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Department of
Agriculture

Forest Service

**Pacific
Northwest
Region**

1989

Land and Resource Management Plan

Part 1

Ochoco National Forest

Caring for the Land...

Land and Resource Management Plan

Preface

Ochoco National Forest

August1989

The Ochoco National Forest Land and Resource Management Plan (Forest Plan) was prepared in compliance with 36 CFR 219, based on the Forest and Rangeland Renewable Resources Planning Act (RPA) as amended by the National Forest Management Act of 1976, and in compliance with 40 CFR 1500 based on the National Environmental Policy Act of 1969.

Because the Plan is a major Federal action significantly affecting the quality of the human environment, an environmental impact statement (EIS) was prepared. The Plan provides direction for implementing the preferred alternative selected in the EIS.

If any particular provision of this Forest Plan, or the application of the action to any person or circumstance, is found to be invalid, the remainder of the Forest Plan and the application of that provision to other persons or circumstances shall not be affected.

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OCHOCO NATIONAL FOREST PLAN

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Chapter 1

Forest Plan Introduction

Chapter 1

Forest Plan Introduction

Purpose

The Forest Land and Resource Management Plan guides all natural resource management activities and establishes management standards and guidelines for the Ochoco National Forest. It describes resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management.

Although Crooked River National Grassland is an administrative unit of the Ochoco National Forest, it is addressed in a separate plan. The Grassland has land and resource characteristics, management activities, and parent laws and regulations which are

generally distinct from those of the Ochoco National Forest. This, coupled with public response, led to a separate land and resource management plan for the Grassland.

The decisions of the Regional Forester in approving a Forest Plan may generally be categorized as:

establishment of Forest-wide multiple-use goals and objectives [36 CFR 219.11(b)];

establishment of Forest-wide standards and guidelines to fulfill requirements of the National Forest Management Act (NFMA) applying to future activities [resource integration requirements of 36 CFR 219.13 to 219.26, and the requirements of 36 CFR 219 27];

establishment of management area direction including management area prescriptions and standards and guidelines applying to future management activities in that management area [36 CFR 219.11(c)];

establishment of allowable timber sale quantity and designation of land suitable for timber management [36 CFR 219.16 and 219 14],

nonwilderness multiple-use allocations for those roadless areas that were reviewed under 36 CFR 219.17 and not recommended for wilderness designation and,

monitoring and evaluation requirements [36 CFR 219.11(d)].

The Forest Plan embodies the provisions of NFMA, the implementing regulations, and other guiding documents. Land use determinations, prescriptions, and standards and guidelines are statements of the Plan's management direction. However, the projected outputs, services, and rates of implementation are dependent on the annual budgeting process

This plan will guide Forest Service programs on the Ochoco National Forest beginning in fiscal year 1990 (Oct. 1, 1989). It will ordinarily be revised on a ten-year cycle, but at least every 15 years. The Plan may be amended or revised at any time if the Forest Supervisor determines that conditions in the area covered by the Plan have changed significantly, or if project level environmental analysis demonstrates the need to make a change.

Relationship of the Forest Plan to Other Documents

Relationship to the Environmental Impact Statement and the Record of Decision

This Forest Plan sets forth the preferred alternative for managing the land and resources of the Ochoco National Forest. The Plan results from extensive analysis and considerations addressed in the Environmental Impact Statement (EIS) and the Record of Decision (ROD). The planning process and the analysis procedures used to develop this Plan are described or referred to in the EIS. The EIS also describes other alternatives considered in the planning process.

Specific activities and projects will be planned and implemented to carry out the direction in this Plan. The Forest will perform environmental analysis on these projects and activities. This subsequent environmental analysis will be tiered to the EIS and Plan.

Relationship to the Regional Guide

The Regional Guide for the Pacific Northwest Region, as amended December 8, 1988, provides direction for National Forest Plans. It includes standards and guidelines addressing the major issues and management concerns considered at the Regional level to facilitate Forest planning.

1. National	Resource Planning Act Assessment and Program.
2. Regional	Regional Guide.
3. Forest	National Forest Land and Resource Management Plans (Forest Plans) for National Forest System lands. Tiered to Regional Guide.
4. Project	Site or project specific plans, generally at Ranger District level. Tiered to Forest Plan.

Relationship to Other Plans

This Forest Plan serves as the single land management plan for the Ochoco National Forest. All other land management plans are replaced or superseded by the direction in this plan, or will be made consistent with it; see Chapter 5 for a listing of existing plans that this Forest Plan supersedes.

Management alternatives for the Ochoco National Forest and the Crooked River National Grassland Land and Resource Management Plans are described in the EIS. The Ochoco National Forest retains administrative and management responsibility for both the Forest and Grassland. Required planning, programming, and management activities for both plans will be integrated at the Supervisor's Office level for efficiency in implementation.

PLAN STRUCTURE

The Forest Plan is composed of five chapters, a glossary, and appendices. Chapter 1 provides planning background and a summary of the types of management decisions made. Chapter 2 summarizes the current situation, and the supply and demand of significant market and nonmarket goods and services on the Forest. Chapter 3 shows the Plan's response to the major public issues, management concerns, and resource opportunities identified during the planning process.

Chapter 4 is the heart of the Forest Plan. It sets the management direction for the Forest for the next 10 to 15 years. It presents goals, objectives, and desired future conditions directing resource management on the Forest. Desired future condition sections describe what the Forest should look like after the implementation of the management direction. Chapter 4 also presents prescriptions for each of the 28 management areas, Forest-wide standards and guidelines, and management area standards and guidelines. Forest-wide standards and guidelines state the constraints within which all practices are to be carried out in implementing the Forest Plan.

Chapter 5 explains how management direction will be implemented, how activities will be monitored, and how the plan will be kept current with changing conditions or other findings. The appendices provide detailed, supplemental information needed to explain portions of the Plan. The Glossary, contained in the FEIS, lists and defines technical terms used in the Plan. An index is provided to assist readers in locating subjects of interest.

FOREST DESCRIPTION

Located near the geographic center of Oregon, the Ochoco National Forest consists of 845,498 acres of land. The Forest is subdivided into four Ranger Districts: Big Summit, Paulina, Prineville, and Snow Mountain. The Forest is headquartered in Prineville.

The Forest administers lands in the Maury and Ochoco mountains, southward extensions of the Blue Mountain physiographic province. Most of the Forest is drained by the Crooked and Deschutes Rivers. Part of the north slope of the Ochoco Mountains drains into the John Day River. The Snow Mountain District drains into three systems: the Crooked River, the John Day River, and Malheur and Harney Lakes.

Vegetative types found on the Forest are diverse.

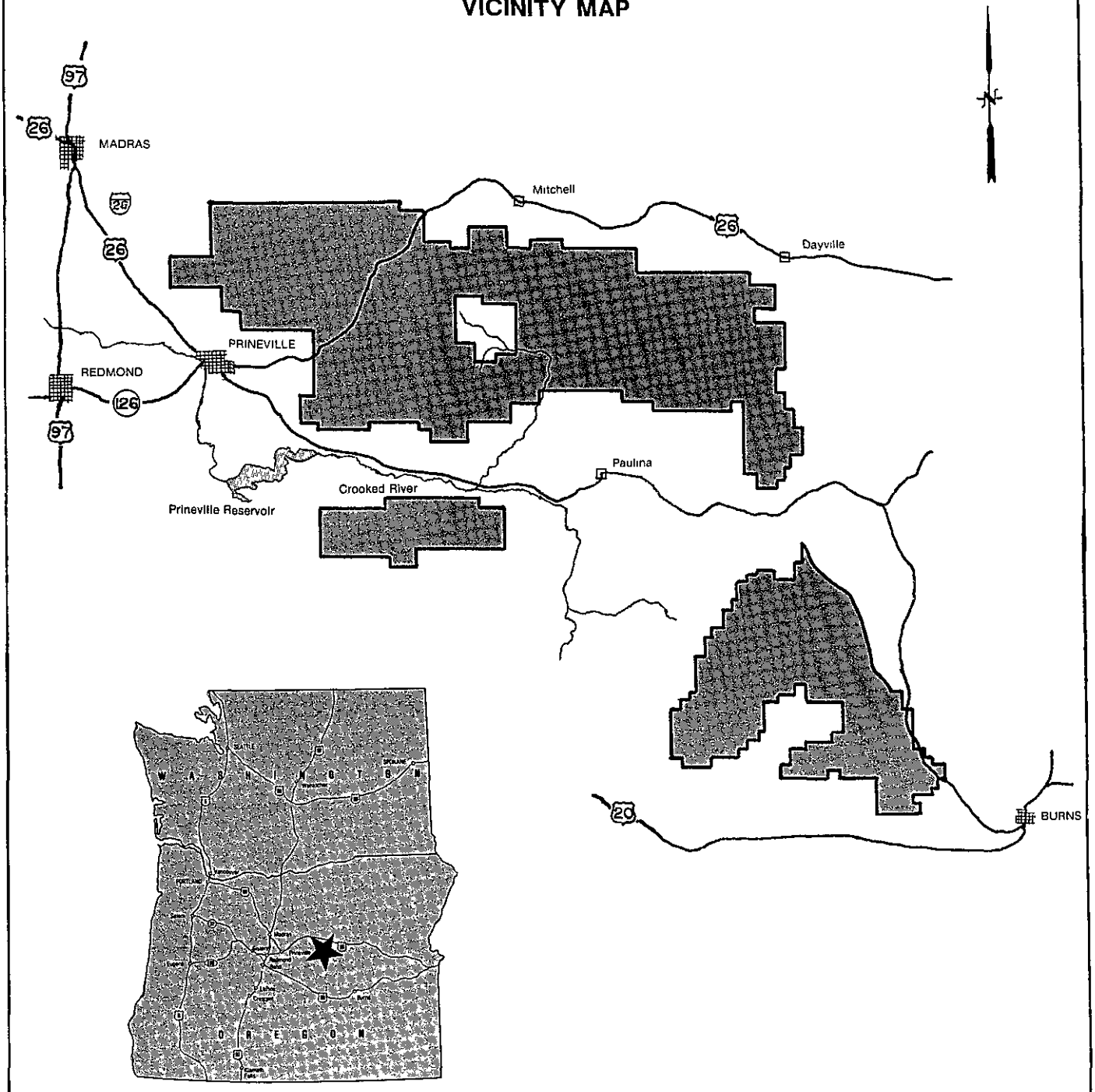
Lower elevations of the Forest where annual precipitation is less than 10 inches per year are vegetated with juniper, sagebrush, and grasses. Higher up, stands of ponderosa pine dominate southern and western aspects and compose the largest single forest type found on the Forest. Mixed conifer stands, made up of Douglas-fir, ponderosa pine, white fir, and western larch, grow at higher elevations on the cooler northern and eastern aspects. Scattered stands of lodgepole pine cover less than one percent of the Forest.

