management activities is emphasized. For information on HRV see the Introduction to Category 3 on page 3-28.

The recreation opportunity spectrum (ROS) for this management area is semi-primitive non-motorized or semi-primitive motorized year-round. Scenery is managed to provide a range of scenic integrity objectives from moderate to very high.

Standards and guidelines

BIODIVERSITY

Guideline **1.** Management activities replicate biological processes found in the area and strive to replicate natural vegetation patterns and patch size.

MINERAL AND ENERGY RESOURCES

Standard **1.** These areas are withdrawn from mineral entry when such action is deemed necessary to meet the objectives of the management area.

VEGETATION MANAGEMENT

Standard **1.** These areas are not part of the suitable timber land base.

2. Vegetation management practices necessary to meet specific biodiversity goals are allowed.

Category 4

Introduction

Management areas in this category emphasize scenic values and recreation. Ecological values are managed to provide recreational use, but are maintained well within the levels necessary to sustain overall ecological systems. Resource use for other values is not emphasized and has little impact on ecological structure, function, or composition. Human use is recreation-oriented. Sights and sounds of people on the site are expected and may even be desired. Motorized transportation is common.

Role of Historic Range of Variability in Desired Future Conditions

Natural processes are sustained in these management areas, but may not be the primary agent of change. These management areas are primarily located along linear features such as rivers or roads, where recreation is a primary activity. There are areas, therefore, where recreation predominates and historical conditions are altered and may remain in such a condition. These are primarily small in scale and do not dominate the landscape patterns or processes. Examples may include, developed recreation sites, trailheads, road corridors, and river corridors. Management activities are generally small in scale and do not characterize entire landscapes.

Activities that mimic natural processes, such as prescribed fire or timber harvest may be used to create desirable conditions for recreation opportunities such as reduced fuels loads, and scenic vistas. Fisheries management allows for conditions outside of HRV as Management Area 4.32 provides for non-native fisheries emphasis.

Management activities that generally are allowed in Category 4 are shown in **Table 3-4,** by prescription.

Table 3-4
Generally allowed activities and allocations in Category 4

Management area prescription		Activities allowed	
		Oil & gas leasing	Locatable minerals
4.2	Scenery	yes	decision by area
4.23	Scenic byways, scenic areas, vistas, or travel corridors	yes	decision by area
4.3	Dispersed recreation	yes	yes
4.32	Dispersed recreation – high use	yes	decision by area
4.4	Recreation rivers – designated and eligible	no	no

Notes:

1. Timber harvest is allowed in all prescriptions in Category 4. However, none of the timber harvest that occurs in Category 4 contributes to the allowable sale quantity.
2. Grazing is allowed in all prescriptions in Category 4.
3. Motorized and mechanized travel is permitted in all prescriptions in Category 4.
4. Developed recreation sites and non-ski areas may be found in all prescriptions in Category 4. Developed recreation sites include trailheads.

4.2 Scenery

Theme

These areas are managed to protect or preserve scenic values and recreation uses of designated scenic byways and other heavily used scenic destinations and travel corridors.

Management area description

Management areas in this prescription occur where outstanding scenic features draw attention and use. These areas are scenic byways, high-quality scenic areas, or vistas noted for outstanding physical features. They may include transportation corridors such as highways and National Forest System roads.

Recreation facilities such as scenic overlooks, interpretive signs, and rest areas commonly occur. Developed campgrounds may be provided. Trailheads are easily accessible. Structures should not only provide a positive addition to the landscape character when viewed in the immediate foreground, but should also not detract from experiencing the scenic values of the greater landscape. To help them blend into the landscape, facilities will be composed of native and natural-appearing materials.

Open roads provide motorized access and recreational opportunities. Non-mechanized activities, such as hiking and horseback riding, are generally available on non-motorized travelways.

Vegetation alterations may be present to enhance the viewing opportunity and to maintain long-term vigor and health of the vegetation. Vegetation management activities are visually subordinate to the surrounding landscape. Vegetation varies from natural-appearing background areas, to foreground and middleground areas where modifications may be noticed but do not attract attention.

Private facilities and communities may be present along these corridors. Many interacting uses are interpreted for the visitor.

Desired condition

Because scenic quality is emphasized, all activities and interactions maintain the scenic values for which the area is designated. Activities maintain a variety of successional stages, plant communities, and associated wildlife through a combination of human manipulation and natural processes. Habitat-improvement projects that increase the potential for viewing and interpreting a variety of wildlife species while providing for visitor and wildlife safety are encouraged.

Relatively high numbers of recreationists and associated disturbances may limit wildlife viewing opportunities to those species that are common or accustomed to the presence of people. Habitat for sensitive species may be enhanced where opportunities exist, but the focus is on protection and maintenance of such habitats. Where opportunities exist, vistas and other viewing opportunities are created and maintained. Opportunities also exist for recreational fishing.

Frequent contacts with other visitors will occur because of the associated travel corridor. A social type of recreational experience is provided. Access is provided to natural attractions, water features, or areas that feature desired recreational opportunities such as camping, hiking, bicycling, fishing, skiing, snowmobiling, and scenic driving. Use may be concentrated or dispersed, depending on the need to protect an area from degradation. Developed recreation sites may be common and often are emphasized in these travel corridors. Developed recreation areas provide hardened surfaces to meet user needs and

protect resources. The travel corridor along scenic byways provides recreation and interpretive facilities that promote scenic values. For information on HRV see the Introduction to Category 4 on page 3-40.

The recreation opportunity spectrum (ROS) for this management area is semi-primitive non-motorized, semi-primitive motorized, roaded natural or rural year-round. Scenery is managed to provide a range of scenic integrity objectives from low to very high.

Standards and guidelines

MINERAL AND ENERGY RESOURCES

Standard **1.** These areas will be withdrawn from mineral entry when such action is deemed necessary to meet the objectives of the management area.

DOMESTIC LIVESTOCK GRAZING

Standard **1.** New water developments, corrals, or holding pens for livestock grazing must blend into the natural landscape.

RECREATION

Standards **1.** Provide parking and access for natural attractions, water features, or areas that provide desired recreation opportunities such as camping, hiking, bicycling, skiing, snowmobiling, fishing, and scenic driving.

2. Provide recreation and interpretation facilities that promote the reasons the area was designated while maintaining its scenic values.

VEGETATION MANAGEMENT

Standards **1.** These areas are not part of the suitable timber land base.

2. Vegetation management practices will be designed to meet scenery resource objectives.

Guideline **1.** Vegetation management operations will be designed to maintain the desired recreation setting.

4.23 Scenic Byways, Scenic Areas, Vistas, and Travel Corridors

Theme

These types of areas are managed to protect or preserve the scenic values and recreation uses of designated scenic byways, scenic areas, vistas, and other heavily used scenic travel corridors.

Management area description

These areas consist of designated scenic byways, scenic areas, vistas, and travel corridors, or other high-quality scenic areas in which outstanding features draw attention and to which people gravitate. The scenic areas and vistas may include roads, trails, or other transportation systems from which the area or vista is seen. Such areas may also include distant views seen from viewpoints along transportation corridors, at developed recreation sites, at other concentrated-use sites, or from communities.

Facilities to enhance the opportunities for viewing the scenery and wildlife may be present, along with opportunities for recreational fishing. Existing facilities, such as powerlines and roads, may be obvious to the casual observer. Vegetation alterations may be present to enhance the view opportunity or to maintain long-term vigor and health of the vegetation.

Desired condition

Opportunities exist to view high-quality scenery that represents the natural character of the region. Forest management activities may be seen, but will be visually subordinate to the surrounding landscape. Travel corridors along scenic byways provide recreation and interpretive facilities that promote the reasons for designation as scenic. Habitat-improvement projects that will increase the potential for viewing and interpreting a variety of wildlife species, while providing for visitor and wildlife safety, are encouraged. When opportunities exist, vistas and other viewing opportunities are created and maintained. For information on HRV see the Introduction to Category 4 on page 3-40.

The recreation opportunity spectrum (ROS) for this management area is semi-primitive non-motorized, semi-primitive motorized, roaded natural, or rural year-round. Scenery is managed to provide a range of scenic integrity objectives from low to very high.

Standards and guidelines

INSECTS AND DISEASE

Guideline **1.** Reasonable effort should be made to control epidemics that threaten the scenic quality of the area, but treatments should not diminish the scenic quality more than would be expected if the epidemic were not controlled.

MINERAL AND ENERGY RESOURCES

Standard **1.** These areas will be withdrawn from mineral entry when such action is deemed necessary to meet the objectives of the management area.

VEGETATION MANAGEMENT

Standards **1.** These areas are not part of the suitable timber land base.

2. Vegetation management practices will be designed to meet scenery resource objectives.

Guideline **1.** Vegetation management operations will be designed to maintain the desired recreation setting.

4.3 Dispersed Recreation

Theme

Dispersed recreation areas are managed to provide undeveloped recreation opportunities in natural or natural-appearing landscapes.

Management area description

The areas may be designated as either motorized or non-motorized. The non-motorized areas will usually have good vehicular access to a central parking area from which the non-motorized use originates.

Dispersed recreational opportunities include viewing scenery and wildlife, dispersed camping, picnicking, fishing, snowmobiling, cross-country skiing, and mountain biking. Opportunities for solitude are limited. A broad range of management activities, including grazing, may occur.

Facilities may be present to provide for health and sanitation, to protect resources, or to enhance the recreation experience. These structures may range from small resorts and campgrounds to fire grills, signs, or vehicle barriers. Roads are generally open to motorized activities. The travel system may include motorized and non-motorized trails.

Desired condition

A wide variety of backcountry recreation opportunities exist as long as they do not interfere with maintaining a natural-appearing landscape. Resource management activities are compatible with, and reduce impacts to, recreation resources and opportunities.

Biological communities are maintained or improved to provide an attractive setting for visitors, complement the recreational values, and provide varied plant communities, structural stages, and associated wildlife. Habitat for sensitive species will be protected and maintained, and may also be enhanced where such opportunities exist. For information on HRV see the Introduction to Category 4 on page 3-40.

The recreation opportunity spectrum (ROS) for this management area is semi-primitive non-motorized, semi-primitive motorized, or roaded natural year-round. Scenery is managed to provide a range of scenic integrity objectives from moderate to very high.

Standards and guidelines

RECREATION

Standard **1.** Prohibit dispersed camping within one-quarter mile of developed campgrounds.

Guideline **1.** To protect sensitive natural resources, high-use recreation sites may be hardened, or have additional restrictions enforced.

VEGETATION MANAGEMENT

Standard **1.** These areas are not part of the suitable timber land base.

Guideline **1.** Vegetation management operations should be designed to maintain the desired recreation setting.

4.32 Dispersed Recreation, High Use

Theme

These areas are managed for recreational opportunities and scenic qualities in locations that attract high numbers of users, such as areas around easily accessible bodies of water.

Management area description

These types of areas are commonly located adjacent to bodies of water where the public concentrates for recreational purposes. Some of the more popular recreational activities in this management area include camping, picnicking, boating, hiking, and fishing. These activities occur in structured settings characterized by scenic beauty.

The lakes that usually lie at the center of these areas serve as visual centerpieces and are the main recreational attractions. Lake size may determine the kinds of boating activities that are allowed. Water skiing, fishing, or other water sports may occur. Information regarding boating restrictions is posted at boat launches and developed-site locations. Trails and roads may lead to and around lakes or other areas within this management area. Facilities may include campgrounds, picnic grounds, overlooks, portable or permanent toilets, trash receptacles, fire grills, signs, or vehicle barriers.

Hardened surfaces may be provided at boat launches or other areas of high use, but are constructed only to protect sensitive natural resources such as soil and vegetation. Livestock may be observed grazing adjacent to developed recreational sites. Recreation residences, resorts, and youth camps may be present and managed to provide unique recreation opportunities.

Desired condition

Recreation facilities are developed and maintained as needed to provide for resource protection and a high quality recreation experience. Biological communities are maintained or improved to provide an attractive setting for visitors, complement the recreational values, and provide varied plant communities, structural stages, and associated wildlife.

In areas with high recreational fishing use or high-value recreational fisheries, habitat is managed for the enhancement of native and desirable non-native sport fish. In developed recreation sites, such as campgrounds and picnic areas, facilities are maintained or upgraded to meet customer needs. Management controls may be implemented to protect public safety. In dispersed areas, management actions maintain the natural characteristics that make the area popular.

A visually appealing landscape is emphasized by providing vista openings, park-like stands, and a diversity of vegetation species. For information on HRV see the Introduction to Category 4 on page 3-40.

The recreation opportunity spectrum (ROS) for this management area is roaded natural in the summer and semi-primitive non-motorized or roaded natural in the winter. Scenery is managed to provide a range of scenic integrity objectives from low to high.

Standards and guidelines

MINERAL AND ENERGY RESOURCES

Standard **1.** These areas are withdrawn from locatable mineral entry when such action is deemed necessary to meet the objective of the management area.

DOMESTIC LIVESTOCK GRAZING

Guideline **1.** Livestock will be dispersed so as to avoid concentration in high-use dispersed recreation areas.

RECREATION

Guideline **1.** To protect sensitive natural resources, high-use recreation sites may be hardened, further developed, or additional restrictions enforced.

VEGETATION MANAGEMENT

Standard **1.** These areas are not part of the suitable timber land base.

Guideline **1.** Vegetation management operations should be designed to maintain the desired recreation setting.

WILDLIFE

Guideline **1.** Retain or enhance opportunities to view wildlife.

4.4 Recreation Rivers – Designated and Eligible

Theme

Recreation rivers are managed to protect and perpetuate eligible and designated recreation river segments.

Management area description

These areas have been identified as being eligible for recreation river designation because of the presence of one or more outstandingly remarkable features that include scenic, recreational, geologic, wildlife, or fisheries values. For descriptions of each of the rivers found eligible, see Appendix F of the FEIS.

The actual width of the designated recreational river corridor area may vary in order to protect the outstanding values. Interim protection for eligible streams includes the bed, bank, and one-quarter mile on either side of the ordinary high-water mark.

These areas are managed to protect and perpetuate eligible river segments in their current condition so that their recreation river qualities are not diminished. Existing uses, levels of use, and management actions will vary from area to area.

Visitors may find an altered environment. They are likely to encounter more people than one would expect in a “wild” or “scenic” river segment. Recreational opportunities vary across the area, depending on their compatibility with the outstandingly remarkable values.

Desired condition

Protecting the values that make the watercourse eligible for designation as a recreation river is the management emphasis for these areas. The health and appearance of vegetation communities are emphasized because of their desirability for recreation use. Silvicultural practices are allowed that protect the immediate river environment, recreation, fish and wildlife, and water quality values.

Evidence of human activities or habitation due to mining, milling, or grazing may be present now and in the future. Existing improvements, such as improved and primitive roads, trails, bridges, fences, shelters, signs, and water diversions, may begin to dominate the landscape. Existing improvements that are no longer needed are removed. For information on HRV see the Introduction to Category 4 on page 3-40.

The recreation opportunity spectrum (ROS) for this management area is roaded natural or rural year-round. Scenery is managed to provide a range of scenic integrity objectives from low to high.

Standards and guidelines

INFRASTRUCTURE

Standard **1.** Glenwood Canyon will be recognized as a linear utility corridor restricted to underground facilities when feasible. New facilities that diminish the river's eligibility status will not be allowed.

MINERAL AND ENERGY RESOURCES

Standard **1.** These areas are withdrawn from mineral entry.

Guideline **1.** These areas are not authorized for new oil and gas leasing.

NATIONAL RIVER SYSTEM

Standards

1. All existing facilities, management actions and uses will be allowed to continue until a decision is made on inclusion into the National Wild and Scenic River System provided that these facilities, actions, and uses do not alter the recreational characteristics.

2. Proposed new uses, management actions, or facilities on National Forest System lands are not allowed if they alter the recreational characteristics of the land and physical resources, or affect the eligibility, potential classification, or potential suitability of the area.

3. When a significant action may threaten the river values, a suitability study will be initiated to determine recommendation for inclusion in the National Wild and Scenic River System.

4. To the extent that the Forest Service is authorized under law to control stream impoundments and diversions, the free-flowing characteristics of the river cannot be modified by new structures that were not part of conditions when eligibility was determined.

VEGETATION MANAGEMENT

Standards

1. These areas are not part of the suitable timber land base.

2. Vegetation management practices necessary to meet recreation river values will be allowed.

Category 5

Introduction

These areas are primarily forested ecosystems that are managed to meet a variety of ecological and human needs. They often are characterized by a substantially modified natural environment. A wide variety of structure and composition is present—some showing the effects of past management activities; others affected predominantly by natural forces such as fire, insects, and disease. Ecological conditions are maintained while emphasizing selected biological structures and compositions considered in the historical range of variability (HRV). These lands often display high levels of investment, use, activity, facility density, and vegetation manipulation evidence. Users expect to see other people and evidence of human activities. Facilities supporting the various resources are common. Motorized transportation is common.

Role of Historic Range of Variability in Desired Future Conditions

The management areas in this category can be split into two categories for the purpose of discussing historic range of variability: (A) management areas 5.12, 5.13, 5.4, 5.43 and 5.5 where a combination of natural processes and active management treatments together affect ecological conditions; and (B) management areas 5.41, 5.42, where natural ecological disturbances are the dominant agent of change.

Group A (5.12, 5.13, 5.4, 5.43, and 5.5): These management areas allow active management that may result in changed ecological conditions. In some locations within these management areas activities such as grazing, timber harvest, or prescribed fire will be the primary agents of change. The resulting ecological conditions depend upon the desired condition as described in the management area, and include:

In management areas 5.12 and 5.13 livestock grazing and timber harvest may be primary agents of change, but will occur within the parameters set by forest-wide and management area direction. Natural disturbance may play less of a role in these areas due to the use of vegetation management activities that mimic or replace natural processes.

In management areas 5.4 and 5.43, timber harvest activities will be designed to result in more early successional aspen and lodgepole pine resulting in diversity of age class that will be closer to historical conditions. Spruce-fir will be managed through uneven aged management which will result in continued high levels of late successional forest similar to historic conditions. Management activities will emphasize natural landscape objectives such as patch size, rotation age, and patterns as described in the HRV Summary in FEIS Appendix D.

In management area 5.5, timber harvest will result in early successional aspen and lodgepole pine. Timber harvest will be designed to mimic the natural processes that would result in the creation of early successional stands. Spruce fir will be primarily influenced by natural processes. Continued aging of spruce fir will result in increased amounts of late successional forests.

Group B (5.41 and 5.42): Natural processes are the primary agent of change. There will be some vegetation management, primarily through timber harvest and prescribed fire. These activities will be designed to mimic natural disturbance processes. The resulting ecological conditions will improve deer and elk winter range and bighorn sheep habitat. These activities will not dominate the landscape in the management areas, however.

Management activities that generally are allowed in Category 5 are shown in **Table 3-5**, by prescription.

Table 3-5
Generally allowed activities and allocations in Category 5[1,2,3]

Management area prescription		Activities allowed			
		Timber harvest	Contributes to ASQ	Mechanized recreation	Grazing
5.12	General forest and rangeland, range vegetation	yes	yes	yes	yes
5.13	Forest products	yes	yes	yes	yes
5.4	Forested flora and fauna habitats	yes	yes	yes	yes
5.41	Deer and elk winter range	yes	no	yes	yes
5.42	Bighorn sheep	yes	no	yes	note #4
5.43	Elk habitat	yes	yes	yes	yes
5.5	Forested landscape linkages	note #5	note #5	yes	yes

Notes:

1. In MA 5.5, winter motorized use is restricted to designated routes and snow play areas.
2. Developed recreation and non-ski areas may be found in all prescriptions in Category 5. Developed recreation sites include trailheads.
3. Oil and gas leasing and locatable mineral exploration is allowed in all prescriptions in Category 5.
4. In 5.42, cattle grazing may be allowed, but domestic sheep grazing may not be permitted.
5. See vegetation management standards under MA 5.5 for vegetative components contributing to ASQ.

5.12 General Forest and Rangelands – Range Vegetation Emphasis

Theme

These areas are managed for the sustainability of the physical, biological, and scenic values of general forest and rangelands, while emphasizing forage production for livestock. Habitat and vegetation are managed to achieve and maintain the desired vegetation condition for livestock, wildlife, and recreational stock.

Management area description

These areas are characterized by a mix of rangeland and forested ecosystems that feature open parks and meadows intermixed with brushlands and stands of aspen and conifers.

Opportunities to view wildlife exist. Forage production is available for both livestock and wildlife. Visitors can expect to see domestic livestock, associated improvements, and evidence of timber harvest and mineral exploration activities.

A wide range of motorized and non-motorized recreational activities exists. Recreation use varies throughout the summer, but generally peaks during hunting season. Recreational facilities may be present. Dispersed camping opportunities are plentiful. Roads vary from primitive to paved surfaces. Some roads may be closed seasonally to protect road surfaces, and to reduce maintenance needs and disturbance to wildlife.

Desired condition

A variety of forested and non-forested plant communities and successional stages are maintained through a combination of human manipulations and natural processes. A diversity of desired plant and wildlife species is represented within the capability of the habitat. Nutrient cycling and energy flow are managed and enhanced in conjunction with the use of domestic livestock grazing.

Soils exhibit infiltration and permeability rates that are appropriate for that soil type, climate, landform, and geologic processes. Evidence of rills, actively eroding gullies, and soil pedestals are minimal to nonexistent.

Ground cover is adequate to protect the soil and appropriate for the habitat type. Management activities are designed to simulate natural vegetation patterns and patch size. Timber harvest operations focus on what is retained in the stand, not on wood fiber production.

Recreation management activities are compatible with and minimize impacts to the production and use of vegetation resources. For information on HRV see the Introduction to Category 5 on page 3-52.

The recreation opportunity spectrum (ROS) for this management area is semi-primitive motorized or roaded natural in the summer and semi-primitive non-motorized or semi-primitive motorized in the winter. Scenery is managed to provide a range of scenic integrity objectives from low to moderate.

Standards and guidelines

VEGETATION MANAGEMENT

Standard

1. These areas are part of the suitable timber land base and contribute to the allowable sale quantity.

Guidelines

1. A full range of silvicultural and grazing practices may be applied to these lands.

2. Protect range improvements and mitigate impacts to natural barriers that serve as controls to livestock movement.

WILDLIFE

Standard

1. Range improvements are designed to be compatible with wildlife needs.

5.13 Resource Production – Forest Products

Theme

These lands are managed to provide commercial wood products. In addition, they provide for forage production, other commercial products, scenic quality, diversity of wildlife, and a variety of other goods and services. Numerous open roads provide commercial access and roaded recreational opportunities, while closed roads provide non-motorized opportunities.

Management area description

Coniferous forests that can be intensively managed for wood fiber due to their accessibility, terrain, and resource condition characterize these areas. The suitable lands determined to be economical are included in the suitable land base for timber production and contribute to the allowable sale quantity. Stands are primarily coniferous, although hardwood species also occur. Forest stands vary in density and height with some sites being more accessible and less rugged than other sites. The forest is largely a mosaic of tree groups of differing ages and heights. A few areas show evidence of decadence or older trees. Young trees are commonly seen. There are some natural openings and meadows of various sizes and shapes.

Visitors can expect to see evidence of past and present timber harvesting and other management practices. Logging traffic may be encountered throughout the year. In portions of the area, management activities may dominate in the foreground and middleground, but harmonize and blend with natural landscape patterns. Older cut areas contain saplings, poles, or immature trees up to 45 feet in height. The forest floor in these areas shows few signs of disturbance. Recently cut areas will show tree stumps, slash, and disturbed soil that will only be apparent for a few years as vegetation returns to the disturbed sites.

An extensive road and trail system exists, ranging from 4-wheel drive roads to maintained gravel roads. Some roads are closed seasonally, while others are closed after timber removal is complete.

Desired condition

The desired condition of this management area prescription is to maintain suitable forested areas with commercially valuable species at ages, densities, and sizes that allow growth rates and stand health conducive to providing a sustained yield of forest products. To achieve this objective, a full array of silvicultural systems will be used that will produce a range of successional stages from seedlings to late-successional stands. Priority will be given to converting decadent and overmature stands to young stands managed at stocking levels that maintain acceptable site occupancy and rates of growth. In areas in which timber harvest is planned, rotation periods are shorter and more frequent. Wildfires are suppressed and insect and disease populations are maintained at endemic levels to protect commercial forest products. For information on HRV see the Introduction to Category 5 on page 3-52.

The recreation opportunity spectrum (ROS) for this management area is roaded modified year-round. Scenery is managed to provide a range of scenic integrity objectives from low to moderate.

Standards and guidelines

INFRASTRUCTURE

Guidelines

1. Roads should not be constructed to higher standards than those required to meet the needs of timber production.

2. Protect trails and associated improvements.

DOMESTIC LIVESTOCK GRAZING

Guideline

1. Grazing of domestic livestock is coordinated with timber management activities to ensure adequate regeneration.

VEGETATION MANAGEMENT

Standards

1. These areas are part of the suitable timber land base and they contribute to the allowable sale quantity.

Guidelines

1. A full range of silvicultural and grazing practices may be applied to these lands.

2. Protect range improvements and mitigate impacts to natural barriers that serve as controls to livestock movement.

5.4 Forested Flora and Fauna Habitats

Theme

These areas are primarily forested ecosystems intermingled with grassland and shrub communities, and are managed to provide a mix of ecological and human needs. These needs include wildlife and aquatic habitats, livestock forage, and forest products. These areas also provide for recreational opportunities, scenic quality, and a variety of other miscellaneous goods and services.

Management area description

Ecological conditions for forested and non-forested ecosystems are maintained and restored, while emphasizing selected biological structures and compositions considering the area's historical range of variability (HRV). The structures and compositions are a result of past and present natural forces such as fire, insects, disease, and human management activities.

Visitors can expect to see other people and evidence of human activities including silvicultural treatments and domestic livestock. Visitors may expect to see managed but natural-appearing stands of trees with cut or burned areas showing soil disturbance, snags, tree stumps, slash, landings, or skid trails. Visitors can find dispersed recreation opportunities including both motorized and non-motorized, although they may also find that access is restricted, at times, through the use of seasonal or year-long road closures. Human use is often high during fall hunting seasons.

Desired condition

These areas provide for a variety of forest and non-forest plant communities and successional stages, over the long term, through a combination of human manipulation and natural processes. Management activities are influenced by biological processes found in the area, and strive to replicate local natural vegetation patterns and patch size (HRV). Vegetation management is designed to simulate natural disturbances, thus silvicultural treatments may be larger than 40 acres in size. Vegetation composition and structure exist in a range of successional stages to meet wildlife and aquatic habitat, livestock forage, and forest product objectives. Timber harvest rotation ages will pattern historical ranges of variability. Management activities will provide adequate late-successional structure components in forested stands and will maintain fire-dependent ecosystems over the long term.

A full range of silvicultural prescriptions may be employed that includes timber harvest and prescribed fire management, in which both focus on long-term desired conditions. In areas where timber harvest is planned, rotation periods may be longer and entries less frequent than traditional approaches. Habitat for sensitive species will be protected and maintained, and may be enhanced where opportunities exist. Management activities provide for healthy aquatic ecosystems. Stabilization or restoration concepts are applied to areas of the forest in which natural disturbance or past management has reduced desired resource conditions. Range improvements are designed to be compatible with wildlife and aquatic life.

Insects and disease generally are accepted unless they threaten ecosystems that are providing important habitat components.

Recreation management activities are compatible with other resource values. The area has a road and trail system. Some roads are closed seasonally; others are closed after timber harvest is complete. Temporary roads are preferable to permanent roads for the removal of forest products. For information on HRV see the Introduction to Category 5 on page 3-52.

The recreation opportunity spectrum (ROS) for this management area is semi-primitive motorized in the summer and semi-primitive non-motorized or semi-primitive motorized in the winter. Scenery is managed to provide a range of scenic integrity objectives from low to moderate.

Standards and guidelines

INFRASTRUCTURE

Guidelines

1. New roads and trails needed to implement management in the area should be low-standard, single-purpose roads.

2. Travelways open to summer motorized travel will not exceed an average travelway density of two miles per square mile.

VEGETATION MANAGEMENT

Standards

1. These areas are part of the suitable timber land base and they contribute to the allowable sale quantity.

2. A full range of vegetation treatments including timber management and grazing strategies may be applied to these lands.

Guideline

1. Protect range improvements and mitigate impacts to natural barriers that serve as controls to livestock movement.

WILDLIFE

Guideline

1. Protect, enhance, and restore habitat for native fishes.

5.41 Deer and Elk Winter Range

Theme

Deer and elk winter ranges are managed to provide adequate amounts of quality forage, cover and solitude for deer, elk and other species.

Management area description

These are areas where multiple-use principles are applied to emphasize habitat management for deer and elk. They include lands classified as winter ranges and areas used during average winters.

These areas consist of both forested and non-forested habitats, generally in the lower elevation fringes of the forest. Many areas are south-facing slopes where snow melt and green-up occur earlier in the spring, and snow accumulation does not occur until late autumn.

These areas are managed to provide adequate amounts of quality forage, cover, and solitude for deer, elk, and other species while on winter range.

Desired condition

Human activities are managed so that deer and elk can effectively use the area. Activities that may be managed or restricted include burning, rangeland management, timber harvest, habitat manipulation, recreation, minerals exploration and development, and road management. Population herd objectives are established in coordination with the Colorado Division of Wildlife.

Vegetation composition and structure are managed to meet the needs of deer, elk, and other species on their winter range. Quaking aspen, Gambel oak, serviceberry, antelope bitterbrush, sage, grasses, and forbs are common throughout the area. Openings are common and interconnected with networks of forested habitat that provide thermal and hiding cover. Management activities are designed to maintain or create habitat mosaic of various types, age classes, and structural stages.

Opportunities to view wildlife are high, especially in the winter; however, such use is not encouraged. All activities should limit disturbance so that deer and elk may use the area during the winter and spring.

Livestock and related range improvements, such as ponds and fences, may be present. Range improvements should be designed to be compatible with deer and elk. This includes, but is not limited to, proper design and location of fences and the planting of native vegetation such as shrubs that deer and elk favor. Water developments benefit big game and livestock by improving distribution and reducing the use of riparian areas.

Road systems and trails are relatively undeveloped. Motorized traffic, including over-the-snow vehicles, is restricted during winter and spring. Camping is restricted during the winter.

To protect wintering big game from disturbance, winter recreation use, both motorized and non-motorized, is generally confined to designated travelways or use corridors. For information on HRV see the Introduction to Category 5 on page 3-52.

The recreation opportunity spectrum (ROS) for this management area is semi-primitive non-motorized or semi-primitive motorized in the winter/spring and semi-primitive non-motorized or semi-primitive motorized in the summer/fall. Scenery is managed to provide a range of scenic integrity objectives from low to moderate.

Standards and guidelines

BIODIVERSITY

Standard

1. Vegetation composition and structure are managed to meet the needs of deer, elk, and other species on their winter ranges within the constraints of the conservation of biological diversity and the maintenance and enhancement of sensitive habitats.

INFRASTRUCTURE

Standards

1. Over-the-snow vehicle use is restricted to designated routes and play areas unless authorized by special use permit or for emergency use.

2. All new roads passing through this area will avoid important forage, cover, and birthing areas.

Guideline

1. Roads and trails needed to implement management in the area should be low-standard, single-purpose roads.

2. Avoid crossing these areas with new arterial and collector roads.

DOMESTIC LIVESTOCK GRAZING

Standard

1. Establish stocking levels for livestock to ensure adequate forage is available for deer and elk.

Guideline

1. Develop livestock grazing systems in cooperation with federal agencies and private landowners to ensure that all lands are considered when determining vegetation management objectives for the area.

RECREATION

Guideline

1. Restrict recreation activities that would disturb deer and elk during winter and spring periods.

SPECIAL USES

Guideline

1. Discourage special uses that require access during winter and spring periods.

VEGETATION MANAGEMENT

Standard

1. These areas are not part of the suitable timber land base.

2. Vegetation management will be designed to maintain or improve deer and elk habitat objectives.

WILDLIFE

Guidelines

1. Where trees and shrubs are sparse, and terrain is the primary factor providing cover, minimize human activity during periods when elk and deer are concentrated in the area.

2. Habitat management goals are developed in coordination with the Colorado Division of Wildlife and the owners of intermingled and adjacent private land to minimize resource conflicts on and off National Forest System lands.

5.42 Bighorn Sheep Habitat

Theme

Management emphasis is to provide adequate amounts of quality forage, cover, escape terrain, and solitude for bighorn sheep and other species, while allowing vegetative manipulation that provides other multiple-use resources.

Management area description

These areas provide habitat for established bighorn sheep herds on the forest. To ensure bighorn sheep viability, maintaining and improving the habitat upon which bighorn sheep depend is emphasized. Much of the area contains cliffs, rocky points, and benches intermixed with grass, forb, and shrub communities. Forested stands may also be present.

Desired condition

Herd objectives are established in cooperation with the Colorado Division of Wildlife. Interpretive opportunities are provided in established viewing areas.

Vegetation is managed to provide healthy plant communities with a variety of species present for food and cover. Natural and created openings or meadows of various sizes and shapes occur. Prescribed natural fire and management-ignited fire plans are developed in support of habitat improvement. For information on HRV see the Introduction to Category 5 on page 3-52.

The recreation opportunity spectrum (ROS) for this management area is primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural, or rural year-round. Scenery is managed to provide a range of scenic integrity objectives from moderate to high.

Standards and guidelines

INFRASTRUCTURE

Standard **1.** Over-the-snow vehicle use is restricted to designated routes.

DOMESTIC LIVESTOCK GRAZING

Standards **1.** Grazing strategies will be implemented to meet bighorn sheep habitat objectives.

2. Grazing by domestic sheep is prohibited unless adequate temporal or spatial separation can be demonstrated.

RECREATION

Guidelines **1.** Recreation activities that disturb bighorn sheep should be restricted.

2. Provide interpretive opportunities in established viewing areas.

VEGETATION MANAGEMENT

Standards **1.** These areas are not part of the suitable timber land base.

2. Vegetation management practices will be used to maintain or improve bighorn sheep habitat.

5.43 Elk Habitat

Theme

These areas are managed for elk. Low road densities and optimum forage and cover ratios characterize this management area prescription.

Management area description

These areas contain important elk habitat, including incidental winter range. They also provide opportunities for non-motorized recreation, while allowing timber harvesting and livestock grazing.

Evidence of human activity related to wood fiber production may be present. Roads used for timber harvesting provide limited access for hikers, mountain bikers, horseback riders, and other non-motorized travelers and hunters. Trails may also be present, providing access to these areas.