The Forest is managed to produce both commodity and noncommodity resources. Timber produced on the Forest is a major component of the local economy. Summer forage for livestock available on the Forest is important to local ranchers. These commodity resources are managed with consideration for recreation, wildlife, soil, and water. Major recreational pursuits include big game hunting and rockhounding. Both of these attractions draw visitors from well beyond the local area.

Figure 1-1

OCHOCO NATIONAL FOREST

VICINITY MAP



Chapter 2

Summary of the Analysis of the Management Situation

Chapter 2

Summary of the Analysis of the Management Situation

Introduction

This chapter summarizes the supply and demand situation for the key market and nonmarket goods and services associated with the Forest. Included is a summary containing:

resource supply and demand conditions for the Resources Planning Act (RPA) periods,

production levels attainable under both the current management direction (Alternative A) and Forest Plan direction (Alternative I),

and a list of information that would be desirable to have prior to the preparation of the next Ochoco National Forest Land and Resource Management Plan.

Resource and Economic Potentials

Benchmarks were developed to help define the resource and economic potentials of the Forest, and the range of outputs from which alternatives could be developed.

Most of the benchmarks were developed to explore the potential of the Forest to produce the maximum of a particular issue-related resource; e.g. timber, range, recreation, or big game. Two benchmarks were developed to determine the mix of resources that produced the maximum present net value (PNV) of the Forest: one using market values only and the other using market and assigned values. Market priced outputs include timber, minerals, livestock, grazing, and developed recreation. Outputs with assigned values are dispersed recreation, including wilderness, and fish and wildlife use. (See Appendix B of the FEIS for dollar values.)

One benchmark estimates the minimum costs to retain the Forest in Federal ownership with no outputs of goods and services other than those that would occur incidentally, such as dispersed recreation.

While benchmarks must be realistic, they could not serve as alternatives because they do not address the issues, concerns, or opportunities (ICO's). Rather, they were used to define the minimum and maximum parameters within which alternatives might be developed.

All benchmarks and alternatives were required to meet management requirements (Regional Direction 1920, 11/10/83). The major management requirements (MR's) addressed are:

size and dispersion of timber harvest units,

soil and water conservation;

riparian areas; and

minimum habitat requirements for old growth dependent species and primary cavity nesters. A more detailed discussion of benchmarks and opportunity costs for MR's is in the FEIS Appendix B and Appendix F.

Resource Description and Supply/Demand Projections For Selected Resources

Introduction

Following is a brief discussion of the current situation of each of the major Forest resources (see FEIS Chapter 3 for more detailed discussions), and the anticipated supply and demand for goods and services associated with these resources. The supply figures were developed from benchmarks and independent estimates. Demand figures were estimated independently and the source is included in Table 2-1. Economists consider "demand" to be a schedule of quantities of an output that users are willing to consume within a price range, at a given time, and under certain conditions of sale. The term "demand," as used in this section, identifies a certain level of consumption at a particular point in time. Although demand estimates are projected over several decades, long-term projections are expected to be less accurate than those for the near future.

Forage

Current Situation:

The Forest provides summer forage for approximately 11,300 cattle and 2,500 sheep annually (58,000 AUM's), involving 55 permittees in 4 counties. These numbers have been relatively stable in the recent past, and adjustments in the numbers of livestock or season of use have not been common.

Supply:

While there appears to be adequate forage to increase the number of AUM's on the Forest, the main limiting factor is distribution of forage use in order to keep some places (primarily riparian areas) from being over-grazed before other areas receive use. Water developments can draw livestock to other areas thereby making forage available that otherwise may not get used. Increasing the grazing to the maximum potential shown in Table 2-1 would require a substantial number of water developments. The construction of 290 water developments could increase the grazing capacity of the Forest by an estimated 9,900 AUM's. Due to potential conflicts with riparian management and other resources, it is not expected that this increase will be realized in the near future.

Demand:

Ranchers regard the Forest as desirable summer range because of the high quality of forage and availability of water. As a result, allotments are usually fully occupied. When an allotment becomes available, it is usually filled, indicating a constant demand for available forage. In addition, there is interest in increasing livestock numbers and the season of use.

The demand figures in Table 2-1 are from the Forest Service 1980 RPA Program, and reflect the Forest's apportioned share of the national demand for forage.

Fuelwood

Current Situation:

Local residents point out that the quality of firewood continues to lower, and travel distances increase. The Forest has sold an average of 10,000 cords of personal use fuelwood in the past 5 years.

Supply:

Availability of firewood on the Forest is proportional to the volume of the timber harvest: increased timber harvests increases residues available for firewood. As shown in Table 2-1, the maximum supply of firewood that could be produced in the first decade is 15,000 cords annually. Wind-thrown trees and juniper make up a small portion of the total supply.

Firewood is also available from other sources, including other nearby National Forests, BLM lands, private lands, and sawmills.

Demand:

Numerous factors influence demand for firewood from the Forest, including accessibility, size and species, availability from other sources, and the price of other forms of energy. These factors make demand difficult to estimate. The total demand for firewood used in homes in Burns, Hines, Redmond, Prineville, Madras, Mitchell, Dayville, and adjacent unincorporated areas is estimated to be 37,000 cords per year.

The proportion of the 37,000 cords that would come from the Forest is estimated to be approximately 18,000 cords annually. The total demand cannot be met by the Forest alone.

Minerals and Energy

Current Situation:

Approximately 140,000 acres of Forest land are under lease for oil and gas. There are no geothermal leases on the Forest. About 8,000 acres of the Forest have been staked as mining claims. There are 350 mineral material sources (quarries or pits) in operation.

Supply:

On the Forest, 807,521 acres are available for oil, gas or geothermal leasing. All of this area is classified as being favorable for the discovery of thermal water of sufficient temperature for direct heat application. Of the acres available, 718,370 acres are classified as being tentatively valuable for the discovery of oil and gas and 804,510 acres are available for the location of mining claims. Of this amount, 81,460 acres are classified as having moderate or high potential for mercury or gold. Reserves of common variety materials (sand, gravel, etc.) are estimated at over 5 million cubic yards.

Demand:

The demand for oil, gas, gold and mercury is directly related to international production and price. An increase in the price of any of these commodities will result in increased exploration on the Forest, and the discovery of a valuable deposit may result in the production of that commodity. The largest number of acres ever leased for oil and gas on the Forest was 670,000 acres in the early 1980's. There is no known demand for direct heat applications of geothermal energy on the Forest. The demand for mineral materials is generated by the construction, reconstruction and maintenance of roads on and near the Forest. Approximately 850,000 cubic yards of mineral material will be produced on the Forest each decade if historic trends continue.

Old Growth

Current Situation:

Timber harvesting has significantly reduced the amount of old growth on the Forest; about 94,000 acres remain. What remains has a less than optimum distribution for wildlife that rely on old growth habitat. The Forest managed 32,000 acres of old growth for wildlife habitat under the 1979 Forest Plan. Approximately 20,000 acres are dedicated under this Plan. However, only about one third of these acres will exist in old growth at any given time.

Old growth areas are a valuable component of the Forest, providing habitat for over 100 wildlife species. They also provide cover for big game, provide attractive scenery, help provide diversity, and are a tree gene pool source. Twenty-one thousand acres are identified as the minimum amount of old growth needed to maintain viable populations of dependent wildlife species.

Supply:

The Forest Plan would resuce the available old growth to about 55,000 acres in fifty years. This is about ten percent of the total forested lands. See Table 2-8 in the FEIS for more details. This acreage of old growth would continue at this level until the

Plan was changed or a catastrophic event destroyed some of the existing old growth. The planned management strategy of uneven-aged managed and rotation ages that would provide 18-inch DBH trees will provide for stands that could be allowed to grow into an old growth condition in 20 to 50 years. These stands are identified as successional Stage V in Table 2-8 in the FEIS, and it is estimated that there would be about 230,000 acres in this condition in fifty years. The acres in this class would fluctuate from year to year but should never be less 100,000 acres. These stands would also provide additional habitat for some of the species normally found in old growth areas.

Recreation

Current Situation:

The Ochoco National Forest provides a wide range of outdoor recreation opportunities. Gentle terrain, high value timber, and good livestock forage encouraged early commercial use of the Forest and development of an extensive road system. As a result, 89 percent of the lands have been roaded for various management activities. Approximately 11 percent, located mostly on the north slope of the Ochoco Mountains or in isolated tracts of rough terrain elsewhere, currently offer opportunities for semiprimitive recreation use.

The Forest estimates use of 350,000 recreation visitor days (RVD's) annually. Much of the recreation use is tied to the road system. Camping, motorized travel, picnicking, and hunting are estimated to comprise 77 percent of the use. Activities associated with certain streams and the few available lakes are popular.

Current direction emphasizes dispersed rather than developed recreation. There are 767 inventoried dispersed sites. There may be over 400 additional dispersed sites which have not been inventoried. Most have no facilities. There are 38 developed (having facilities) recreation sites with a total capacity of 1902 people at one time (PAOT).

The existing trail system is a remnant of a formerly extensive system which has largely been replaced by roads. The Forest currently maintains 96 miles of nonmotorized summer trails. There are 9 miles of cross-country ski trails and 75 miles of snowmobile trails. Twin Pillars and Round Mountain trails are National Recreation Trails.

Supply:

Developed recreation capacity could be increased to support an additional 925 PAOT. This increase in PAOT's would be accomplished by increasing site capacity of existing sites and the construction of several new sites. As much of the Forest is currently roaded, the dispersed roaded recreation opportunities far exceed the demand

The current inventory of roadless areas on the Forest (not including wilderness) totals 45,893 acres: Lookout Mountain, 16,594 acres; Rock Creek, 9,336 acres; Cottonwood, 9,737 acres; Silver Creek, 3,226 acres, and Green Mountain, 7,000 acres.

Demand:

Overall recreation demand is correlated with the population increase of approximately 1% per year. Demand for recreational vehicle camping, hiking, and interpretation is increasing at a higher rate than many other recreational activities. Hiking demand is highest in the semiprimitive natural setting. The latest information in the State-wide Comprehensive Outdoor Recreation Plan (SCORP) indicates that although more use actually occurs in roaded modified settings, the predominant preference is for primitive and semiprimitive nonmotorized settings.

The demand for roadless recreation expressed in RVD's is shown in Table 2-1. If all of the inventoried roadless areas were managed as semiprimitive nonmotorized (SPNM), the Forest could meet the demand for roadless recreation for 50 years and beyond.

The demand for future management of roadless is summarized as follows:

> Lookout Mountain was the most controversial area. The majority of people who commented

on the Draft Plan favored continued management of the area for nonmotorized recreation, while others wanted a motorized access route to the top.

There was general support for managing Silver Creek, Rock Creek, and Cottonwood as roadless areas.

There was little support for managing Green Mountain for nonmotorized recreation.

Social and Economic

Current Situation:

In Crook and Harney Counties, over 80% of the forested land is in public ownership, most of which is administered by the Forest Service. The surrounding communities are significantly affected both socially and economically by resource management on the Forest. County revenues from the Forest exceed 30 percent of some local counties' total annual receipts. Timber industry and government agency employment accounts for approximately half of the economic base. Livestock grazing on the Forest is vital to some local ranchers and important to the communities' social character. The Forest also provides numerous recreational opportunities.

Supply:

The Forest has the ability to supply more outputs which influence jobs and payment to counties than current levels Higher levels of these outputs (timber and domestic livestock) generally mean less opportunities for leisure activities such as hunting and roadless recreation.

Demand:

The Forest will continue to be relied upon for outputs that affect the social and economic character of the local communities. As the demand for all outputs and opportunities continue to grow, it is unlikely that the Forest will be able to provide for all aspects that influence the social and economic character of the local communities.

Timber

Current Situation:

Timber production from the Forest contributes significantly to the local economy and to the regional timber supply. The level of harvest directly affects income, employment, and county revenues in the Forest's six-county general zone of influence, and particularly in Crook and Harney counties, the Forest's primary zone of influence.

The average annual sale volume between 1979 and 1988 was 137 MMBF for all species, including 109 MMBF of ponderosa pine. The average annual cut, during this period, was 111 MMBF for all species, which included 87 MMBF of ponderosa pine.

Growth and inventory of forest stands is measured in units of cubic foot volume because it is independent of numerous product requirements occurring within a locale, region or the nation as a whole. Board foot volume measurement varies with size of trees and is designed for certain product specifications and current technology. Young stands that have been regenerated cannot be measured in board foot or equivalent units of measurement; attempting to do so would underestimate the biological potential of timber producing lands and make future growth projections impossible. It is Forest Service Policy (FSM 1922.15) to use cubic foot volume as a measurement of long-term sustained yield, as well as regulate the amount of timber to be offered and sold as specified by the allowable timber sale quantity (ASQ), in order to respond to changing technology and product requirements projected for the future (RPA, '85).

Supply:

The maximum volume of timber that could be harvested annually on a sustained yield from the Forest, subject to legal requirements, is 23.3 MMCF - 10 percent higher than the current harvest. The maximum long-run sustained yield is 22.8 MMCF.

Measured in board feet, the maximum potential yield declines to two percent below the present harvest by the fifth decade (2026-2035). This is because

the smaller diameter trees produced in the future will saw into fewer board feet relative to cubic feet than the large diameter trees being harvested now. Due to past rates of harvest, the supply of large diameter ponderosa pine has been declining, resulting in smaller diameter trees and less ponderosa pine being produced in the future.

In the short term, the harvest could be increased by departing from nondeclining even flow. This would result in more timber available in the near future, but less thereafter.

The species mix will likely change in the future. While there is still a substantial volume of ponderosa pine standing on the Forest, future harvests will likely include greater percentages of Douglas-fir, western larch, and white fir than in the past.

Demand:

The Forest does not have the capability to meet local demand for timber as indicated by the installed mill capacity. The installed mill capacity in Crook and Harney counties is 400 MMBF annually. In 1987, the mills processed 280 MMBF - 70% of capacity. In 1982, they processed 87 MMBF, which was 25% of capacity at that time.

The mills are set up primarily to process large diameter ponderosa pine logs, and the greatest demand is for ponderosa pine. The change in tree size and species in the future will require the mills to continue retooling to process this change of materials. Industry is demanding not just that an adequate volume of timber be offered for sale in the future, but that a good share of it be large diameter ponderosa pine.

Quantified demand estimates for timber are available from two sources: the 1980 Resource Planning Act (RPA) Program and State of Oregon 1980 Timber Supply Assessment.

The Forest Service Pacific Northwest Region apportioned the RPA targets to the 19 Forests in the Region. The Ochoco National Forest was assigned a goal of 25 MMCF (150 MMBF) annually, for the years 1986 through 1995. This level of harvest would be maintained into the future. The demand figures are shown in Table 2-1.

In 1980, the Oregon State Forestry Department issued its "Forestry Program for Oregon." Within this report, output levels were assigned to various land owners: state, federal, private, and industrial. The outputs assigned to the Ochoco National Forest are shown in Table 2-1. In summary, the State calls for increasing the harvest on the Forest by over 20 percent in the 1980 to 1990 period.

The maximum supply could meet the state demand for the next 50 years, but could meet the RPA demand for only 20 years.

Wildlife

Current Situation:

There are over 375 different species of reptiles, amphibians, birds, and mammals known or expected to inhabit the Forest; 15 species of game fish, and numerous nongame fish species are in the area's reservoirs, lakes, and streams. Deer, elk and antelope are big game animals hunted on the Forest. Anadromous (steelhead) fish spawning occurs in some streams.

Habitat is known or expected to exist for the following species classified by state or federal wildlife agencies as endangered, threatened, or sensitive: peregrine falcon, bald eagle, Swainson's hawk, western sage grouse, greater sandhill crane, long-billed curlew, common loon, Malheur spotted sculpin, wolverine, and redband trout.

Supply:

The Forest has potential habitat to support 4,040 elk by the year 2030. The current elk population is estimated at 2,300. The primary factors influencing big game habitat are: the amount of timber harvest, selection of silvicultural systems, and the extent and use of the road system.

The Oregon Department of Fish and Wildlife (ODFW) has a current planning benchmark of 2600 elk.

The deer population is estimated at 18,300, which is the ODFW management objective. The habitat could support a larger population.

TABLE 2-1
SUMMARY OF PROJECTED SUPPLY AND DEMAND FOR SELECTED RESOURCES FOR THE FOREST

	Average Annual for Decade					
Resources	1	2	3	4	5	Source of Information
ECONOMIC AND SOCIAL CHANGE IN JOBS FROM CURRENT SITUATION						
Supply						
Current Direction	48	N/A	N/A	N/A	N/A	Alternative A
Maximum Potential	224	N/A	N/A	N/A	N/A	Independent Estimates
Forest Plan	109		N/A	N/A	N/A	Alternative I
PAYMENT TO COUNTIES (MM $)						
Supply						
Current Direction	4 3	5 3	N/A	N/A	5 1	Alternative A
Maximum Potential	6 0	N/A	N/A	N/A	N/A	Maximum PNV Benchmark
Forest Plan	4 9	5 6	N/A	N/A	5 4	Alternative I
FIREWOOD (M CORDS)						
Supply						
Current Direction	14 0	12 4	12 0	12 0	11 6	Alternative A
Maximum Potential	15 0	14 0	13 0	13 0	13 0	Timber Benchmark
Forest Plan	13 0	12 0	11 0	11 0	11 0	Alternative I
Demand	18 0	18 0	18 0	18 0	18 0	Independent Estimate 1/
RANGE (MAUM)						
Supply						
Current Direction	57 8	57 6	63 7	64 9	65 2	Alternative A
Maximum Potential	68 0	65 7	75 6	75 9	76 3	Range Benchmark
Forest Plan	58 0	62 5	66 6	63 9	65 6	Alternative I
Demand	83 0	83 0	83 0	83 0	86 0	RPA 2/
RECREATION (MRVD)						
Developed Recreation						
Supply						
Current Direction	224 5	224 5	224 5	224 5	224 5	Alternative A
Maximum Potential	261 3	261 3	261 3	261 3	261 3	Recreation Benchmark
Forest Plan	261 3	261 3	261 3	261 3	261 3	Alternative I
Demand	116 1	130 5	145 0	156 6	172 0	Independent Estimate 3/
Roaded Natural and Rural Supply						
Supply						
Current Direction	1099 3	1099 3	1099 3	1099 3	1099 3	Alternative A
Maximum Potential	1139 4	1139 4	1139 4	1139 4	1139 4	Maximum PNV Benchmark
Forest Plan	1067 9	1067 9	1067 9	1067 9	1067 9	Alternative I
Demand	262 4	288 8	312 2	337 8	365 0	Independent Estimate 3/
SEMIPRIMITIVE MOTORIZED SUPPLY						
Supply						
Current Direction	0	0	0	0	0	Alternative A
Maximum Potential	25 9	25 9	25 9	25 9	25 9	Recreation Benchmark
Forest Plan	0	0	0	0	0	Alternative I
Demand	16 8	18 3	20 0	21 7	23 5	Independent Estimate 3/
SEMIPRIMITIVE NONMOTORIZED SUPPLY						
Supply						
Current Direction	22 5	22 5	22 5	22 5	22 5	Alternative A
Maximum Potential	65 1	65 1	65 1	65 1	65 1	Recreation Benchmark
Forest Plan	44 0	44 0	44 0	44 0	44 0	Alternative I
Demand	32 2	35 3	38 5	42 0	45 7	Independent Estimate 3/
FISHING						
Supply						
Current Direction	28 7	31 9	34 1	36 5	39 2	Alternative A
Maximum Potential	28 7	33 1	35 3	37 7	40 5	Wildlife Benchmark
Forest Plan	28 7	33 1	35 3	37 7	40 5	Alternative I
Demand	47 8	57 3	61 4	66 0	71 0	Maximum PNV Benchmark
HUNTING						
Supply						
Current Direction	82 5	80 6	75 1	77 0	76 2	Alternative A
Maximum Potential	79 8	79 8	89 1	87 3	88 8	Wildlife Benchmark
Forest Plan	79 1	77 9	78 4	77 7	75 5	Alternative I
Demand	89 9	98 1	108 8	108 8	108 8	ODFW