Desired condition

Vegetation is managed to provide healthy plant communities with a variety of species present for food and cover. Forested areas may appear managed without much evidence of damage by insects and disease. Natural and created openings or meadows of various sizes and shapes occur as well. Large patches of late-successional structure, including trees of many different heights, occur. Scattered dead trees appear in openings and in older stands. Most of the local road surfaces are covered with grasses or other vegetation unless they have been recently used to haul logs. In such cases, the vegetation may be worn down.

Non-motorized recreational activities are provided, including hiking, mountain biking, horseback riding, hunting, and cross-country skiing. Motorized opportunities are limited. Travel closures may exist based on elk habitat objectives. For information on HRV see the Introduction to Category 5 on page 3-52.

The recreation opportunity spectrum (ROS) for this management area is semi-primitive non-motorized or semi-primitive motorized year-round. Scenery is managed to provide a range of scenic integrity objectives from low to moderate.

Standards and guidelines

INFRASTRUCTURE

Guideline **1.** Travelways open to motorized travel will not exceed an average travelway density of one-half mile per square mile during seasonal periods when the area is designated for calving, migration, winter, or summer habitat (see Wildlife Guideline 2, below).

DOMESTIC LIVESTOCK GRAZING

Guideline **1.** Design livestock management strategies, including distribution and stocking rates, to be compatible with elk habitat objectives.

VEGETATION MANAGEMENT

Standards

1. These areas are part of the suitable timber land base and they contribute to the allowable sale quantity.

2. Vegetation management practices will be used to maintain or improve elk habitat.

WILDLIFE

Guidelines

1. Provide adequate forage to sustain elk populations.

2. The following dates may be used for restrictions of activities, depending upon the objectives for which the area was established:

Calving

May 15 to June 20

Migration

Fall—October 15 to November 30
Spring—April 15 to June 20

Winter

December 1 to April 14

Summer

June 16 to October 14

For the season of use for a particular area, see **Table 3-6** and the accompanying elk habitat maps.

Table 3-6
Elk habitat management use restriction strategy by polygon and district

Polygon ID	Ranger District	Acres	SC	C	SM	FM	W	Map Number
1	Blanco	9352	x	x				1
2	Blanco	1076	x	x				1
3	Dillon	10811		x			x	5
4	Blanco	11515	x					1
5	Blanco	2748		x				1
6	Blanco	1568	x					1
7	HolyCross	7826		x				4
8	Dillon	1908	x					5
9	Dillon	79					x	5
10	Dillon	3000	x	x			x	5
11	Dillon	1822	x	x				5
12	Rifle	6351		x				1
13	Dillon	70		x				5
14	Dillon	8709	x	x			x	5
15	Dillon	10		x			x	5
16	Rifle	6900	x	x		x	x	1
17	Dillon	2		x			x	5
18	Dillon	7		x			x	5
19	Dillon	406		x			x	5
20	Rifle	23487	x	x				1
21	Dillon	73		x			x	5
22	Rifle	15954	x					1
23	Dillon	640		x			x	5
24	Dillon	45					x	5
25	Dillon	5					x	5
26	Dillon	102		x			x	5
27	Dillon	10					x	5
28	Dillon	71					x	5
29	Dillon	5					x	5
30	Dillon	1831		x			x	5
31	HolyCross	2822		x				3
32	Dillon	1804					x	5
33	Eagle	3839		x				3
34	Eagle	3278		x				3
35	HolyCross	875		x				3
36	Eagle	1418		x				3
37	Dillon	1907	x					5
38	Dillon	260		x			x	5
39	Dillon	2125		x			x	5

Table 3-6 continued

Polygon ID	Ranger District	Acres	SC	C	SM	FM	W	Map Number
40	Dillon	899					x	5
41	Dillon	7474		x				5
42	Eagle	2055		x			x	3
43	Sopris	5351		x				3
44	Rifle	3794		x			x	2
45	Rifle	893		x		x		2
46	Rifle	8146		x				2
47	Rifle	8325		x		x	x	2
48	Rifle	7663		x				3
49	Sopris	5715		x				3
51	Rifle	300		x		x	x	2
52	Rifle	15231	x	x				3
53	Sopris	10425	x	x				3
57	Aspen	1452		x	x	x		3

Key:

SC= Summer concentration areas C= Calving areas SM= Spring migration areas

FM= Fall migration areas W= Winter areas

Note:

Polygons numbers 50, 54, 55, and 56 were deleted after map verification.

Figure 3-1
Elk habitat Map 1

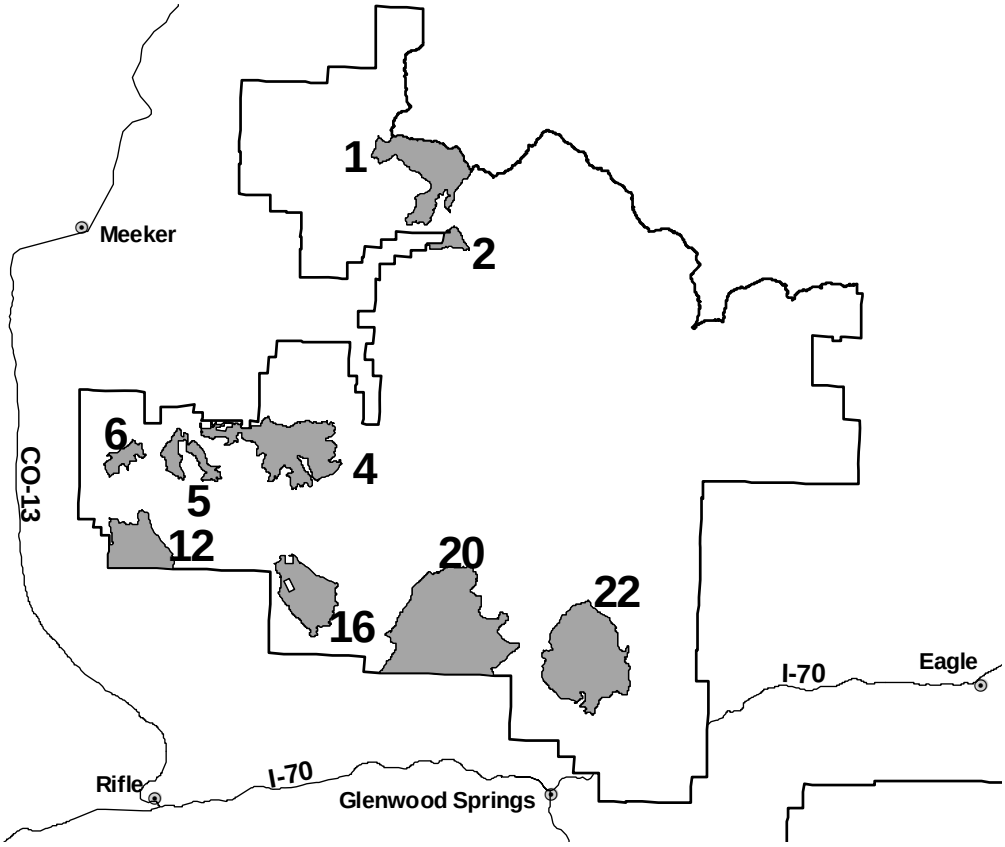


Figure 3-2
Elk habitat map 2

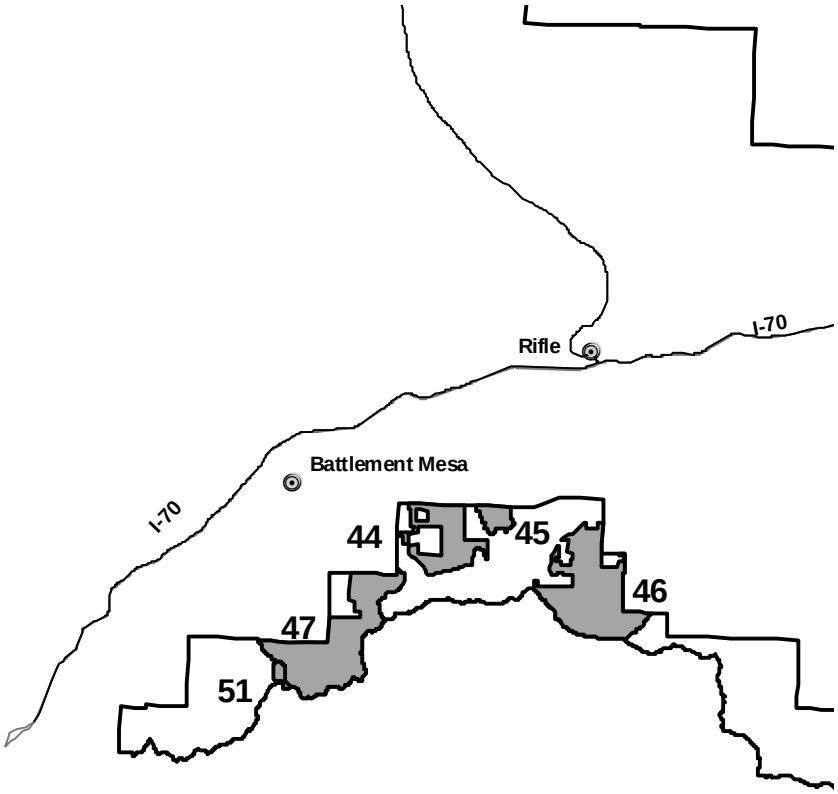


Figure 3-3
Elk habitat map 3

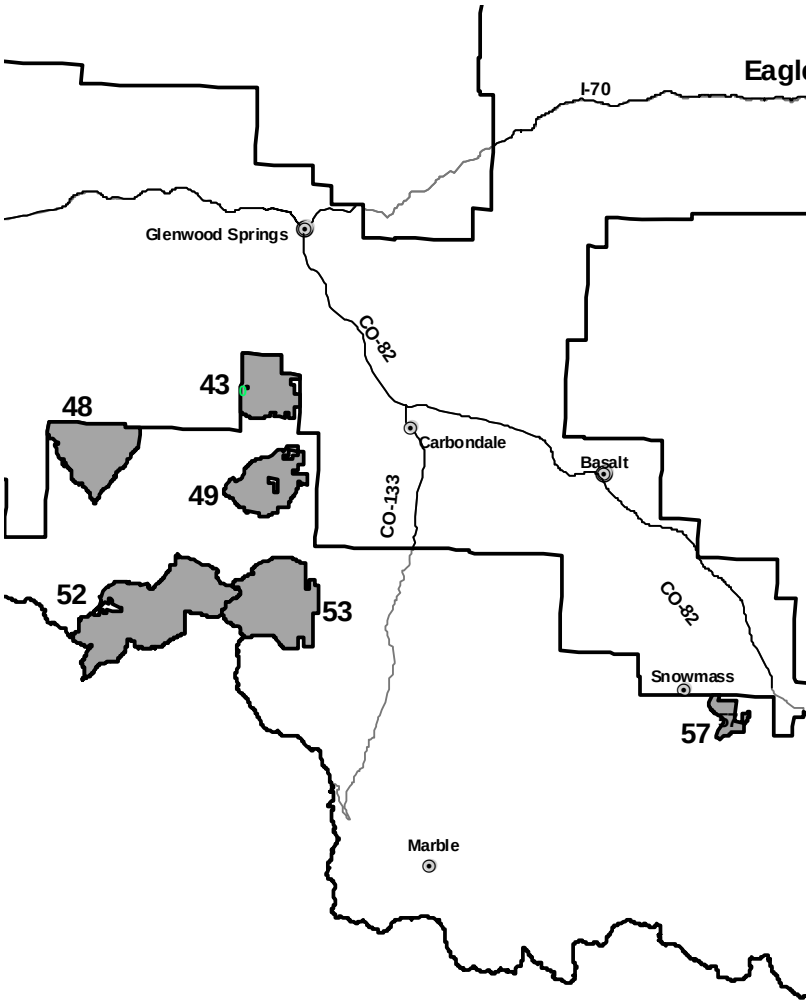


Figure 3-4
Elk habitat map 4

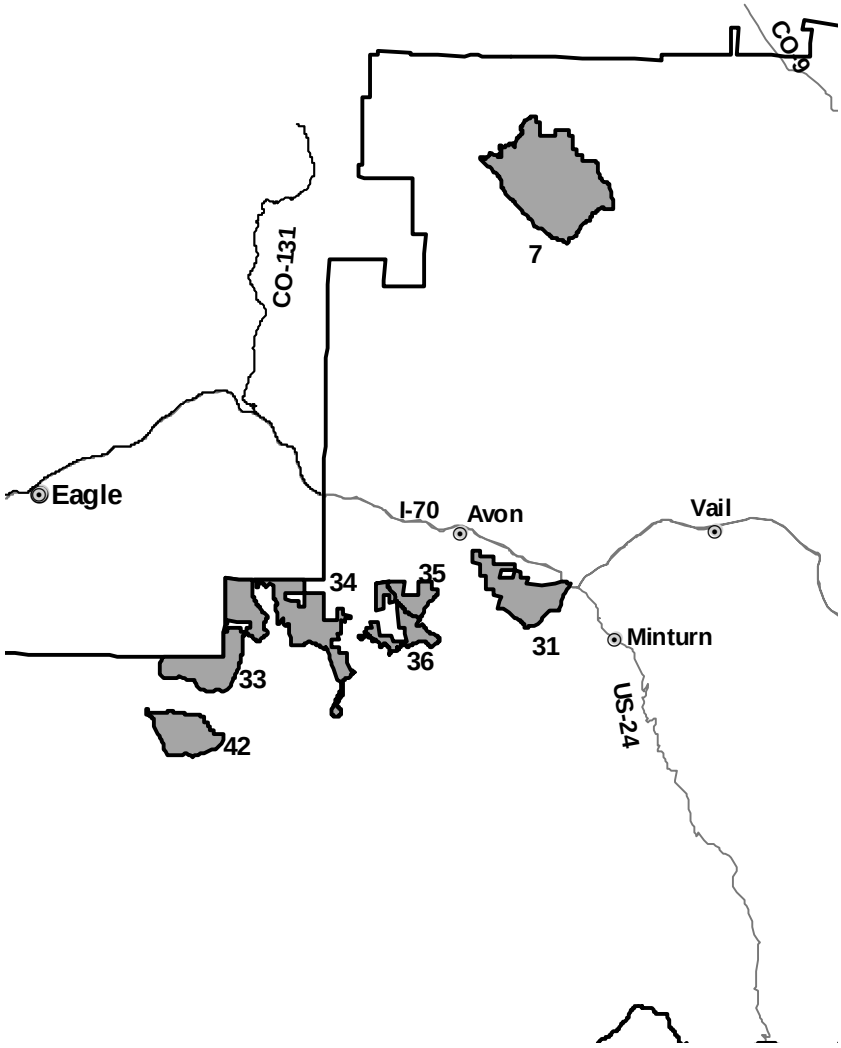
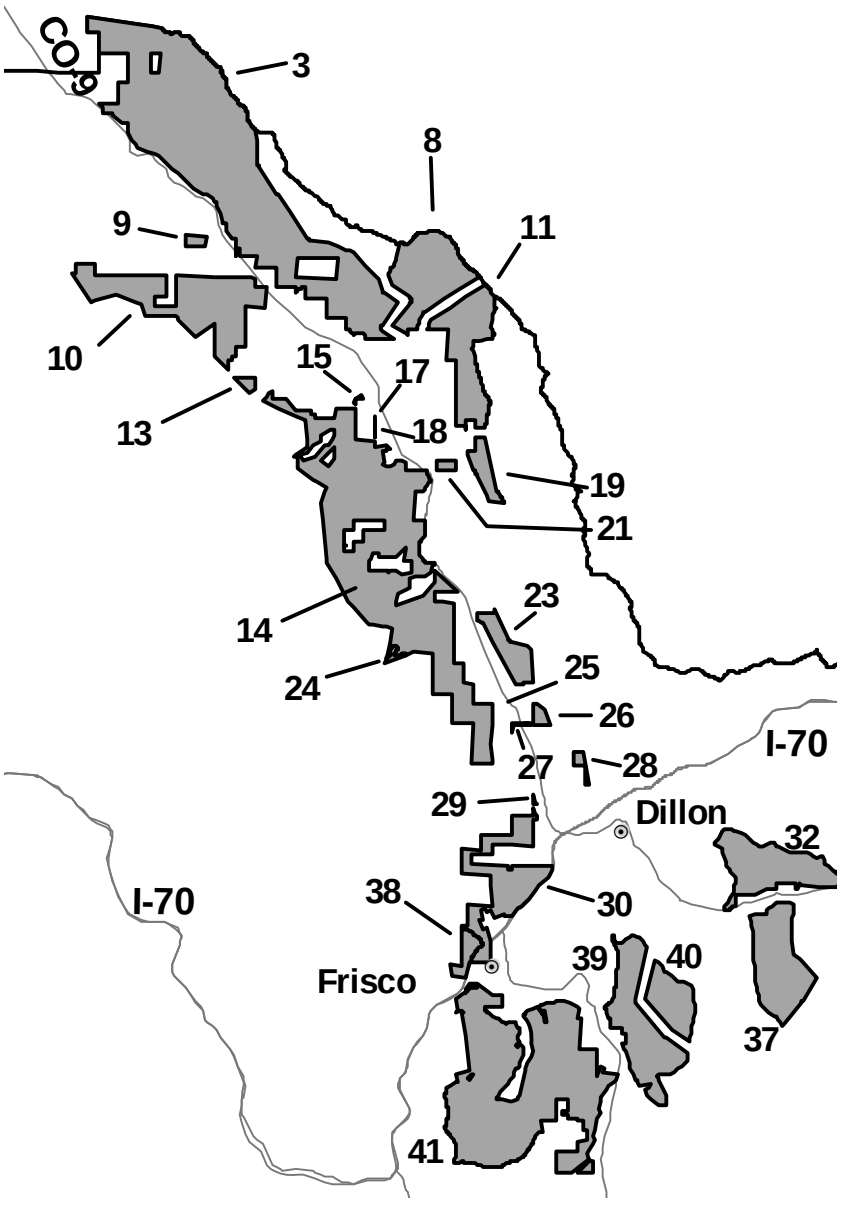


Figure 3-5
Elk habitat map 5



5.5 Forested Landscape Linkages

Theme

These areas are managed as key landscape linkages. They provide areas for landscape-scale movement, migration, and dispersal of forest carnivores and other wide-ranging wildlife species. These areas provide safe travel connections between large blocks of forested landscapes across the forest. They provide security from intensive recreational and other human disturbances.

Management area description

These areas are intended to provide landscape-level linkages between forested landscapes across the White River National Forest. They are generally found in areas of conifer cover types adjacent to natural or human-created constrictions of forested ecosystems. They may provide secure movement zones to connect portions of the forest that have land allocations providing a high level of habitat protection or security, such as designated wilderness. They may also be designed to provide movement pathways through areas with adjacent high human development or disturbances.

There is light or minimal impact from human use in these areas. Natural processes generally predominate; however, vegetation may be managed to enhance denning or foraging habitat characteristics for target species, such as lynx, marten, or wolverine. Recreation huts or other developed recreation sites may be present, but are not common. Habitat management activities will be based on the best scientific information available.

Desired condition

The maintenance of dense, undisturbed, closed-canopy conifer stands that provide security habitats for landscape-scale forest carnivore movement, migration, and dispersal between forested landscapes is emphasized.

Lynx key linkage areas will be managed to provide elements of habitat security in conifer forests. The desired vegetation condition is generally dense, interconnected blocks of late successional conifer cover types (primarily spruce and fir species) intermixed with patches of seedling to pole-sized trees (mainly lodgepole pine). The dense conifers provide lynx hiding and denning cover. The early seral forest vegetation provides habitat for the snowshoe hare, an important prey species for the lynx.

Wolverine areas will be managed to provide habitat security from human disturbances, especially during spring maternity periods. Vegetation in these areas is mainly large, dense, interconnected, late-successional spruce-fir stands.

Management of these areas will provide benefits for carnivores, as well as for other wildlife species with large home ranges. These areas are not designed to provide all denning, foraging, maternity, or reproductive areas necessary for lynx, marten, wolverine, or other wide-ranging species survival, but rather to provide secure habitats in which these species can safely move across and between forested landscapes where natural or human-created constrictions have been identified.

Natural biological processes and conditions influence vegetation composition and structure. Prescribed fire is used where appropriate to create or renew desirable habitat conditions and may be used to mimic natural disturbance regimes. The maintenance and protection of security habitats is emphasized in all management activities.

Vegetation may be managed to provide foraging habitat characteristics for wildlife species requiring these forested landscape connections. The landscape is primarily natural-appearing.

Roads and trails exist to provide resource management and recreational access. Road densities and motorized and mechanized uses are managed at or below current levels to reduce disturbances. These areas provide mostly non-motorized, backcountry recreation opportunities. Motorized portions may include some seasonal travel restrictions. Dispersed recreation may be regulated in the area to maintain use at or below current levels and patterns. Existing huts and developed recreation sites are managed within current site capacities. For information on HRV see the Introduction to Category 5 on page 3-52.

The recreation opportunity spectrum (ROS) for this management area is primitive, semi-primitive non-motorized, or semi-primitive motorized year-round. Scenery is managed to provide a range of scenic integrity objectives from moderate to very high.

Standards and guidelines

BIODIVERSITY

Guideline
1. Management activities replicate biological processes found in the area and strive to replicate natural vegetation patterns and patch size.

INFRASTRUCTURE

Standards
1. Designated travelways are open to motorized and mechanized travel when such use is compatible with the area objectives.

Guideline
1. Roads needed to implement management in the area should be low-standard, single-purpose roads and should be closed or decommissioned following management activities.
2. Development of new recreation facilities and expansion of existing facilities will be discouraged.
3. Open motorized and mechanized travelway density will not increase.

RECREATION

Standard
1. Over-the-snow vehicles are restricted to designated routes and play areas.

Guideline
1. Recreation use of these areas may be restricted to ensure the effectiveness of the area for use by forest carnivores and other wide-ranging wildlife species. Potential security habitats will be protected from concentrated recreational use.
2. Potential security habitats will be protected from intensive recreational use or development.

VEGETATION MANAGEMENT

Standards
1. The spruce-fir vegetation component is not part of the suitable timber land base and does not contribute to the allowable sale quantity.
2. The lodgepole pine and aspen vegetation components are part of the suitable timber land base and contribute to the allowable sale quantity.

3. Vegetation management practices will ensure maintenance of large interconnected blocks of dense conifer stands to provide for maintenance and enhancement of security habitats.

WILDLIFE

Standard	**1.** Habitat management goals are developed in coordination with the U.S. Fish and Wildlife Service and owners of intermingled and adjacent private lands to minimize resource conflicts on and off National Forest System lands.
Guideline	**1.** In areas where adequate, dense, late-successional conifer habitats exist to provide security for denning and movement, vegetation management activities should consider maintenance or enhancement of habitats important to primary prey species for lynx, such as snowshoe hare and red squirrel.

Category 7

Introduction

Public lands are intermingled with private lands to such an extent that ecosystem management for National Forest System lands must be tempered by other landowner's uses and objectives. Human activities have altered the natural appearance of these landscapes in most areas on both public and private lands. Sights and sounds of people predominate. Private land use is often residential. Resource use is not planned on a sustainable basis, but may occur in concert with surrounding private land values. Motorized transportation is common.

Role of Historic Range of Variability in Desired Future Conditions

Forest health conditions are primarily a result of land management activities, not natural processes, on small, concentrated areas in this prescription. Management activities in this category, therefore, will not have significant impact on landscape characteristics at a broad scale. Land management activities are designed to consider adjacent landowners objectives and priorities. Vegetation management will be designed to reduce fuel loading and meet visual objectives. Historic conditions may not be attainable in these areas due to urbanization factors such as access, fire potential, and recreation use.

Management activities that are generally allowed in Category 7 are shown in **Table 3-7**.

Table 3-7
Generally allowed activities and allocations in Category 7

	Activities allowed						
Management area prescription	**Timber harvest**	**Contributes to ASQ**	**Motorized recreation**	**Mechanized recreation**	**Grazing**	**Oil & gas leasing/ locatable minerals**	**Developed recreation & non-ski areas**
7.1 Intermix	yes	no	yes	yes	yes	yes	yes

7.1 Intermix

Theme

Areas characterized by an interface between National Forest System lands and other public and private lands are managed to protect natural resources, provide compatible multiple uses, and maintain cooperative relationships between private landowners and other governments with jurisdiction. Opportunities to consolidate landownership patterns are pursued.

Management area description

These areas are located along the borders of the forest, adjacent to other public and private lands. The private lands are usually undergoing pressure from urban and private residential development.

Cooperative relationships are emphasized with other agencies, local governmental jurisdictions, and adjacent landowners. Opportunities are sought for coordinated, multi-jurisdictional management approaches to address resource issues and impacts that transcend the national forest boundary.

Desired condition

Management actions are geared toward influencing the vegetation composition and structure to promote visual screening and to minimize hazardous fuel loading patterns.

Wildlife habitat provides adequate cover for big game species between winter and summer ranges. Wildlife viewing is encouraged in areas not identified as winter range or sensitive habitats, and discouraged in those habitats considered sensitive. In high-recreation-use areas, human disturbance may limit viewing opportunities to those species that are common or accustomed to the presence of people. Aquatic habitats that provide for recreation fisheries are protected.

Opportunities for solitude are limited. Sights and sounds of human development are evident. The area is accessible for use by visitors, while conflicts with adjacent landowners are minimized to the extent compatible with overall management objectives. Land ownership patterns are simplified. Clearly identified property boundaries and acquisition of rights-of-way are a priority. Both motorized and non-motorized recreation activities are provided. For information on HRV see the Introduction to Category 7 on page 3-76.

The recreation opportunity spectrum (ROS) for this management area is semi-primitive non-motorized, semi-primitive motorized, roaded natural, or rural year-round. Scenery is managed to provide a range of scenic integrity objectives from low to moderate.

Standards and guidelines

PUBLIC RELATIONS

Guideline

1. Management activities are coordinated with other affected landowners.

2. Develop, where appropriate and practical, coordinated multi-jurisdictional land management efforts.

INFRASTRUCTURE

Guideline

1. New improvements are designed to resemble natural patterns and to be less intrusive on the landscape.

INSECTS AND DISEASE

Guideline **1.** Minimize potential for insect and disease outbreaks through vegetation treatments, maintaining stands at a moderate or lower risk.

REAL ESTATE

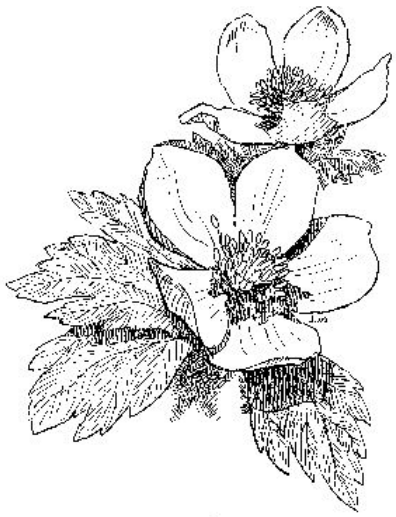
Guideline **1.** Develop landownership adjustment patterns in cooperation with local governments, private landowners, forest users and the general public.

VEGETATION MANAGEMENT

Standards **1.** These areas are not part of the suitable timber land base.
2. Vegetation management practices will be used to meet resource management objectives other than wood production.

WILDLIFE

Guideline **1.** Set objectives for wildlife management in cooperation with the Colorado Division of Wildlife on an area-by-area basis. These objectives may feature both game and non-game species.



Category 8

Introduction

In this category, ecological conditions and processes are likely to be permanently altered by human activities beyond the level needed to maintain natural-appearing landscapes and ecological processes. These areas are generally small in scale. Ecological values are protected where they affect the health and welfare of human occupancy. Human activities are generally commercial in nature and directly or indirectly provide jobs and income. Motorized transportation is common.

Role of Historic Range of Variability in Desired Future Conditions

Historic conditions may be permanently altered in these management areas. These altered conditions may persist throughout the life of the plan. In many instances the primary agent of change is the construction of a permanent facility, and has already taken place. In other cases, the construction will occur over the life of the plan. Examples of existing facilities that have altered, or may alter, the natural conditions include: transmission corridors, ski areas, developed recreation complexes. Historic conditions may be considered in projects in these areas and limited progress towards historic conditions may be made for issues including noxious weeds. Other conditions that have been permanently altered will remain in that state.

Management activities that generally are allowed in Category 8 are shown in **Table 3-8**, by prescription.

Table 3-8
Generally allowed activities and allocations in Category 8

		Activities allowed				
Management area prescription		**Grazing**	**Oil & gas leasing**	**Locatable minerals**	**Developed recreation**	**Non-ski areas**
8.21	Developed recreation complexes	no	yes	decision by area	yes	yes
8.25	Ski areas – existing and potential	yes	no	no	yes	no
8.31	Aerial transportation corridors	yes	yes	yes	no	yes
8.32	Designated utility corridors – existing and potential	yes	yes	yes	yes	no

Notes:

1. Timber harvest is allowed in all prescriptions in Category 8. However, none of the timber harvest that occurs in Category 8 contributes to the allowable sale quantity.
2. Developed recreation sites include trailheads.
3. Motorized and mechanized travel is allowed in all prescriptions in Category 8; however, motorized use is restricted within ski area permit boundaries by forest supervisor closure orders.

8.21 Developed Recreation Complexes

Theme

These areas contain developed recreation sites that provide an array of recreational opportunities and experiences in a forested environment. These types of areas also include the surrounding terrain, resulting in an attractive setting for the developments.

Areas are managed to provide a variety of recreation opportunities in multiple-site, highly developed recreation complexes.

Management area description

Areas such as campgrounds, day-use areas, swimming beaches, visitor centers, marinas, boat launches, trailheads, scenic overlooks, interpretive sites, groups of recreation residences, winter sports sites, Nordic centers, and resorts may be present. As such, major site modifications and facility installations are expected. These areas may appear singly or in combination at recreational complexes, although this management area is not applied to individual campgrounds.

These areas may include both private and public facilities located on National Forest System lands. Roads, trails, and sometimes highways are often clearly evident. Roads and recreation sites may be paved. Trails are generally highly maintained and may be surfaced. There may be evidence of bare and compacted soil, erosion, litter, or other associated disturbances outside of designated use areas and travelways.

Recreation opportunities occur in an intensively managed, highly regulated environment modified to accommodate a high level of interaction among users. There are few, if any, opportunities for solitude. On-site regulation and control are obvious, but harmonize with the natural setting to the extent possible. Multiple information stations and kiosks provide visitors with area information. Directional and regulatory signs are widely used to identify requirements for use of the area. Entrance stations may be present.

Desired condition

Recreation facilities are developed and maintained to provide a variety of high quality recreational experiences in a primarily natural setting. The level of development is commensurate with demand and visitor expectations. Vegetation communities are maintained or improved to provide an eye-pleasing appearance for visitors, complement the recreation values, and provide varied structural stages and plant communities. The areas will provide access and parking to sites, natural attractions, water features, or areas that provide desired recreation opportunities such as camping, hiking, bicycling, skiing, snowmobiling, fishing, and scenic driving.

The health, sustainability, and appearance of communities are emphasized because of their desirability for recreational use. This includes manipulating vegetation to accommodate both existing and new facilities. Control of insect and disease populations is featured. Riparian communities and aquatic ecosystems are managed to provide safe recreation access and prevent unacceptable resource damage. Opportunities are available for viewing birds. Many areas offer opportunities for recreational fishing. For information on HRV see the Introduction to Category 8 on page 3-80.

The recreation opportunity spectrum (ROS) for this management area is roaded natural or rural in the summer and semi-primitive non-motorized, semi-primitive motorized, roaded natural, or rural in the winter. Scenery is managed to provide a range of scenic integrity objectives from low to moderate.

Standards and guidelines

INFRASTRUCTURE

Guidelines

1. Design facilities and access to provide site protection, efficient maintenance, and user convenience.

2. Design and locate improvements on winter sports sites to provide safety for users.

3. Provide dust abatement and maintenance on roads and camping spurs to enhance or maintain the safety and quality of the recreational experience.

MINERAL AND ENERGY RESOURCES

Standard

1. These areas are withdrawn from mineral entry when such action is deemed necessary to meet the objective of the management area.

DOMESTIC LIVESTOCK GRAZING

Guideline

1. Grazing is excluded from developed recreation sites through the use of fencing or effective natural barriers.

RECREATION

Guideline

1. Provide hardened sites to meet user needs and to protect resources.

SCENERY MANAGEMENT

Guideline

1. Facilities may dominate, but must harmonize and blend with the adjacent landscape.

SPECIAL USES

Guideline

1. Do not issue special use permits that will preclude future recreational developments.

VEGETATION MANAGEMENT

Standards

1. These areas are not part of the suitable timber land base.

2. Vegetation management practices will be used to meet specific resource objectives other than wood production.

Guideline

1. Vegetation management operations should be designed to maintain the desired recreation setting.

WILDLIFE

Guideline

1. Habitat in the complex is managed to provide for a variety of fish for recreational angling.

8.25 Ski areas – Existing and Potential

Theme

Ski areas are developed and operated by the private sector to provide opportunities for intensively managed outdoor recreation activities during all seasons of the year. This management area also includes areas with potential for future development.

Management area description

Ski areas provide winter sports activities and other intensively managed outdoor recreation opportunities for large numbers of national and international visitors in highly developed settings. In some areas, use in the summer may be as intensive as in the winter.

This management area includes existing resorts that have already been permitted and developed, as well as additional suitable terrain into which development is planned for the future.

Desired condition

Management areas are characterized by a vegetational mosaic that includes natural and man-made grassy openings intermixed with forested or partially forested areas and rocky outcroppings. Forested areas are managed as sustainable cover with a variety of species and age classes in patterns typical of the natural landscape character of the area. Vegetation is managed to avoid catastrophic changes that could result from windthrow, insects, disease, or fire. Disturbed areas are revegetated to protect scenery and minimize erosion.

Protection of scenic values is emphasized through application of basic landscape aesthetics and design principles, integrated with forest management and development objectives. Reasonable efforts are made to limit the visibility of structures, ski lifts, roads, utilities, buildings, signs, and other man-made facilities by locating them behind landform features or by screening them behind existing vegetation. Facilities are architecturally designed to blend and harmonize with the national forest setting as seen from key viewpoints. Facilities that no longer serve a useful purpose are removed.

Recreational uses are intensively managed during the summer and winter seasons. Appropriate facilities are those that are directly related to the operation and support of skiing activities. Facilities may be intensively used throughout the year to satisfy a variety of seasonal recreational demands. Encounters between individuals and human sounds may be frequent, but vary by time of day and season.

Contacts with Forest Service personnel may be common, generally for the purpose of providing information and monitoring compliance with the terms and conditions of the special use permits. Opportunities for solitude are limited.

Transportation systems provide convenient access to National Forest System lands in key portal locations with adequate public parking, base facilities, and community infrastructure. Base areas that serve as entrance portals are designed as gateways to public lands. They are architecturally designed to blend with the forest setting and contain convenient facilities and services that provide for the needs of forest visitors.

Mountain roads and trails, constructed by the permit holder to serve a variety of uses, are subject to seasonal closure. Motorized equipment may be used in constructing, maintaining, and operating facilities and managing public use, where appropriate.

Directional, regulatory, and informational signs are common. They are consistent with the resort sign plan and they foster safe use, identify routes, and provide visitor information.

A Master Development Plan (MDP) is part of each ski area's special use permit. The MDPs are prepared by the permit holder and accepted by the Forest Service. They describe the improvements and facilities that are authorized at each resort and are the guiding document used to describe the expected future condition for the resort. These plans encompass all the area authorized for use by the special use permit including areas that are, at present, undeveloped. Areas allocated are managed to avoid deterioration of site conditions that may detract from planned uses.

For information on HRV see the Introduction to Category 8 on page 3-80.

The recreation opportunity spectrum (ROS) for this management area is rural year-round. Scenery is managed to provide a range of scenic integrity objectives from very low to low.

Standards and guidelines

INFRASTRUCTURE

Standard

1. Permanent outdoor advertising is not a needed public service and is not allowed.

Guidelines

1. Facilities are designed with an architectural theme intended to blend facilities with the natural environment.

2. Vegetation is retained to screen facilities from key viewpoints.

3. Roads are designed to minimize visual and resource impacts. They are constructed and maintained with good alignments and grades that minimize erosion.

4. Motorized travel is prohibited, except when authorized by special use permit or for administrative or emergency purposes.

SOILS

Standards

1. Effective ground cover (mulch) upon completion of ground disturbing activities will meet minimum levels of the pre-treatment habitat type (Hess and Wasser, 1982) as shown in the following table:

Habitat Type (group)	Minimum Ground Cover %
Aspen	95
Lodgepole Pine	90
Spruce-Fir	95

Mitigation measures will be determined on a case-by-case basis in the alpine component to protect against erosion.

2. Cross drain placement will meet the following minimum spacing:

Ski Trail Slope %	Maximum Distance in Feet
1-6	300
7-9	200
10-14	150
15-20	90
21-40	50
41+	25

Guideline **1.** Ground cover, as a combination of revegetation and mulch applications, should meet the requirements in the table below, one and two years following completion of ground disturbing activities.

Erosion Hazard Class	Year 1 Minimum Effective Ground Cover %	Year 2 Minimum Effective Ground Cover %
Low	20-30	30-40
Moderate	30-45	40-60
High	45-60	60-75
Very High/Severe	60-90	75-90

MINERAL AND ENERGY RESOURCES

Standard **1.** These areas are withdrawn from mineral entry.

RECREATION

Guideline **1.** Resource management activities should minimize impacts to recreational resources within existing permitted sites and areas planned for future development.

2. Uses and activities are considered appropriate on National Forest System lands if they enhance natural resource-based recreation opportunities. Facilities are considered appropriate if the preponderance of revenues generated from those facilities is by skiers and snowboarders during the winter season.

3. Ski area boundaries may be amended to improve skier safety, avoid physical hazards, manage known avalanche zones, or remain in compliance with Forest Service regional boundary management policies.

VEGETATION MANAGEMENT

Standards
1. These areas are not part of the suitable timber land base.
2. Vegetation management practices will be used to maintain and improve ski area objectives.

Guideline
1. Manage stands and islands of trees to provide for a variety of species and size classes and perpetuate forest cover. Vegetative management should complement snow management objectives and scenery and recreational values.

WATER AND AQUATIC RESOURCES

Standards
3. Snow management, including snowmaking and snow-farming, will be conducted in a manner that prevents slope failures and gully erosion, as well as bank erosion and sediment damage in receiving channels.

WILDLIFE

Guidelines
1. Provide opportunities to educate visitors about wildlife and habitat.

THREATENED SPECIES - LYNX

Note: See page 2-18 for an explanation of how this direction will be implemented.

Standard
1. When developing large winter recreation facilities, design new trails, roads and lift termini to protect lynx diurnal security habitats in and around proposed developments or expansions.

Guidelines
1. When designing ski area expansions, provide adequate sized coniferous inter-trail islands, including the retention of coarse woody material, to maintain snowshoe hare habitat.
2. Evaluate and adjust as necessary, ski operations in expanded or newly developed areas to provide nocturnal foraging opportunities for lynx in a manner consistent with operational needs, especially in landscapes where lynx habitat occurs as narrow bands of coniferous forest across mountain slopes.

8.31 Aerial Transportation Corridors

Theme

An aerial transportation corridor serves the principal purpose of transporting people to, from, and within communities or ski areas.

Management area description

Aerial transportation corridors allow people to move directly among key locations at ski areas and communities. Corridors are sufficiently wide to allow analysis of alternative alignments. Permitted rights-of-way are limited in width to functional levels needed for construction, maintenance and operations, but required mitigation measures may extend outside designated rights-of-way.

Desired condition

Vegetation may be removed to construct and operate aerial transportation systems. Low-profile structures and facilities that have low visual impacts are preferred. Structures that have dark non-reflective exterior surfaces and colors that blend with natural conditions are preferred. Development of scenic vistas for passengers riding aerial transportation systems is allowed if scenic integrity objectives can be met. Operations plans for aerial transportation systems strive to be compatible with the management areas they cross.

For information on HRV see the Introduction to Category 8 on page 3-80.

The recreation opportunity spectrum (ROS) for this management area will be compatible with the surrounding areas. Scenery will be managed to provide a range of scenic integrity objectives from very low to low.

Standards and guidelines

INFRASTRUCTURE

Guideline **1.** Public access restrictions may be imposed within the corridor for health, safety, resource, or compatibility considerations.

VEGETATION MANAGEMENT

Standard **1.** These areas are not part of the suitable timber land base.

WATER AND AQUATIC RESOURCES

Guidelines **1.** Avoid locating structures in floodplains.

2. Locate corridors and structures to minimize impacts to riparian areas and wetlands.

8.32 Designated Utility Corridors – Existing and Potential

Theme

This prescription emphasizes management of existing and potential linear and non-linear rights-of-way corridors. These corridors are used for major oil and gas pipelines; major water transmission systems (excluding reservoirs); slurry pipelines; aerial and underground utility facilities for transmission of electricity; major communications systems including telephone, microwave, and fixed sites; railroad rights-of-way; and major routes for highways and roads.

Management area description

These areas are managed for the construction, operation, and maintenance of facilities associated with public utilities and transportation systems. Rights-of-way for corridors are typically linear management areas that may traverse other management areas. Vegetation composition and structure have been altered to meet the needs of the site. Protection of facilities and personnel within the area is the primary emphasis for vegetation treatment. Physical disturbances to existing conditions frequently are high within the right-of-way corridor and low outside the corridor. The road system within utility and railroad corridors, as well as utility sites, may be restricted to utility maintenance access. Most roads have a native surface suitable for passage with high-clearance vehicles. Other management options include livestock grazing, wildlife habitat, and dispersed recreation.

Desired condition

For existing corridors and sites, visitors can expect to see significant modifications to general forest areas. Larger trees are removed to provide for safety and protection of facilities and of personnel working within the area. Smaller trees are still present. The boundaries of the cut areas bordering the corridors and cleared sites are blended into the surrounding vegetation. Opportunities for viewing wildlife are good. Wildlife species that prefer edge habitats, such as deer, are most common. Raptors are often seen within the corridors, although they may not nest there. Habitat for sensitive species may be enhanced where opportunities exist, but the focus is on maintenance and protection of these habitats. Dispersed recreation activities may be available for both motorized and non-motorized activities, including hunting, ATV riding, snowmobiling, hiking, cross-country skiing, horseback riding, and bicycling. For information on HRV see the Introduction to Category 8 on page 3-80.

The recreation opportunity spectrum (ROS) for this management area is compatible with the surrounding areas. Scenery is managed to provide a range of scenic integrity objectives from low to very high.

Standards and guidelines

INFRASTRUCTURE

Guideline **1.** Public access restrictions may be imposed within the corridor for health, safety, resource, or compatibility considerations.

MINERAL AND ENERGY RESOURCES

Standards **1.** Designated utility corridors for linear utilities (shown in **Figures 3-6** and **3-7**) will be occupied by utilities according to **Table 3-9**:

Figure 3-6
Designated utility corridors for linear utilities (west side of forest)

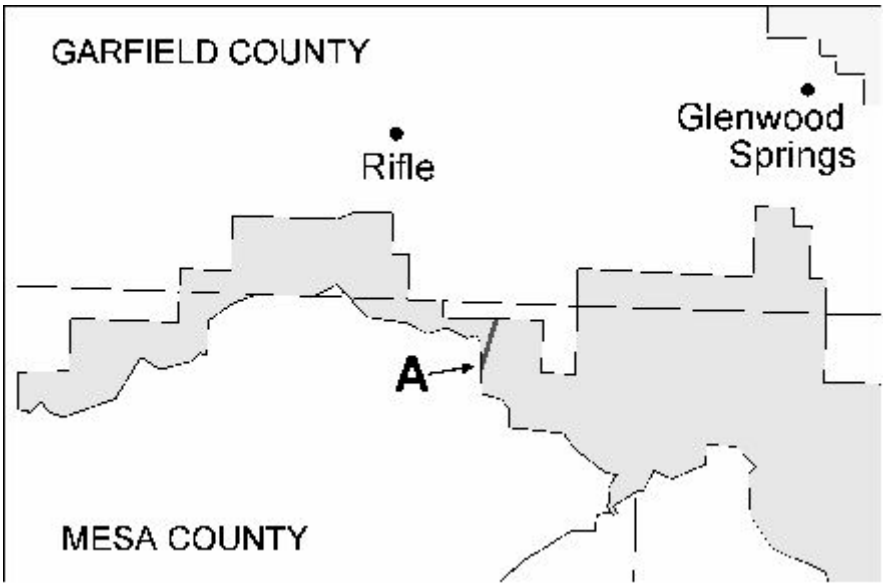


Figure 3-7
Designated utility corridors for linear utilities (east side of White River National Forest).

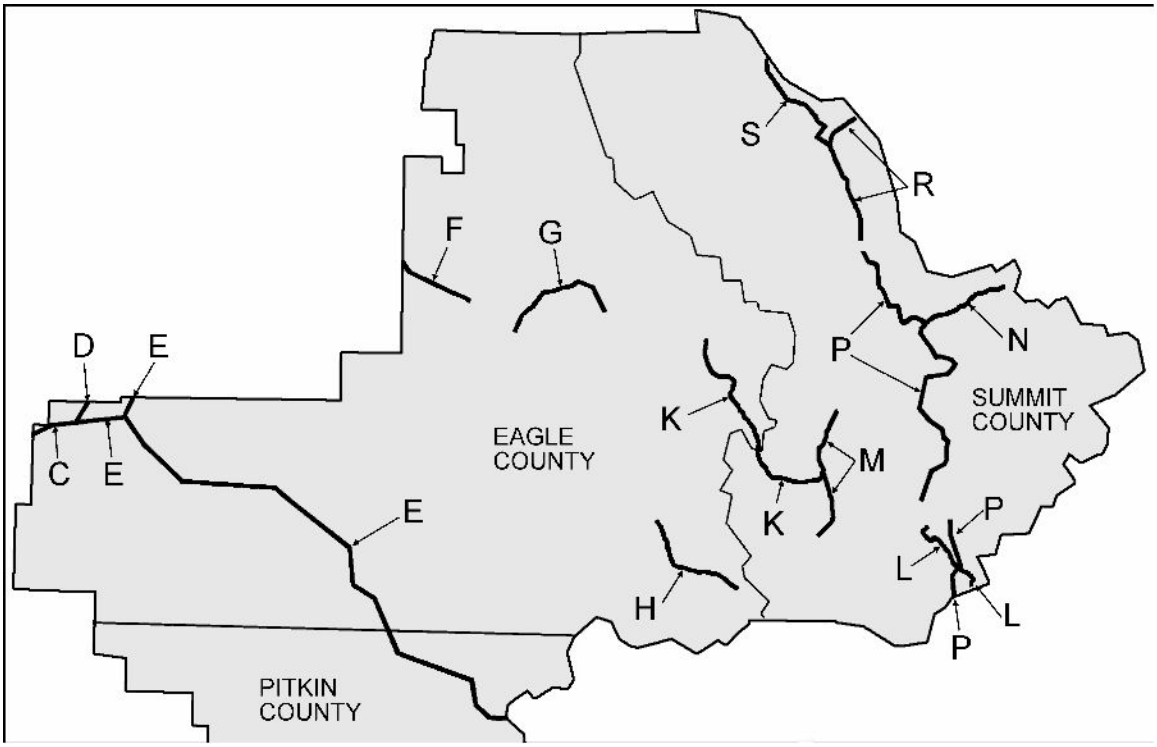


Table 3-9
Designated utility corridors for linear utilities on the White River National Forest

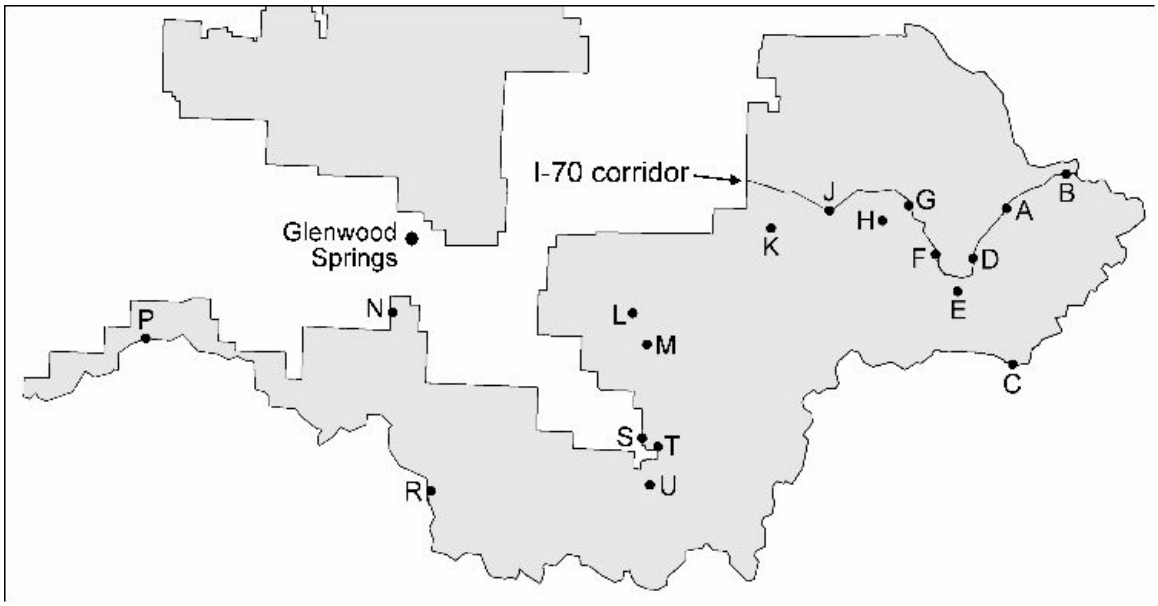
Corridor	Approved in alternative	Approved occupancy and/ or conditions of occupancy
A	B only	Aerial only
C	All	Aerial or underground
D	C, D, E, F, I and J	Underground only
E	All	Aerial only
F	All	Aerial only
G	All	Aerial only
H	All	Aerial or underground
K	C, D, E, F, I and J	Underground only
L	C, D, E, F, I and J	Underground only
M	C, D, E, F, I and J	Aerial or underground
N	C, D, E, F, I and J	Underground only
P	*B, C, D, E, F, I and J	Aerial only
R	C, D, E, F, I and J	Aerial or underground
S	C, D, E, F, I and J	Aerial only

Note:

"Aerial" is defined as "at or above prevalent tree canopy level."

*Only south sections are in Alternative B.

Figure 3-8
Designated non-linear utility sites (electronic/communication)



2. Designated non-linear utility sites (shown in **Figure 3-8**) will be occupied according to **Table 3-10**:

Table 3-10
Designated electronic sites on the White River National Forest

Site	Name	Approved in alternative	Approved occupancy and/ or conditions of occupancy
A	Lake Hill	All	Multi-user
B	West Tunnel	All	Multi-user cellular only
C	Hoosier Pass	All	Multi-user
D	Officers Gulch	All	Multi-user cellular only
E	Copper Mountain	All	Multi-user cellular only
F	Shrine Pass	All	Multi-user cellular only
G	East Vail	All	Multi-user cellular only
H	Vail Mountain	All	Multi-user
J	Lower Dowd	All	Multi-user
K	Beaver Creek	All	Multi-user
L	Red Table – East Red Table – West	All	FAA only Multi-user
N	Sunlight	All	Multi-user
P	Haystack Mountain	B only	Multi-user
R	McClure Pass	C, D, E, F, I and J	Multi-user
S	Lower Red Mountain	All	No new or additional users
T	Upper Red Mountain	All	Multi-user; no additional users until access issue resolved
U	Aspen Mountain	All	Multi-user

SCENERY MANAGEMENT

Standard **1.** Vegetation management plans, for new or reissued permits, are designed to minimize and rehabilitate visual impacts.

Guideline **1.** The boundaries of the cut areas bordering utility corridors are blended into the surrounding vegetation in locations visible from key viewpoints.

VEGETATION MANAGEMENT

Standard **1.** These areas are not part of the suitable timber land base.

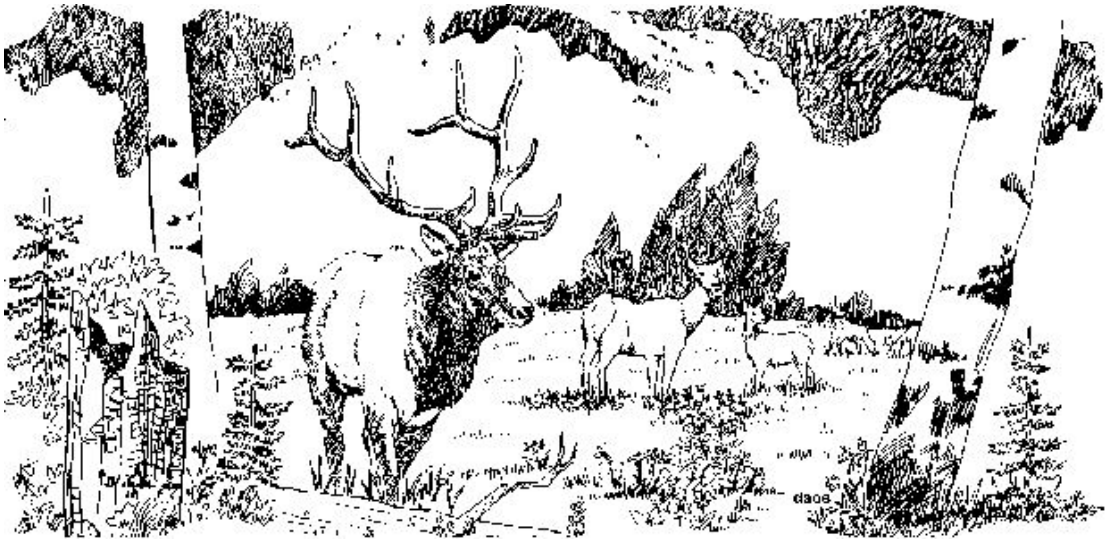
WATER AND AQUATIC RESOURCES

Guidelines **1.** Avoid locating structures in floodplains.

2. Locate corridors and structures to minimize impacts to riparian areas and wetlands.

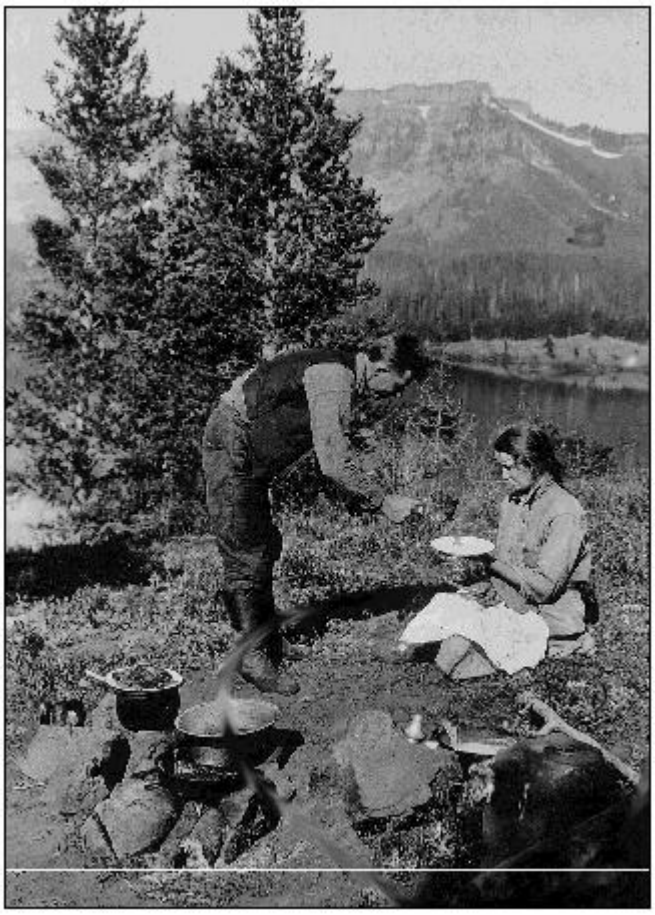
WILDLIFE

Standard **1.** Design and construction of power transmission and distribution lines will minimize electrocution hazards, and, where feasible, provide perch sites.



CHAPTER FOUR

Monitoring and Evaluation



Campers at Trappers Lake, 1937

Chapter 4
Monitoring and Evaluation

Overview

Monitoring is defined as the process of taking periodic observations to detect changes or trends in resources or environment. Comparing conditions between two or more successive inventories provides estimates of change and is a form of monitoring. A single observation or inventory does not necessarily result in monitoring. However, an inventory may set a reference point against which future observations may be compared during monitoring. Evaluation is defined as interpreting or judging information.

The purpose of this chapter is to provide the support and direction to facilitate successful monitoring. The sections in this chapter are:

- Monitoring framework overview
- Monitoring purpose
- Information management
- Reasons for monitoring (monitoring drivers)
- Definitions
- Monitoring priorities
- Annual monitoring work plan
- Evaluation process
- Annual forest monitoring and evaluation report
- Monitoring strategy

In brief, the steps to successful monitoring are:

1. **Establish a monitoring budget:** As part of the annual program budgeting process, establish an annual monitoring budget to collect, manage, and evaluate data, coordinate with partners, produce the annual report, and fund the Monitoring Interdisciplinary (ID) Team.
2. **Identify a monitoring ID Team:** At least one year in advance of the published monitoring report, establish an ID Team with the authority to coordinate and supervise monitoring activities, administer monitoring funding, evaluate the data collected, and produce the annual monitoring report.
3. **Build a monitoring guide:** The ID Team will annually build, update, or validate a monitoring guide designed to facilitate data collection and storage on monitoring items using standardized monitoring protocols, corporate data, and information storage.
4. **Find cooperators:** The ID Team will find and manage cooperators who will aid in data collection and possibly data evaluation. Cooperators will play a key role in a successful monitoring effort.
5. **Establish an annual monitoring work plan:** The ID Team, under the direction of the Forest Leadership Team, will build and work under a work plan with the budget provided. The project work plan will identify the monitoring questions to be addressed for the year, the funding available, where data on monitoring items will be collected, and who will have the responsibility to obtain the data.

6. **Manage the collection and storage of data:** The ID Team will work with Forest Service employees and cooperators to see that data is collected using standard methods found in the monitoring guide and are entered into the appropriate corporate data storage system.
7. **Evaluate the data:** The ID Team will evaluate the data collected with the goal of answering the monitoring questions.
8. **Publish and distribute the annual monitoring report:** The ID Team will write and distribute the annual monitoring report.

Monitoring purpose

Effective monitoring and evaluation fosters improved management and more informed planning decisions. It helps identify the need to adjust desired conditions, goals, objectives, standards, and guidelines as conditions change. Monitoring and evaluation helps the agency and the public determine how a forest plan is being implemented, whether plan implementation is achieving desired outcomes, and whether assumptions made in the planning process are valid.

Monitoring and evaluation are learning tools that form the backbone of adaptive management. With these tools, data is collected and compiled to serve as reference points for the future. New scientific understanding and technology, changes in law, policy, and resource conditions, growing concerns, trends, and changing societal values can be incorporated into forest planning. Finally, the scientific validity and appropriateness of assumptions used in the development of forest plans can be evaluated. In short, monitoring efforts breathe life into a static document—the forest plan—to make it dynamic, relevant, and useful.

Several kinds of activities can be referred to as "monitoring." Programmatic monitoring tracks and evaluates trends of ecological, social, or economic outcomes. Project implementation monitoring verifies compliance with forest plan standards and guidelines. Effectiveness monitoring evaluates how effectively our management actions achieve desired outcomes. Validation monitoring verifies assumptions and models used in forest plan implementation. Monitoring may also address issues for large geographic areas of which a forest is a part. These types of monitoring are addressed in forest plans.

There are two other types of monitoring: (1) tracking or development of administrative reports (plans for protection of historic sites, interpretive plans, plans to inventory a particular resource, or conservation strategies) and (2) tracking specific program outputs (such as miles of trail maintained, recreation visitor days, cubic feet of timber harvested, or acres of prescribed burn accomplished). These monitoring programs will not be discussed at greater length here. Tracking of outputs can be referenced using general terms in a forest plan and may be included in an annual monitoring plan or annual monitoring and evaluation report, as they are important measures of how funds are used and are important to the public.

As a forest plans and implements its monitoring and evaluation program, there are several important guidelines to consider. Monitoring should:

- Be purposeful and conducted to answer specific questions.
- Be done at the appropriate spatial and temporal scale to answer the question.
- Be done in collaboration with others (agencies, interested publics, researchers, and non-governmental organizations) to share the workload (including obtaining data from other sources), gain expertise, and build credibility and trust.
- Use the best available science and established protocols to collect and evaluate the data.
- Use modern information management techniques and tools.
- Apply stringent selection criteria so that a monitoring activity is only conducted if it is feasible, realistic, and affordable.
- Emphasize evaluation as much as the collection of the data.

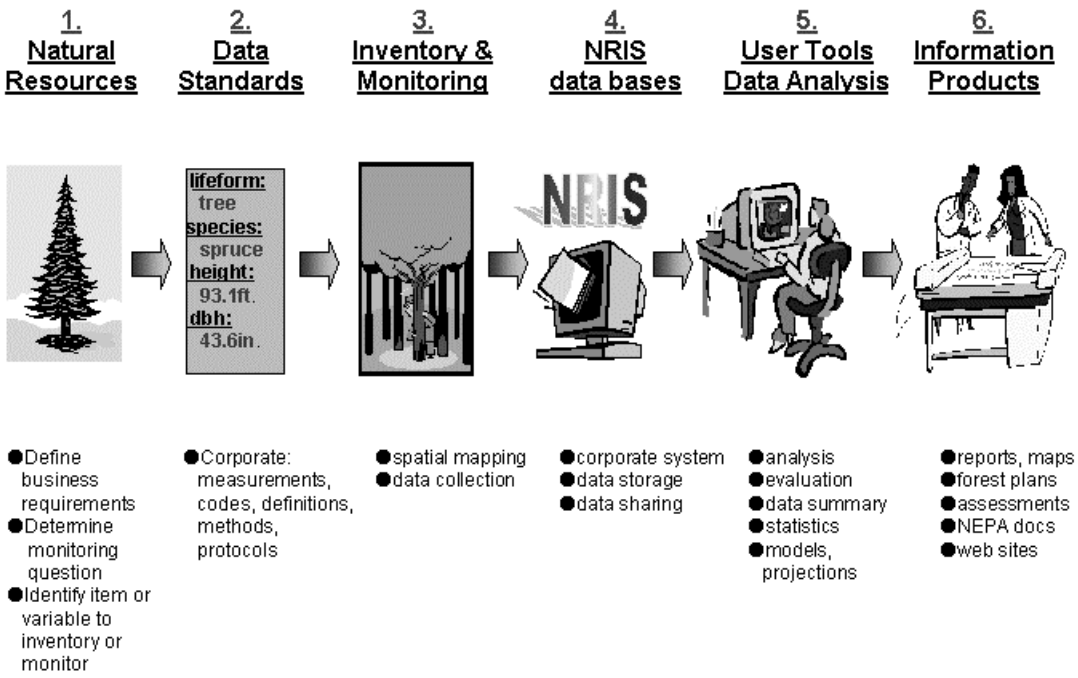
Monitoring and evaluation are conducted at several scales and for many purposes, each of which has different objectives and requirements. Monitoring requirements and tasks are developed to be responsive to the objectives and scale of the plan, program, or project to be monitored.

Monitoring and evaluation are separate, sequential activities required by National Forest Management Act (NFMA) regulations to determine how well objectives have been met and how closely management standards and guidelines have been applied. Monitoring generally includes the collection of data and information, either by observation or measurement. Evaluation is the analysis of the data and information collected during the monitoring phase. The evaluation results are used to answer the monitoring questions, determine the need to revise or amend management plans or how they are implemented, and form a basis for adaptive management of National Forest System lands. Monitoring and evaluation results provide the information necessary to amend the 2001 forest plan over its lifespan. This keeps the forest plan up-to-date and responsive to emerging issues, new scientific information, and changing resource conditions.

This chapter provides programmatic direction for monitoring and evaluating forest plan implementation. Monitoring provides the forest supervisor with the information necessary to determine whether the 2001 Forest Plan is sufficient to guide management of the White River National Forest for the subsequent year, or whether modification of the plan is needed.

Information management

Monitoring and evaluation involve more than just collecting data. They encompass the full range of information management steps, shown in the figure below.



Once the purpose or reason for monitoring has been determined (such as to answer a particular monitoring question), careful thought needs to taken to identify which feature or variable will be measured and how it will be measured. If no standard methods or protocols exist for data collection, protocols are developed in consultation with research station staff or other scientific specialists as needed.

After ID Team members determine how information will be gathered, data collection begins. If appropriate research is already being conducted by other agencies, scientists, or volunteers, then the Forest Service can be spared the expense and effort of collecting it. Once monitoring results are obtained and have been checked against quality standards, they are stored in a corporate electronic database, such as Natural Resources Information Systems (NRIS) or geographic information systems (GIS). The data are then analyzed and interpreted.

The interpreted information is evaluated by the ID Team to answer the monitoring question and give it meaning in the context of the forest plan. A variety of analytical tools and evaluation procedures are available to interpret the data. The results are reported to the Forest Leadership Team to consider and act on as well as documented in the annual monitoring and evaluation report. Monitoring data, evaluation results and the annual report should be accessible to the public electronically, preferably via the Internet.

Reasons for monitoring (monitoring drivers)

The NFMA requires national forests to do specific monitoring tasks. The level and intensity of any additional monitoring is dependent on available staffing, funding and forest priorities.

Following is a list of reasons (monitoring drivers) why certain items are included in a forest plan:

- Legal and regulatory requirements
- Forest Service Manual direction
- Tracking desired conditions, goals, and objectives
- Validation of models and assumptions
- Tracking agency expectations
- Tracking public expectations and issues
- Tracking forest plan standards and guidelines
- Contributions to broad-scale monitoring
- Court rulings

Legal drivers include regulations at 36 CFR 219 that describe NFMA monitoring requirements. Some of these requirements provide guidance for developing the monitoring program while others include specific compliance requirements. The following regulations specify the minimum requirements for monitoring. This list applies to forest plans that are being revised under the 1982 regulations.

- ***36 CFR 219.7(f)*** A program of monitoring and evaluation will be conducted that includes consideration of the effects of National Forest management on land, resources, and communities adjacent to or near the national forest as well as the effects to national forest management from activities on nearby lands managed by other federal, state, local, or tribal government agencies or under the jurisdiction of local governments.
- ***36 CFR 219.11 (d)*** Monitoring and evaluation requirements that provide a basis for a periodic determination and evaluation of the effects of management practices.
- ***36 CFR 219.12 (k)*** Monitoring requirements identified in the forest plan will provide for:
    1. A quantitative estimate of performance comparing outputs and services with those projected by the forest plan.
    2. Documentation of the measured prescriptions and effects, including significant changes in productivity of the land.
    3. Documentation of costs associated with carrying out the planned management prescriptions as compared with costs estimated in the forest plan.
    4. A description of the following monitoring activities:
        i. The actions, effects, or resources to be measured and the frequency of measurements.
        ii. Expected precision and reliability of the monitoring process.
        iii. The time when evaluations will be reported.
    5. A determination of compliance with the following standards:
        i. Lands are adequately restocked as specified in the forest plan.
        ii. Lands identified as not suited for timber production are examined at least every 10 years to determine if they have become suited; and

that, if determined suited, such lands are returned to timber production.

iii. Maximum size limits for harvest areas are evaluated to determine whether such size limits should be continued.

iv. Destructive insects and disease organisms do not increase to potentially damaging levels following management activities.

- ***36 CFR 219.19 (a) (6)*** Population trends of management indicator species will be monitored and relationships to habitat changes determined. This monitoring will be done in cooperation with state fish and wildlife agencies to the extent possible.
- ***36 CFR 219.21 (g)*** Forest planning will evaluate the potential effects of vehicle use off roads and, on the basis of the requirements of 36 CFR 295, classify areas and trails of National Forest System (NFS) lands as to whether or not off-road vehicle use is permitted.

Definitions

Monitoring Questions Specific monitoring questions are developed to ensure that monitoring and evaluation address information essential to measuring forest plan accomplishment and effectiveness. These questions help identify issues of concern and reveal how they are changing. The evaluation process (discussed below) determines whether the observed changes are consistent with forest plan desired future conditions, goals, objectives and what adjustments may be needed.