Resources	1	2	3	4	5	Source of Information
BIG GAME DEER (1000 DEER)						
Supply						
Current Direction	18 3	18 3	18 3	18 3	18 3	ODFW 4/
Maximum Potential	18 3	18 3	18 3	18 3	18 3	ODFW
Forest Plan	18 3	18 3	18 3	18 3	18 3	ODFW
ELK						
Supply						
Current Direction	3370	3160	2570	2775	2690	Alternative A
Maximum Potential	3075	3075	4070	3880	4040	Wildlife Benchmark
Forest Plan	3000	2900	2900	2800	2600	Alternative I
Demand	2560	2560	2560	2560	2560	ODFW 5/
TIMBER (MMCF)(ASQ + SALVAGE)						
Supply (All Species)						
Current Direction	19 3	20 6	20 6	20 5	20 5	Alternative A
Maximum Potential	23 4	23 4	23 4	23 4	23 4	Timber Benchmark
Forest Plan	19 8	19 5	19 2	19 2	19 2	Alternative I
Supply (Ponderosa Pine)						
Forest Plan						Alternative I
Demand						Maximum PNV Benchmark
State of Oregon	19 0	19 6	19 7	20 6	21 6	State of Oregon 6/
Forest Service	25 0	25 0	25 0	25 0	25 0	RPA 2/
WILDERNESS USE (MRVD)						
Supply						
Current Direction	25 7	25 7	25 7	25 7	25 7	Alternative A
Maximum Potential	25 7	25 7	25 7	25 7	25 7	Oregon Wilderness Bill
Forest Plan	25 7	25 7	25 7	25 7	25 7	Alternative I
Demand	16 3	17 8	19 2	21 0	22 9	Independant Estimate 3/
OLD GROWTH (M ACRES)						
Supply						
Current Direction	93 8	83 0	73 0	63 0	53 0	Alternative A
Maximum Potential	93 8	93 8	93 8	93 8	93 8	Benchmark
Forest Plan	93 8	83 9	74 2	64 5	55 1	Alternative I
Demand	N/A	N/A	N/A	N/A	N/A	
SNAGS (% OF POTENTIAL)						
Supply						
Current Direction	46 0	52 0	52 0	52 0	52 0	Alternative A
Maximum Potential	51 0	59 0	67 0	68 0	69 0	Benchmark
Forest Plan	47 0	49 0	51 0	55 0	54 0	Alternative I
Demand	N/A	N/A	N/A	N/A	N/A	
MINERALS - OIL (M ACRES LEASED)						
Supply						
Current Direction	808	808	808	808	808	Alternative A
Maximum Potential	808	808	808	808	808	
Forest Plan	808	808	808	808	808	Alternative I
Demand	140	670	400	270	140	

1/ Firewood estimate, based on past sales of permits
2/ Forest Service 1980 Resource Planning Act Program
3/ Estimate based on population growth See text
4/ Management objective for deer established by Oregon Department of Fish and Wildlife
5/ The Forest Program for Oregon, 1980

NOTE Current Direction is the No Action alternative which is Alternative A

MM$ - Million Dollars
M Cords Thousand Cords
MAUM - Thousand Animal Unit Months
MRVD - Thousand Recreation Visitor Days
MMCF Million Cubic Feet
ASQ Allowable Sale Quantity

The Forest has the potential habitat to support larger populations of deer and elk than is required by the ODFW's management objectives.

Demand:

The primary demand for wildlife on the Forest is for populations of deer and elk large enough to be hunted. Hunting license sales are expected to grow two percent annually between 1986 and 1995, and one percent annually thereafter.

Although the demand for hunting opportunities is expected to increase in the future, big game population levels are ultimately limited by the capacity of the environment to support them. Control through hunting is a means of regulating big game populations at levels compatible with their habitat capacity. The authority for establishing hunting seasons and regulating populations rests with the State.

Habitat for Wildlife Species Dependent upon Snags

Current Situation:

The number of snags (standing dead trees) across the Forest is quite variable. In the mixed conifer stands on the north slopes, snags are fairly abundant. On the southern slopes, where ponderosa pine stands predominate, snags are relatively scarce because of timber harvesting and firewood cutting.

Snags provide habitat for many species of wildlife. Snags and down logs are used for nesting and/or shelter by at least 39 species of birds and 23 species of mammals. The number of snags is usually the limiting factor controlling the population of birds that nest in snags.

Supply:

The Forest is presently providing about 47 percent of the potential population level of cavity nesting species. A 40 percent level is dictated in General Forest, General Forest Winter Range, and Winter Range management areas Other management areas do not have any level dictated but predominantly end up with higher than the 40 percent level due to other resource management constraints. Forest-wide, we will be managing for 49 percent of the potential population level of cavity nesting species by the end of the second decade, and 54 percent by the fifth decade.

Demand:

Demand for snag habitat is difficult to determine. The management requirement level (MR) is 20 percent of the potential population level. This is the level needed to maintain viable populations of cavity nesting species. Regional guidance is to provide for 40 percent of potential population on General Forest, General Forest Winter Range, and Winter Range management areas. Most of the other management areas have a higher than 40 percent level because of other resource constraints. Overall, the Forest will be averaging between 47-54 percent of potential population over the five decade planning horizon.

Information Needs

This section lists possible information, inventory and research needs for the Ochoco National Forest. Gaps in data or scientific knowledge that would be desirable to fill prior to preparation of the next Forest land and resource management plan are recognized. Organization and development of these needs is based on the biological, physical and social ecosystems which are the foundation for the planning process.

This ecosystem perspective has been used to develop a comprehensive framework for identifying and organizing information, inventory, and research needs. This framework is intended to encourage integrated research approaches that address interdisciplinary needs rather than traditional functional approaches.

The ecosystem approach should meet planning needs, as well as help the public understand information needs.

Several situations were identified as having particular current importance in forest planning. Old growth, riparian/aquatic, upper slope ecosystems, and human interactions within the forest environment, are examples of areas where more information would be desirable in order to test present planning assumptions as plans are implemented.

Information needed to address potential concerns fall into the five general categories: interactions/processes, long-term productivity, cumulative effects, social and economic analysis, and wildland/community relations.

Interactions/Processes

This category includes information leading to a better understanding of the interactions of ecosystems, and the physical, biological, social, and political processes that influence these ecosystems.

Refine recreation carrying capacity estimates by development of predictive model figures for dispersed recreation.

Determine the relationships between recreational settings, use, and opportunities and other resource uses.

Survey streams for native fish. Determine occurrence, distribution, and status.

Improve knowledge of the distribution and habitat requirements of wildlife associated with old growth forests.

Understand the relationships between old growth characteristics and ecological and visual diversity, associated plant and wildlife species, and the maintenance of natural gene pools.

Assess the effects of landscape patterns of timber harvest and road construction on biological diversity (including management indicator species) and stability of special habitat areas such as Research Natural Areas.

Determine the effects of vertebrate species on other ecosystem components (e.g., effects of big game on plantations, and effects of insectivorous birds on forest insect populations).

Assess effects of stream segmentation by barriers caused by road crossings, debris, etc., on fish production potential.

Assess fish productivity of various stream and lake habitats, and the effects of management activities on fisheries potential. Determine sediment types and levels that affect fish habitat components.

Assess the results of stream rehabilitation projects on fish population dynamics.

Develop effective methods of uneven-aged management to produce maximized resource benefits.

Evaluate the relationship of uneven-aged management with fuels treatment, long-term site productivity, designated skid trails, and reforestation needs.

Develop strategies (rotation length, stocking levels) for producing higher quality wood.

Develop strategies that minimize soil disturbance and compaction during harvesting, and post harvest activities.

Identify specific sites and situations where natural regeneration can be a successful management option.

Evaluate the costs and benefits (both monetary and nonmonetary) of alternative logging residue treatments.

Develop data base (inventory) and analysis techniques to identify sites that are uneconomical to manage for timber production given the anticipated variation in production costs and price.

Increase knowledge of site/moisture relationships in harvested areas (micro-watersheds).

Develop a predictive methodology for sediment production and soil productivity for use in project-level planning.

Identify key soil chemical or physical factors which might be monitored to determine significant impairment of long-term productivity.

Improve total tree biomass information that is needed to evaluate whole-tree harvesting practices.

Evaluate the effects of stand treatment combinations on understory composition in managed stands.

Evaluate the effects of fire (presence or absence) on the nutrient cycle in local stand types.

Develop a drainage-specific predictive model for fisheries and the effects of habitat modification.

Identify the effects of prescribed fire on old growth habitat components.

Determine the necessary size of an old growth habitat area to support a pair of pileated woodpeckers.

Develop an effective technique to regenerate mountain mahogany, bitterbrush and aspen.

Discover how seasonal vegetation changes affect pocket gopher utilization of their habitat.

Discover how elk use different timber stand conditions. Identify whether we are treating ponderosa pine in a way that precludes future elk use.

Determine the abundance and distribution of redband trout and Malheur mottled sculpin (sensitive species) in the Silver Creek Basin on Snow Mountain Ranger District.

Determine what good avian indicator species for monitoring riparian habitat are. Determine which monitoring techniques are relatively low cost, but provide a reasonable level of reliability.

Discover how big game, both deer and elk, are responding to prescribed fire that has been applied to Pine Spring Basin in order to improve their habitat.

Determine elk use relative to Habitat Effectiveness Index values.

Determine if elk use patterns change on summer and winter range after timber management activities.

Determine fidelity of elk to winter concentration areas in the Horse Heaven drainage relative to varying winter severity. Determine if use patterns vary relative to severity of winter.

Locate calving areas in the Horse Heaven/Lookout Mountain area south of Big Summit Prairie.

Improve knowledge of requirements necessary to support viable populations of indicator species.

Long-Term Productivity

This section includes studies leading to better understanding of ecosystem needs in order to maintain various aspects of long-term productivity.

Determine user (visitor) needs and expectations for recreational opportunities.

Inventory wildlife habitats: riparian, wetlands, old growth forests, snags, and lodgepole pine by biological, chemical, and physical characteristics.

Assess the importance of seral vegetation in maintaining long-term site productivity for dependant species.

Determine the amount and distribution of in-stream woody debris necessary to maintain the productivity of fish habitat.

Determine the effects of forest fragmentation on ecosystem integrity and function, including viability of vertebrate species.

Determine the effects of management practices on the incidence and severity of pathogens and insects as they affect the condition of the Forest over time.

Develop local yield studies for principal timber species growing in managed conditions.

Evaluate the effects of soil compaction on long-term productivity.

Assess the effects of harvest practices and residue treatments on long-term productivity.

Understand the role of fire in the nutrient cycles that maintain long-term productivity.

Identify which nutrients, if any, are limiting production on the Forest.

Identify the current productivity levels of resources such as timber, wildlife forage, and fish habitat to establish baseline levels of productivity.

Identify the mineral potential of the Forest.

Cumulative Effects

This section includes studies to examine the cumulative effects of naturally occurring and human-induced activities on various aspects of selected ecosystems and resources.

Develop indicators or criteria to predict when recreational user patterns may change as a result of intensive forestry practices.

Determine wildlife and fish species reactions to patterns of habitat created or altered by management and natural succession.

Develop a drainage-specific predictive model for fisheries and the effects of habitat modification.

Determine the effects of human disturbance and livestock competition on wildlife species.

Assess the potential effects of predation of management indicator species on each other in small fragmented habitat units.

Evaluate the effects of planting genetically-selected stock on stand growth and yield, pathogen and insect population dynamics, forage nutritional quality for wildlife, etc.

Determine the cumulative effects of timber management activities (timber harvest, road construction, and site preparation) on water quality and stream stability and fish habitat.

Develop threshold of sediment production for cumulative effects on the soil and water resource considering the value of the water and the uses associated with the water.

Evaluate the cumulative effects on soil productivity by ground-based timber harvest equipment under uneven-aged management strategies.

Evaluate the effects of fire exclusion on the structure and function of ecosystems.

Social and Economic Analyses

Additional studies are needed to increase our understanding of the economic and social effects of many planned wildland activities.

Measure and predict the effects of changes to wildland landscapes on recreational values, both in economic and social terms.

Understand the effects of long-term changes in site productivity for a range of resources on local and regional economies.

Evaluate the relative costs of strategies aimed at managing the effects of pathogens and insects on stand growth and yield, recreation values, water quality, etc.

Evaluate decision processes that can compare market and nonmarket benefits.

Identify Forest Service contributions to the local economy and the dependency of local communities on the Forest.

Determine the economics of pruning ponderosa pine.

Evaluate the quality (grade, species, size) of wood that will be needed by local industry in the future.

Wildland-Community Relations

The relations and interactions between wildlands and the human communities within and around them need to be better understood.

Evaluate the patterns of resource theft and develop techniques for reducing losses.

Develop vegetative strategies that reduce risk of wildfire and recognize adjacent community values and concerns.

Chapter 3

Response to Issues, Concerns, and Opportunities

Chapter 3

Response to Issues, Concerns, and Opportunities

Overview

The Ochoco National Forest initiated its public involvement process in 1980 to prepare for the Draft Plan and Environmental Impact Statement (EIS). There has been a major effort throughout the process to capture and incorporate public and agency ideas so that the Final Ochoco National Forest Plan can be responsive to concerns and new information. This has been a continuing effort. The Plan is intended to be dynamic in its ability to respond to new ideas, issues or information as circumstances may require

Issues Display and Discussion in the Final EIS

A in the FEIS details how the issues were originally developed and how they evolved. The public comments on the DEIS, and the Forest responses to those comments are discussed in Appendix I of the FEIS. Substantive comment received on the Draft Plan and EIS did result in changes in the final documents. A number of the issues were modified and new issues added.

A discussion of the changes in issues from the Draft to the Final and how the Plan will address the issues follows.

Issue #1, Timber Supply and Forest Management, continued to be a major concern. Subissues relating to timber supply and forest management have been identified and are treated separately.

Timber Supply and Sustained Even-Flow Yield: Timber industry and dependent publics continued to offer support for sustained yield of 137 MMBF annually. Local economic stability and jobs were strongly related to high harvest levels by timber industry and dependent publics. At the other end of the spectrum, conservationists favored a much more conservative harvest level of 75 to 90 MMBF annually.

Between 1990 and 2000, the average annual harvest will be 19.0 MMCF (ASQ) (115 MMBF), slightly below the current harvest level. The volume of ponderosa pine offered annually will average 85 MMBF. This represents a considerable decrease from pine volume sold between 1980 and 1988, which averaged 109 MMBF annually.

The long-term sustained yield for this Plan is 19.0 MMCF. This is 82 percent of the potential estimated in the Maximum Timber Benchmark (23.5 MMCF).

The timber harvest will be modified in some areas to protect other resources. In old growth and roadless areas, harvest will be prohibited. In riparian areas and scenic corridors, rotation time will be lengthened. In big game areas, thinning practices will be altered.

Ponderosa Pine Management: There was significant support for the production of large diameter pine (at least 20 inches in DBH) and a timber supply scenario to sustain large diameter pine production over time to maintain the present industry base in Prineville and surrounding communities. The importance of large diameter pine to wildlife and as a visual resource was noted by other interest groups.

The strong interest in maintaining large diameter ponderosa pine over time has been incorporated into the Final Plan with even-aged silvicultural systems designed to provide an average tree of 18 inches DBH, and uneven-aged silvicultural systems designed to provide ponderosa pine greater than or equal to 20 inches DBH. Special management areas in the Final Plan will also provide large ponderosa pine greater than 20 inches DBH with some, such as Old Growth, providing old growth pine of diameters up to their biological potential in some cases.

Uneven-aged vs. Even-aged Silviculture: The timber industry and other groups noted some advantages and expressed general interest in the Forest exploring uneven-age management strategies on all or portions of the Ponderosa pine stands available for timber management. Industry sees this as a means to allow the continuation of high harvest levels in pine while providing a quality log. Conservation groups and other publics sensitive to even-age management systems see this as a means to limit clearcutting, reduce harvest levels and preserve a forested appearance over time.

In the first decade, 62,200 acres of forest land will be managed through uneven-aged timber harvest prescriptions. Even-aged timber harvest prescriptions (clearcuts, shelterwoods, and overstory removals) will be applied to 82,900 acres.

Departure: The preferred alternative in the Draft Plan proposed a departure from sustained yield to maintain high timber supplies for the first decade. There was essentially no support for this departure. Industry predicted that the departure option would result in an unstable timber supply which would negatively affect business and community stability. Conservationists suggested that the departure option was merely an euphemism for the rapid liquidation of old growth forest.

The timber harvest is scheduled to maintain a non-declining yield. The objective will be to maximize timber production within the constraints of the Plan, and maintain a sustained timber supply over time.

Clearcutting: There was almost unanimous opposition to clearcutting. Many opposed it as a waste of younger stock and potential crop trees. Others cited the adverse effects of clearcutting on other resources Industry expressed some acceptance of clearcutting in mixed conifer stands, but regarded the clearcutting of Ponderosa Pine as unacceptable.

In the first decade, there will be 8,700 acres of clearcuts in mixed conifer stands. Root rot and other insect and disease problems, plus slash disposal needs, make any type of partial removal impractical for most of the mixed conifer stands. Ponderosa pine will be harvested with overstory removals, as appropriate. Clearcuts are used to harvest ponderosa pine only rarely when insects or disease preclude other harvest methods.

Issue #2, Social and Economic Wants and Needs of Local Communities, continued to receive the attention of the timber industry and dependent publics. These groups were adamant in demanding a high timber supply to maintain the local economy and jobs. Others called this viewpoint short-sighted and suggested that the rapid conversion to second growth/ fiber management might not be positive in the long run. These respondents reasoned that old growth contributes more to the local economy even if harvest levels are significantly reduced, because old growth ponderosa pine has a much higher commercial value than second growth. This issue is interrelated with the departure, uneven-age, and ponderosa pine issues discussed in Issue #1.

Some comments noted the importance of grazing on local economies. These respondents expressed concern over the negative effect that reductions in grazing would have on Crook and Harney Counties. This issue is discussed in Issue #3, livestock grazing.

Local communities are dependent on forest-related jobs and income, and payments to counties in lieu of taxes. As a result, economics is the major factor in measuring the social and economic effect the Plan will have on these communities.

[1]These figures include the Crooked River National Grassland

Using computer models (described in FEIS Appendix B), the economic effects of the Plans[1] for the first decade were estimated.

Income	Increase $1.737 million
Employment	Increase 124 jobs
Payments to counties, average annual	$4.9 million

Payments to counties will increase to $5.6 million in the second decade and then decrease to $5.4 million by the end of the fifth decade.

Issue #3, Livestock Grazing or Grazing Allotments, remained a major issue for the management of the Forest. In the public comments to the Draft, concern was expressed over the impact of grazing on riparian areas and big game habitat Many felt livestock grazing numbers could not be increased while simultaneously improving riparian conditions. Others stated that the economies of Crook and Harney Counties are dependent on ranching, and that significant reductions in livestock numbers would have adverse effects on those economies.

Grazing will remain level or slightly decrease in the first decade and then slowly increase over time with improved management, improved riparian conditions and the installation of range improvements.

The use of riparian areas by livestock will decrease in the first decade. This will be offset by increasing forage production on transitory range, improved forage production resulting from nonstructural range improvements, and construction of water developments to distribute livestock into areas where forage is available, but natural water sources are not.

Issue #4, Riparian Area Management, received additional interest during the public comment period to the Draft. Generally, comments addressed the impacts of grazing, timber harvest and road building. As noted in the discussion for Issue #3, concern was expressed over the proposed increases in grazing numbers and how this might prevent the Forest and Grassland from improving riparian conditions.

All riparian areas on the Forest will be managed to achieve "excellent" condition. Fencing, log weir construction, rock structures, shrub plantings, and woody debris additions will be used to improve riparian conditions. These improvements will be completed in the first decade. However, it will be 20 to 60 years before all riparian areas have attained their full biological potential.

Issue #5, Transportation System, brought 1000 comments on the FEIS. Some commented that too many roads are constructed and that road standards are too high. These respondents expressed concern over the cost of road construction and maintenance.

Support was voiced for the physical closure of roads to protect water quality and sensitive areas. Both temporary and permanent road closures were recommended to protect wildlife habitat. This is different from the comments made at the first public meetings, which opposed the closure of areas to access by motorized equipment. This view was expressed in comments stressing the need for roads to provide recreation access for the elderly and handicapped.

A travel plan for the Forest will address road management concerns and will complement the objectives of the various management areas on the Forest and Grassland. Wildlife habitat effectiveness objectives will be partially met through road restrictions and closures. The number of miles of roads maintained open for public travel on the Forest will decrease nominally in the future as a result of these road restrictions and closures for big game habitat protection and erosion control and public safety.

In the first decade 840 miles of road will be maintained for passenger car travel, and 2,330 miles will be maintained for high clearance vehicles. By the fifth decade 850 miles will be maintained for passenger cars, and 2,270 miles for high clearance vehicles.

Roads will be closed to protect soil and water, prevent disturbance of big game, and limit investment loss. In the first decade, 1,160 miles of roads will be closed. In the fifth decade, 2,190 miles will be closed. Closures may be seasonal or year long.

Issue #6, Big Game Habitat, was second only to timber in the number of public comments on the Draft. The public continues to be very interested in the number of elk and deer on the Forest and Grassland. In particular, there was support voiced for population levels of elk higher than those proposed by the Draft Plan and the Oregon Department of Fish and Wildlife (ODFW). The public supported the management of big game winter range and the management of road systems to attain habitat effectiveness.

The Forest Plan will designate important areas of big game winter range in two management area classifications: Winter Range (64,130 acres) and General Forest Winter Range (107,360 acres). Management for big game habitat will be the primary emphasis in winter range. In addition, wildernesses, roadless areas, old growth areas, and Hammer Creek Wildlife/Recreation Area will provide important big game habitat.

The Final Plan will provide standards and guidelines for the management of cover and road management that will support elk numbers that meet the population objectives of ODFW. In these areas, road use and thermal cover will be managed to provide high quality big game habitat. Habitat will support 3,000 elk in the first decade, decreasing to 2,870 in the second decade, and to 2,620 by the fifth decade due to the effects of timber management. The ODFW's current planning benchmark for elk on management units within the Forest is 2,600.