Monitoring Items A monitoring item, or data element, is a quantitative or qualitative parameter that can be measured or estimated. One or more monitoring items are selected for the purpose of answering a monitoring question. A particular monitoring item may be used to answer more than on monitoring question. Potential monitoring items are listed in the forest plan as part of the accompanying table of monitoring questions. These are thought to be the best items needed to answer the questions, but they are subject to change as the monitoring strategy is implemented. Any changes to the list of potential monitoring items will be reflected in the Monitoring Guide or Annual Monitoring Work Plan that accompany this forest plan. Each monitoring item has an associated unit of measure, such as acre, mile, etc. Examples of monitoring items with their associated unit of measure include acres and location of soils improved or number of water bodies restored on the White River National Forest. Details on the units of measure are shown in the Monitoring Guide.

Monitoring Methods Monitoring methods are developed in the Monitoring Guide, and may change based on changes in technology, staffing, budgets and issues. Only standardized protocols will be used in collecting monitoring item data.

Precision/Reliability The precision and reliability with which each forest program or activity is monitored depends on the particular program or activity to be monitored. Two classes of precision and reliability are recognized:

Class A These methods are generally well accepted for modeling or measuring the resource or condition. They produce repeatable results and are often statistically valid. Reliability, precision, and accuracy are very good. The cost of conducting these measurements is higher than other methods. These methods are often quantitative in nature.

Class B These methods are based on project records, communications, on-site ocular estimates, or less formal measurements like pace transects, informal visitor surveys, air photo interpretation, and other similar types of assessments. Reliability, accuracy, and precision are good, but usually less than Class A. Class B methods are often qualitative in nature, but still provide valuable information on the status of resource conditions.

Scale describes the level of analysis with respect to land size. This measure is important in describing effects dealing with habitat heterogeneity and viability issues; as well as, describing cumulative effects of management actions. Examples include: sixth order hydrologic unit code, geographic area, administrative unit, or landscape (forest-wide).

Frequency describes the timing of monitoring and evaluation efforts over time. Examples include: annually, every five years, or every ten years.

Monitoring priorities

After monitoring questions are developed, a screening process sorts the more significant questions from the less significant to ensure efficient use of limited resources—time, money and personnel. The priority of a question may affect the intensity or extent of associated monitoring activities. Following is a list of questions used in the screening process with a brief explanation or example. Key words are used to describe the appropriate screen in the monitoring strategy table.

1. **Is there a high degree of uncertainty associated with management assumptions?** *Examples:* (1) a new way of doing something where there is limited experience with the new technique; (2) actions taken in response to an unprecedented situation; (3) a lack of data for a particular resource response to a management action. **Key Words – High Uncertainty.**

2. **Is there a high degree of disparity between existing and desired conditions?** *Examples:* (1) a particular habitat component is at a much lower level than desired; (2) the amount of use of a particular resource or use at a particular location is much higher than desired. **Key Words – High condition disparity.**

3. **Are proposed management activities likely to affect resources of concern?** There may be other forces affecting a resource much more significantly than anything the Forest Service does. Also, there may be portions of the landscape where no management activities are planned. An efficient monitoring strategy will focus on those circumstances where management activities are expected to have a discernable outcome. **Key Words – Likely to affect resources of concern.**

4. **What are the consequences of not knowing resource conditions?** *Examples:* (1) if a species is at risk, consequences could be high, whether or not management activities are likely to affect it; (2) if a relationship with cooperators or local government is at risk due to a management activity, consequences could be high (in this case, a *human* resource). **Key Words – Great Consequences.**

5. **Will monitoring respond to a key issue?** Key issues identified through scoping may warrant monitoring *even if* they are (1) well understood, (2) the existing condition is good, and (3) management activities will have little impact. Monitoring may be necessary for educational and/or accountability purposes. **Key Words – Key Issue.**

6. **In addition to the above, can the question be cost-effectively answered?** If the cost of answering the question is especially high in regard to benefits, or if an adequate monitoring method cannot be developed, the resource in question may be more appropriately studied by another entity, such as Forest Service research or private educational institutions. **Key Words – Cost-effectively answered.**

Research contributions

Research needs are identified during the development of forest plans. Any additional research needs are identified during monitoring and evaluation of the plan as it is implemented and in the annual monitoring and evaluation reports. The regional forester evaluates any research needs for inclusion in the regional research program proposal, which is used by Forest Service research and development staff as input for determining priorities for research funding at the regional and national levels.

Monitoring guide

The Monitoring Guide provides the specific methodologies, protocols, and administrative information associated with each monitoring item described in a forest plan. The guide is flexible and may be changed as new methodologies and techniques for monitoring are developed and approved. While the guide uses information in the forest plan, it is not a part of it; therefore, it may be changed without amending the forest plan.

Specific information for each monitoring item in the Monitoring Guide should include the following:

1. Resource or condition being monitored
2. Monitoring question
3. Monitoring driver
4. Cooperators
5. Monitoring items (information/indicators)
    - A. Metadata of data collection
        - i. Scale
        - ii. Unit of measure
        - iii. Precision and reliability (This must also be in the forest plan per 36 CFR 219.12(k)(4)(ii))
        - iv. Quality assurance/quality control
        - v. Methods (i.e., standard, approved protocols)
        - vi. Frequency of measurement
        - vii. Who collected? When collected?
        - viii. Reporting period (This must also be in the forest plan per 36 CFR 219.12(k)(4)(iii))
        - ix. Information management (description of how data will be stored and made accessible)
6. Responsibility
7. Cost
8. Evaluation Process

Annual monitoring work plan

The Monitoring ID Team prepares an annual monitoring plan of operations with a list of monitoring items each year by October 1. Methods and protocols for each monitoring item are derived from the Monitoring Guide.

Monitoring items are selected through interdisciplinary team coordination, budget constraints, and forest leadership direction. Monitoring drivers and priority considerations will help in the selection process.

The forest interdisciplinary team (ID Team) reviews the previous years' monitoring and evaluation results to determine if methodology and protocols in the Monitoring Guide are effective and efficient; if not, changes may be made to the Monitoring Guide.

A strategy for involving the public and other agencies in our monitoring activities is considered each year. This may be accomplished through partnerships with interest groups, volunteer groups, other federal, state, and local agencies, and universities. Monitoring work trips for the public may also be scheduled to demonstrate monitoring methods. Forest staff make forest plan monitoring results available to the public through news releases and the internet.

The monitoring plan includes direction for preparing the current year's annual monitoring and evaluation report and lays the framework for information required for five- and 10-year evaluation reports. Results of this plan will show priority and budget trends that guide future priorities and budgets.

The following is an example of annual monitoring plan items:

The following items will be monitored in FY02 according to direction in the Monitoring Guide:

Activity	Monitoring Guide Page Reference	Responsible Person
2. What is the increase/decrease in forest noxious weeds?	24	District through Forest Range Group Leader
10. Reforestation: Five years after regeneration harvest are lands adequately restocked?	45	District through Forest Silviculturist

Each Forest ID Team member coordinates the data collection for his or her respective resource area. The data is then interpreted and contributes to the annual monitoring and evaluation report prepared by the team the following fiscal year.

Evaluation process

The Forest ID Team evaluates the data and information collected through monitoring. Successful adaptive management depends on collectively evaluating the effectiveness of management activities in moving the forest toward desired conditions. The "desired condition" (or other driver) that prompted the development of a monitoring question is typically associated with one or more monitoring items. Whereas the desired condition may be conceptual or visionary in nature, the monitoring items are generally a measurable aspect of the desired condition.

Evaluation is the process of transforming data into information—a value-added process. It is a process of *synthesis* that brings together value, judgment, and reason with monitoring data to answer the questions "Did we or are we?", "So what?", and perhaps, "Why?"

Evaluation requires context: A sense of the history of the place or the circumstances (temporal and spatial context) are important to the evaluation of management activities.

Evaluation requires baseline or reference information: Evaluation will describe movement from a known point (baseline or reference condition) either toward or away from a desired condition. The desired conditions may or may not ever be fully achieved, but it is important to know if management activities are heading in the right direction.

Evaluation produces information that is used to infer outcomes and trends: Conclusions will be drawn from an interpretation of evidence.

The evaluation process will be documented: Evaluation may occur through a variety of means such as facilitated group interactions, scaled survey instruments, or through computer assisted technology (e.g., statistical or analytical tools or internet forums). The processes used will be described in the annual monitoring and evaluation report.

Evaluation results are documented in an annual monitoring and evaluation report: The responsible official (i.e., the forest supervisor) uses this report as a tool to initiate change.

Annual monitoring & evaluation report

The annual monitoring and evaluation report is a Management Attainment Report requirement and an output target for forests. Besides fulfilling these requirements, these reports serve several purposes, including:

- Documenting monitoring and evaluation accomplishments
- Providing an accountability tool for monitoring and evaluation expenditures
- Providing an assessment of the current state of the forest
- Providing adaptive management feedback to responsible officials of any needed changes to the forest plan or adjustments to management actions
- Describing to the public how their public lands are being managed

The monitoring and evaluation report is based on monitoring data and information gathered the previous fiscal year. It evaluates forest plan implementation and provides an overview of resource conditions and trends as they relate to indicators and criteria for sustainability with specific attention on the effects of management on ecological system structure and function.

The following items are included in the report:

- ***Key findings*** what has changed, what the forest supervisor is committing to do about them (signed and dated)
- ***Chapter 1 – Setting the Context*** An overview of past, present, and desired conditions is presented which may be summarized from broad-scale assessments, projects, programs, policy, and law. This is organized by the Montreal criteria of sustainability where practicable. These seven criteria are:
    - Conservation of biological diversity;
    - Maintenance of productive capacity of forest ecosystems;
    - Maintenance of forest ecosystem health and vitality;
    - Conservation and maintenance of soil and water resources;
    - Maintenance of forest contribution to global carbon cycles;
    - Maintenance and enhancement of long-term socioeconomic benefits to meet the needs of society; and
    - The legal, institutional, and economic framework for forest conservation and sustainable management.
- ***Chapter 2 – Monitoring Results*** The monitoring results are described and are organized by GPRA goals where practicable. These goals are:
    - Ecosystem health;
    - Multiple benefits to people;
    - Scientific and technical assistance; and
    - Effective public service.
- ***Chapter 3 – Evaluation and Action Plan*** This is a synthesis of results, interpreted to draw conclusions about whether or not we are moving toward forest goals and desired conditions.
- ***Appendix***

Monitoring items we will report on in any given year are listed as the reporting frequency in the chart of monitoring questions.

Monitoring Strategy

The monitoring strategy contains all the relevant Land & Resource Management Plan monitoring called for by the monitoring drivers. The available monitoring budget will in all likelihood require a significantly smaller monitoring program in any given year than the table below presents. It is the monitoring items not the monitoring questions that are the major cost factor. The monitoring item initiates the data collection and a single monitoring item may answer several monitoring questions. Cooperators can greatly expand the annual monitoring program and stretch a Forest or Grassland's available monitoring budget many fold.

In almost all cases, it will be necessary for the Forest Leadership Team in conjunction with the Monitoring ID team to prioritize what will be monitored in any given year based on the monitoring drivers, monitoring priorities, the accomplishments of the previous year's monitoring, and the urgency of a monitoring question.

Monitoring Driver	*Monitoring Question*	*Monitoring Priority*	*Potential Monitoring Items*	*Precision & Reliability*	*Scale*	*Frequency of Reporting*
Effectiveness Monitoring						
Goal 1 Objective 1a	**Watershed 1:** To what extent has water quality condition on watersheds containing National Forest System lands been restored, maintained or improved?	Management activities are likely to affect resources of concern.	Sixth Level watersheds in condition class I, II, & III	A	Geographic	Five years
Notes: Livestock grazing, mining, timber harvesting and other management activities can affect riparian area recovery and condition.						
Goal 1 Objective 1a	**Watershed 2:** To what extent have soils eroded or disturbed by Forest Service management or permitted activities been restored?	Likely to affect.	Acres & location of soils eroded, disturbed, or restored by Forest Service management or permitted activities.	B	Geographic	Five years
Notes: Livestock grazing, mining, timber harvesting and other ground disturbing activities can affect soil condition.						

Monitoring Driver	*Monitoring Question*	*Monitoring Priority*	*Potential Monitoring Items*	*Precision & Reliability*	*Scale*	*Frequency of Reporting*
Goal 1 Objective 1a	**Watershed 3:** To what extent have instream flows been assured to provide adequate water for fisheries and other riverine flora and fauna in streams and rivers with high resource values?	Great consequences	Name and location of streams & rivers having high resource values and the extent instream flows are maintained or improved. Incidents of damaging low stream flows.	A	Geographic	Five years
Notes: Fisheries and the ecosystem supporting them can be destroyed if water is not available.						
Legal: 36 CFR 219.19(a)(6); 36 CFR 219.20; 36 CFR 219.27(5 and 6); Goal 1, Objective 1b	**MIS 1:** What is the potential habitat capability for each management indicator species?	High condition disparity; Viability, Great consequences; Key issue	Acres and distribution of potential habitat	A	Administrative unit wide	Five years
Notes: Determining and identifying potential habitat for each management indicator species is a regulatory requirement under NFMA. Reference areas may be needed to determine potential habitat capability for some management indicator species.						
Legal: 36 CFR 219.19(a)(6); 36 CFR 219.20; 36 CFR 219.27(5 and 6); Goal 1, Objective 1b	**MIS 2:** What is the current habitat suitability for each management indicator species?	High condition disparity; MIS for key issue (grassland vegetation conditions)	Current condition and trend of key habitats for each Management Indicator Species; Habitat suitability evaluation ratings	A	Administrative unit wide	Five years
Notes: Evaluating the current condition and trend of key habitats for each management indicator species is a regulatory requirement under NFMA. Monitoring of MIS habitat is a high priority						

Monitoring Driver	*Monitoring Question*	*Monitoring Priority*	*Potential Monitoring Items*	*Precision & Reliability*	*Scale*	*Frequency of Reporting*
Legal: 36 CFR 219.19(a)(6); 36 CFR 219.20; 36 CFR 219.27(5 and 6); Goal 1, Objective 1b	**MIS 3:** What are the long-term population trends for each management indicator species and the relationships between long-term population trends and the effects of management activities on habitats on NFS lands?	High condition disparity; Viability, Great consequences; Key issue	Long-term population trends; Habitat suitability evaluation ratings	A	Administrative unit wide	Five years
Notes: Determining long-term populations trends for each management indicator species is a regulatory requirement under NFMA. The relationships between long-term trend and changes in habitat quality and quantity as a result of management activities also needs to be evaluated. Monitoring of MIS populations and habitat is a high priority						
Legal: USDA Departmental Regulation 9500-4; 36 CFR 219.19 and 219.27(6); Goal 1, Objective 1b	**T&E 1:** To what extent are NFS lands and their management contributing to the recovery and viability of T&E Species?	Key issue (recovery and viability); Great consequences	Survival, Dispersal and reproduction statistics; Population trend; Habitat suitability/capability evaluation ratings, national Canada lynx/snowshoe hare presence and distribution, location and intensity of snow compaction activities.	A	Geographic areas	Annually
Notes: The Forest Service is implementing recovery actions identified in the plan on the National Forests. Monitoring species populations and habitat is a high priority.						

Monitoring Driver	*Monitoring Question*	*Monitoring Priority*	*Potential Monitoring Items*	*Precision & Reliability*	*Scale*	*Frequency of Reporting*
Legal: Migratory Bird Treaty Act; Bald and Golden Eagle Protection Act; USDA Departmental Regulation 9500-4; 36 CFR 219.19 and 219.27(6); Goal 1, Objective 1b	**T&E 2:** To what extent are NFS lands and their management contributing to the viability of recently delisted species	Key issue (recovery and viability); Great consequences	Population parameters/trends; habitat suitability/capability; site specific analysis	A	Administrative unit wide; geographic areas	Annually
Notes: An understanding of how and to what extent NFS lands contribute the viability of recently delisted species is critical to ensuring a continued delisted status.						
Legal: Migratory Bird Treaty Act; USDA Departmental Regulation 9500-4; 36 CFR 219.19 and 219.27(5 & 6); Goal 1, Objective 1b	**Viability 1:**To what extent are National Forest System Lands and their management contributing to the viability of sensitive plant and animal species and species of viability concern?	Key issue (Viability); Great consequences	Populations; Distribution; Reintroductions; Transplants; Survival, Dispersal and reproduction statistics; Acres of habitat improvement; Reintroductions; Transplants, Survival and reproduction statistics; Groundwater levels; Riparian and woody regeneration accomplishments; Wetlands vegetation/habitat management accomplishments; Water management accomplishments	A	Administrative unit wide	Five years
Notes: Monitoring of populations and habitats of those sensitive species that are endemic or at higher risk (outcomes 3 through 6) is a high priority.						

Monitoring Driver	*Monitoring Question*	*Monitoring Priority*	*Potential Monitoring Items*	*Precision & Reliability*	*Scale*	*Frequency of Reporting*
Legal: 36 CFR 219.20; Management Areas 5.41, 5.42; Goal 1, Objective 1b	**Wildlife 1:** Is habitat effectiveness on the forest being maintained or enhanced?	Recreational and economic issue and cooperative program with state wildlife agencies	Habitat effectiveness evaluations	A	Administrative Unit Wide	Five years
Notes: Big game viewing and hunting are popular recreational activities on these lands and both contribute to the economic diversity of local and state economies. Management of designated big game ranges on NFS lands can help meet big game objectives established by State Wildlife Agencies. Land uses and developments on these lands can have significant effects on big game habitat.						
Legal: 36 CFR 219.12(k)5(iv); Goal 1, Objective 1c; Goal 1, Objective 1d	**Ecosystem Health 1:** To what extent are destructive insect and disease outbreaks prevented following management activities? (See also Community 1)	Key issue; Great consequences	Acres & number of outbreaks. Distance to and age of nearest management activity.	A	Geographic	Five years
Notes: Destructive insect and disease outbreaks can cause a great deal of property & resource damage. Prevention promotes healthy ecosystems.						
Goal 1, Objective 1c.	**Ecosystem Health 2:** To what extent are desired vegetation/soils conditions on rangelands being met?	Management activities likely to affect resources of concern; Great consequences.	Location & amount of rangelands meeting, Making measurable progress towards, or Not meeting desired vegetation structure and composition.	A	Forest-Wide	Annual Vegetation and Riparian Condition Report
Notes: Rangeland health is determined by three criteria: degree of soil stability and watershed function, integrity of nutrient cycles and energy flows, and presence of functioning recovery mechanisms. Indicators include changes in vegetative cover, plant vigor, change in kind and number of seedlings and plant age class distribution.						

Monitoring Driver	*Monitoring Question*	*Monitoring Priority*	*Potential Monitoring Items*	*Precision & Reliability*	*Scale*	*Frequency of Reporting*
Goal 1, Objective 1c	**Ecosystem Health 3:** To what extent are desired vegetation conditions in forested areas being met?	Management activities are likely to affect resources of concern; Great consequences.	Location & percent of forested lands meeting, Making measurable progress towards, or Not meeting desired structural stages	A	Geographic	Five years
Notes: The mosaic of structural stages in forests helps determine the diversity of native plants and animals occurring in an area. Fire and timber management largely determine the mix of structural stages.						
36 CFR 219.21 (g) 36 CFR 295.2 &.5 Goal 1, Objective 1c	**Ecosystem Health 4:** What are the effects of vehicle use off roads?	Key issue	Number and location of off-road vehicle caused incidents of erosion and new unauthorized roads. Acres of ineffective wildlife habitat due to off-road vehicle use.	B	District	Two years
Notes: NFMA requirement to assess the potential effects of vehicle use off roads prior to classifying areas and trails for off-road vehicle use. Monitoring will provide information for the travel management plan to be prepared within five years after record of decision is signed.						
Goal 2 Objective 2a	**Benefits to People 1:** To what extent are trails managed to meet regional standards and to minimize conflicts among users..	Great consequences	Location and miles of trails meeting and not meeting regional standards. Reports of conflicts among users.	B	District	Five years (20% annually)
Notes: An understanding of trail conditions is needed in order to obtain funding and schedule the work needed to bring trails up to standard. A trail in poor condition causes erosion and is a safety hazard.						

Monitoring Driver	*Monitoring Question*	*Monitoring Priority*	*Potential Monitoring Items*	*Precision & Reliability*	*Scale*	*Frequency of Reporting*
Goal 2 Objective 2a	**Benefits to People 2:** Where does the demand for recreation opportunities warrant development of additional opportunities such as trails or campgrounds?	Great consequences	Customer survey and individual public contacts. Name of facility, location, and time existing use exceeds capacity, visitor use counts.	B	District	Five years
Notes: An understanding of the demand for recreation opportunities is needed to efficiently use available funding to develop new recreation facilities or programs and satisfy public demand for recreation opportunities.						
Legal - National Historic Preservation Act; Goal 2 Objective 2a; Goal 2 Objective 2b	**Benefits to People 3:** To what extent are Forest visitors informed of the recreation opportunities available to them; are they adequately guided to those recreation opportunities; and do they receive adequate interpretive information on National Register of Historic Places and other heritage sites, geologic, paleontologic, wildlife, plant, and recreation resources or opportunities?	Key issue	Customer survey and individual contacts with forest visitors.	B	District	Five years
Notes: People like to have directional signs to guide them to their destination. Private landowners appreciate it when visitors do not trespass on their land. Interpretive information further enhances the National Forest experience.						

Monitoring Driver	*Monitoring Question*	*Monitoring Priority*	*Potential Monitoring Items*	*Precision & Reliability*	*Scale*	*Frequency of Reporting*
Legal - National Historic Preservation Act; Goal 2 Objective 2b	**Benefits to People 4:** To what extent are National Register sites and districts being protected and preserved?	Great consequences	Condition of each site, incidents of vandalism.	B	Site or District	Five years
Notes: An understanding of site or district conditions is needed in order to obtain funding and schedule the work needed to bring these sites up to standard. Restoration is less expensive if acted upon as early as possible.						
Goal 2 Objective 2a; Goal 2 Objective 2c	**Benefits to People 5 (Scenery):** To what extent have scenery management objectives been met?	Management activities are likely to affect resources of concern	Acres and location of prescribed scenery integrity objectives versus existing scenic integrity.	B	Geographic	Five years
Notes: Management activities can alter the scenic integrity of an area either positively or negatively. Benefits derived from scenic settings include identity, self-image of communities and individuals, and enhanced quality of life- including the conservation of the positive cultural landscape.						
Goal 2 Objective 2b	**Special Areas 1:** To what extent have the unique features of the Special Areas been conserved or enhanced? This includes Special Interest Areas, Wild, Scenic, and Recreational Rivers	Great consequences	Condition of the unique resources for which the area was established.	B	Area specific	Five years
Notes: An understanding of the condition and trend of the unique features or characteristics that lead to protecting Special Interest Areas is needed so management action can be taken to preserve or enhance Special Interest Areas. Monitoring of the condition of the Wild, Scenic and Recreational rivers will ensure the protection of the outstandingly remarkable values for which the area has been designated, and for data needed in the Suitability Analysis.						

Monitoring Driver	*Monitoring Question*	*Monitoring Priority*	*Potential Monitoring Items*	*Precision & Reliability*	*Scale*	*Frequency of Reporting*
Goal 2 Objective 2b	**Research Natural Areas 1:** To what extent have the unique ecological features of the Research Natural Areas been conserved or enhanced?	Great consequences	Condition of the unique ecological resources for which the area was established.	B	Area specific	Five years
Notes: An understanding of the condition and trend of the unique features or communities that lead to protecting Research Natural Areas are needed so management action can be taken to preserve or enhance the unique ecological resources for which the Research Natural Area was established for.						
Goal 2, Objective 2b	**Wilderness 1:** To what extent has the natural condition of Wilderness been preserved?	Great consequences	Condition of resource and special features.	B	Area specific	Five years
Notes: An understanding of the condition and trend of the special features and resources that lead to recommending an area as wilderness is needed so management action can be taken to preserve the natural condition.						
Goal 2, Objective 2b	**Recommended for Wilderness 1:** To what extent are the areas Recommended for Wilderness preserved in their natural condition?	Great consequences	Condition of resources and special features.	B	Area specific	Five years
Notes: An understanding of the condition and trend of the special features and resources that lead to recommending an area as wilderness is needed so that management action can be taken to preserve the natural condition of recommended wilderness.						

Monitoring Driver	*Monitoring Question*	*Monitoring Priority*	*Potential Monitoring Items*	*Precision & Reliability*	*Scale*	*Frequency of Reporting*
Goal 3 Objective 3a	**Scientific and Technical Services 1:** To what extent has the effectiveness of scientific, developmental, and technical information delivered to domestic and international interests been improved?	Key Issue	Participation of forest personnel in community and other government projects; availability of Forest Service natural resource, economic, social, facility, and other information	B	Administrative unit wide	Annually
Notes: Determining how and to what extent scientific, developmental and technical information delivered to the public has been improved is critical to continued improvement in scientific and technical services.						
Goal 4 Objective 4a	**Effective Public Service 1:** To what extent has the safety and economy of Forest Service roads, trails, facilities, and operations improved?	Key Issue	Percent of the Forest Development Transportation System with appropriate maintenance; Miles decommissioned; Buildings, bridges and other facilities maintained to standard.	A	Administrative unit wide	Annually
Notes: Providing a safe, economical forest transportation system is a key issue.						
Goal 4 Objective 4b	**Effective Public Service 2:** To what extent is appropriate access to NFS lands provided?	Key Issue	Percent of the Forest Development Transportation System open to specific uses, Percent of the Forest Development Transportation System restricted to seasonal use, Public and private rights-of-ways across forest lands.	A	Administrative unit wide	Annually
Notes: Providing appropriate public access to NFS lands is a key issue.						

Monitoring Driver	*Monitoring Question*	*Monitoring Priority*	*Potential Monitoring Items*	*Precision & Reliability*	*Scale*	*Frequency of Reporting*
Legal 36 CFR 219.7(f); Goal 5, Objective 5a	**Public Collaboration:** What are the effects of National Forest System Management on adjacent communities?	Key issue; Easily/cost effectively answered	NFS related jobs and income; Community tourism receipts, Federal revenue sharing with state and local governments.	B	County and community depending on data availability.	5 years, Annually when available
Notes: How NFS management affects local economies is an important public issue. With cooperation from State & Local governments the information can be obtained at a relatively low cost.						
Goal 6 Objective 6a	**American Indian Rights and Interests 1:** To what extent are traditional cultural properties being protected?	Management activities are likely to affect resources of concern	Condition of each site, incidents of vandalism or disruption of the use of traditional cultural properties.	B	Geographic	Five years
Notes: Management activities may affect the usefulness of traditional cultural properties						
Goal 6 Objective 6b	**American Indian Rights and Interests 2:** To what extent has coordination with the three Confederated Ute improved?	Management activities are likely to affect resources of concern	Condition of each site, incidents of vandalism or disruption of the use of traditional cultural properties.	B	Geographic	Five years
Notes: Management activities may affect the usefulness of traditional cultural properties						

Monitoring Driver	*Monitoring Question*	*Monitoring Priority*	*Potential Monitoring Items*	*Precision & Reliability*	*Scale*	*Frequency of Reporting*
Implementation Monitoring						
Legal: Endangered Species Act; Goal 1 Objective x1b	**T&E 1:** Are actions identified in national recovery plans for threatened and endangered species being implemented where opportunities exist on national grasslands and forests?	Key issue (recovery and viability); Great consequences	Type of actions identified in recovery plans that FS is implementing and type of recovery plan actions that could be implemented on national forests.	A	T&E recovery areas identified in recovery plans.	Annually
Notes: Recovery plans have been prepared for each of the threatened and endangered species occurring on the national forests. National recovery plans have specific action items that could be applied to the national forests in the planning area. These lands can play a significant role in the recovery of these species.						
Agency Expectations; Public Expectations & Issues. Goal 1, 2, 3, 4, 5, 6	**Administration 1:** Are the action plans identified in the objectives being completed on schedule?	Management activities are likely to affect resources of concern.	Percent compliance; narrative	B	Administrative unit wide	Annually
Notes: These are the administrative activities such as conduct studies, obtain baseline inventories, complete action plans, or coordinate with outside groups. The administrative activities are necessary to set the stage for successful Land & Resource Management Plan implementation, and failure to conduct administrative activities would likely affect the ability to meet the goals, objectives, and desired future conditions established in the plan.						

Monitoring Driver	*Monitoring Question*	*Monitoring Priority*	*Potential Monitoring Items*	*Precision & Reliability*	*Scale*	*Frequency of Reporting*
Legal: 36 CFR 219.12 (k)	**Implementation Monitoring 1:** Have site-specific decisions implemented the Land & Resource Management Plan direction?	Management activities are likely to affect resources of concern.	Percent compliance; narrative; As a minimum review 3 timber sales; 2 AMPs per district; and 10% of other NEPA projects completed for compliance with Land & Resource Management Plan direction.	B	Administrative unit wide	Annually
Notes: The standards and guidelines provide mitigation to help meet the goals and objectives of the Land & Resource Management Plan. Failure to implement the standard and guidelines would likely affect the ability to meet the goals and objectives established in the Plan.						
Legal: 36 CFR 219.12 (k)	**Implementation Monitoring 2:** Are standards and guidelines and management identified in the forest plan/allotment management plan and/or AOI being implemented as planned?	Management activities are likely to affect resources of concern.	Permit compliance and standards and guideline inspection.	A	Active Allotments	Annually
Notes: The standards and guidelines provide mitigation to help meet the goals and objectives of the Land & Resource Management Plan. Failure to implement the standard and guidelines would likely affect the ability to meet the goals and objectives established in the Plan.						
Legal: 36 CFR 219.12 (k)	**Implementation Monitoring 3:** Is an integrated noxious weed program being implemented?	High condition disparity.	Acres of noxious weeds treated by treatment method, prevention practices implemented, acres of disturbed ground revegetated.	A	Administrative unit wide	Annually
Notes: The standards and guidelines provide mitigation to help meet the goals and objectives of the Land & Resource Management Plan. Failure to implement the standard and guidelines would likely affect the ability to meet the goals and objectives established in the Plan.						

Monitoring Driver	Monitoring Question	Monitoring Priority	Potential Monitoring Items	Precision & Reliability	Scale	Frequency of Reporting
Validation Monitoring						
Legal: 36 CFR 219.11 (d); Goal 1.b	**MIS:** Are the selected management indicator species and their response to management activities in habitats on local National Forest System lands adequately representing the management effects on other species in the associated response guilds and is the species membership identified for each response guild reasonably accurate and complete?	Key issue (viability); Legal issue; Great consequences	MIS population and reproduction statistics; Habitat use and availability statistics for MIS and associated species.	A	Administrative unit-wide	Five years
	Noxious Weeds: Are treatment and prevention measures effective in reducing infestations of noxious weeds?	Management activities are likely to affect resources of concern.	Effectiveness of previous treatments in previous years.	A	Areas treated forest-wide	Annually

The following monitoring requirements are required as specified in the Southern Rockies Lynx Management Direction (ROD).

1. Maps of the location and intensity of snow compacting activities and designated and groomed routes that occurred inside LAUs during the period of 1998 to 2000 constitute baseline snow compaction. Changes in activities and routes are to be monitored every five years after the decision.
2. When fuels treatment and vegetation management project decisions are signed, report the following:
    a) Acres of fuel treatment in lynx habitat by Forest and LAU, and whether the treatment is within or outside the WUI as defined by HFRA.
    b) Whether or not the fuel treatment met the vegetation standards or guidelines. If standard(s) were not met, report which standard(s) was not met, why it could not be met, and how many acres were affected.
    c) Application of exceptions in Standard **S5 [VEG]**: For areas where any of the exceptions 1 though 5 listed in Standard S5 [VEG] were applied, report the type of activity, the number of acres, and the location (by unit and LAU) and whether or not Standard S1 [VEG] was within the allowance.
    d) Application of exceptions in Standard **S6 [VEG]**: For areas where any of the exceptions 1 though 4 listed in Standard S6 [VEG] were applied, report the type of activity, the number of acres, and the location (by unit and LAU) and whether or not Standard S1 [VEG] was within the allowance.
    e) Total acres of lynx habitat treated under exemptions and exceptions to vegetation standards, to assure the 4.5 percent limit is not exceeded on any Forest over the life of the amendment (15 years).
3. Application of guidelines:
    a) Summarize what guideline(s) were not followed and why.
    b) Document the rationale for deviations to guidelines.

CHAPTER FIVE

Appendices

Bull elk

Appendix AA
National strategic goals

Following is a list of national goals relevant to land and resource management. This list is based on *Forest Service Manual* (FSM) objective statements. The topics to which the goals pertain are organized alphabetically. References to the FSM are included, should the reader wish to consult the FSM directly.

Air Quality (2580.2)

1. Protect air-quality-related values within Class 1 areas, as described in 42 U.S. Code (USC) 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.

Air Resources 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 1990. (FSM 2580)

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.

Animal Damage Management (2650.2)

1. Protect resources and permitted livestock from animal damage on National Forest System lands and protect human health and safety.

Burned Area Emergency Rehabilitation (2523.02)

1. Provide for immediate rehabilitation of watersheds following wildfire to help stabilize soil and control water, sediment, and debris movement.

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.

Commercial Timber Sales (2430.2)

1. Provide an orderly program of timber sales from each national forest in accordance with the forest land and resource management plan (forest plan) or approved interim plans.
2. Offer for sale the allowable sale quantity (ASQ) and other sales specified in forest plans, subject to financing levels or other modification during their implementation.
3. Coordinate the timber sales program with planning, management, and use of other forest resources.
4. Provide a continuous flow of raw material to local forest industries.

Concession Uses Involving Privately Developed Facilities (2343.02)

1. Provide a diversity of recreation activities that emphasizes the forest setting and rustic, natural resource-based recreation opportunities.

Condemnation (5480.2)

1. 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.

Development (7720.2)

1. Locate, survey, design, and construct transportation facilities in accordance with FSM 7702.
2. Locate, design, and construct facilities that provide the stability and durability appropriate for their intended service life and uses.

Energy Management (2170.2)

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 sources extracted from National Forest System lands.
3. Facilitate recovery of fuels from forest 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.

Federal Lands Highway Program (7740)

1. Assist the Federal Highway Administration (FHWA) with the administration of the forest highway program to plan and develop access roads to:

   Enhance the value of National Forest System resources;

   Protect, develop, and use the National Forest System and its renewable resources;

   Enhance economic development at the local, regional, and national levels;

   Serve local needs and communities dependent on the National Forest System activities;

   Provide for economy of operation and maintenance and the safety of the users; and

   Provide safe and adequate rural highways connecting the National Forest System with major highway systems.

Federal Power Act Projects (2770.2)

1. Ensure hydroelectric production where it is compatible with national forest purposes. 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.

Fire Management (5102)

1. Protect, maintain, and enhance the production and quality of national forest resources through fire protection and use of prescribed fire.
2. Provide a cost-efficient level of wildfire protection on National Forest System lands commensurate with the threat of life and property and commensurate with the potential for resource and environmental damage based on hazard, risk, values, and management objectives.
3. Consistent with land and resource management objectives, minimize the sum of (a) the fire program cost, plus (b) the net change in value of planned resource outputs due to fire.

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.

Fire Suppression (5130.2)

1. Suppress wildfires at minimum cost consistent with land and resource management objectives and fire management direction as stated in fire management action plans.

Fish and Wildlife (2602)

1. Maintain ecosystem diversity and productivity by:

   Recovering threatened or endangered species;

   Maintaining at least viable populations of all native and desired non-native wildlife, fish, and plants in habitats distributed throughout their geographic range on National Forest System lands; and

   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.

Floodplain Management Wetland Protection (2527.02)

1. Reduce risk of flood loss.
2. Minimize impacts of floods on human safety, health, and welfare.
3. Minimize destruction, loss, and degradation of wetlands.
4. Preserve and restore the natural and beneficial value of floodplains and wetlands.

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.

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.

Forest Highways (7440.2)

1. 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 ground water or surface water beyond applicable federal and/or state water quality and effluent discharge standards.
2. Where no standards exist, the quality of characteristics of surface and ground water shall:

   Be maintained as near to their existing conditions as measurable;

   Not be degraded to adversely affect either present or projected beneficial uses (FSH 7409.11 ch. 20); and

   Not be allowed to degrade the quality of subsequent ground or surface receiving waters beyond the standards when such have been established.

Fuel Management (5150.2)

1. 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.

Group Use by Institutions or Other Entities (2345.02)

1. Allow group recreation opportunities, facilities, and service at camps on National Forest System land when suitable private lands are not available.

Harvest Cutting (2471.02)

1. 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.

Heritage (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.

Highway Safety Program (7733.02)

1. Reduce traffic accident, deaths, injuries, and the resulting property damage.

Insects and Disease in Wilderness (2324.11)

1. Allow indigenous insect and plant diseases to play, as nearly as possible, their natural ecological role within wilderness.
2. Protect the scientific value of observing the effect of insects and disease on ecosystems and identifying genetically resistant plant species.
3. Control insect and plant disease epidemics that threaten adjacent lands or resources.

Interpretive Services / Visitor Information (2390.2)

1. Assist those visitors to 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. Promote visitor understanding of the Forest Service, the National Forest System, forestry research, and state and private forestry programs.
3. Inform visitors of recreation opportunities and facilities on the national forests.
4. Help visitors know and experience the natural environment.

5. Implement an interpretive program that helps solve management problems and aids in the development of public understanding of Forest Service management.
6. 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. Increase visitor understanding of natural and cultural history principles and their relation to land management techniques.

Land Exchange (5430.2)

1. Implement land management and resource planning directions to attain an optimum National Forest System land ownership pattern that provides for resource uses that best meet the present and future needs of the people.

Land Ownership 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 Surveying (7151.02)

1. Provide legal and 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 defendable administrative and property boundary lines on-the-ground, and accurately depict the location of landownership lines on administrative maps produced by the Forest Service.

Maintenance of Improvement (2244.02)

1. Maintain, in operable condition, all range improvements on the National Forest System and other lands administered by the Forest Service.

Mineral Materials (2850.2)

1. Meet the demand for mineral materials consistent with the management of other surface 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 in Wilderness (2323.72)

1. Preserve the wilderness environment while performing activities for the purpose of gathering information about mineral resources.
2. 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 non-federally owned minerals (FSM 2830), preserving the wilderness resource to the extent possible.
3. Ensure the restoration of lands disturbed during exploration and development activities, as nearly as practicable, promptly upon abandonment of operations.

Minerals Reservations Outstanding Mineral Rights (2830.2)

1. 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.

Motorized Equipment in Wilderness (2326.02)

1. Accomplish management activities with non-motorized equipment and non-mechanical 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.

Municipal Supply Watersheds (2542.02)

1. Manage National Forest System lands for multiple-use by balancing present and future resource use with domestic water supply needs.

National Forest System Modification (5450.2)

1. The objectives of National Forest System modifications are to:

   Obtain national forest status for all appropriate land within the National Forest System;

   Modify existing National Forest System unit boundaries as needed to provide logical exterior boundaries;

   Establish purchase units as needed to meet program objectives; and

   Establish national forest or other boundaries as needed to facilitate management and administration.

2. The objectives of land transfer are to:

   Improve management efficiency of federal lands;

   Improve service to the public; and

   Result in net benefits to the government, to the public, or both.

National Registry of National Landmarks (2373.02)

1. Cooperate with the U.S. Department of Interior National Park Service to:

   Encourage the preservation of sites illustrating the geological and ecological character of the United States.

   Enhance the scientific and educational value of sites thus preserved. Foster a greater concern in the conservation of the Nation's natural heritage.

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 appropriate 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.

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 excepted 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.
5. Gather information and carry out research in a manner compatible with preserving the wilderness environment to increase understanding of wilderness ecology, wilderness uses, management opportunities, and visitor behavior.

Noxious Weed Management (2080.2)

1. Use an integrated weed management approach to control and contain the spread of noxious weeds on National Forest System lands to adjacent lands. Specific objectives to be achieved through noxious weed management include:

   Prevention of the introduction and establishment of noxious weed infestations;

   Containment and suppression of existing noxious weed infestation;

   Formal and informal cooperation with state agencies, local landowners, weed control districts and boards, and other federal agencies in the management and control of noxious weeds; and

   Educate and increase awareness of employees, users of National Forest System lands, adjacent landowners, and state agencies about noxious weed threats to native plant communities and ecosystems.

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.

Operations and Maintenance (7730.2)

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.

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 that are consistent with planned program objectives.

Personal Use Firewood (2409.18)

1. Provide free firewood and other wood for personal use in order to aid in the protection and silvicultural improvements of the national forest when these needs cannot be met through the use of charge permits.

Pesticide Management (2150.2)

1. Ensure the proper use of pesticides.

Potable Water Supply (7420.2)

1. Protect the health of the public and Forest Service personnel. Accomplishing this objective requires that water provided by the Forest Service for human consumption at any administrative site or public use area must be both safe and protected.

Prescribed Fire (5140.2)

1. 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.

Privately Provided Recreation Opportunities (2340.2)

1. 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 land to meet public needs, as determined through land and resource management planning.
2. Facilitate the use, enjoyment, understanding, and appreciation of the national forest natural resource setting.

Publicly Managed Recreation Opportunities (2330.2)

1. Maximize opportunities for visitors to know and experience nature while engaging in outdoor recreation.
2. Develop and manage sites consistent with the available natural resources to provide a safe, healthful, aesthetic, non-urban atmosphere.
3. Provide a maximum contrast with urbanization at national forest sites.

Range Improvement Investment (2246.02)

1. Invest in cost-effective range improvements to achieve objectives established in forest plans and allotment management plans.

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 Vegetative Rehabilitation and Equipment Workshop to enhance restoration, improvement, and quality of ranges.

Range in Wilderness (2323.21)

1. Manage wilderness range in a manner that utilizes the forage resource in accordance with established wilderness objectives.

Range Management (2202.1)

1. 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. Integrate management of range vegetation with other resource programs to achieve multiple-use objectives contained in forest plans.
3. Provide for livestock forage, wildlife food and habitat, outdoor recreation, and other resource values dependent on range vegetation.

4. 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.

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 plans.

Recreation (2302)

1. Provide non-urbanized outdoor recreation opportunities in natural-appearing forest and rangeland settings.
2. Protect the long-term public interest by maintaining and enhancing open space options; public accessibility; and cultural, visual, and natural resource values.
3. Promote public transportation and/or access to national forest recreation opportunities.
4. Shift land ownership patterns as necessary to place urbanized recreation settings into other ownerships to create more public open space and/or natural resource recreation values.

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 types of recreation.

Reforestation (2470.02)

1. Maintain all forested 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.
4. Develop and demonstrate successful reforestation methods and techniques and encourage their use by private landowners.

Research in Wilderness (2324.41)

1. Provide appropriate opportunity for scientific studies that are dependent on a wilderness environment.

Research Natural Areas (4063.02)

1. Preserve a wide spectrum of pristine representative areas that typify important forbs, shrubland, grassland, alpine, aquatics, 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.

Reservations and Outstanding Rights (5470.2)

1. 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.

Resource Conservation and Development Program (3620.2)

1. 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. 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. 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.

Right-of-Way Acquisition (5460.2)

1. Acquire, across non-national forest 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. Acquire such rights-of-way in time to meet road and trail construction and resource development program schedules.
3. Acquire all interests to permit use of roads and trails to meet the multiple-use and sustained yield objectives of the national forests.

Riparian Areas (2526.02)

1. Protect, manage, and improve riparian areas while implementing land and resource management activities.
2. Manage riparian areas in the context of the environment in which they are located, recognizing their values.

Rural Development (3602)

1. 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. Protect and manage the natural resources including scenic, wilderness, and other special values of forest and range environments in rural areas.
2. Promote research to expand the technological base for forestry and the use of forest products and to lend support for rural housing goals.
3. 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. Maintain or increase the forest land base, improve its productivity, and improve forest land ownership patterns.
5. 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. Expand public understanding of environmental conservation and natural resource planning, protection, and management and how stewardship is related to these activities.
7. Provide information and analysis for determining forest resource potentials and opportunities to enhance rural development.

Salvage Sales (2435.02)

1. Provide for the removal of damaged or dead timber as soon as practically possible to avoid unnecessary loss of value and volume and to respond to potentially serious catastrophes such as wildfire, windthrow, or hurricane.
2. Manage timber stands at high risk of spreading disease or insect epidemics to prevent volume loss.
3. Manage the use of salvage sale funds to provide for the rapid optimum practical use of wood material damaged through natural events, such as insects, windstorms, wildfires, hurricanes, and tornadoes.

Scenic and Historic Trails (2352.41)

1. 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.

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.

Sign and Poster Program (7160.2)

1. Support accomplishment of management area 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 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 grasslands.
4. Identify national forest and grassland facilities and land.

Silvicultural Practices (2470.2)

1. Prescribe, implement, and monitor silvicultural practices that develop forest stand conditions which meet land management objectives designated in regional guides and forest plans.

Soil and Water in Wilderness (2323.41)

1. Maintain satisfactory natural watershed condition within wilderness.

Soil Resource Improvement (2553.02)

1. Improve soil quality to selected levels for specific purposes by mechanical treatment, chemical or other soil additives, irrigation, or vegetative manipulation.
2. Rehabilitate soils that are in unsatisfactory condition.

Solid Waste Management (2130.3)

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.

Special Interest Areas (2360.3)

1. Protect and, where appropriate, foster public use and enjoyment of areas with scenic, historical, geological, botanical, zoological, paleontological, or other special characteristics. Classify areas that possess unusual recreation and scientific values so that these special values are available for public study, use, or enjoyment.

Special Use Administration (2721.02)

1. Issue and administer special-use permits for recreation uses that serve the public, promote public health and safety, and protect the environment.

Special Use Authorization (2710.2)

1. 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 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.
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 of reasonable use and enjoyment of their land without unnecessarily reducing the management options of the Forest Service or damaging national forest lands or resources.

Special Uses (2702)

1. 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.
2. Administer special uses based on resource management objectives and sound business management principles.
3. Develop and maintain a well-trained workforce to properly manage and administer special uses.

Structural Range Improvements (2242.02)

1. Install structural range improvements to obtain proper livestock management and to meet objectives contained in forest plans and allotment management plans.

Structures and Improvements in Wilderness (2324.31)

1. Limit structures and improvements for administrative purposes or under special-use permit to those actually needed for management, protection, and use of wilderness for the purpose for which the wilderness was established.

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.

Timber Management (2402)

1. Provide a continuous supply of national forest timber for the use and necessities of the citizens of the United States.
2. 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. 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.
4. Manage and provide for regeneration of tree stands.
5. Maintain a diversity of forest vegetation types and resources consistent with the forest plan.

Timber Stand Improvement (2476.02)

1. Maintain or increase the growth rate, health, species composition, and/or improve the quality of stands of timber or other resource uses according to direction in the forest plan.
2. Develop and demonstrate the benefit of methods and techniques of timber stand improvement for all resource uses as an encouragement for private landowners to apply timber stand improvement practices on their own land.

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. 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.
4. Mitigate adverse impacts of users on the natural resources, cultural and historical resources and on other users.

Transportation Planning (7710.2)

1. Efficiently provide facilities that will achieve forest management direction and that are appropriate for this intended use.
2. Direct the orderly development and management of the transportation system and ensure the documentation of decisions affecting the system.

Transportation System (7702)

1. Plan, develop, and operate a network of transportation facilities and transportation modes that provide user safety, convenience, and efficiency of operations.
2. Provide access to National Forest System lands to accomplish management direction and protection objectives that are coordinated with national and statewide transportation needs.
3. Coordinate access to National Forest System lands with national and statewide transportation needs.
4. Minimize the total transportation present value cost, including user, maintenance, construction, restoration, realignment, and betterment costs.

Visual Quality (2380.2)

1. Manage all National Forest System lands to attain the highest possible visual quality commensurate with other appropriate public uses, costs, and benefits.

Wastewater Collection Systems and Treatment Works (7430.2)

1. Avoid creating health hazards or nuisance conditions. Restore and maintain the chemical, physical, and biological quality of water resources.
2. Manage future pollution or degradation of surface or ground waters.

Water Quality Management (2532.02)

1. 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. Provide water of a quality suitable for the beneficial uses identified in the land and resource management planning process.
3. 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.)

Watershed Improvements (2522.02)

1. Restore hydrologic balance of degraded watershed areas by stabilizing soil, controlling surface run-off and erosion, reducing flood potential, and improving long-term soil productivity.
2. Improve soil and water quality.

Watershed Management (2502)

1. Protect and, where appropriate, enhance soil productivity, water quality and quantity, and timing of waterflows.
2. Maintain favorable conditions of streamflow and continuous production of resources from National Forest System watersheds.

Watershed Protection and Management (2520.2)

1. 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.

Wildlife and Fish Management in Wilderness (2323.21)

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.

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.

Appendix BB

Key national and regional policies

Introduction

The following is a partial listing of national and regional Forest Service policy relevant to this Land and Resource Management Plan (Forest Plan). A complete listing can be found in the Forest Service Manual and the Forest Service Handbook. Together, these are known as the Forest Service Directives System (System).

The System is the primary basis for the management and control of all internal programs, and serves as the primary source of administrative direction to Forest Service employees. The System sets forth legal authorities, management objectives, policies, responsibilities, delegations, standards, procedures, and other instructions.

The **Forest Service Manual** (FSM) contains legal authorities, goals, objectives, policies, responsibilities, instructions, and guidance needed on a continuing basis by Forest Service line officers and primary staff, in more than one unit, to plan and execute assigned programs and activities.

Forest Service Handbooks (FSH) are directives that provide instructions and guidance on how to proceed with a specialized phase of a program or activity. Handbooks are either based on a part of the FSM or they incorporate external directives.

Most standards and guidelines used to implement forest plans are located in the System under the following general headings and codes:

1010 Laws, Regulations, and Orders
1030 Forest Service Mission
1500 External Relations
1900 Planning
2060 Ecosystem Classification, Interpretation, and Application
2070 Biological Diversity (Reserved)
2200 Range Management
2300 Recreation, Wilderness, and Related Resource Management
2400 Timber Management
2500 Watershed and Air Management
2600 Wildlife, Fish, and Sensitive Plant Habitat Management
2700 Special Uses Management
2800 Minerals and Geology
3400 Forest Pest Management
5100 Fire Management
5400 Land Ownership

7400 Public Health and Pollution Control Facilities
7500 Water Storage and Transmission
7700 Transportation System

The intent of many forest-wide standards and guidelines is incorporated into permits that authorize specific uses on the national forests. General permitting requirements can be referenced as follows:

Minerals	FSM 2817, 2822
Range Management	FSM 2230.3
Recreation	FSM 2331.1, 2342.04
Special Uses	FSM 2711
Timber Management	FSM 2451
Transportation System	FSM 7731.16

The following list of policies is organized alphabetically. References are included to the FSM or FSH, should the reader wish to consult these sources directly.

American Indians (FSM 1563)

On October 22, 1992, the U.S. Department of Agriculture issued a policy statement on Indian tribes. The outlined policies are:

1. Support the principles of self-governance delineated in the Indian Self-Determination Act and Education Assistance Act.
2. Consult with tribal governments regarding the influence of U.S. Department of Agriculture activities on water, land, forest, air, and other natural resources of tribal governments.
3. Seek input from tribes on U.S. Department of Agriculture policies and issues affecting tribes and reconciling Indian needs with the principle of good resource management.
4. Observe the American Indian Religious Freedom Act.
5. Work 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.
6. Encourage early communication and cooperation between agencies with responsibilities to tribal governments.
7. Consistent with applicable law or regulation, facilitate tribal participation in program planning and activities.

Biological Diversity (FSM 2670)

Sensitive Species

1. Manage sensitive species habitat as directed in interim directive 2600-94-2.

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 vegetation buffer around cave entrances.

   b) Do not alter cave entrances with timber harvest activities.

   c) Do not dispose of slash or refuse or burn slash at cave entrances.
5. Road and 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 (PL 99-662) in accordance with data elements required by the Federal Emergency Management Agency (FSM 7514). Maintain a record for all dams on National Forest lands over 6 feet high (vertical difference between the lowest point on the crest of the dam and the lowest point in the original streambed). As a minimum, the record should include the dam identification, location, purpose, owner, administrative classification, hazard-potential classification, height, and maximum storage. (FSM 7154)

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

1. 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)

2. 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 (NFPA).

3. 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

1. 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)

2. Use prescribed fire where it will meet management objectives in the most economically and ecologically acceptable way. (FSM 5140)

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 heritage resources specialist. 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 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.

Integrated Pest Management (FSM 4500)

1. Use only chemicals registered with the Environmental Protection Agency and follow label instructions.

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

1. 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)

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

1. Approve applications for permit to drill (APD) in conformance with all stipulations included in the lease and necessary conditions of approval determined during review of the applications. (FSM 2800)

Geophysical Operations

1. Permit geophysical operations on withdrawn, classified lands where the operations do not interfere with purposes for which the lands are withdrawn.

2. Do not permit such operations if significant adverse effects cannot be prevented. (FSM 2860)

Coal, Uranium, and Non-Energy Common Materials

1. 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 disposal 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 Bureau of Land Management (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.

2. 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.

Range (FSM 2200)

1. Allotment management plans (AMPs) need to provide for threatened, endangered, and sensitive species. (FSM 2203, 2211, 2212)
2. When updating allotment management plans, 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 allotment management plans. 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)

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 non-motorized 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 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

1. A recreation opportunity spectrum (ROS) map is included with this Forest Plan. A decision to change an ROS class will be documented in a National Environmental Policy Act (NEPA) decision document. (FSM 1922.15, 2310.3)

Research Natural Areas (FSM 4060)

1. Discourage or prohibit any public use which 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 Acquisition (FSM 5460)

1. Acquire rights-of-way on existing and proposed Forest System roads and trails that cross lands 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)

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/cc 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)

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 which involve any hazardous materials as defined in U.S. Code (USC) 9601 et seq., 40 Code of Federal Regulations (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, 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 should supplement traditional economic considerations with both 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)

1. Provide for accelerated growth, create specific stocking, and improve quality and vigor of timber stands.
2. 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 of the stand. (FSH 2409.26c, FSH 2409.17)

Silvicultural Prescriptions

1. 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)
2. Apply a variety of silvicultural systems and harvest methods that best meets resource management objectives.
3. Prepare individual silvicultural prescriptions for areas or site-specific practices.
4. Use thinning practices that consider genetic diversity and competition among the trees for water, nutrients, and light. The frequency of thinning should depend upon the tree species, financial efficiency, and the site growing conditions (as commonly measured by site index). (FSH 2409.17 Chapter 6)
5. Where appropriate, reduce competition between desired trees and other vegetation. (FSH 2409.17 Chapter 6)
6. 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)

7. In most circumstances, rely on or make primary use of those silvicultural systems that ensure regeneration of forest stands through natural seeding and suckering. (FSH 2409.26b Chapter 70)

8. Use artificial regeneration methods when the natural sequence of events and/or environmental conditions cannot be relied on to regenerate the forests within 5 years or earlier. (FSH 2409.26b Chapter 70)

9. 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)

Transportation System Management (FSM 7700)

Transportation and Travel

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 which encourage, accept, discourage, eliminate, unrestrict, or prohibit use 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 non-motorized. 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. The permanent forest trail system will be determined and identified in the forest trail development plan. This plan will include the existing and future trail system, trail use type, trail management objectives, and ROS and visual quality constraints as they apply to trail experiences. (FSM 2353)

10. National historic, scenic, or recreation trails will receive higher priority than other trails for reconstruction, operation, and maintenance. (FSM 2353)

11. 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.

12. Construct or reconstruct trails when needed as part of the transportation system.

Visual Quality (FSM 2380)

1. Management activities must be consistent with the visual quality objectives (VQO) in the 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)

Water (FSM 2520)

Water Quality

1. Develop integrated soil-water-fishery improvement schedules for watersheds, coordinated with other resources. Coordinate with staging wildlife agencies.

2. Apply treatment and land use controls as needed to restore soil productivity, water quality, channel stability, and aquatic habitat. (FSM 2522.03, 2522.2)

Wild and Scenic Rivers (FSM 2354)

1. 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 area must be maintained.

5. New mining claims and mineral leases are prohibited within 1/4 mile of the river. Valid claims will not be abrogated. Subject to regulations (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 mining 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 will be permitted within a narrow incised river valley or, if the 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 can 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

1. A wide range of silvicultural practices could be allowed provided that such practices are carried on in such a way that there is no 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.

2. All water supply dams and major diversions are prohibited.

3. No development of hydroelectric power facilities is allowed.

4. Flood control dams and levees are prohibited.

5. Subject to regulations at 36 CFR 228 that the Secretaries of Agriculture and Interior may prescribe to protect the rivers included in the National System, new mining claims and mineral leases could be allowed and existing activities allowed to continue. However, mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.

6. 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.

7. 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.

8. 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.

9. 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 no be allowed.

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, recreation, and fish and wildlife values must be evaluated in the selection of the site.

11. Motorized travel on land or water may be permitted, prohibited, or restricted to protect the river values.

Recreational Rivers

1. Timber harvesting would be allowed under standard restrictions to protect the immediate river environment, water quality, scenic, fish and wildlife, and other values.
2. 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.
3. No development of hydroelectric power facilities is allowed.
4. Existing flood control works may be maintained. New structures are prohibited.
5. Subject to regulations (36 CFR 228) that the Secretaries of Agriculture and Interior may prescribe to protect values of rivers included in the National System, new mining claims and mineral leases are allowed and existing activities are allowed to continue. Mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.
6. Paralleling roads or railroads could be constructed on one or both riverbanks. There can be several bridge crossings and numerous river access points.
7. Lands may be managed for a full range of agricultural uses to the extent currently practiced.
8. Campgrounds and picnic areas may be established in close proximity to the river. However, recreational classification does not require extensive recreation development.
9. Small communities as well as dispersed or cluster residential developments are allowed. New structures are allowed for both habitation and for intensive recreation use.
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, recreation, and fish and wildlife values must be evaluated in the selection of the site.
11. Motorized travel on land or water may be permitted, prohibited, or restricted. Controls will usually be similar to surrounding lands and waters.

Wildlife and Fish (FSM 2600)

General

1. Manage animal damage in cooperation with the state wildlife agencies and 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

1. Provide habitat for federally listed or proposed endangered or threatened species on National Forest System lands. (FSM 2672.24, 2676)

2. Complete biological evaluations on actions authorized through NEPA decision documents and funded or carried out by the Forest Service to determine the effects on federally listed or proposed endangered or threatened species. (FSM 2672.4)

3. 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)

4. Carry out consultation, informal or formal as appropriate, with the U.S. Fish and Wildlife Service for Platte River system water depletions over 25 acre-feet, pursuant to the Intra-Service biological opinion issued on June 13, 1996, as amended on May 21, 1997. Carry out consultation, informal or formal as appropriate, with the U.S. Fish and Wildlife Service for Colorado River system water depletions.

Appendix CC

Relevant federal and state statutes and other regulations

STATUTES

American Indian Religious Freedom	*Act of August 11, 1978*
Americans With Disabilities Act	*Act of 1990*
Anderson-Mansfield Reforestation and Revegetation	*Act of October 11, 1949*
Antiquities Act	*Act of June 8, 1906*
Archaeological Resources Protection Act, as amended 1988	*Act of October 31, 1979*
Architectural Barriers Act	*Act of 1968*
Bankhead-Jones Farm Tenant Act	*Act of July 22, 1937*
Clarke-McNary Act	*Act of June 7, 1924*
Clean Air Act Amendments of 1977 and 1990	*Act of August 7, 1977*
Clean Water Acts (1948-87)	
Clean Water Amendments ("Federal Water Pollution Control Act Amendments of 1972")	
Color of Title	*Act of December 22, 1928*
Common Varieties of Mineral Materials	*Act of July 31, 1947*
Cooperative Forestry Assistance Act	*Act of July 1, 1978*
Disaster Relief Act	*Act of May 22, 1974*
Eastern Wilderness Act	*Act of January 3, 1975*
Economy Act	*Act of June 30, 1932*
Emergency Flood Prevention (Agricultural Credit Act)	*Act of August 4, 1978*
Endangered Species Act	*Act of December 28, 1973*
Energy Security Act	*Act of June 30, 1980*
Federal Advisory Committee Act	*Act of October 6, 1972*
Federal Cave Resources Protection Act	*Act of November 18, 1988*
Federal Coal Leasing Amendments Act	*Act of August 4, 1976*
Federal Insecticide, Rodenticide, and Fungicide Act	*Act of October 21, 1972*
Federal Land Policy and Management Act	*Act of October 21, 1976*

Federal Noxious Weed Act	*Act of January 3, 1975*
Federal Power Act	*Act of June 10, 1920*
Federal-State Cooperation for Soil Conservation	*Act of December 22, 1944*
Federal Water Pollution Control Act, as amended (Water Quality Act of 1965, Clean Water Restoration Act of 1966)	*Act of July 9, 1956*
Federal Water Project Recreation Act	*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 and Rangeland Renewable Resources Planning Act	*Act of August 17, 1974*
Forest Highways	*Act of August 27, 1958*
Freedom of Information Act	*Act of November 21, 1974*
Geothermal Steam Act	*Act of December 24, 1970*
Granger-Thye Act	*Act of April 24, 1950*
Historic Preservation Act	*Act of October 15, 1966*
Joint Surveys of Watershed Areas Act	*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	*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 and Minerals Policy Act of 1970	*Act of December 31, 1970*
Mining Claims Rights Restoration Act	*Act of August 11, 1955*
Multiple Use and Sustained Yield Act	*Act of June 12, 1960*
National Environmental Policy Act	*Act of January 1, 1970*
National Forest Management Act	*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	*Act of June 4, 1897*
Petrified Wood	*Act of September 28, 1962*
Pipelines	*Act of February 25, 1920*
Preservation of American Antiquities	*Act of June 8, 1906*
Preservation of Historical and Archaeological Data	*Act of May 24, 1974*
Public Land Surveys	*Act of March 3, 1899*
Public Rangelands Improvement Act	A*ct of October 25, 1978*
Rehabilitation Act of 1973, as ammended	*Act of 1973*
Renewable Resources Extension Act	*Act of June 30, 1978*
Research Grants	*Act of September 6, 1958*
Right of Eminent Domain	*Act of August 1, 1888*
Rural Development Act	*Act of August 30, 1972*
Safe Drinking Water Amendments	*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	*Act of November 18, 1977*
Solid Waste Disposal (Resource Conservation & Recovery Act)	*Act of October 21, 1976*
Supplemental National Forest Reforestation Fund	*Act of September 18, 1972*
Surface Mining Control And Reclamation Act	*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 U.S. Criminal Code (Title 18 USC 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	*Act of May 18, 1972*
Water Quality Improvement Act	*Act of April 3, 1965*
Water Resources Planning Act	*Act of July 22, 1965*
Watershed Protection and Flood Prevention Act	*Act of August 4, 1954*
Weeks Act	*Act of March 1, 1911*
Weeks Act Status for Certain Lands	*Act of September 2, 1958*
Wild and Scenic Rivers Act	*Act of October 2, 1968*
Wild Horse Protection	*Act of September 8, 1959*
Wild Horses and Burros Protection Act	*Act of December 15, 1971*
Wilderness Act	*Act of September 3, 1964*
Wildlife Game Refuges	*Act of August 11, 1916*
Wood Residue Utilization Act	*Act of December 19, 1980*
Woodsy Owl/Smokey Bear Act	*Act of June 22, 1974*
Youth Conservation Corps	*Act of August 13, 1970*

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 National Forest System 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 s	Wilderness Primitive Area
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	

EXECUTIVE ORDERS

EO 11593	Protection and Enhancement of Cultural Environment
EO 11988	Floodplain Management
EO 11644/11989	Use of Off-Road Vehicles
EO 11990	Protection of Wetlands
EO 12113	Independent Water Project Review
EO 13007	Indian Sacred Sites

STATE AND LOCAL LAWS

Colorado Air Quality Control Act

AGREEMENTS

Memorandum of Understanding

White River National Forest and Aspen Wilderness Workshop

- Includes cooperative efforts to annually monitor and report on wilderness lake monitoring, visibility monitoring, and aerosol monitoring on Aspen District.

Memorandum of Understanding

White River National Forest and Bureau of Land Management

- Provides guidance for coordinating the joint issuance and administration of Christmas tree permits.

Memorandum of Understanding

State of Colorado and Forest Service, National Park Service, and Bureau of Land Management

- Colorado Smoke Management Plan – January 1, 2001

Colorado Senate Bill 94-217 (1994)

- Requires State Air Pollution Control Division to periodically evaluate federal actions and their impacts to visibility and other air-quality-related values in Class I areas.

Federal Multi-Agency Source Water Agreement

- 13 federal agencies, including the Forest Service, agreed to assist states and local entities, within the mission and resource of the agency, to complete local source water assessments and protection activities.

Appendix DD

Fish and wildlife management in wilderness

Introduction

The following are policies and guidelines for fish and wildlife management in National Forest System and Bureau of Land Management wilderness (FS, BLM, and IAFWA – August 1986):

Purpose

This statement of policy and the following guidelines are intended to provide guidance to state and federal personnel for the management of fish and wildlife in wilderness in accordance with the Wilderness Act of 1964 (16 USC 1131-1136). Both state and federal agencies are responsible for fostering mutual understanding and cooperation in the management of fish and wildlife in wilderness. These guidelines should serve as a framework for cooperation among the Forest Service, the Bureau of Land Management, and the states in the coordination of fish and wildlife management and in the development of cooperative agreements or other management plans.

These policies and guidelines were developed within the overall context of the purpose and direction of the Wilderness Act, and they should be made available to all agencies responsible for management of the National Wilderness Preservation System, to appropriate state fish and wildlife agencies, and to other interested parties.

General policy

Fish and wildlife management activities in wilderness will be planned and carried out in conformance with the Wilderness Act's purpose of securing an "enduring resource of wilderness" for the American people. The wilderness resource is defined in section 2(c) of the Act as an area essentially "untrammeled by man," where natural ecological processes operate freely, and the area is "affected primarily by the forces of nature." The National Wilderness Preservation System will be managed to ensure that ecological succession, including fire and infestation of insects, operate as freely as possible with only minimum influence by humans.

Fish and wildlife management activities will emphasize the protection of natural processes. Management activities will be guided by the principle of doing only the minimum necessary to manage the area as wilderness.

Section 4(d)(7) of the Wilderness Act stipulates that: "Nothing in this Act will be construed as affecting the jurisdiction or responsibilities of the several states with respect to wildlife and fish in the national forests." Angling, hunting, and trapping are legitimate wilderness activities, subject to applicable state and federal laws and regulations.

This nation is fortunate in having a National Wilderness Preservation System encompassing a wide range of ecosystems. Specific on-the-ground conditions will result in slightly different application of these guidelines in so vast a system. These different applications are spelled out in national forest plans or wilderness management plans. This is both appropriate and proper, if nature is to be allowed to play the dominant role.

Aerial fish stocking

Aerial stocking of fish will be permitted for those waters in wilderness where this was an established practice before wilderness designation or where other practical means are not available. Aerial stocking requires approval by the administering agency.

Guidelines

a) As justification for aerial stocking, the state agency will supply the administering agency a list of those waters where stocking with aircraft was an established practice before wilderness designation, indicating the type of aircraft used (fixed-wing or helicopter). This justification will become a part of the wilderness management plan.

b) To stock waters that had not been aerially stocked before wilderness designation, the state agency will demonstrate to the administering agency the need for using aircraft.

c) Plan aircraft flights over wilderness to minimize disturbance. Consider season of year, time of day, route and altitude of flight, and location of landing areas on the perimeter of the wilderness.

Angling, hunting, and trapping

Angling, hunting, and trapping are legitimate wilderness activities subject to applicable state and federal laws and regulations.

Chemical treatment

Chemical treatment may be necessary to prepare waters for the reestablishment of indigenous species, to protect or recover federally listed threatened or endangered species, or to correct undesirable conditions resulting from the influence of humans. Species of fish traditionally stocked before wilderness designation may be considered indigenous if the species is likely to survive. Undesirable conditions and affected species will be identified in wilderness plans.

Guidelines

a) Use only registered pesticides according to label directions.

b) In selecting pesticides, give preference to those that will have the least impact on non-target species and on the wilderness environment.

c) Schedule chemical treatments during periods of low human use, insofar as possible.

d) Immediately dispose of fish removed in a manner agreed to by the administering agency and the state agency.

Facility development and habitat alteration

In rare instances, facility development and habitat alteration may be necessary to alleviate adverse impacts caused by human activities on fish and wildlife. For the benefit of wildlife that spend only part of the year in wilderness, give first priority to locating facilities or habitat alterations outside wilderness.

Flow-maintenance dams, water developments, water diversion devices, ditches and associated structures, and other fish and wildlife habitat developments necessary for fish and wildlife management (which were in existence before wilderness designation) may be permitted to remain in operation.

Clearing of debris that impedes the migratory movements of fish on primary spawning streams may be permitted, but only in a manner compatible with the wilderness resource.

Maintenance of existing water supplies and development of additional water supplies may be permitted, but only when essential to preserve the wilderness resource and to correct unnatural conditions resulting from human influence.