Issue #7, Roadless Areas and Wilderness Study Areas, generated the third highest number of comments on the DEIS. Public comments focused on Lookout Mountain and the Ochoco Canyons area of the Forest.

Lookout Mountain has received a lot of public interest from the beginning and continues to concern public groups and the Forest Service. Because of competing interests over available resources, the area has received special attention during the planning process.

Comments about Lookout Mountain involved access, recreation and multiple use. Commentors disagreed as to whether or not Lookout Mountain should be managed as a roadless area. Many supported a roadless designation, while others felt that the existing roads should be reopened to allow senior citizen, handicap or recreation access. There was also significant disagreement over the appropriate size of the area to be left roadless.

Other comments addressed timber management in this area. Some commentors felt that timber should be harvested, while others felt that management should stress recreation and wildlife.

Ochoco Canyons, Green Mountain, Silver Creek and the North Fork of the Crooked River also received comments. There was strong sentiment for the retention of existing roadless areas by some, while others objected to the single-use designation as precluding other uses. Some respondents recommended that roadless area management reflect a compromise between natural values and commodity production.

In the Final Plan, 15,660 acres at Lookout Mountain are allocated to remain unroaded. Cottonwood, most of Rock Creek, and a portion of Silver Creek, totaling 14,300 acres, will be retained as roadless areas and managed for semiprimitive nonmotorized recreation. Green Mountain will be managed as general forest. The Draft proposed semiprimitive motorized recreation which was determined not to be appropriate for the area and not supported by public comment

The total wilderness, proposed wilderness, and unroaded acreage is 83,800 - about 10 percent of the Forest. Combined, unroaded areas and wilderness will meet the expected demand for semiprimitive recreation until the year 2025. A number of other special management areas which will also provide nonmotorized recreational opportunities have been designated. These are Summit National Historic Trail, Stein's Pillar, Hammer Creek, Deep Creek and Round Mountain National Recreation Trail.

Issue #8, Scenic or Visual Resources, continued to receive public interest. Generally public comments to the DEIS concerned the retention of the scenic corridor along Highway 26.

Some comments supported increased emphasis on visual resources, while others supported less emphasis. Those favoring less emphasis expressed concern that an emphasis on visual resources would result in reduced harvest levels.

The Plan will provide for a number of scenic corridors where the primary emphasis will be to meet visual quality objectives in order to maintain and enhance key scenery. Travel corridors, including major roads, access roads to roadless areas, and a winter sports corridor on the Big Summit District, will be managed for scenic qualities. Scenic corridors will total 40,110 acres, 38 percent of the maximum potential of 106,700 acres. These scenic corridors will provide the public with views of large ponderosa pines in park-like settings.

Parts of the Summit National Historic Trail, roadless areas, dispersed and developed recreation areas, Bandit Springs, Stein's Pillar, Hammer Creek, Deep Creek, and the North Fork Crooked River Scenic and Recreation Corridors will be managed to maintain a natural or near-natural appearance.

Issue #9, Old Growth Forest, generated over 1000 comments on the DEIS. A majority of the comments supported a larger allocation for old growth. In addition, there was interest in increasing the old growth management area size over that in the Draft Plan.

Approximately 47,890 acres will be managed for old growth: 19,990 acres specifically allocated to old growth management, and another 27,900 acres in wilderness and other special management areas (Wilderness Study Areas, Research Natural Areas, Summit National Historic Trail, roadless areas and facilities). This allocation includes 1,270 acres of timber stands which are mature, but not far enough along in succession to meet the definition of old growth. This represents 228 percent of the minimum level required by old growth dependent species (21,000 acres), and 51 percent of the maximum old growth available on the Forest (93,800 acres). Refer to Table II-8 for acres of old growth by species.

The size and distribution of areas managed for old growth were designed to meet habitat requirements for the pileated woodpecker, a management indicator species. These areas will also provide habitat for other species dependent upon old growth.

The existing mature stands and designated old growth outside Old Growth, Wilderness, and other special management areas will be subject to timber harvest. By the year 2030, it is expected that only the following areas will contain stands of timber with trees up to 27 inch DBH: wildernesses, Research Natural Areas, old growth areas, Summit National Historic Trail, Rock Creek/Cottonwood Creek Roadless Area, Silver Creek Roadless Area, Lookout Mountain Recreation Area, eagle roosting areas, facilities, developed recreation areas, dispersed recreation areas, Bandit Springs, Highway 26 Visual Corridor, visual management corridors, Round Mountain National Recreation Trail, and Hammer Creek.

Issue #10, Fuelwood Supply, also generated over 1000 comments to the DEIS. The comments supported the continuation of fuelwood supplies into the future. This plan will continue to make firewood available to the public at levels commensurate with project activitity and available access. A moderate amount of firewood will be available, approximately 13,000 cords annually, between 1990 and 2000.

Between 1984 and 1989, the annual demand for firewood on the Forest and Grassland has been less than 10,000 cords. Thus, it appears that demand will exceed supply.

Issue #11, Snag Dependent Wildlife - Cavity Nesters, continued to receive some interest. Although the number of comments was limited, they voiced support for the retention of snag habitat and concern that the Draft Plan did not adequately protect snag habitat.

Moderate (74 percent of potential) and fairly well distributed levels of habitat will be provided for cavity-dependent species. Snag levels will vary by management areas, ranging from 40 percent in intensively managed areas to 100 percent in wilderness

and unroaded areas. Snags will not be allowed to remain in minor areas, such as developed recreation areas and facilities, for safety reasons.

Issue #12, Winter Sports, also received continued attention by segments of the public. The development of additional winter sports trails and snow park areas was widely supported. Some skiers supported the creation of separate use areas for skiers and snowmobilers.

Comments regarding conflicts between snowmobiles and cross-country skiers in the Lookout Mountain area were received. Opinions included eliminating snowmobile use, constructing separate cross-country and snowmobile trails, and allowing unrestricted snowmobile use.

Most of the Forest, except for Bandit Springs and Wilderness Areas, will be open to snowmobiling. Bandit Springs (1580 acres) will be limited to non-motorized winter sports, such as snowshoeing, cross country skiing and sledding. Lookout Mountain Recreation Area will be open to snowmobiling.

New Issues

Public involvement, including comments on the DEIS, has resulted in the Forest adding four new issues to the twelve developed for the DEIS. Two of the issues are extensions of previous issues where it became evident that special attention would be appropriate in the FEIS to capture public concerns and allow full assessment of the issue in the development, analysis and selection of a final alternative for the Forest and Grassland Plans.

Anadromous Fish: Anadromous fish were not identified as an issue in the development of the DEIS and proposed Forest Plan. In the responses to the DEIS, anadromous fish were identified as a concern by several individuals and groups, including the Columbia River Inter-Tribal Fish Commission. Primary concerns included protection and enhancement of spawning habitat and the adequacy of the monitoring plan. Native American groups noted that treaties guarantee protection for anadromous fish habitat.

All riparian areas, including streams which support anadromous fish, will be managed for "excellent" condition. There will be 26 smolts per 100 square meters of streamed in the first decade, increasing to 126 smolts per 100 square meters in the fifth decade.

Historic Trail Preservation: It is Forest Service policy to identify and preserve cultural resources. The Ochoco National Forest has an old trail that was the major east-west travel route through the Forest for many years. The Summit Trail was originally constructed in the early 1900's as a pack trail, and continued to provide access as a trail system until the late 1930's. The significance of this trail was recognized by the Forest Service in January 1987, when it was nominated to the National Register of Historic Places. This action was subsequently followed by a Forest decision to protect and manage the trail corridor for its historical significance. Comments overwhelmingly favored the re-establishment and protection of this trail.

The Summit National Historic Trail is allocated to a management area in the Final Plan. This management area includes 170 acres of preservation, 5,600 acres of retention, and 3,790 acres of partial retention visual quality objectives. The outer boundary of the management area will generally not exceed 600 feet on either side of the trail.

Off-Road Vehicle (ORV) Use: This issue emerged during the issue/Final Plan validation phase. Most respondents desired a reduction in ORV use on the Forest and Grassland. Some favored a total ban on ORV's, while others felt use should be prohibited in sensitive areas. Damage to the environment and noise levels were the reasons given for restriction or prohibition.

In contrast, some respondents requested additional areas for ORV use. They felt that the Forest and Grassland have enough nonmotorized opportunities and that motorized recreation opportunities are lacking.

Only trails historically established for exclusive ORV use are being designated at this time. Any others will be accomplished in the Plan implementation phase through site-specific analysis and further planning.

Round Mountain: In its response to the Draft Plan, the Oregon Hunters Association (along with a number of other sponsors, such as the Oregon Natural Resources Council) asked that a recreation unit be established for the Round Mountain area. This was brought up again by one individual in the validation process. The indivual suggested that the Round Mountain area could provide the opportunity, through a specific allocation, to demonstrate some management emphasis for a working forest with special provisions for recreation, scenic, and wildlife resources.

The Plan does not create a special management area for Round Mountain. A portion of the Round Mountain area is allocated to old growth, and the Round Mountain National Recreation Trail is treated as a separate management area. The rest of the area is allocated to General Forest.

Chapter 4

Forest Management Direction

Section 1

Forest Management Goals, Objectives, and Desired Future Condition

Chapter 4

Forest Management Direction

Section 1

Forest Management Goals, Objectives, and Desired Future Condition

Goals are generalized statements that provide broad direction for future management of the Forest. The primary goal of the Ochoco National Forest is to manage under the principles of "Caring for the Land and Serving People." Multiple use and sustained-yield management of all forest resources are an integral part of these principles. Specific resource goals are in support of these principles and are presented in this chapter.

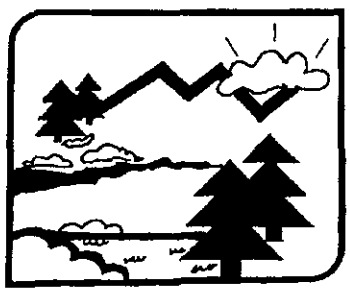
Objectives represent projected, potential outputs in support of overall goals. They are based on available inventory data and assumptions, subject to annual budgets. Objectives for key forest resources are displayed as average annual outputs, or totals per decade for the next five decades. They do not infer a commitment on the part of the agency to supply the appropriate resource on a regular basis, but do state the maximum output available, subject to the broad discretion of the Forest Service.

Desired future conditions summarize the anticipated physical changes that are likely to occur as a result of carrying out planned management practices over time. These descriptions are provided at ten years, and fifty years and beyond, for the Forest.