Guidelines

a) Submit proposals for new structures or habitat alterations to the administering agency for approval.

b) Build or maintain new and existing structures permitted for wildlife management in a manner that minimizes the visual impacts on the landscape.

c) Limit clearing of debris from spawning streams to those identified in the wilderness management plan as being critical to the propagation of fish.

d) Use only non-motorized equipment to clear debris. Use explosives only when the use of hand tools is not practical, and only outside of heavy visitor-use periods.

e) The administering agency and the state agency will jointly make decisions to remove existing water-related improvements.

f) If it is necessary to restore essential food plants after human disturbance, use only indigenous plant species.

Fire management

The objectives of fire management in wilderness are to: (a) permit lightning-caused fires to play, as nearly as possible, their natural ecological role within wilderness; and (b) reduce, to an acceptable level, the risks and consequences of wildlife within wilderness or escaping from wilderness. Fire ignited by lightning will be permitted to burn or will be suppressed as prescribed in an approved plan. Prescribed fires ignited by man may be permitted to reduce unnatural buildup of fuels only if necessary to meet objectives (a) and (b) above. Although additional benefits may result from human-ignited prescribed fire, vegetation manipulation will not be used to justify such fires.

Fish and wildlife research

Research on fish and wildlife, their habitats, and the recreational users of these resources is a legitimate activity in wilderness when conducted "in a manner compatible with the preservation of the wilderness environment" (Sec. 4(d)(1) of the Wilderness Act). Methods that temporarily infringe on the wilderness environment may be approved if alternative methods or other locations are not available. Research or management surveys must be approved in writing, on a case-by-case basis, by the administering agency.

Helicopters and fixed-wing aircraft overflights may be used to conduct approved fish and wildlife research activities. Aircraft must be used in a manner that minimizes disturbance of other users, including humans and wildlife.

All fish and wildlife studies within and over wilderness must be conducted so as to preserve the natural character of the wilderness. Aerial counts and observations of wildlife may be permissible for management of wilderness wildlife resources. Capturing and marking of animals, radio telemetry, and occasional temporary installations (such as shelters for cameras and scientific apparatus and enclosures and exclosures essential to wildlife research or management surveys) may be permitted, if they are essential to studies that cannot be accomplished elsewhere.

Guidelines

a) Obtain scientific written approval or permits from the administering agency before erecting any structure, enclosure, or exclosure.

b) Locate and construct all structures so as to make them unobtrusive on the landscape.

c) Construct structures of native materials or camouflage to make them blend with their natural surroundings.

d) Plan aircraft flights over wilderness to minimize disturbance. Consider time of day, season of the year, route and altitude of flight, and location of landing areas on the perimeter of the wilderness.

e) Research projects underway when a wilderness is designated may continue, but modify research methods to minimize disturbance of the wilderness environment.

f) Installation of permanent base stations within wilderness is not permitted for monitoring of radio-instrumented animals.

g) The administering agency should only approve capture methods that minimize the impact on the wilderness environment.

Fish stocking

Fish stocking may be conducted by the state agency in coordination with the administering agency, using means appropriate for wilderness, when either of the following criteria is met: (a) to reestablish or maintain an indigenous species adversely affected by human influence; or (b) to perpetuate or recover threatened or endangered species.

Selection of species for stocking will be determined jointly by the administering agency and the state agency. Exotic species of fish will not be stocked. The order of preference for stocking fish species is (a) federally listed threatened or endangered species, (b) indigenous species. Species of fish traditionally stocked before wilderness designation may be considered indigenous if the species is likely to survive. Numbers and size of fish and time of stocking will be determined by the state agency.

Barren lakes and streams may be considered for stocking, if there is mutual agreement that no appreciable loss of scientific values or adverse effects on wilderness resources will occur.

Guidelines

a) The state agency will make fish stocking schedules available to the administering agency, indicating what species and numbers are planned for each water within a wilderness.

b) Adjust stocking rates to minimize the likelihood of exceeding the carrying capacity of the water being stocked so as to reduce the chance of producing a population imbalance and to minimize the likelihood of attracting overuse detrimental to the wilderness resource.

Motorized equipment

Section 4(c) of the Wilderness Act states:

> *Except as specifically provided for in this Act, and subject to existing private rights, there will be no commercial enterprise and no permanent road within any wilderness area designated by this Act and, except as necessary to meet minimum requirements for this administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area), there will be no temporary road, no use of motor vehicles, motorized equipment, or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.*

The emphasis is on the management of the area as wilderness as opposed to the management of a particular resource. This language is viewed as direction that all management activities within wilderness be done without motor vehicles, motorized equipment, or mechanical transport, unless truly necessary to administer the area or specifically permitted by other provisions in the Act. It means that any such use should be rare and temporary, that no roads can be built, and that Wilderness managers must determine such use is the minimum necessary to accomplish the task. Any use of motorized equipment or mechanical transport requires advance approval by the administering agency.

Population sampling

Scientific sampling of fish and wildlife populations is an essential procedure in the protection of natural populations in wilderness.

Guidelines

a) Use only methods that are compatible with the wilderness environment.

b) Gill netting, battery-operated electrofishing, and other standard techniques of population sampling may be used.

c) Closely coordinate sampling activities with the administering agency and schedule them to avoid heavy public-use periods.

Spawn taking

The collection of fish spawn will be permitted from wilderness when alternative sources are unavailable or unreliable, or where spawn taking was an established practice before wilderness designation.

Guidelines

a) Do not use motorized equipment to assist in collecting and removing spawn.

b) Use of techniques and facilities necessary to take spawn, which were in existence before wilderness designation, may continue as provided for in the wilderness management plan.

c) Facilities for spawn-taking stations must be approved after wilderness designation and must be removed after the termination of each season's operation.

d) Decisions to prohibit spawn taking, where it was an established practice before wilderness designation, will be made jointly by the administering agency and the state agency.

Threatened & endangered species

Many wilderness areas provide important habitat for federally listed threatened and endangered species of wildlife. Actions necessary to protect or recover threatened or endangered species, including habitat manipulation and special protection measures, may be implemented in wilderness. But such actions must be necessary for the perpetuation or recovery of the species and it must be demonstrated that the actions cannot be done more effectively outside wilderness. Use only the minimum actions necessary and the methods most appropriate in wilderness.

Guidelines

a) Manage wilderness to protect known populations of federally listed threatened or endangered species where necessary for their perpetuation and to aid in their recovery in previously occupied habitat.

b) When alternative areas outside of wilderness offer equal or better opportunities for habitat improvement or species protection, take actions to recover threatened or endangered species outside of wilderness first.

c) Threatened and endangered species may be transplanted into previously occupied habitat within wilderness.

d) All transplants or habitat improvement projects require approval by the administering agency.

e) To prevent federal listing, protect indigenous species that could become threatened or endangered or are listed as threatened or endangered by states.

Transplanting wildlife

Transplants (removal, reintroduction, or supplemental introduction) of terrestrial wildlife species in wilderness may be permitted if necessary to: (a) perpetuate or recover a threatened or endangered species; or (b) restore the population of an indigenous species eliminated or reduced by human influence.

Transplants will be made in a manner compatible with the wilderness character of the area. Transplant projects, including follow-up monitoring, require advance written approval by the administering agency.

Guideline

a) Motorized methods and temporary holding and handling facilities may be permitted if they are the minimum necessary to accomplish an approved transplant.

Wilderness wildlife resources

Many wildlife species are sensitive to human encroachments on their ranges. Grizzly bear, bighorn sheep, elk, mountain goat, birds of prey (such as peregrine falcon and bald eagle), other migratory and resident birds, and certain other wilderness wildlife species cannot tolerate excessive human disturbance, particularly during certain seasons of the year.

When necessary to reduce human disturbance to a wildlife species, the administering agency, in coordination with the state agency, may take direct or indirect management actions to control visitor use.

Guidelines

a) Specify in the wilderness management plan the management actions necessary and the agency responsible to reduce conflicts with wildlife.

b) If and when it becomes apparent that public use is significantly degrading the wilderness wildlife resources, limitations on visitor use may be imposed and enforced by the appropriate agency. Any limitations will be applied equitably to all wilderness visitors.

Wildlife damage control

Wildlife damage control in wilderness may be necessary to protect federally listed threatened or endangered species, to prevent transmission of diseases or parasites affecting other wildlife and humans, or to prevent serious losses of domestic livestock. Control of non-indigenous species also may be necessary to reduce conflicts with indigenous species, particularly if the latter species are threatened or endangered.

Guidelines

a) Acceptable control measures include lethal and non-lethal methods, depending upon need, justification, location, conditions, efficiency, and applicability of state and federal laws.

b) Control measures will be implemented by the Animal and Plant Health Inspection Service, the administering agency, the state fish and wildlife agency, or other approved state agency, pursuant to cooperative agreements or memoranda of understanding. Wildlife damage control must be approved by the administering agency on a case-by-case basis.

c) Direct control at individual animals causing the problem.

d) Use only the minimum amount of control necessary to solve the problem.

e) Use pesticides only where other measures are impractical. Use only registered pesticides according to label directions and subject to the following restrictions

1) Pesticides may be applied only by certified pesticide applicators.
2) The placement of pesticides will be accurately indicated on the largest scale USGS map available.
3) Place warning signs at the entrance to the area where pesticides are being used to warn the public of any dangers to themselves or their pets.
4) In the selection of pesticides, give preference to those that will have the least impact on non-target species and on the wilderness environment.

Appendix EE
List of species

The following tables display federal threatened, endangered, and proposed species; Region 2 sensitive species; management indicator species; species of concern; species of viability concern; and species needing more baseline inventory and evaluation to determine status on the White River National Forest.

Table EE 1, 2, 3 Threatened, Endangered, Region 2 Sensitive (on or potential for WRNF), and Management Indicator Species (MIS)

KEY
WHR - White River NF
K - Species currently documented to occur on National Forest System (NFS) lands.
L - Species or habitat is suspected to occur on NFS lands, but unconfirmed.
P – Potential site for reintroduction of the species has been identified.
N - Species not known or suspected to occur on NFS lands, however it may occur in planning area vicinity. Evaluate whether indirect effects from Forest Service management actions may occur.

	WHR
STATUS: ENDANGERED	
MAMMALS	
BIRDS	
FISHES	
Humpback chub *Gila cypha*	N
Bonytail chub *Gila elegans*	N
Colorado pikeminnow *Ptychocheilus lucius*	N
Razorback sucker *Xyrauchen texanus*	N
INVERTEBRATES	
Uncompahgre fritillary *Boloria acrocnema*	L
PLANTS	
STATUS: THREATENED	
MAMMALS	
Canada lynx *Lynx canadensis*	K
BIRDS	
Mexican spotted owl *Strix occidentalis lucida*	L
FISHES	

	WHR
Greenback cutthroat trout *Oncorhynchus clarki stomias*	K
INVERTEBRATES	
PLANTS	
Eutrema penlandii Penland alpine fen mustard	K
STATUS: SENSITIVE	
MAMMALS	
Spotted bat *Euderma maculatum*	K
North American wolverine *Gulo gulo*	K
River otter *Lontra canadensis*	L
American marten *Martes americana*	K
Fringed myotis *Myotis thysanodes*	L
Rocky Mountain bighorn sheep *Ovis canadensis canadensis*	K
Townsend's big-eared bat *Plecotus townsendii*	K
Pygmy shrew *Sorex hoyi*	L
BIRDS	
Northern goshawk *Accipiter gentilis*	K
Boreal owl *Aegolius funereus*	K
Sage sparrow *Amphispiza bellii*	L
Ferruginous hawk *Buteo regalis*	K
Greater sage-grouse *Centrocercus urophasianus*	K
Northern harrier Circus cyaneus	K
Olive-sided flycatcher *Contopus cooperi*	K
Black swift *Cypseloides niger*	K
American peregrine falcon Falco peregrinus anatum	K
Bald eagle *Haliaeetus leucocephalus*	K
White-tailed ptarmigan Lagopus leucurus	K
Loggerhead shrike *Lanius ludovicianus*	K
Lewis's woodpecker *Melanerpes lewis*	L
Flammulated owl *Otus flammeolus*	K
American three-toed woodpecker Picoides dorsalis	K
Purple martin *Progne subis*	K

	WHR
Brewer's sparrow *Spizella breweri*	K
Columbian sharp-tailed grouse Tympanuchus phasianellus columbianus	L
AMPHIBIANS	
Boreal toad *Anaxyrus boreas boreas*	K
Northern leopard frog *Lithobates pipiens*	K
REPTILES	
FISHES	
Bluehead sucker *Catostomus discobolus*	K
Flannelmouth sucker *Catostomus latipinnis*	K
Mountain sucker *Catostomus platyrhynchus*	K
Roundtail chub *Gila robusta*	K
MOLLUSCS	
INSECTS	
Nokomis fritillary (*aka* Great Basin silverspot) *Speyeria nokomis nokomis*	L
PLANTS – Non-vascular	
Sphagnum angustifolium (Sphagnum)	K
PLANTS – Ferns & Allies	
Carex diandra (lesser panicled sedge)	K
Eriophorum altaicum var. *neogaeum* (whitebristle cottongrass)	K
Eriophorum chamissonis (Chamisso's bristlegrass)	K
Eriophorum gracile (slender bristlegrass)	K
Ptilagrostis porteri (Porters' false needlegrass)	K
PLANTS – Dicots	
Armeria maritima ssp. *sibirica* (Siberian sea thrift)	K
Astragalus leptaleus (park milkvetch)	K
Astragalus wetherillii (Wetherill's milkvetch)	K
Braya glabella (smooth northern-rockcress)	K
Cirsium perplexans (Rocky mountain thistle)	K
Draba exunguiculata (clawless draba)	K
Draba grayana (Gray's draba)	K
Machaeranthera coloradoensis (Colorado tansyaster)	K

	WHR
Parnassia kotzebuei (Kotzebue's grass of Parnassus)	K
Penstemon harringtonii (Harrington's beardtongue)	K
Phacelia scopulina var. *submutica (Candidate)* (Debeque phacelia)	K
Ranunculus karelinii [R. gelidus ssp. grayi] (ice cold buttercup)	K
Thalictrum heliophilum (Cathedral Bluff meadow-rue)	K
STATUS: MIS	
MAMMALS	
American Elk	K
Cave Bats	K
BIRDS	
American Pipit	K
Brewer's Sparrow	K
Virginia's Warbler	K
INSECTS	
Aquatic Microinvertebrates	
All trout (includes brook, brown, rainbow, and Colorado River cutthroat)	K

Updated to reflect current ESA listing status, the revised (May 2009) sensitive species list, and the amended MIS list

Table EE-4
Species of concern on the White River National Forest

Common name	Scientific name
Mule deer	*Odocoilus hemionus*
Bighorn sheep	*Ovis canadensis*
American peregrine falcon	*Falco peregrinus anatum*

Table EE-5
Species of viability concern on the White River National Forest

Common name	Scientific name	Common name	Scientific name
Plants			
Colorado tansy-aster	*Machaeranthera coloradoensis* (Gray) Osterhout var. *brandegei* (Rydberg) T.J. Watson	Sea pink	*Armeria scabra* Pallas spp. *sibirica* (Turczanivov ex Boissier) Hylander
Leadville milkvetch	*Astragalus molybdenus* Barneby	Smooth rockcress	*Braya glabella* (Richardson) S. Watson var. *glabella*
Altai cotton-grass	*Eriophorum altaicum* Meinsh. var. *neogaeum* Raymond	Kotzebue grass-of-Parnassus	*Parnassia kotzebuei* Chamisso and Schlechtendal
Harrington beardtongue	*Penstemon harringtonii* Penland	De Beque phacelia	*Phacelia submutica* J.T. Howell
Porter feathergrass	*Ptilagrostis porteri* (Rydberg) W.A. Weber	Tundra buttercup	*Ranunculus gelidus* Karlin and Kirilov spp. *grayi* (Britton) Hulten
Sun-loving meadowrue	*Thalictrum heliophilum* Wilken and DeMott	Penland alpine fen mustard	*Eutrema edwardsii* R. Brown ssp. *penlandii* (Rollins) W.A. Weber
Birds			
Pygmy nuthatch	*Sitta pygmaea*	Northern sage grouse	*Centrocercus urophasianus*
Barrow's goldeneye	*Bucephala islandica*	Brewer's sparrow	*Spizella breweri*
Mammals			
Townsend's big-eared bat	*Corynorhinus townsendii*	Fringed myotis	*Myotis thysanodes*
Canada lynx	*Lynx canadensis*	North American wolverine	*Gulo gulo luscus*
Fish			
Bonytail	*Gila elegans*	Colorado pikeminnow	*Ptychocheilus lucius*
Humpback chub	Gila cypha	Razorback sucker	*Xyrauchen texanus*
Roundtail chub	*Gila robusta*	Colorado River cutthroat trout	*Oncorhynchus clarki pleuriticus*
Amphibians			
Boreal western toad	*Bufo boreas boreas*	Northern leopard frog	*Rana pipiens*

Table EE-6
Species needing more baseline inventory and evaluation to determine status on the White River National Forest

Common name	Scientific name	Common name	Scientific name
Plants			
Arctic braya	*Braya glabella* (Richardson) S. Watson *var. glabella*	Lance-leaved moonwort	*Botrychium lanceolatum* (Gmelin) Angstrom var. *lanceolatum*
Colorado wild buckwheat	*Erigonum coloradense* Small	Pale moonwort	*Botrychium pallidum* W.H. Wagner
Brewer's cliff-brake	*Pellaea breweri* Chamissoo and Schlechtendal	Reflected moonwort	*Botrychium echo* W.H. Wagner
Stiff clubmoss	*Lycopodium dubium* Zoega	Canyon bog-orchid	*Limnorchis ensfolia* Rydberg
Rocky Mountain columbine	*Aquilegia saximontana* Rydberg ex B.L. Robinson in A. Gray	Grand mesa penstemon	*Penstemon mensarum* Pennell
Draba	*Draba spectabilis* Greene *var. oxyloba* (Greene) Gilg and Schulz	Slender rock-brake	*Cryptogramma stelleri* (Gmelin) Prantl
Arctic draba	*Draba fladnizensis* Payson	Weber saussurea	*Saussurea weberi* Hulten
Clawless draba	*Draba exunguiculata* (O.E. Schulz) C.L. Hitchcock	Tundra saxifrage	*Muscaria monticola* Small
Porsild draba	*Draba porsildii* Mulligan	Lesser panicled sedge	*Carex diandra* Schrank
Tundra draba	*Draba ventosa* A. Gray	Low northern sedge	*Carex concinna* R. Brown
Woods draba	*Draba oligosperma* Hooker	Mud sedge	*Carex limosa* Linnaeus
Mountain bladder fern	*Cystopteris montana* (Lamarck) Bernhardi ex Desveaux	Green spleenwort	*Asplenium trichomanes-ramosum* Linnaeus
Oak fern	*Gymnocarpium dryopteris* (l.) Newman	Hanging garden sullivantia	*Sullivantia hapemanii* (Coulter & Fisher) Coulter var. *purpusii* (Brandegee) Soltis
Wooly fleabane	*Erigeron lanatus* Hooker	Broad-leaved twayblade	*Listera convallarioides* (Swartz) Nuttall
Globe gilia	*Ipomopsis globularis* (Brand) W.A. Weber	Northern twayblade	*Listera borealis* Morong
Large-flower globe-mallow	*Iliamna grandiflora* (Rydberg) Wiggins	Northern rockcress	*Draba borealis* De Candolle
Snow grass	*Phippsia algida* (Phipps) R.Br.	Colorado divide whitlow-grass	*Draba streptobrachia* Price
Dwarf hawksbeard	*Askellia nana* (Richardson) W.A. Weber	Gray's peak whitlow-grass	*Draba grayana* (Rydberg) C.L. Hitchcock
Purple lady-slipper	*Cypripedium fasciculatum* Kellogg ex S. Watson	Lancepod whitlowgrass	*Draba lonchocarpa* Rydberg *var. lonchocarpa*
Wetherill milkvetch	*Astragalus wetherillii* M. E. Jones	Mountain whitlow-grass	*Draba rectifructa* C.L. Hitchcock
Common moonwort	*Botrychium lunaria* (Linnaeus) Swartz	Thick-leaf whitlow-grass	*Draba crassa* Rydberg

Table EE-6 continued

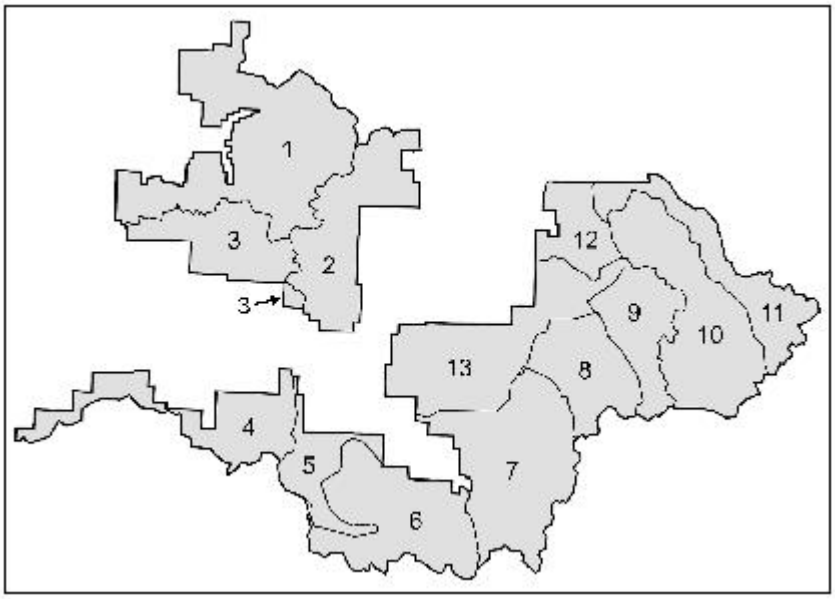
Common name	Scientific name	Common name	Scientific name
Birds			
Black swift	*Cypseloides niger*		
Mammals			
Spotted bat	*Euderma maculatum*		
Invertebrates			
Fragil ancylid	*Ferrissia fragilis*	Desert forktail	*Ischnura barberi*
Dark blue butterfly	*Lycaeides idas sublivens*	Swampy lymnaea	*Lymnaea stagnalis*
Theano alpine butterfly	*Erebia theano*	Two-banded skipper	*Pyrgus ruralis*
Uncompahgre fritillary butterfly	*Boloria acrocnema*	Umbilicate sprite	*Promenetus umbilicatellus*
White-veined arctic butterfly	*Oeneis taygete*	Short-tailed black swallowtail	*Papilio indra minori*
Painted damsel	*Hesperagrion heterodoxum*	Mossy valvata	*Valvata sincera*
Hudsonian emerald	*Somatochlora hudsonica*		

Appendix FF

Late-successional and old-growth forest standard

Introduction This appendix is biodiversity standard #5 of the forest-wide standards and guidelines. To ensure that late-successional (mature and old-growth forest with moderate to dense canopy closure, defined as structural stages 4B, 4C, and 5) and old-growth (as described by M. Mehl 1992) forests are well-distributed across the White River National Forest, the forest has been divided into 13 **late-successional assessment areas** (LSAAs), as shown in **Figure FF-1**.

Figure FF-1
Late-successional assessment areas on the White River National Forest



These areas are large enough to incorporate the effects of natural landscape disturbance processes and patterns. Where possible, ecological subsection boundaries were used as the dividing lines. When this approach produced some areas that were larger than desired, fourth-order watershed lines were used to divide the LSAAs into smaller units. These 13 LSAAs are useful for identifying acreages of late-successional or old-growth forest that will be managed over the long term for the respective characteristics shown in **Table FF-1**.

Table FF-1
Assessment areas, cover types, and management constraints for late-successional and old-growth forests

		Minimum % to be managed	
LSAA	**Cover type**	**Late-successional**	**Old-growth**
1	Spruce-fir	30	*(see note #1)*
	Lodgepole pine	10	
	Douglas-fir	10	
2	Spruce-fir	30	*(see note #1)*
	Lodgepole pine	10	
	Douglas-fir	10	
3	Spruce-fir	30	10
	Lodgepole pine	10	
	Douglas-fir	10	
4	Spruce-fir	30	10
	Lodgepole pine	10	
	Douglas-fir	10	
5	Spruce-fir	30	10
	Lodgepole pine	10	
	Douglas-fir	10	
6	Spruce-fir	30	10
	Lodgepole pine	10	
	Douglas-fir	10	
7	Spruce-fir	30	10
	Lodgepole pine	10	
	Douglas-fir	10	
8	Spruce-fir	30	10
	Lodgepole pine	10	
	Douglas-fir	10	
9	Spruce-fir	30 *(see note #2)*	10
	Lodgepole-pine	10	
	Douglas-fir	10	
10	Spruce-fir	30	10 *(see note #3)*
	Lodgepole pine	10	
	Douglas-fir	10	
11	Spruce-fir	30	10
	Lodgepole pine	10	
	Douglas-fir	10	
12	Spruce-fir	30	10
	Lodgepole pine	10	
	Douglas-fir	10	
13	Spruce-fir	30	10
	Lodgepole pine	10	
	Douglas-fir	10	

Notes:

1. LSAA 1 and LSAA 2 are found on the Flat Tops Plateau. These two units were significantly affected by a spruce bark beetle epidemic that occurred in the late 1940s and early 1950s. This outbreak killed nearly all spruce on the forest greater than eight inches diameter at breast height (DBH) over an area of approximately 250,000 acres. As a result, the spruce-fir composition found on the plateau changed from 90 percent spruce/10 percent fir to 20 percent spruce/80 percent fir, with the accompanying release of previously suppressed fir and spruce. Spruce has been very slow to reestablish within these two LSAAs. Because of the relatively young ages present these areas are at least 100-150 years away from qualifying as old-growth (as described by M. Mehl, 1992). They do display many of the other stand qualities normally found in old-growth stands important to wildlife, such as an abundance of snags and downed woody material, and often have multi-layered canopies. In terms of the size and canopy closure of the residual fir, many stands qualify as late-successional, and currently there is an abundance of late-successional spruce-fir within these two LSAAs (71 percent in LSAA 1 and 51 percent in LSAA 2). Because age is the limiting factor, there are no methods of management that can be applied to turn these stands into old-growth at an earlier date. The late-successional standard currently is met in these areas, and stands within these identified areas will continue to progress toward old-growth conditions. The few stands that have been identified as either old-growth or old-growth recruitment will be managed as old-growth and removed from the suitable timber base. However, no additional stands will be identified to be managed as old-growth within these two LSAAs.
2. In LSAA #9, the current spruce-fir late-successional acreage is 474 acres short of meeting the minimum standard of 30 percent. Two stands of spruce-fir, which total 560 acres of structural stage 3C (middle-aged with greater than 70 percent canopy closure), have been identified to be managed long term for late-successional characteristics. For further information, see the project file.
3. In LSAA #10, the current spruce-fir old-growth acreage is 811 acres short of meeting the minimum standard of ten percent. A total of six additional stands of structural stage 4C (mature with greater than 70 percent canopy closure), totaling more than 900 acres, have been identified to be managed long term for old-growth characteristics. For further information, see the project file.

Spruce-fir

The spruce-fir cover type covers more than one fourth of the forest, and makes up almost one half of all forested acres. The forest-wide standard for late-successional spruce-fir is to maintain a minimum of 30 percent of the spruce-fir as late successional in each LSAA. Spruce-fir old-growth acreage is calculated as a portion of the maintained late-successional spruce-fir acreage, not as additional acreage. There are three exceptions, as explained by the notes in Table FF-1.

Lodgepole pine and Douglas fir

Lodgepole pine and Douglas fir cover types both are included within the late-successional standard, but neither cover type is included in the old-growth portion of the standard. The standard is that 10 percent of lodgepole pine and 10 percent of the Douglas-fir must be maintained as late-successional within each LSAA. Recently completed old-growth inventories indicate patchy, localized distribution for old-growth for each of these two types. Douglas fir old-growth is concentrated in five of the 13 LSAAs, and lodgepole pine old-growth is concentrated in six of the 13 LSAAs. Environmental constraints similar to those described for aspen control the development of these stands. It is not feasible to manage old-growth on a Forest-wide basis when environmental site conditions necessary for the development of old-growth characteristics meeting the definition criteria eliminate the development of old-growth across large portions of the forest.

Aspen

The aspen cover type is a major component of the forest. However, environmental conditions supporting aspen vary widely across the forest. The western section of the Flat Tops Plateau provides productive conditions for large, rapidly growing aspen. The bulk of the remaining forest, following the Continental Divide from Summit County to Pitkin County, has a more severe climate and different soil conditions, with a consequently lower potential for the growth of aspen. These conditions produce many older aspen stands that never develop characteristics meeting regional descriptions of late-successional aspen forest. No management techniques currently exist that will produce aspen stands meeting the definition criteria in these areas. Because of these factors, aspen is not included in the forest-wide late-successional or old-growth standard. Forest-wide biodiversity guidelines #2 and #3 and silvicultural guideline #8 all ensure that the ecological importance of aspen is considered and that aspen is maintained across the landscape of the White River National Forest.

Appendix GG

List of acronyms

ADT	American Discovery Trail
AIRFA	American Indian Religious Freedom Act
AMS	Analysis of the Management Situation
AQRV	air-quality-related values
ASQ	allowable sale quantity
ATV	all-terrain vehicle
AUM	animal unit month
BA	biological assessment
BE	biological evaluation
BLM	Bureau of Land Management
CDNST	Colorado Divide National Scenic Trail
CDOW	Colorado Division of Wildlife
CFR	Code of Federal Regulations
CVU	common vegetation unit
DAU	data analysis unit
DEIS	draft environmental impact statement
EPA	Environmental Protection Agency
ESI	existing scenic integrity
FDR	forest development road
FDT	forest development trail
FEIS	final environmental impact statement
FS	Forest Service
FSH	Forest Service Handbook
FSM	Forest Service Manual
GIS	geographic information system
GPRA	Government Performance & Results Act
HRV	historic range of variability
HUC	hydrologic unit code
IDT	interdisciplinary team
IRI	integrated resource inventory
IWM	Integrated Noxious Weed Management
LAU	lynx analysis unit
LRMP	land and resource management plan
LSAA	late successional assessment area
MA	management area
MIC	management indicator communities
MIS	management indicator species
MBF	thousand board feet
MDP	master development plan
MMBF	million board feet
MMCF	million cubic feet

MRVD	million recreation visitor days
NAAQS	national ambient air quality standard
NAGPRA	Native American Graves Protection and Repatriation Act
NBIS	national bridge inspection standards
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NFS	National Forest System
NOI	notice of intent
NRHP	National Register of Historic Places
NRT	National Recreation Trail
NSO	no surface occupancy
NST	National Scenic Trail
NTSA	National Trail System Act
NWSRS	National Wild and Scenic Rivers System
NWPS	National Wilderness Preservation System
OHV	off-highway vehicle
PAOT	persons at one time
PILT	payments in lieu of taxes
PNV	present net value
PSD	permit of significant deterioration
PTES	proposed, threatened, and endangered species
RIM	Recreation Information Management
RMRIS	Rocky Mountain resource inventory system
RNA	research natural area
ROD	record of decision
ROS	Recreational Opportunity Spectrum
RPA	Forest and Rangeland Renewable Resources Planning Act
RVD	recreation visitor day
SAOT	skiers at one time
SIA	special interest area
SMS	Scenery Management System
STL	suitable timber lands
TES	threatened and endangered species
TMDL	total maximum daily loads
TSTL	tentatively suitable timber lands
UCR	Upper Colorado River Interagency Fire Management Unit
USDA	U.S. Department of Agriculture
USDI	U.S. Department of the Interior
VMS	Visual Management System
WCP	watershed conservation practices

Appendix HH
Glossary

aboriginal areas	Used to describe the historic and prehistoric lands where a tribe(s) carried out food gathering or seasonal activities or traded with other Indian peoples. These areas may be extensive depending on the geographic terrain.
aboriginal rights	Aboriginal rights are based on aboriginal title, original title, or Indian title, which is the possessory right to occupy and use an area that Indians have traditionally used. Congress could extinguish such rights or title at will through treaty or otherwise. Individual aboriginal rights were based on continuous actual possession by occupancy, enclosure, or other actions establishing a right to the land to the exclusion of adverse claimants. For national forest managed lands, such possession must have predated the establishment of the National Forests.
acceptable vegetation management status	A plant community that is at least 75 percent similar to the desired plant community.
access	The opportunity to approach, enter and make use of public or private land.
acid neutralizing capacity	A water chemistry measurement that reflects the ability of a watershed to offset acid inputs.
acre-foot	The amount of water covering one acre to a depth of one foot.
activity	A measure, course of action, or treatment that is undertaken to directly or indirectly produce, enhance, or maintain forest and rangeland outputs or achieve administrative or environmental quality objectives.
activity area	An area of land affected by a management activity or activities. An activity area can range from a few acres to an entire watershed depending on the type of monitoring being conducted.
adaptive management	A type of natural resource management in which decisions are made as part of an ongoing process. Adaptive management involves testing, monitoring, evaluation, and incorporating new knowledge into management approaches based on scientific findings and the needs of society. Results are used to modify management policy.
affected environment	The biological and physical environment that will or may be changed by proposed actions and the relationship of people to that environment.

age class	A distinct aggregation of trees originating from a single natural event or regeneration activity, or grouping of trees, e.g. 10-year age class, as used in inventory or management.
air pollution	Any substance or energy form (heat, light, noise, etc.) that alters the state of the air from what would naturally occur.
airshed	Basic geographic units in which air quality is managed.
allocation	The assignment of a land area to a particular use or uses to achieve management goals and objectives.
allotment	A designated area of land available for livestock grazing upon which a specified number and kind of livestock may be grazed under a range allotment management plan. It is the basic land unit used to facilitate management of the range resource on National Forest System lands.
allowable sale quantity (ASQ)	The amount of chargeable timber volume which can 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	(1) The degree of utilization considered desirable and attainable on various parts of a ranch or allotment considering the present nature and condition of the resource, management objectives and levels of management; (2) The amount of forage planned to be used to accelerate range improvement.
alluvial	Of or pertaining to sand, mud, and other sediments deposited on land by streams.
alpine	Those portions of mountains that rise above the cold limits of trees.
alternative	A combination of management prescriptions applied in specific amounts and locations to achieve a desired management emphasis as expressed in goals and objectives. One of several policies, plans, or projects proposed for decision making. An alternative need not substitute for another in all respects.
all-terrain vehicle (ATV)	Any motorized, off-highway vehicle 50 inches or less in width, having a dry weight of 600 pounds or less that travels on three or more low-pressure tires with a seat designed to be straddled by the operator.
analysis area	One or more capability areas combined for the purpose of analysis in formulating alternatives and establishing various impacts and effects.

animal unit month (AUM) The tenure of one animal unit (considered to be one mature 1,000-pound cow or the equivalent based on the average daily forage consumption of 26 pounds of dry matter per day) for a period of one month.

aquatic ecosystem An ecosystem (biological and physical components and their interactions) in which water is the principle medium. Examples include wetlands, streams, reservoirs and areas with plants or animals characteristic of either permanently or seasonally inundated soils.

aquifer A geologic formation capable of transmitting water through its pores at a rate sufficient for water-supply purposes. The term water-bearing is sometimes used synonymously with aquifer when a stratum furnishes water for a specific use. Aquifers are usually saturated sands, gravel, fractures, caverns or vesicular rock.

arterial road Provides service to large land areas and usually connects with public highways or other Forest Service arterial roads to form an integrated network of primary travel routes. The location and standard are often determined by a demand for maximum mobility and travel efficiency rather than specific resource management service. It usually is developed and operated for long-term land and resource management purposes and constant service.

aspect (1) The visual first impression of vegetation or a landscape at a particular time or as seen from a specific point; (2) the predominant direction of slope of the land; (3) seasonal changes in the appearance of vegetation.

assigned camp A location that is authorized for occupancy and use by the authorized officer and for which a fee is paid by the holder.

attenuated flooding Flooding lessened in severity due to natural or man-made structures or areas that disperse water or slow flows.

available lands Those portions of a national forest not administratively excluded from timber harvest or livestock grazing.

background A term used in visual management to describe that part of a scene or landscape that is farthest from the viewer, usually three miles to infinity from the observer.

band A group of people who share a culture, territory and sense of mutual recognition. Bands are primarily those pre-treaty-making-period American Indian groups.

basal area The cross-sectional area of a single stem, including bark, measured at breast height (4.5 feet or 1.37 meters above the ground).

benchmark Reference points that define the bounds within which feasible management alternatives can be developed. Benchmarks may be defined by resource output or economic measures.

beneficiary The recipient of payment or entitlement based upon an agreement, contract or treaty. Indian tribes in the project area signed treaties and agreements with the U.S. in exchange for promises by the U.S. to "secure" or guarantee rights the Indians reserved in these treaties and agreements.

best available control measures A term used to refer to the most effective measures (according to EPA guidance) for controlling small or dispersed particulates and other emissions from sources such as roadway dust, soot and ash from woodstoves and open burning of rush, timber, grasslands, or trash.

big game Certain wildlife that may be hunted for sport under state laws and regulations, including elk, pronghorn antelope, mule and white-tail deer, turkey and bighorn sheep.

biogeography The study of the geographic distribution of plants and animals.

biodiversity The full variety of life in an area, including the ecosystems, plant and animal communities, species and genes, and the processes through which individual organisms interact with one another and their environments.

biological assessment A biological assessment evaluates the potential effects of an action on listed and proposed species under the Endangered Species Act and designated and proposed critical habitat. A biological assessment also determines whether any such species or habitat is likely to be adversely affected by the action. An assessment used in determining whether formal consultation or a conference is necessary.

biological evaluation A review of all Forest Service planned, funded, executed or permitted programs and activities for possible effects on regionally listed sensitive species. A biological evaluation may be used or modified to satisfy consultation requirements for biological assessments of construction projects requiring an environmental impact statement.

biological opinion An official report by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service issued in response to a formal Forest Service request for consultation or conference. It states whether or not the federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.

biomass The total amount of living plants and animals above and below ground in an area at a given time.

board foot The amount of wood contained in an unfinished board one inch thick, 12 inches long and 12 inches wide (2.54 x 30.5 x 30.5 cm).

browse Twigs, leaves, and young shoots of trees and shrubs upon which animals feed; in particular, those shrubs that are utilized by livestock and big game animals for food.

buffer zone An area on the edge of protected areas with restrictive land-use controls allowing only activities compatible with protection of the core area, such as research, environmental education, recreation and tourism.