The information presented in this section provides goals, objectives, and desired future conditions for each of the key Forest resources. Resources are presented in alphabetical order. They are:

AIR QUALITY
BIOLOGICAL DIVERSITY
CULTURAL RESOURCES
FACILITIES
FIRE
FORAGE AND LIVESTOCK USE
FOREST HEALTH
FOREST RESIDUES
FUELWOOD
LANDS
MINERALS AND ENERGY
OLD GROWTH
RECREATION
SCENIC RESOURCES
SOCIAL AND ECONOMIC
SOIL
TIMBER
TRANSPORTATION SYSTEM
WATER
WILDLIFE AND FISH

Air Quality



Goal(s)

Maintain air quality at a level adequate for the protection and use of the Ochoco National Forest resources, and which meets or exceeds applicable Federal and State standards and regulations (Clean Air Act, as amended, and Oregon State Implementation Plan for Protection of Visibility in Class I Areas).

Objectives

Use the best available technology and management techniques to minimize smoke production from prescribed burning activities. Table 4-1 shows the estimate of total suspended particulates (TSP) generated in smoke from both natural and activity residue treatments.

Table 4-1

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
TSP Generation by Prescribed Fire	M Tons/Yr.	13.2	12.7	11.5	7.4	9.9

Desired Future Condition

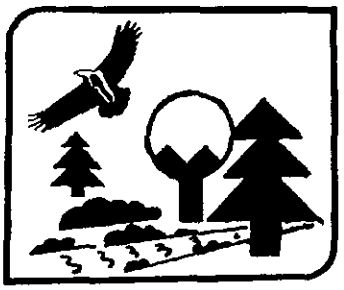
In Ten Years

Smoke emissions are projected to decrease over time, as shown in Table 4-1. This will result in a similar percentage decrease in visibility impairment (see Fire, Prescribed Burning Objectives, this section).

Fifty Years and Beyond

Emissions will decline to stable levels by the fifth decade: about 7 to 10 thousand tons per year. Improvement in visibility over the long run is primarily the result of the timber harvest schedule and an anticipated 20-40 percent reduction in the amount of excess residues in the managed stand condition.

Biological Diversity



Goal(s)

Maintain native, historic, and desirable introduced plant and animal species and communities, including those that may be threatened, endangered, or sensitive.

Maintain or enhance ecosystem functions to provide long-term productivity of forest resources and biological communities.

Objectives

Provide for all seral stages of terrestrial and aquatic plant associations existing and/or desirable for the Forest, with a distribution that is ecologically sound and ensures continued reproduction of the specie(s). For the Ochoco National Forest, the following diversity elements (Table 4-2) serve as objectives for defining biological diversity for both plants and animals. Values are displayed as totals, rather than average annual outputs.

Table 4-2

Resource/Activity	Unit of Measure	Decade 1st	2nd	3rd	4th	5th
Riparian Areas in Excellent Condition [1/]	M Acres	10.0	11.2	12.7	15.1	17.5
Riparian Areas Designated For Connective Habitat	M Acres	1.0	1.0	1.0	1.0	1.0
Snag Habitat for Cavity Nesters (Average Across the Forest)	Percent of Potential	47	49	51	55	54
Old Growth (Allocated plus Unallocated)	M Acres	93.8	83 9	74.2	64.5	55.1
Acres of forested land by Successional Stage [2/]						
Stage I and II	M Acres	9	30	26	37	34
Stage III	M Acres	151	151	30	56	63
Stage IV	M Acres	184	192	333	160	190
Stage V	M Acres	134	115	109	255	230
Stage VI	M Acres	94	84	74	64	55
Acres of nonforest land by Plant Community Type						
Timberline Meadows	M Acres	3	3	3	3	3
Meadows	M Acres	9	9	9	9	9
Juniper Dominant	M Acres	57	57	57	57	57
Grass Dominant	M Acres	5	5	5	5	5
Sagebrush Dominant	M Acres	38	38	38	38	38
Biscuit Root-Scabland	M Acres	7	7	7	7	7

[1/] See WATER Objectives, this section
[2/] Stage I=Grass-forb
Stage II=Shrub-seedling (0-10 years)
Stage III=Pole-sapling (11-39 years)
Stage IV=Young (40-79 years)
Stage V=Mature (80-159 years)
Stage VI=Old Growth (160 + years)

Desired Future Condition

In Ten Years

Forest-wide, biological diversity of plant and animal communities and species will be different in ten years.

Riparian areas, which serve as critical habitat for more than 75 percent of the Forest's wildlife species, will be improved over today's conditions, as a result of specific management actions. Connective habitat, of which riparian areas are a major factor, will be available in varying degrees across the Forest to provide linkage or extensions between forested habitats for wildlife species. Some riparian areas have been purposely widened in identified areas to accommodate movement of old growth dependent species (pileated woodpecker) between primary reproductive habitats (see Section 3, Management Area Standards and Guidelines for Wildlife and Fish).

Snag habitat for cavity nesters will be at about 47 percent of potential, but will be more evenly distributed as areas currently deficient in snags are improved due to natural mortality, or created through management action.

About 94 thousand acres of old growth will exist across the Forest, with large contiguous acreages concentrated mostly in wilderness, roadless areas and Research Natural Areas. Old growth specifically allocated for dependent wildlife species (along with equal acreages of supplemental feeding habitat) will exist in a somewhat evenly distributed pattern across the remainder of the Forest in order to ensure viable populations. In addition, other old growth will exist in areas allocated for various levels of vegetative manipulation (i.e. General Forest and other management areas), but will be declining over time.

Out of a total of 572 thousand acres of forested vegetation, all successional stages are expected to be present, though they will not necessarily be evenly distributed geographically. Pole/sapling, young stands, and mature stands (Stages III-V, respectively) will comprise the largest acreage, especially across intensively managed areas of the Forest. These will be represented both vertically (uneven-aged stands) and horizontally (even-aged stands). Grass/forb and shrub/seedling stages will be increasing, primarily in mixed conifer stands, as even-aged management is implemented. Old growth (Stage VI) will be decreased, both in total acreage as well as overall distribution.

In non-forest plant communities, species dominance may change as a result of forage enhancement for wildlife and livestock, and juniper thinning or removal for watershed improvement. No planned management practices are intensive to the point that they will actually result in a change from one plant community to another for non-forest vegetation types.

Even though not specifically stated as an objective above, habitat for existing threatened, endangered, and sensitive species of plants and animals will be available as needs are identified over time. Current conditions include habitat for bald eagles, as stated in specific management area prescriptions (see Section 2,

Management Area Prescriptions for Eagle Roosting Areas; also see Threatened, Endangered, and Sensitive Plants and Animals List, Appendix C).

Fifty Years and Beyond

Forest-wide, biological diversity of plant and animal communities and species will be substantially different.

Most of the riparian areas on the Forest will be in "excellent condition" as a result of specific management actions. Connective habitat will be available in varying degrees across the Forest in order to provide linkage or extensions between forested habitats for wildlife species, but may not be as effective as today, because most timber stands in these areas will have been placed under some level of management.

Snag habitat for cavity nesters will be at about 54 percent of potential, and as evenly distributed as possible. No areas of the Forest (other than those managed for safety concerns, i.e. administrative areas) will be below 40 percent of potential.

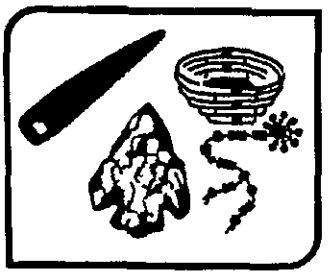
About 55 thousand acres of old growth will exist across the Forest, but will be concentrated mostly in wilderness, roadless areas and Research Natural Areas. In order to ensure viable populations, old growth specifically allocated for dependent wildlife species (along with equal acreages of supplemental feeding habitat) will still exist in a somewhat evenly distributed pattern across the remainder of the Forest . Very little old growth will exist in areas allocated for various levels of vegetation manipulation (i.e. General Forest and other management areas), as most of these areas will have been treated.

On forested land, all successional stages should be present, though they will not necessarily be evenly distributed geographically. Young and mature stands (Stages IV & V) will comprise the largest acreage, especially across intensively managed areas of the Forest. These will be represented both vertically (uneven-aged stands) and horizontally (even-aged stands). Grass/forb and shrub/seedling stages (Stages I & II) will be approaching an acreage indicative of a fully managed forest condition, meaning that similar acreages will be represented indefinitely. Old growth (Stage VI) will be about 55 thousand acres, and most will be concentrated in wilderness, roadless areas and Research Natural Areas. The remaining acreages will be in somewhat isolated stands reserved for dependent wildlife species across the Forest, with a small acreage still available in General Forest and other management areas.

No significant change in acre distribution of non-forest plant communities is projected at this time.

Habitat for threatened, endangered, and sensitive plant and animal species will be available as needs are identified in accordance with Federal Law.

Cultural Resources



Goal(s)

Locate, evaluate, protect, and mitigate if necessary, significant historic and archaeological sites. Enhance and interpret selected sites for public enjoyment, education and interpretation after public involvement with American Indian Tribes, historical societies, and local interest and professional groups. Promote opportunities for research, and traditional Native American cultural practices, writing, and photography.

Objectives

Complete "broad-area" cultural resource inventories and documentation prior to ground-disturbing activities on the Forest (see standards and guidelines, Section 3, this chapter). Identify Native American traditional food and religious use areas, in compliance with Public Law 95-341 (American Indian Religious Freedom Act) and the Treaty of 1855, with the assistance of the Warm Springs Confederated Tribes and the Burns Paiute Tribe.

Numbers shown in Table 4-3 represent estimates of site documentation, site enhancement or interpretation, and nominations to the National Historic Register for future decades, based on past experience.

Table 4-3

Resource/Activity	Unit of Measure (Average)	Decade				
		1st	2nd	3rd	4th	5th
Sites Documented	Number/Yr.	120	100	80	70	60
Sites Enhanced/Interp.	Number/Yr.	3	3	3	2	2
Nat'l Register Nomination	Num/Decade	2	2	2	2	2

Desired Future Condition

In Ten Years

In ten years, 60-70 percent of the Forest will have been surveyed for cultural resources. As the demand for timber harvest and other resources in previously avoided areas increases, many significant cultural resource sites will be mitigated. This will benefit the public as well as the academic community by increasing the body of knowledge about the prehistory and history of the Forest. Accurate, meaningful interpretation of a greater number of sites will result. Similarly, greater knowledge will enable the Forest to more efficiently manage the resource.