Bureau of Land Management (BLM) An agency in the U.S. Department of the Interior responsible for administering public lands.

canopy cover The percentage of the ground covered by a vertical projection of the natural spread of the branches and leaves of the trees in an area.

carrying capacity The maximum number of animals that can be supported in a given environment without deteriorating that environment.

cave A cave is any naturally formed void, cavity, recess or system of interconnected passages that occur beneath the surface of the earth or within a cliff or ledge, including natural subsurface water and drainage systems large enough to permit a person to enter, whether or not the entrance is naturally formed or created by humans. The term “cave” shall also include any natural pit, sinkhole or other feature that is an extension or component of a cave.

cavity tree A live tree with one or more cavities. The presence of a cavity may be by verified by visual observation of the cavity or by the behavior of a cavity nester suggesting active breeding behavior.

ceded lands Lands that tribes ceded to the U.S. by treaty in exchange for reservation of specific land and resource rights, annuities and other promises in the treaties.

channel A passage, either naturally or artificially created, that periodically or continuously contains moving water, or that forms a connecting link between two bodies of water. River, creek, run, branch and tributary are some of the terms used to describe natural channels. Natural channels may be single or braided. Canal and floodway are some of the terms used to describe artificial channels.

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. Consistent with the definition of timber production, planned production of fuelwood is not included in the allowable sale quantity and therefore is non-chargeable.

class 1 area Under the 1977 Clean Air Act amendments, all international parks, national parks larger than 6,000 acres, and designated wilderness areas larger than 5,000 acres that existed on August 7, 1977 are considered a Class 1 area. This class provides the most protection to pristine lands, severely limiting the amount of additional air pollution that can be added to these areas.

class 2 area A geographic area designated by Congress for a moderate degree of protection from future air quality degradation. Moderate increases in new pollution may be permitted in class 11areas. All wilderness designated after August 7, 1977 are automatically class 11 areas, as are all other National Forest System lands (except additions to existing class 1 areas).

classified road Roads wholly or partially within or adjacent to National Forest System lands that are determined to be needed for long-term motor vehicle access, including state roads, county roads, and other roads authorized by the Forest Service.

clearcutting See *regeneration method*.

climax (1) The final or stable biotic community in a successional series that is self-perpetuating and in dynamic equilibrium with the physical habitat; (2) The assumed end point in succession.

closed road An intermittent service road in Maintenance Level 1 that is closed to all vehicular traffic for more than one year.

collector road Serves smaller land areas than a forest arterial road and usually is connected to a forest arterial road or public highway. Collects traffic from forest local roads and/or terminal facilities. The location and standard are influenced by both long-term multi-resource service needs, as well as travel efficiency. May be operated for either constant or intermittent service, depending on land use and resource management objectives for the area served by the facility.

Cole classes Campsite condition classes based on defined levels and/or types of impact. The presence, absence, or degree of change in certain critical parameters is quickly noted and forms the basis for an impact rating, usually between 1 and 5.

commercial forest land Land declared suitable for producing timber crops and not withdrawn from timber production by statute or administrative regulation.

commercial timber sale The selling of timber from National Forest System lands for the manufacture of commercial products, such as lumber, plywood, etc.

commercially valuable species Tree species that are used in the production of wood products and are often bought by purchasers within the White River National Forest's regional timber market. The list of commercially valuable species is subject to change over time depending on the market supply and demand for individual species. The White River National Forest's current list includes Englemann spruce, subalpine fir, Douglas fir, lodgepole pine, ponderosa pine, and aspen.

composition The proportion of each tree species in a stand expressed as a percentage of either the total number, basal area or volume of all tree species in the stand.

concessionaire A special-use permittee who provides goods and services primarily at Forest Service developed sites (excluding ski areas).

confederated tribe A body of separate and different tribes who operate under one form of tribal government upon a reservation or Indian trust land.

conflict Goal interference attributed to another's behavior.

conformity determination An area conforms to air quality standards as determined by the Environmental Protection Agency or state or local entity.

connected disturbed areas High runoff areas like roads and other disturbed sites that discharge surface runoff into a stream or lake.

connectivity The arrangement of habitats that allows organisms and ecological processes to move across the landscape. Patches of similar habitats are close together or linked by corridors of appropriate vegetation. The opposite of fragmentation.

construction The supervising, inspecting, actual building, and all expense incidental to the development of a new facility, including locating, surveying, mapping, costs and acquisition of rights-of-way and elimination of hazards.

consultation (1) An active, affirmative process that (a) identifies issues and seeks input from appropriate American Indian governments, community groups and individuals; and (b) considers their interests as a necessary and integral part of the BLM and Forest Service decision-making process. (2) The federal government has a legal obligation to consult with American Indian tribes. This legal obligation is based on such laws as Native American Graves Protection and Repatriation Act, the American Indian Religious Freedom Act and numerous other executive orders and statutes. The legal responsibility is, through consultation, to consider Indian interests and account for those interests in the decision. (3) Consultation also refers to a requirement under Section 7 of the Endangered Species Act for federal agencies to consult with the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service with regard to federal actions that may affect listed threatened or endangered species or critical habitat.

cooperating agency Any federal agency other than the lead agency that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major federal action significantly affecting the quality of the human environment.

coppice See *regeneration method*.

cost The negative or adverse effects or expenditures resulting from an action. Costs may be monetary, social, physical or environmental in nature.

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 specific 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.

cover type A descriptive classification of vegetation based on the present dominant tree species.

critical habitat Habitat of federally listed threatened or endangered species where those physical and biological features essential to conservation of the species are found and which may require special management considerations or protection. This habitat may currently be occupied or determined by the Secretary of the Interior to be essential for areas outside the species' current range.

cubic foot A unit of true volume that measures 1 x 1 x 1 foot (30.48 x 30.48 x 30.48 centimeters).

cumulative impact The impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

decommissioning Activities that terminate the function of a road and mitigate any adverse impacts to forest resources in the process. The road is permanently removed from the transportation system. The activities range from blocking the entrance, scattering boughs on the roadbed, revegetating and water barring, to removing fills and culverts, reestablishing drainage-ways, pulling back unstable road shoulders, and recontouring the slopes for full obliteration. (A road does not have to be recontoured to be decommissioned.)

deferred rotation Any grazing system that provides for a systematic rotation of the deferment among pastures (units).

design capacity — The maximum theoretical amount of use a developed recreational site was built to accommodate. This is usually expressed in PAOTs (persons at one time).

desired future condition — A portrayal of the land or resource conditions that are expected to result if goals and objectives are fully achieved.

developed recreation — This type of recreation is dependent upon facilities provided to enhance recreation opportunities in concentrated-use areas. Examples include campgrounds and ski areas. Facilities in these areas might include roads, parking lots, picnic tables, drinking water, toilets, ski lifts and buildings.

developed recreation sites — Relatively small, distinctly defined areas where facilities are provided for concentrated public use, such as campgrounds, picnic areas and swimming beaches.

diameter at breast height (DBH) — A diameter of the stem of a tree measured at breast height (4.5 feet or 1.37 meters) from the ground.

direct effects — Environmental effects caused by an action and that occur at the same time and place.

dispersed campsite — An individual/family-sized campsite that has a general size of about 600-750 square feet. It includes a hardened area around a fire pit, a barren area, and/or user-constructed facilities.

dispersed recreation — Those forest, range, or desert-oriented outdoor recreation activities that normally take place outside of sites or areas that are developed or managed to concentrate recreational use. Dispersed recreation activities may require facilities for safeguarding visitors, protecting resources, and enhancing the quality of visitor experiences.

district ranger — The official responsible for administering the National Forest System lands on a ranger district.

disturbance — An event that causes a significant change from the normal pattern in an ecological system. Disturbances are often subdivided into natural disturbances and man-caused disturbances.

diversity — Diversity refers to the distribution and abundance of different plant and animal communities and species within the area covered by a forest plan. This term is derived from the National Forest Management Act (NFMA). It is not synonymous with "biodiversity."

draft environmental impact statement (DEIS) — The statement of environmental effects required for major federal actions under Section 102 of the National Environmental Policy Act and released to the public and other agencies for comment and review.

easement A special-use authorization for a right-of-way that conveys a conditioned interest in National Forest System land, and is compensable according to its terms.

ecoregion A scale of planning and analysis is the National Hierarchical Framework that has broad applicability for modeling and sampling, strategic planning and assessment, and international planning. Ecoregions include domain, division and province ecological units.

ecosystem A functional unit consisting of all the living organisms (plants, animals, and microbes) in a given area, and all the non-living physical and chemical factors of their environment, linked together through nutrient cycling and energy flow. An ecosystem can be of any size—a log, pond, field, forest or the earth's biosphere—but it always functions as a whole unit. Ecosystems are commonly described according to the major type of vegetation, for example, forest ecosystem or range ecosystem.

ecosystem composition The plant and animal species and communities in the plan area.

ecosystem-level approach An approach to maintaining biodiversity that involves maintaining a diversity of structures within stands and a diversity of ecosystems across the landscape. The intent is to meet most of the habitat requirements of most of the native species.

ecosystem structure The biological and physical attributes that characterize ecological systems.

ecotone A transition area between two adjacent ecological communities usually exhibiting competition between organisms common to both.

edge An outer band of a patch of vegetation that has an environment significantly different from the interior of the patch.

edge effect Habitat conditions (such as degree of humidity and exposure to light or wind) created at or near the more-or-less well-defined boundary between ecosystems. For example, between open areas and adjacent forest.

elk security habitat An area that will hold elk during periods of stress because of geography, topography, vegetation, or a combination of those features.

endangered species A taxonomic group of organisms in danger of extinction throughout all or a significant portion of its range.

environmental assessment (EA) — A document that discloses the environmental impacts to be expected from a proposed action and from specific alternatives to the proposed action. An EA is prepared when significant environmental impacts are not anticipated or when there is a question as to the extent of the impacts. Comments are accepted within 30 days of release of an EA, and are considered before a final decision is made. Responses to comments appear in an appendix to the EA.

environmental impact statement (EIS) — A formal public document prepared to analyze the impacts on the environment of a proposed project or action and released for comment and review. An EIS is prepared, instead of an EA, when significant environmental impacts are anticipated. Comments by the public and by other agencies are accepted within 90 days after the release of a Draft EIS, and are considered before the final decision is documented in a Final EIS. Responses to comments appear in an appendix to the Final EIS.

essential habitat — Essential habitat is designated by a Regional Forester. It possesses the same characteristics as critical habitat without having been declared as critical habitat by the Secretary of the Interior or Commerce. The term includes habitats necessary to meet recovery objectives for endangered, threatened, and proposed species and those necessary to maintain viable populations of sensitive species.

even-aged management — The application of a combination of actions that results in the creation of stands in which trees of essentially the same age grow together. Regeneration in a particular stand is obtained during a short period at or near the time that a stand has reached the desired age or size for regeneration, and is harvested.

even-aged method — See *regeneration method*.

even-aged stand — A stand of trees composed of a single age class in which the range of tree ages usually is +/-20 percent of the rotation.

even-aged system — A planned sequence of treatments designed to maintain and regenerate a stand with one age class. The range of tree ages usually is less than 20 percent of the rotation. Also see *clearcutting, seed tree, shelterwood, coppice*.

exotic species — Non-native species, or fish, wildlife or plant species that was deliberately or accidentally introduced in an ecosystem and that has become permanently established.

extirpated — A species which has become locally extinct; a species or subspecies that has disappeared from a locality or region without becoming extinct throughout its entire range.

federal recognition — Acknowledgement of an Indian tribe as a government entity that has a special relationship with the U.S. government. This relationship recognizes that Indian tribes receive some rights not available to other citizens; for example, health and education benefits from the trust relationship or off-reservation hunting and fishing rights related to treaties with tribal governments.

federally recognized Indian tribes — An Indian group for which: (1) Congress or an executive order created a reservation for the group either by treaty (before 1871), statutorily expressed, agreement by executive order, or other valid administrative action; and (2) the U.S. has some continuing political relationship with the group, such as providing services through the Bureau of Indian Affairs.

fire management — The activities concerned with the protection of people, property and forest areas from wildfire and the use of prescribed burning for the attainment of forest management and other land use objectives, all conducted in a manner that considers environmental, social and economic criteria.

forest development road — A forest road under the jurisdiction of the Forest Service. Total mileages of forest development roads are used for reporting to Congress. These roads are synonymous with the term "National Forest System road (NFSR)."

forest development trail — Trails wholly or partially within, adjacent to and serving the national forests and other areas administered by the Forest Service that have been included in the Forest Development Transportation Plan.

forest development transportation system — Those facilities, forest development roads, trails, and airfields in the transportation network and under Forest Service jurisdiction. See also *road density*.

forest development road density — See *road density.*

forest highway — A designated forest road under the jurisdiction of, and maintained by, a public authority that is subject to the Highway Safety Act.

forest land not suitable for timber production — Lands not selected for timber production in a forest plan alternative because of the fact that: (a) the multiple-use objectives for the alternative preclude timber production; (b) other management objectives for the alternative limit timber production activities to the point at which it is not possible to meet management requirements set forth in 36 CFR 219.27; or (c) the lands are not cost-efficient, over the planting horizon, in meeting forest objectives that includes timber production. In the preferred alternative and forest plan, lands not appropriate for timber production are designated as unsuitable.

forest road A road wholly or partly within, or adjacent to, and serving the National Forest System. Roads are necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources. See also *road.*

forest visitor map A map that provides detailed information about a national forest. It is to be used by the forest visitor and those interested in specific activities such as driving, camping, hunting, or other recreational activities. Long-term (3-4 year) travel management information and philosophy from the forest plan is also displayed.

four-season resort Any recreation facility on National Forest System lands permitted to operate during more than one season of the year. Resorts with either a winter or summer emphasis may be authorized for facilities to remain open to allow additional recreational use during alternative seasons. Permit holders who operate ski-based facilities during the winter season and permit holders with summer-based resorts with overnight lodging normally are assigned responsibility for public safety and resource protection and are required to manage their permit area 365 days per year.

fragmentation The process of transforming large continuous patches of similar vegetation into one or more smaller patches surrounded by disturbed areas. This may occur naturally through such agents as fire, landslides, windthrow and insects and disease, or through development action of humans. The primary distinction between fragmentation and perforation is in scale; fragmentation impacts usually are large in scale and may inhibit or prevent one or more species from moving from one patch of suitable habitat to another. See also Perforation.

fuelwood Wood used for conversion to some form of energy, e.g., in residential use or in cogeneration plants.

group selection See *regeneration method*

habitat The place where an organism lives and/or the conditions of that environment, including the soil, vegetation, water, and food.

habitat capability The capability of a given habitat to meet the needs of species, either seasonally or year-round.

habitat effectiveness Percentage of available habitat that is usable by elk during the non-hunting season. This includes habitat that is considered cover and forage, and is measured against the effects of roads.

hardening (a recreation site) The protection of physical resources (usually from recreational impacts) accomplished through a variety of means (such as surfacing, graveling, adding signs, improving drainage, placing barriers or metal fire rings, etc.) that allows continued recreational use of the area.

harvesting method (cutting method) A cutting method by which a stand is logged. The emphasis is on meeting logging requirements while concurrently attaining silvicultural objectives See also *regeneration methods*.

head month One month's use and occupancy of the range by one weaned or adult cow with or without calf, full, steer, heifer, horse, burro, mule, or sheep or goats.

historic range of variability The natural fluctuation of components of healthy ecosystems over time. Refers to the range of conditions and processes that are likely to have occurred prior to settlement of the project area by people of European descent (approximately the mid-1800s), which would have varied within certain limits over time. Historical conditions and processes portrayed include such variables as forest or grassland vegetation types, compositions, and structures, fish and wildlife habitats and populations, and drought, grazing, and fire regimes.

hydrologic unit code (HUC) Divides watersheds into a series of progressively smaller nested levels, with the first level being the largest land area relative to higher-numbered levels in that watershed. Each level is identified systematically by a hydrologic unit code number, or HUC. A first-level watershed can be divided into a number of second level watersheds; each second-level watershed may be further subdivided into third-level watersheds, and so forth.

Indian country Broadly speaking, Indian country is all the land under supervision of the U.S. government that has been set aside for the use of Indians. This would include reservations, as well as other areas under federal jurisdiction and designated for Indian use.

Indian land Any land in collective tribal holding or ownership for which the Secretary of the Interior has a continuing trust responsibility to manage for the benefit of the respective tribe. In the past, this term described certain parcels or areas where Indians lived and represented a smaller concept than Indian territory.

Indian territory Unsurveyed lands that were recognized by the federal government to be occupied or used by Indians. Prior to the U.S. Constitution, lands occupied or used by American Indians were referred to as "Indian Territory." Historical documents dating back to the 16th century refer to these unsurveyed regions and a "territory."

infrastructure The facilities, utilities and transportation systems needed to meet public and administrative needs.

institutional and semi-public uses Includes a variety of membership and limited-constituency institutions such as service clubs and religious, conservation, youth, fraternal and social groups; educational institutions such as schools, colleges and universities; and similar common-interest organizations and associations. Semi-public outfitters may operate commercially on an intermittent or irregular basis in providing services to select clientele rather than the public at large. As a rule, membership or affiliation is required, rather than being open to the public at large.

isolated cabin Cabins on sites not planned or designated for recreational cabin purposes. These cabins are authorized by special-use permit.

jurisdiction The legal right to control or regulate use of a transportation facility. Jurisdiction requires authority, but not necessarily ownership. The authority to construct or maintain a road may be derived from fee title, an easement, an agreement, or other method.

karst A type of landform that develops when soluble rocks (such as limestone, dolomite, gypsum, anhydrite, and halite) are dissolved. A karst landscape is characterized by well-developed subsurface drainage, collapse features such as sinkholes, dry valleys, vertical shafts, caves, and fluted rock surfaces (epikarst).

ladder fuels Fuels that provide vertical continuity between the surface fuels and crown fuels in a forest stand, thus contributing to the ease of torching and crowning.

land exchange A discretionary, voluntary transaction involving mutual transfers of land or interests in land between the Secretary of Agriculture acting by or through the Forest Service and a non-federal entity.

landscape A heterogeneous land area composed of a cluster of interacting ecosystems that are repeated in similar form throughout. Landscapes vary in size, down to a few kilometers in diameter.

landscape ecology The study of the distribution patterns of communities and ecosystems, the ecological processes that effect those patterns and changes in pattern and process over time.

late successional forest A forest stand of mature to old growth tress with canopy closure of greater than 40 percent. This category includes habitat structural stages 4B, 4C and 5.

lentic Standing water habitat such as lakes, ponds, seeps, bogs and meadows (wet).

lifeways Manner and means by which a group of people lives—their way of life. Components include language, subsistence strategies, religion, economic structure, physical mannerisms, and shared attitudes.

limits of acceptable change (LAC) A framework for establishing acceptable and appropriate resource and social conditions in recreation settings.

lithic Stone used as raw material for the production of artifacts, such as tools or other utilitarian objects. It may also be used strictly for ceremonial purposes.

local road Connects terminal facilities with forest collector or forest arterial roads or public highways. The location and standard are usually controlled by topography and a specific resource activity rather than travel efficiency. Forest local roads may be developed and operated for long-term, intermittent, or short-term service.

lotic Running water habitat such as rivers, streams and springs.

lynx analysis unit (LAU) The LAU is a project analysis unit upon which direct, indirect, and cumulative effects analyses are performed. LAU boundaries should remain constant to facilitate planning and allow effective monitoring of habitat changes over time. An area of at least the size used by an individual lynx, about 25-50 square miles.

lynx habitat Lynx occur in mesic coniferous forest that have cold, snowy winters and provide a prey base of snowshoe hare. Lynx records occur predominantly in the following vegetation types: In the western U.S. lodgepole pine, subalpine fir, Engelmann spruce, and aspen cover types on subalpine fir habitat types. Cool, moist Douglas-fir, grand fir, or western larch forest, where they are interspersed with subalpine forests, also provide habitat for lynx. In the Southern Rocky Mountain Geographic Area, because of their structure, mature and late-successional spruce-fir forests, provide structure and forage that is superior to mature lodgepole pine forests. (Many parts of the Southern Rockies currently have a shortage of regenerating lodgepole pine stands.) In the absence of widespread regenerating forest stands, mature and late-successional spruce-fir forests may constitute some of the most important habitat for lynx. These stands not only provide components necessary for denning habitat, but also produce red squirrels, grouse, and snowshoe hares. Although these forest types may support a lower density of hares than do densely regeneration stands, they also likely provide stable populations of both hares and red squirrels over time.

lynx denning habitat Habitat used during parturition and rearing of young until they are mobile. The common component appears to be large amounts of coarse woody debris, either down logs or root wads. (In some studies this was estimated at greater than 80 downed logs per acre, but could be less if properly arranged.) The coarse woody debris provides escape and thermal cover for kittens. Denning habitat may be found either in older mature forest of conifer or mixed conifer/deciduous types, or in regenerating

stands (greater than 20 years since disturbance). Denning habitat must be located within daily travel distance of foraging habitat (typical maximum daily distances for females is 3-6 miles).

lynx diurnal security habitat – In lynx habitat, areas that provide secure winter daytime bedding sites for lynx in highly disturbed landscapes, e.g., large developed winter recreational sites or areas of concentrated winter recreational use. It is presumed that lynx may be able to adapt to the presence of regular and concentrated human use during winter, so long as other critical habitat needs are being met, and security habitat blocks are present and adequately distributed in such disturbed landscapes. Security habitat will provide lynx the ability to retreat from human disturbance during winter daytime hours, emerging at dusk to hunt when most human activity ceases. Security habitats will generally be sites that naturally discourage winter human activity because of extensive forest floor structure, or stand conditions that otherwise make human access difficult, and should be protected to the degree necessary. Security habitats are likely to be most effective if they are sufficiently large to provide effective visual and acoustic insulation from winter human activity and to easily allow movement away from infrequent human intrusion. These winter habitats must be distributed such that they are in proximity to foraging habitat.

lynx foraging habitat Habitat that supports primary prey (snowshoe hare) and/or important alternate prey (especially red squirrels) that are available to lynx. The highest quality snowshoe hare habitats are those that support a high density of young trees or shrubs (greater than 4,500 stems or branches per acre from studies done in the Northern Rocky Mountain Geographic Area, but estimated at 1000 to 2000 stems per acre in the lodgepole pine and spruce-fir forests in the Southern Rocky Mountain Geographic Area), tall enough to protrude above the snow. These conditions may occur in early successional stands following some type of disturbance, or in older forests with a substantial understory of shrubs and young conifer trees. Coarse wood debris, especially in early successional stages (created by harvest regeneration units and large fires), provides important cover for snowshoe hares and other prey. Red squirrel densities tend to be highest in mature cone-bearing forests with substantial quantities of coarse woody debris.

lynx habitat connectivity (landscape) Cover (vegetation) in sufficient quantity and arrangement to allow for the movement of lynx. Narrow forested mountain ridges or shrub-steppe plateaus may provide a linkage between more extensive areas of lynx habitat. Wooded Riparian

Communities may provide travel cover across otherwise open valley floors between mountain ranges, or lower elevation ponderosa pine or pinyon-juniper woodlands may link high elevation spruce-fir forests.

lynx habitat currently in unsuitable condition — Areas within identified/mapped lynx habitat that are in early successional stages as a result of recent fires or vegetation management, in which the vegetation has not developed sufficiently to support snowshoe hare populations during all seasons. Management-created openings would likely include clearcuts and seed tree harvest units, and might include shelterwood and commercially-thinned stands depending on unit size and remaining stand composition and structure.

lynx habitat matrix — Matrix is defined as the most extensive and most connected landscape element type present, which plays the dominant role in landscape functioning. A landscape surrounding a patch. For lynx, this is an area which is predominantly lynx habitat, but due to natural fragmentation, includes stringers or isolated patches of vegetation such as aspen, riparian areas, sagebrush, grasslands, or alpine. These stringers or patches may have value to lynx for alternate prey species or travelways. Activities in these areas could have effects on adjacent lynx habitat.

lynx unsuitable habitat areas — Areas such as lakes, low elevation ponderosa pine forest, and alpine tundra that do not support snowshoe hare populations and are not considered to be capable of providing lynx habitat. See also *lynx habitat currently in unsuitable condition*.

lynx key linkage areas — Critical areas for lynx habitat. Usually, the factors that place connectivity at risk are highways or private land developments. Special management emphasis is recommended to maintain or increase the permeability of key linkage areas.

maintenance level — See *road maintenance.*

management-ignited — See *prescribed burning.*

management indicator community — Management indicator communities are important habitats that are selected to predict the likely effects of management actions that are identifiable, measurable, and predictable and can be related to habitat of associated species.

management indicator species — Includes the following endangered and threatened species identified on state and federal lists for the planning area: species with special habitat needs that may be influenced significantly by planned management programs; species commonly hunted, fished or trapped; and additional species selected because their population changes are believed to indicate effects of management activities on other species of a major biological community or on water quality.

Mature forest — Generally used in an economic sense to indicate that a forest has attained harvest age.

meaningful measures — A process that helps provide quality service to recreation visitors by setting quality standards for work, prioritizing work by visitor preferences, and agreeing to a plan of work consistent with program funding.

mechanized vehicle — Any contrivance that provides mechanical assistance and has moving parts for the purpose of transporting one or more people across land or water and that is powered by a living or non-living power source. Examples include wagons, bicycles, rollerblades, paddle-wheeled watercraft. Not included are wheel chairs when used as a necessary medical appliance. Also not included are skis, snowshoes, rafts, canoes, sleds, travois, or similar devices without moving parts.

microclimate — Generally the climate of small areas, especially insofar as this differs significantly from the general climate of the region. Forest stands often create microclimates.

National Environmental Policy Act (NEPA) — An act declaring a national policy to encourage productive harmony between people and their environment, to promote efforts that will prevent or eliminate damage to the environment and the biosphere and simulate the health and welfare of people, to enrich the understanding of the ecological systems and natural resources important to the nation and to establish a Council on Environmental Quality.

National Forest Management Act (NFMA) — A law passed in 1976 amending the Forest and Rangeland Renewable Resources Planning Act that requires the preparation of regional and forest plans and the preparation of regulations to guide that development.

National Forest System (NFS) lands — Federal lands designated by executive order or statute as national forests, national grasslands, or purchase units, or other lands under the administration of the U.S. Forest Service.

National Forest System road — A classified forest road under the jurisdiction of the Forest Service. The term "National Forest System Road" is synonymous with the term "forest development road."

National Recreation Trails — Trails designated by the Secretary of Interior or the Secretary of Agriculture as part of the national system of trails authorized by Section 4 of the National Trails System Act in or reasonably accessible to urban areas.

National Register of Historic Places (NHRP) — A list of heritage resources that have local, state or national significance maintained by the Secretary of the Interior.

National Wild and Scenic River System — Rivers with outstanding scenic, recreational, geological, fish and wildlife, historic, cultural, or other similar values designated by Congress under the Wild and Scenic Rivers Act for preservation of their free-flowing condition. See also *wild, scenic, and recreational rivers*.

National Wilderness Preservation System — All lands covered by the Wilderness Act and subsequent wilderness designations, irrespective of the department or agency having jurisdiction.

natural appearing landscapes — Whether naturally evolved, or culturally established, the landscape appears natural.

natural regeneration — The establishment of a plant or a plant age class from natural seeding, sprouting, suckering, or layering.

No Action alternative — An alternative that maintains established trends or management direction.

non-chargeable volume — Timber harvest not included in the allowable sale quantity calculations.

non-forested area — Lands never having or incapable of having 10 percent or more of the area occupied by forest trees, or lands previously having such cover and currently developed for non-forest use.

non-motorized activities — Activities that do not incorporate the use of a motor, engine or other non-living power source. Excluded by this classification would be such machines as aircraft, hovercraft, motorboats, automobiles, motor bikes, snowmobiles, bulldozers, chainsaws, rock drills and generators.

non-system road — A road within the National Forest System that is not necessary for the protection, administration, and utilization of the National Forest System or the use and development of its resources. It may, however, have recreational or historical value. Subsequent conversion to a different status may occur in the future. See also *unclassified and way*.

notice of intent — Formal notification that an environmental impact statement will be prepared and considered. The notice briefly describes the proposed action and possible alternatives, the agency's scoping process, and the address and name of the agency to contact regarding questions about the proposed action and the environmental impact statement.

noxious weed An alien plant that aggressively invades or is detrimental to native plant communities. The direct or indirect effect of the presence of this plant is detrimental to environmentally sound management of natural ecosystems.

obliteration The act of eliminating the functional characteristics of a travelway and the reestablishment of natural resource production capability. The intent is to make the corridor unusable as a road or a trail and stabilize it against soil loss.

off-highway vehicle (OHV) As defined by Colorado Revised Statute 33-14.5-101: "any self-propelled vehicle which is designed to travel on wheels or tracks in contact with the ground, which is designed primarily for use off of the public highways, and which is generally and commonly used to transport persons for recreational purposes. *Off-highway vehicle* does not include the following: (a) vehicles designed and used primarily for travel on, over or in the water; (b) snowmobiles; (c) military vehicles; (d) golf carts; (e) Vehicles designed and used to carry disabled persons; (f) Vehicles designed and used specifically for agricultural, logging or mining purposes."

once-over-lightly rotation grazing A rotation grazing system in which the animals graze an area lightly and only once during the grazing season.

open road density See *road density.*

orographic Of or about mountains, as in orographic lifting or orographic influence. The effects of increased rainfall on the windward mountain side of mountain ranges causes an air mass to cool and rise and thus to lose most of its moisture as it moves across mountain ranges.

outfitter/guide A special-use permittee that provides all commercial outfitting operations involving services for accommodating guests, transporting persons, and providing equipment, supplies, and materials. The permittee also provides guiding activities wherein the guide furnishes personal services or serves as a leader or teacher.

outputs The goods, end products or services purchased, consumed or utilized directly by people. Outputs are goods, services, products and concerns produced by activities that are measurable and capable of being used to determine the effectiveness of programs and activities in meeting objectives. A broad term used to describe any result, product or service that a process or activity actually produces.

overgrazing Continued heavy grazing that exceeds the recovery capacity of the community and creates a deteriorated range.

overmature A tree or even-aged stand that has reached that stage development when it is declining in vigor and health and reaching the end of its natural life span.

overstory removal The cutting of trees comprising an upper canopy layer in order to release trees or other vegetation in an understory.

paleontological area A unit of land that contains fossils of plants and animals, shellfish, early vertebrates, coal swamp forests, early reptiles, dinosaurs, and other prehistoric plants and animals.

particulates Small particles suspended in the air and generally considered pollutants.

patch In landscape ecology, a particular unit with identifiable boundaries which differs from its surroundings in one or more ways. These can be a function of vegetational composition, structure, age or some combination of the three.

patented mining claim A parcel of land originally claimed under the Mining Law of 1872 for which title has now passed from the federal government to the mining claimant. A patented mining claim is private land.

payments in lieu of taxes (PILT) Payments to local or state governments based on ownership of federal land and not directly dependent upon production of outputs or receipt sharing. Specifically, they include payments made under the Payments in Lieu of Taxes Act of 1976.

perforation The process of "punching holes" in large continuous patches of similar vegetation. These holes are generally small in scale and may impact some individuals of plants and wildlife in the affected areas. Perforations may be created by natural disturbances, such as fire, windthrow or insects and disease or through the management actions of humans. The primary distinction between a perforation and fragmentation is in scale; perforations are generally small in scale and most species are able to negotiate around these habitat disruptions to suitable adjacent habitats. See also *fragmentation*.

permit A special-use authorization that provides permission, without conveying an interest in land, to occupy and use National Forest System lands or facilities for specific purposes, and which is both revocable and terminable.

persons at one time (PAOT) A recreational capacity measurement term indicating the number of people who can use a facility or area at one time.

planning area The area of the National Forest System, including national grasslands, covered by a regional or forest plan.

planning criteria Standards, tests, rules, and guidelines by which the planning process is conducted and upon which judgments and decisions are based.

planning horizon — The overall time period considered in the planning process that spans all activities covered in the analysis or plan and all future conditions and effects of proposed actions that would influence the planning decisions. In the National Forest System planning process, this is 50 years.

planning period — A time interval for which inputs and outputs are identified in a planning process. Current Resource Planning Act and national forest plan intervals are five and 10 years, respectively.

planning records — Documents and files that contain detailed information and decisions made in developing the forest plan. Available at the Forest Supervisor's Office.

plant association — The distinctive combination of trees, shrubs, grasses, and herbs occurring in a theoretical terminal or climax community or series of communities.

plant community — A grouping of plants that have reached dynamic equilibrium with the local environmental conditions and is equivalent to climax. On site, there is no evidence of replacement by other dominant plant species and there is no evidence of serious disturbances.

potential natural community (PNC) — A taxonomic unit of vegetation classification. The biotic community that would be established under present environmental conditions if all successional sequences were completed without additional human-caused disturbances. Natural disturbances, such as drought, flood, wildfire, grazing by native fauna, and insect and disease infestations, are inherent in the development of potential natural communities, which may include naturalized, non-native species.

potential ponderosa pine cover type areas — Cover types that have the ecological characteristics that could be properly managed as a ponderosa pine cover type. These areas include historical ponderosa pine cover types that, because of past active management, have developed into other forest cover types.

population viability — The ultimate concern and requirement for species are long-term persistence, assessed and provided within the context of ecosystems. A population with a high level of viability is one with a high likelihood of continued existence throughout its range over the long term—for example, the next 100 years.

preferred alternative — The alternative recommended for implementation as the forest plan at the draft stage based on the evaluation completed in the planning process.

prescribed burning — Controlled application of fire to wildland fuels in either their natural or modified state, under specified environmental conditions, that allows the fire to be confined to a predetermined area and, at the same time, to produce the fireline intensity and rate of spread required to attain planned resource management objectives. Also called *management-ignited*.

prescribed fire A fire burning within prescription, resulting from planned or unplanned ignition.

present net value (PNV) 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.

prevention of significant deterioration of air quality (PSD) A classification established to preserve, protect, and enhance the air quality in National Wilderness Preservation System areas in existence prior to August 1977 and other areas of national significance, while ensuring that economic growth can occur in a manner consistent with the preservation of existing clean air resources. Specific emission limitations and other measures, by class, are detailed in the Clean Air Act.

primitive See *recreational opportunity spectrum*.

proposed action In terms of the National Environmental Policy Act, the project, activity, or action that a federal agency intends to implement or undertake and which is the subject of an environmental analysis.

proposed species Any species of fish, wildlife, or plant that is proposed by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service to be listed as threatened or endangered.

province A continuous geographic area wherein species composition, both plant and animal, is more homogenous than between adjacent areas.

public The people of an area, state, or nation that can be grouped together by a commonality of interests, values, beliefs, or lifestyles.

public access Usually refers to a road or trail route over which a public agency has secured a right-of-way for public use.

public involvement A Forest Service process designed to broaden the information base upon which agency decisions are made by (1) informing the public about Forest Service activities, plans and decisions, and (2) encouraging public understanding about the participation in the planning processes that lead to final decision-making.

public issue A subject or question of widespread public interest identified through public participation relating to management of National Forest System lands.

public-private ventures Opportunities for private, profit-oriented businesses to invest in the development of campgrounds and other appropriate facilities on National Forest System lands.

range Land supporting indigenous vegetation that is grazed or that has the potential to be grazed, and is managed as a natural ecosystem.

range allotment A designated area of land available for livestock grazing upon which a specified number and kind of livestock may be grazed under a range allotment management plan. It is the basic land unit used to facilitate management of the range resource on National Forest System lands and other associated lands administered by the Forest Service.

Range condition A rangeland is considered to be in satisfactory condition when the desired condition is being met or short-term vegetation objectives are being achieved to move the rangeland toward the desired condition or trend. Unsatisfactory condition is when the desired condition is not being met and short-term vegetation objectives are not being achieved to move the rangeland toward the desired condition or trend.

rangeland Lands on which the native vegetation is predominately grasses, grass-like plants, forbs, or shrubs suitable for grazing or browsing usage. Includes lands revegetated naturally or artificially to provide a forage cover that is managed like native vegetation.

rangeland health The degree to which the integrity of the soil and the ecological processes of rangeland ecosystems are sustained.

ranger district Administrative subdivision of a national forest supervised by a district ranger who reports to a forest supervisor.

reclamation Returning disturbed lands to a form and productivity that will be ecologically balanced, often in conformity with a predetermined reclamation plan.

reconstruction Construction activities performed on an existing facility. Reconstruction includes those activities that alter the facility from its originally constructed or subsequently reconstructed condition.

recontouring Obliteration of a road or trail by means of decompaction, reestablishment of sub-surface flow, debris and rock placements, treatments to gullies and to their connectivity to stream systems, vegetation plantings, seeding, mulching, reestablishing original contours or removal of drainage structures.

record of decision (ROD) A document separate from but associated with an environmental impact statement that publicly and officially discloses the responsible official's decision on the proposed action.

recovery plan Identifies, justifies, and schedules the research and management actions necessary to reverse the decline of a species and ensure its long-term survival.

recreation carrying capacity — The level of recreation use beyond which impacts exceed social or biological levels specified by evaluative standards.

recreation information management (RIM) — The Forest Service system for recording recreation facility condition and use. Technically refers to a database system that has been replaced by one called INFRASTRUCTURE.

recreation opportunity — Availability of a real choice for a user to participate in a preferred activity within a preferred setting in order to realize desired experiences.

recreational opportunity spectrum (ROS) — A framework for stratifying and defining classes of outdoor recreation environments, activities, and experience opportunities. The settings, activities, and opportunities for obtaining experiences are arranged along a continuum or spectrum divided into seven classes: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural, roaded modified, rural and urban.

primitive — Area that is characterized by an essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free of evidence of human-induced restrictions and controls. Motorized use within the area is not permitted.

semi-primitive non-motorized — Area is characterized by a predominantly natural or natural-appearing environment of moderate to large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but would be subtle. Motorized recreation is not permitted, but local roads used for other resource management activities may be present on a limited basis. Use of such roads is restricted to minimize impacts on recreational experience opportunities.

semi-primitive motorized — Area is characterized by a predominantly natural or natural-appearing environment of moderate to large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but would be subtle. Motorized use of local primitive or collector roads with predominantly natural surfaces and trails suitable for motor bikes is permitted.

roaded natural — Area is characterized by predominantly natural-appearing environments with moderate evidence of the sights and sounds of people. Such evidence usually harmonizes with the natural environment. Interaction between users may be moderate to high, with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is allowed and incorporated into construction standards and design of facilities.

roaded modified — Area is characterized by substantially modified environments except for campsites. Roads, landings, slash and debris may be strongly dominant from within yet remain subordinate from distant sensitive roads and highways. Interaction between users and evidence of others may be moderate on roads, but there is little evidence of others or interaction at camp sites. The area is managed in such a way that few on-site controls may be present except for gated roads. Conventional motorized use is allowed and incorporated into construction standards and design of facilities.

rural — Area is characterized by a natural environment that has been substantially modified by development of structures, vegetative manipulation or pastoral agriculture development. Resource modification and utilization practices may be used to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities often are provided for special activities. Moderate user densities are present away from developed sites. Facilities for intensified motorized use and parking are available.

urban — Area is characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Renewable resource modification and utilization practices are often used to enhance specific recreational activities. Vegetation cover often is exotic and manicured. Sights and sounds of humans are predominant on the site. Large number of users can be expected both on the site and in nearby areas. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to carry people throughout the site.

recreation residence Cabins on National Forest System land that normally were established in tracts and built for recreation purposes with agency approval and supervision. These cabins are authorized by special-use permit and are not the primary residences of the owners.

recreation visitor day (RVD) Twelve visit hours, which may be aggregated continuously, intermittently, or simultaneously by one or more persons. Recreation visitor days are used to measure recreational production or output capacity.

reforestation The reestablishment of forest cover either naturally (by natural seeding, coppice, or root suckers) or artificially (by direct seeding or planting). Reforestation usually maintains the same forest type and is done promptly after the previous stand or forest was removed (synonymous with *regeneration*).

regeneration (reproduction) method A cutting method by which a new age class is created. The major methods are clearcutting, seed tree, shelterwood, selection, and coppice (also see *harvesting method*).

even-aged methods Methods to regenerate a stand with a single age class.

coppice A method of regenerating a stand in which all trees in the previous stand are cut and the majority of regeneration is from sprouts or root suckers.

clearcutting A method of regenerating an even-aged stand in which a new age class develops in a fully exposed microclimate after removal, in a single cutting, of all trees in the previous stand. Regeneration is from natural seedlings, direct seeding, plant seedlings, and/or advance reproduction. Cutting may be done in groups or patches (group or patch clearcutting), or in strips (strip clearcutting). In the clearcutting system, the management unit or stand in which regeneration, growth and yield are regulated consists of the individual clearcut stand (see *group selection*). When the primary source of regeneration is advance reproduction, the preferred term is *overstory removal*.

seed tree An even-aged regeneration method in which the new age class develops from seeds that germinate in fully exposed microenvironments after removal of all previous stand except a small number of trees left to provide seed. Seed trees are moved after regeneration is established.

shelterwood — A method of regenerating an even-aged stand in which a new age class develops beneath the moderated microenvironment provided by the residual trees. The sequence of treatments can include three distinct types of cuttings: (1) an optional preparatory cut to enhance conditions for seed production; (2) an establishment cut to prepare the seed bed and to create a new age class; and (3) a removal cut to release established regeneration from competition with overwood. Cutting may be done uniformly throughout the stand (uniform shelterwood), in groups or patches (group shelterwood), or in strips (strip shelterwood).

two-aged methods — Methods designed to maintain and regenerate a stand with two age classes. In each case the resulting stand may be two-aged or tend toward an uneven-aged condition as a consequence of both an extended period of regeneration establishment and the retention of reserve trees that may represent one or more age classes.

uneven-aged (selection) methods — Methods of regenerating a forest stand, and maintaining an uneven-aged structure, by removing some trees in all size classes either singly, in small groups, or strips.

group selection — A method of regenerating uneven-aged stands in which trees are removed, and new age classes are established, in small groups. The maximum width of groups is approximately twice the height of the mature trees, with small openings providing microenvironments suitable for tolerant regeneration and the larger openings providing conditions suitable for more intolerant regeneration. In the group selection system, the management unit or stand in which regeneration, growth, and yield are regulated consists of a landscape containing an aggregation of groups. See also *clearcutting*.

single tree selection — A method of creating new age classes in uneven-aged stands in which individual trees of all size classes are removed more-or-less uniformly throughout the stand to achieve desired stand structural characteristics.

Region 2 — See *Rocky Mountain Region.*

rehabilitation — Actions taken to restore or reclaim site productivity, water quality or other values.

research natural area (RNA) Formally designated tracts of land where natural processes are allowed to continue and where natural features are preserved for education and research. These conditions are ordinarily achieved by allowing natural physical and biological processes to prevail without human intervention. However, under unusual circumstances, deliberate manipulation may be used to maintain the unique feature that the RNA was established to protect.

responsible official The Forest Service employee who has the delegated authority to make a specific decision.

restoration Holistic actions taken to modify an ecosystem to achieve desired, healthy, and functioning conditions and processes. Generally refers to the process of enabling the system to resume its resiliency to disturbance.

Revegetation The reestablishment and development of plant cover. This may take place naturally through the reproductive processes of the existing flora or artificially through the direct action of reforestation or reseeding.

Right-of-way Land authorized to be used or occupied for the construction, operation, maintenance and termination of a project or facility passing over, upon, under or through such land.

Riparian Refers to land bordering a stream, lake or tidewater, and generally implying a particular type of habitat physiognomy often characterized by an overstory of trees or other large woody plants with a complex understory of other woody and/or herbaceous species.

Riparian area Ecological units with distinctive vegetation, landform, soil and water regimes consisting of the aquatic ecosystem and wet-to-moist areas located between aquatic ecosystems and adjacent terrestrial ecosystems. They include floodplains and wetlands. Riparian ecosystems are distinguished by soil characteristics and distinctive existing or potential vegetation communities that are adapted to soils with consistently high levels of moisture.

Riparian community Repeating, classified, defined and recognizable assemblages of plant or animal communities associated with riparian areas.

Riparian ecosystem A transition between the aquatic ecosystem and the adjacent upland terrestrial ecosystem. It is identified by soil characteristics and by distinctive vegetation communities that require free or unbounded water.

Road A facility for purposes of travel by vehicles greater than 50 inches in width. It does not include trails used by motor vehicles that are operated and maintained under the trail vehicle classification.

road density Road density refers to the miles of road per square mile. There are different road densities depending on what road types are being considered. These densities include:

forest development road density — The miles of forest development roads per square mile. This is the road density of the road system managed by the Forest Service for resource management.

open road density — The miles of forest development roads and other private and public roads and highways open for public travel.

wheel-track density — The miles of established wheel tracks per square mile. Wheel tracks are not managed as part of the forest development road system and are formed by repeated travel off system roads by users.

roadless area An area in a national forest or national grassland that (1) is larger than 5,000 acres or, if smaller, contiguous to a designated wilderness or primitive area, or lies east of the 100th Meridian and therefore under the jurisdiction of the Eastern Wilderness Act, and (2) contains no roads and 3) has been inventoried by the Forest Service for possible inclusion in the Wilderness Preservation System.

road maintenance The upkeep of the entire forest development transportation facility including surface and shoulders, parking and side areas, structures and such traffic control devices as are necessary for its safe and efficient utilization. Road maintenance is classified in terms of the following levels:

maintenance level 1 — Assigned to intermittent service roads during the time they are closed to vehicular traffic. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities.

maintenance level 2 — Assigned to roads open for public or permitted use by high clearance vehicles. Passenger car traffic is not a consideration.

maintenance level 3 — Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities.

maintenance level 4 — Assigned to roads that provide a moderate degree of user comfort and convenience at moderate travel speeds. Some roads may be paved and/or dust-abated.

maintenance level 5 — Assigned to roads that provide a high degree of user comfort and convenience. These roads are normally paved facilities.

roadless area — See *road density.*

roaded modified — See *recreational opportunity spectrum.*

roaded natural — See *recreational opportunity spectrum.*

Rocky Mountain Region — The Forest Service organizational unit consisting of Colorado, Wyoming, and parts of South Dakota, Nebraska and Kansas. Also known as Region 2.

rotation — In even-aged systems, the period between regeneration establishment and final cutting. See *regeneration methods.*

salable minerals — Salable minerals include common varieties of sand, stone, gravel, pumice, pumicite, cinders and clay. In general, these minerals are widespread and relatively low in value. They are generally used for construction materials and for road-building purposes.

salvage sale — A salvage sale is a timber sale where the primary reason for entry is that most of the trees are insect-infested or are dying or damaged, or the trees are dead standing or down, and they can still be useful as logs, firewood, or other wood products. Associated healthy trees in the stand can be removed to improve the whole stand, if it is efficient and desirable, in order to leave the stand in a healthier condition.

scoping process — An early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to the proposed action. Scoping requires examining a proposed action and its possible effects; establishing the depth of environmental analysis needed; determining analysis procedures, data needed, and task assignments. During the scoping period, the public is encouraged to participate and submit comments on proposed projects.

scenic integrity — State of naturalness, or conversely, the state of disturbance created by human activities or alteration. Integrity is stated in degrees of deviation from the existing landscape character. The degrees of deviation are used to describe the existing scenic integrity, proposed scenic integrity levels, and scenic integrity objectives.

seed tree See *regeneration methods*.

sensitive species Those plant and animal species identified by regional foresters for which population viability is a concern, as evidenced by: (a) significant current or predicted downward trends in population numbers or density, or (b) significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution. (For a list of Region 2 sensitive species that are known or thought to occur on the White River National Forest, see Appendix E of the Revised Forest Plan).

shelterwood See *regeneration methods*.

significant cave A cave located on Federal lands that has been determined to meet the criteria in 36 CFR 290.3(c) or (d) and has been designated in accordance with 36 CFR 290.3(e). A cave considered significant may contain biotic, cultural, mineralogical, paleontologic, geologic, hydrologic, or other resources that have important values for scientific, educational or recreational purposes. Any cave located within a special management area, designated wholly or in part due to cave resources therein, shall also be determined significant. This could include special areas, research natural areas, or other areas of special interest.

silviculture The art and science of controlling the establishment, growth, health, and quality of forests and woodlands to meet the diverse needs and values of landowners and society on a sustainable basis.

silviculture system A planned series of treatments for tending, harvesting, and re-establishing a stand. The system name is based on the number of age classes (see *even-aged, two-aged, uneven-aged*), and or the regeneration method used (see *clearcutting, seed tree shelterwood, selection,* and *coppice*).

single tree selection See *regeneration methods*.

single unit management A management strategy designed to achieve consistency in any Wilderness that extends onto more than one national forest. It requires agreement on a lead forest and on processes for achieving consistent policies and coordination and capturing management efficiencies.

sinkhole A funnel-shaped vertical hole the sides of which are often loose dirt.

site The classification of land based on its climate, physiographic (physical geography), edaphic (soil), and biotic factors that determine its suitability and productivity for particular species and silvicultural alternatives.

size class Tree size recognized by distinct ranges, usually of diameter or height.

ski area A site and attendant facilities expressly developed to accommodate alpine or Nordic skiing and from which the preponderance of revenue is generated by the sale of lift tickets and fees for ski rental, skiing instruction and trail passes, or for the use of permittee-maintained ski trails. A ski area also may include ancillary facilities directly related to the operation and support of skiing activities. Operation of Nordic and alpine ski areas for up to 40 years and encompassing such acreage as the forest officer determines sufficient and appropriate is authorized by the National Ski Area Permit Act of 1986.

skiers at one time (SAOT) The daily capacity of a ski-based resort.

snag A standing dead tree or standing portion from which at least the leaves and smaller branches have fallen. Often called a stub if it is less than 20 feet tall.

snowshoe hare habitat See *lynx foraging habitat* under *lynx habitat.*

social analysis An analysis of the social (as distinct from the economic and environmental) effects of a given plan or proposal for action. Social analysis includes identification and evaluation of all pertinent desirable and undesirable consequences to all segments of society, stated in some comparable quantitative terms, such as persons or percent of population in each affected social segment. It also includes a subjective analysis of social factors not expressible in quantitative terms.

soil compaction A physical change in soil properties that results in a decrease in porosity and an increase in soil-bulk density and strength.

soil erosion The detachment and movement of soil from the land surface by water or wind. Soil erosion and sediment are not the same.

soil productivity The inherent capacity of a soil to support the growth of specified plants, plant communities or a sequence of plant communities. Soil productivity may be expressed in terms of volume or weight/unit area/year, percent plant cover or other measures of biomass accumulation.

sovereignty For Indian tribes that have federal recognition, this is the inherent governmental power from which all specific political powers are derived. Indian governmental powers, with some exceptions, are not powers granted by Congress, but are inherent powers of a limited sovereignty that have never been extinguished. A tribe retains the inherent right to self-government and no state may impose its laws on a reservation.

special-use permit See *permit.*

species A singular or plural term for a population or series of populations of organisms that are capable of interbreeding freely with each other but not with members of other species. Includes a number of cases:

desired non-native FSM 2620.1-1 and 36 CFR 219.19 direct the Forest Service to manage "habitats for all existing native and *desired non-native* plants, fish, and wildlife species in order to maintain at least viable populations of such species." Within research natural areas (RNAs)and wilderness (both designated and recommended), management actions are focused on sustaining the natural process within the range of historic variability. Generally, indigenous species are preferred within wilderness and RNAs and there are no "desired non-native" plants, fish, and wildlife species in these areas. In other management areas, it may be appropriate to manage for "desired non-natives" based on habitat goals and objectives for wildlife and fish, including endangered, threatened, and sensitive animal and plant species.

endemic A species originating in, or belonging to, a particular region.

exotic A species introduced accidentally or intentionally to a region beyond its natural range.

subspecies A subdivision of a species. A population or series of populations occupying a discrete range and differing genetically from other subspecies of the same species.

species diversity A measurement that relates the density of individuals of a species in a habitat to the number of different species present in the habitat. The number of different kinds of species in a given habitat.

species-level approach An approach to maintaining biodiversity that is directed toward particular habitats or individual species that might fall through the ecosystem-level approach. These habitats may be critical in some way and the species threatened or endangered.

special interest area Areas managed with emphasis on protecting or enhancing unusual characteristics. These areas are managed to maintain their special interest values.

speleothem An all-inclusive term used to describe deposits in caves of calcium, aragonite, etc.

stablilization The process of arresting the deterioration of a damaged heritage resource in order to prevent further damage from occurring. Stabilization may include reconstructing portions of the heritage resource.

stand A contiguous group of trees sufficiently uniform in age class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit. See also *regeneration method*.

standard In Region 2, a standard is defined as a mandatory requirement. Mandatory adherence to standards is the most important feature distinguishing standards from desired condition statements.

structural stages Any of several developmental stages of tree stands described in terms of tree age and the extent of canopy closure they create. They include:

structural stage 1 ***Grass/forb.*** Forest openings created by disturbances, such as fire or windthrow. Meadows and prairies are also modeled as grass/forb although succession will not move beyond this stage.

structural stage 2 ***Shrubs/seedlings.*** Developmental stage dominated by tree seedlings (less than one-inch DBH) and shrub species.

structural stage 3 ***Sapling/pole.*** Developmental stage dominated by young trees on to seven inches diameter breast height, 10 to 50 feet tall and usually less than 50 years old. This stage is subdivided into three canopy closure classes: (a) less than 40 percent; (b) 40 to 70 percent; and (c) greater than 70 percent.

structural stage 4 ***Mature.*** Consists of trees larger and older than stage 3. Also classified by the same canopy closure categories as stage 3.

structural stage 5 ***Old growth.*** This structural stage is characterized by trees at least 200 years old for spruce-fir or Douglas fir; 150 years old for lodgepole pine; or 100 years old for aspen.

subnivean The space between the ground and snow, which can be an important habitat for a variety of wildlife species.

succession The progress of vegetational development whereby an area becomes successively occupied by different plant communities.

successional stages (seral stages) The relatively transitory communities that replace one another during development toward a potential natural community.

suitable forest lands Land to be managed for timber production on a regulated basis.

sustainability A concept that reflects the capacity of a dynamic ecosystem to maintain its composition, function, and structure over time thus maintaining the productivity of the land and a diversity of plants and animals.

sustained yield The yield that a forest can produce continuously at a given intensity of management. The achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources on National Forest System lands without impairment of the productivity of the land.

temporary road A road associated with a timber sale contract, fire activity, or other short-term access need, and not intended to be part of the forest development transportation system and not necessary for future resource management. When intended use is ended, these roads are treated to eliminate motor vehicle traffic and permit the reestablishment of vegetation to minimize erosion.

thermal cover Cover used by animals to ameliorate the effects of weather. Optimally, thermal cover is provided by a stand of coniferous trees, 30 to 60 acres in size, at least 40 feet tall, with a canopy cover of at least 70 percent.

threatened species Any species likely to become endangered within the foreseeable future throughout all or a significant portion of its range and that has been designated in the Federal Register by the Secretary of the Interior as such.

tiering The elimination of repetitive discussions of the same issue by incorporating by reference the general discussion in an environmental impact statement of broader scope (e.g., a project environmental assessment could be tiered to the forest plan EIS).

timber A general term applied to tree stands that provide a wood-fiber product.

timber base The lands within a national forest suitable for timber production.

timber production The purposeful growing, tending, harvesting and regeneration of regulated crops of trees to be cut into logs, bolts or other round sections for industrial or consumer use, except fuelwood.

traditional The beliefs, acts, practices, objects, or sites for the perpetuation of an Indian culture originating from or historically located at a specific area. This may include traditional cultural practices that are so interrelated with spiritual activities tat they cannot be separated from the land location.

traffic service level Used to describe a road's significant traffic characteristics and operating conditions:

service level A — Traffic is free-flowing with adequate parking facilities. Accommodates mixed traffic including all vehicles normally found on public roads.

service level B — Traffic may be congested during heavy flow periods such as during peak commercial or recreation activities. Accommodates mixed traffic including all vehicles normally found on public roads.

service level C — Traffic may be interrupted by limited passing facilities or slowed by the road condition. All vehicle types are accommodated with some controls.

service level D — Traffic flow is slow or may be blocked by an activity. Two way traffic is difficult and may require backing to pass. The road is designed for a single use, not for mixed traffic. Some vehicles may not be able to negotiate**.**

transition plan A plan that sets forth the steps necessary to complete structural changes to facilities to achieve program accessibility as required by Section 504 of the Rehabilitation Act of 1973 and Forest Service regulation 7 CFR Part 15e.

travel management The integrated planning of and providing for appropriate movement of people and products to and through National Forest System lands.

travel management strategy A designation of acceptable modes, methods and time periods for travel over a road, trail, or area.

travel order A travel management decision issued by the Regional Forester or Forest Supervisor to restrict, prohibit or allow the use of a described area or transportation facility over which the Forest Service has jurisdiction.

travelway A way for passage of vehicles, conveyances, persons or domestic livestock (stock driveways), developed by construction or use: may be referred to as a road or a trail.

trail A linear travelway for purposes of travel by vehicles 50 inches in width or less, pack animals or people.

trailhead The parking, signing, or other facilities available at the beginning of a trail.

trail vehicle Vehicles designed for trail use, such as bicycles, snowmobiles, trail motorcycles, and all-terrain vehicles (ATVs).

treaty A legally binding agreement between two or more sovereign governments. With respect to American Indian tribes, a treaty is a document negotiated and concluded by a representative of the president of the U.S. and ratified by two-thirds majority vote of the U.S. Senate.

treaty boundaries A modern term that applies to lands described within the treaty document, usually outlining an area of land that was ceded to the U.S..

treaty rights Tribal rights or interests, reserved in treaties, by Indian tribes for the use and benefit of their members. Such uses are described in the respective treaty document. Only Congress may abolish or modify treaties or treaty rights.

tribal self-governance First stated in modern terms by former President Nixon in 1970 as "self determination," this refers to the ability of Indian tribal governments to make decisions that affect either the general tribal population or tribal assets—a modern U.S. Indian policy that reinstates the independent decision-making process of Indian tribal entities that had existed before European contact. In 1982, Congress passed new authorities whereby Indian tribes could sign a compact directly with the Secretary of the Interior without involving the Bureau of Indian Affairs in the delivery of federal services. Using appropriations formerly sent through the Bureau of Indian Affairs, Indian tribes can now prioritize their own expenditures of federal funds.

tribe Term used to designate a federally recognized group of American Indians and their governing body. Tribes may comprise more than one band.

trust responsibility This term has never been defined by the U.S. Congress, any President, or any Cabinet official. Generally, it is a set of principles and concepts outlining the responsibilities of the U.S. government to act as the trustee of Indian people and Indian-owned assets. The U.S. government, through the President, has certain responsibilities to protect Indian property and rights, Indian lands and resources. The trust responsibility may involve a fiduciary obligation in which the President, through the Secretary of the Interior, acts as the trustee of Indian assets. Fulfilling or redeeming a trust responsibility, can best be reflected or demonstrated as a matter of action—a stream that was protected, a site that was maintained intact, a property right that has been left unaffected by a federal action. The writing of an environmental document is not an example of fulfillment of a trust duty.

trustee One that holds legal title to property to administer it for the benefit of another. The Federal Government's trust responsibility arises from promises made in treaties, executive orders and agreements. Certain lands and resources of Indians are entrusted to the U.S. government through those treaties and agreements.

two-aged selection See *regeneration method.*

unclassified road Roads on National Forest System lands that are not managed as part of the forest transportation system, such as unplanned roads, abandoned travelways, and off-road vehicle tracks that have not been designated and managed as a trail; and those roads that were once under permit or other authorization and were not decommissioned upon the termination of the authorized. See also *non-system road and way.*

understory The lowest layer of vegetation in a forest or shrub community composed of grass, forbs, shrubs and trees less than 10 feet tall. Vegetation growing under the tree canopy.

undesirable species (1) Species that conflict with or do not contribute to the management objectives; (2) Species that are not readily eaten by animals.

uneven-aged management The application of a combination of actions needed to simultaneously maintain continuous high-forest cover, recurring regeneration of desirable species, and the orderly growth and development of trees through a range of diameter or age classes.

uneven-aged selection methods See *regeneration methods*.

uneven-aged stand A stand with 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*.

unsuitable forest land (not suited) — Forest land not managed for timber production because: (a) Congress, the Secretary, or the Chief has withdrawn it; (b) it is not producing or capable of producing crops of industrial wood; (c) technology is not available to prevent irreversible damage to soil productivity, or watershed conditions; (d) there is no reasonable assurance based on existing technology and knowledge, that it is possible to restock lands within five years after final harvest, as reflected in current research and experience; (e) there is, at present, a lack of adequate information about responses to timber management activities; or (f) timber management is inconsistent with or not cost-efficient in meeting the management requirements and multiple-use objectives specified in the forest plan.

urban — See *recreational opportunity spectrum.*

usufructuary — Having the legal right of using and enjoying the fruits or profits of something belonging to another. A land-use right where title to the land belongs to another person. A hunting right on National Forest System lands is an example of a usufructuary right.

utility corridor — A linear strip of land defined for the present or future location of transportation or utility facilities within its boundaries

utilization level — The portion of the current year's forage production by weight consumed or trampled by livestock. Utilization levels are usually expressed as a percentage.

vegetation management — Any activities undertaken to modify the existing condition of the vegetation.

viable population — A group of individuals of a particular species that produces enough offspring for long-term persistence and adaptation of the species or population in a given place. 36 CFR 219.19 defines a viable population for planning purposes as one that has the estimated numbers and distribution of reproductive individuals to ensure that a continued viable population is well distributed in the planning area. A planning area is further defined by 36 CFR 219.3 as the "area of the National Forest System covered by a regional guide or forest plan." Direction from the Forest Service Manual (FSM 2670.5) defines a viable population as one that has the estimated numbers and distribution of reproductive individuals to ensure the continued existence of the species throughout its existing range (or range required to meet recovery for listed species) within the planning area.

viewshed Total visible area from a single observer's position or the total visible area from multiple observer positions. Viewsheds are accumulated seen areas from highways, trails, campgrounds, towns, cities, or other view locations. Examples are corridors, feature or basin viewsheds.

water influence zone The land next to water bodies where vegetation plays a major role in sustaining long-term integrity of aquatic systems. It includes the geomorphic floodplain, riparian ecosystem, and inner gorge. Its minimum horizontal width (from top of each bank) is 100 feet or the mean height of mature dominant late-seral vegetation, whichever is most.

watershed An area of land that collects and discharges water into a single main stream through a series of smaller tributaries. The area of land, bounded by a divide, that drains water, sediment and dissolved materials to a common outlet at some point along a stream channel, or to a lake, reservoir or other body of water. Also called drainage basin or catchment.

watershed level Divides watersheds into a series of progressively smaller nested levels, with the first level being the largest land area relative to higher-numbered levels in that watershed. Each level is identified systematically by a hydrologic unit code number, or HUC. A first-level watershed can be divided into a number of second level watersheds; each second-level watershed may be further subdivided into third-level watersheds, and so forth.

water yield (1) The measured output of surface water, usually measured in acre-feet; (2) The runoff from a watershed, including groundwater outflow.

way Travelways existing on the national forest but not inventoried as part of the forest development transportation system. These routes vary in width, length and structure. Their origin is typically from off-road public travel but may also be abandoned routes from past management activities such as mining, oil and gas exploration, grazing and timber harvesting. See also *non-system road and unclassified road.*

wheel-track density See *road density.*

wild, scenic and recreational rivers Rivers or sections of rivers designated by Congressional actions under the 1968 Wild and Scenic Rivers Act as wild, scenic or recreational by an act of the legislature of the state or states through which they flow. See also *National Wild and Scenic Rivers System.* Rivers may be classified and administered under one or more of the following categories:

wild river — River or section of river that is free of impoundments with watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

scenic river — River or section of river that is free of impoundments, with watersheds still largely undeveloped, but accessible in places by roads.

recreational river — River or section of river that is readily accessible by road or railroad that may have some development along its shoreline and that may have undergone some impoundment or diversion in the past.

wilderness An area of undeveloped federal land that Congress designated as wilderness and that retains its primeval character and influence, without permanent improvements or human habitation, and is protected and managed to preserve its natural conditions. An area that 1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; 2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; 3) comprises at least 5,000 acres of land or is of sufficient size to make practicable its preservation and use in an unimpaired condition; and 4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

wilderness implementation schedule A document outlining how the wilderness management direction in a forest plan will be carried out. A three-to-five year schedule of actions that are needed to bring existing conditions into compliance with forest plan standards and guidelines.

wildfire Any wildland fire not designated and managed as a prescribed fire within an approved prescription. All wildfires will be given an appropriate suppression action.

wildlife Collectively, non-domesticated vertebrate animals, except fishes. The natural community of animals and plants.

windthrow The act of trees being uprooted by wind. The result is a *blowdown.*