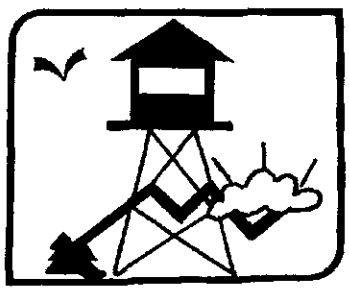
Management plans and allocations for site and thematic site classes may have been recognized, through amendment of the Forest Plan and involvement with appropriate individuals, groups and public agencies. Traditional Native American use of sites and areas will be recognized and considered during land and resource management activities Site enhancement and interpretation will have been performed on specific sites and thematic classes. Stabilization of threatened cultural resource sites will have been performed within or adjacent to existing public recreation and use areas.

Fifty Years and Beyond

The accumulated knowledge of historic, cultural and prehistoric site types and implementation of management plans and allocation strategies for cultural resources will reduce the need to inventory certain portions of the Forest. Information on the prehistoric, historic, and Native American cultural use of the Forest will have increased to a level that management of the resource will be efficient and precise. Advances in archaeological methods, historic research, sampling site stabilization and thematic evaluation will affect changes in management and result in more accurate interpretation of the resource. A large body of protected sites and data from mitigation projects will provide the basis for ongoing interpretive programs and facilities.

Enhancement and interpretation will begin to dominate the cultural resource program. Local citizens, groups and professional organizations will be involved in site preservation and interpretation. Native Americans will make greater use of the Forest for traditional food gathering and religious practices; they will be involved in the management and treatment of prehistoric sites and burials, and the Forest in general.

Facilities



Goal(s)

Plan, construct, maintain, and manage Forest facilities to provide maximum economy, investment protection, user safety, and resource protection.

Objectives

Facilities relate to administrative sites located across the Forest These include ranger stations, campground facilities, work centers, lookouts and electronic sites. Future facilities construction or improvements are provided as totals (first decade only), instead of average annual outputs. See Table 4-4.

Table 4-4

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Construction and Improvements (Reconstruct)	Number	27	N/A	N/A	N/A	N/A

Desired Future Condition

In Ten Years

Forest facilities will be attractive to users and reflect favorably on the Forest Service. Marginal facilities will have been removed or upgraded based on need and planned life expectancy.

Fifty Years and Beyond

No drastic changes in location or design of Forest facilities are predicted, even though some changes may occur as a result of an aging population.

Fire

Goal(s)

Control wildfire aggressively (particularly in urban-Forest interface areas), and in a cost-effective manner (minimize suppression cost plus loss).

Provide for the ecologically sound use of prescribed fire as a cost-effective management tool for achieving resource management objectives.

Objectives

Wildfire Management

Provide a cost-efficient fire management organization as determined by the National Fire management Analysis System. The Wildfire Effectiveness Index figures shown in Table 4-5 represent average annual program cost plus wildfire loss per thousand acres protected.

Table 4-5

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Wildfire Effectiveness Index	$/1000 ac protected	715	715	715	715	715

Prescribed Burning

Reduce wildfire intensities to support a cost-efficient fire protection organization.

Emulate the natural role of fire in maintaining environmental diversity and site productivity. Maintain or improve wildlife and range habitat.

Table 4-6 provides estimates of average prescribed fire acres. It is anticipated that there may be large variations above and below these averages in any one year due to variations in available burning conditions, funding, personnel, and timber harvest schedule.

Table 4-6

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Prescribed Burning Natural & Activity Fuels	M Acres/Yr	24.6	25.2	24.9	19.7	25.6

Desired Future Condition

In Ten Years

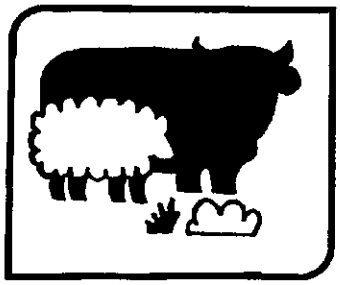
It is expected that about 750 acres per year will burn as wildfires, based on planned suppression organization. The Wildfire Effectiveness Index will be about $715 per 1000 acres protected.

About 25,000 acres will have been prescribed burned per year, resulting in 246,000 acres burned at the end of the first decade.

In Fifty Years

No dramatic changes in the number of acres burned by wildfire are expected. Much of the Forest will have reached a near stable mosaic of residue levels, as a direct result of managed timber stands and appropriate use of prescribed fire.

Forage and Livestock Use



Goal(s)

Provide forage for wildlife and domestic livestock in a manner consistent with other resource objectives and environmental constraints, while maintaining or improving ecological condition and plant community stability.

Objectives

Present permitted use by domestic livestock is 58,000 Animal Unit Months (AUM's). The Forest objective is to improve all range conditions to good or excellent by intensifying management. In the long run, present AUM's can probably be maintained or increased; but short-term (within this planning period) reductions in AUM's are predicted, particularly for improving riparian conditions. Average annual production for the first decade will not be substantially different from today, due to increases in upland forage production, resulting primarily from timber harvest.

Structural and nonstructural improvements play a large role in achieving overall forage management objectives. As shown in Table 4-7, improvements are planned to increase over the next decade, and then decrease to a maintenance level thereafter.

Wild horses are found on particular areas of the Big Summit Ranger District. The number of wild horses is currently estimated at 60 and is expected to be maintained at that level indefinitely (see Appendix I, Management of Wild Horses).

Table 4-7

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Forage Production [1/]	M AUM's/Yr	57	62.5	66.6	63.9	65.6
Structural Improvements						
Fencing	Miles/Yr.	35.7	0	0	0	0
Fencing Removal	Miles/Yr.	3.0	0	0	0	0
Water Developments	Number/Yr	14.0	0	0	0	0
Nonstructural Improvements						
Juniper Treatment For Riparian Improvement	Acres/Yr.	796	0	0	0	0
Range Burning For Forage Enhancement	Acres/Yr.	4,072	4,072	4,072	4,072	4,072
Wild Horses	Number	60	60	60	60	60

[1/] AUM fluctuations are due primarily to acres of transitory range made available by timber harvest type, amount and location.

Desired Future Condition

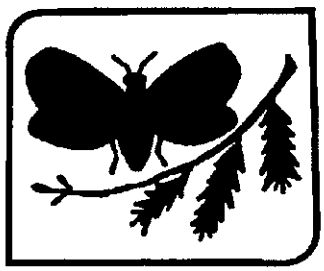
In Ten Years

Most allotments will be managed under more intensive grazing systems than present. Management changes and the resulting structural improvements necessary to improve riparian conditions to excellent will have been installed. Predicted reductions in available AUM's due to riparian exclosures and other riparian improvement practices, completed during the first decade, will generally have been offset by increases in transitory range made available through timber harvest and additional water developments installed in the uplands.

Fifty Years and Beyond

Range conditions will be good and forage production will be higher than at present due to improved range conditions. All necessary range improvements (structural and non-structural) will be completed, and the range improvement program will consist primarily of reconstruction and maintenance. Most riparian areas will be in excellent condition.

Forest Health



Goal(s)

Maintain the health of the Forest for present and future uses, within management's ability to do so. Forest health is defined as "a condition where biotic and abiotic influences on the Forest (i e. insects, diseases, atmospheric deposition, silvicultural treatments, harvesting practices) do not threaten management objectives either now or in the future."

Objectives

Utilize Integrated Pest management (IPM) strategies to maintain forest health.

Prevention and control of damage to forest resources, caused by insects, diseases, and noxious weeds will be accomplished through a number of practices.

Resource activities to control pests will depend on site specific analysis and may vary greatly from year to year. Emphasis will be on prevention rather than control When control is necessary, the method with the least impact on the environment will be used. Best estimates of activities for the next five decades are shown in Table 4-8. These do not represent target acres of accomplishment.

Table 4-8

Resource/Activity	Unit of Measure	Decade 1st	2nd	3rd	4th	5th
Integrated Pest management Strategies						
Manual [1/]	Acres/Yr.	100	100	100	100	100
Mechanical [1/]	Acres/Yr.	200	200	200	200	200
Biological [2/]	M Acres/Yr	100	100	100	100	100
Chemical	Acres/Yr.	200	200	200	200	200

Note: These acres do not include scheduled activities for resource management, such as precommercial thinning.

[1/] Includes 25 acres of noxious weed control

[2/] Primarily related to control of spruce budworm and other defoliators, using Bacillus thuringiesis (b t), or other suitable biological agents

Desired Future Condition

In Ten Years

Integration of pest management strategies in all activities will be practiced. Some of the most important activities are:

Accelerated precommercial and commercial thinning in overstocked ponderosa pine and lodgepole pine where this can be done within management area and economic limitations.

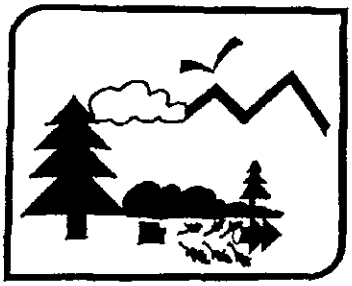
Attempts to identify severe root rot pockets and to treat these stands as soon as practical.

Stands being regenerated, including selection cutting, emphasizing treatments that will favor early seral species. This will be done by a combination of prescribed fire, planting, site preparation for naturals, and seed tree selection.

Fifty Years and Beyond

Continued practice of standards and guidelines for Forest Health should provide stands with manageable levels of most root rots, dwarf mistletoe, and bark beetles. Care will be needed when planning projects around the boundaries of old growth or wilderness areas to prevent encroachment of diseases. Forest managers will need to be on the alert for insects and diseases in the younger stands as these become more common.

Forest Residues



Goal(s)

Manage forest residues (woody biomass), resulting from either natural or man-caused processes, as a separate resource. Provide this resource for the benefit of resources such as soil, water, wildlife, and timber, as well as for the social and economic benefits associated with firewood gathering and other family oriented endeavors centered around residues.

Objectives

Provide for natural levels of forest residues consistent with the access, vegetation community, stage of stand development, on-site nutrient cycling, diversity, and forest protection needs. Desired residue profiles for common vegetation types around the Forest are shown in Forest-wide Standards and Guidelines under Forest Residues. More specific profiles by management area are shown in Section 3, Management Area Standards and Guidelines. Approximately 12 tons per acre represents a weighted average residue condition across the Forest. This equates to about 10.4 million tons of minimum residue requirements for the whole Forest (See Minimum Site Requirements, Table 4-9.)

Remove residues that exceed minimum site requirements. Attempt to use excess residues to reduce the impacts of alternate disposal methods (machinery operations and/or emissions from prescribed fire).

Table 4-9 shows how the amount of forest residues change over time. Units represent total amount of residues available on the Forest at any one time, and not an average annual output.

Table 4-9

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Pretreatment Residues	MM Tons	20.0	18.9	18.2	16 6	17.1
Minimum Site Requirements	MM Tons	10.4	10.4	10.4	10.4	10.4
Excess Residues	MM Tons	9.6	8.5	7.7	6.2	6.7
Activity	MM Tons	4.3	4.2	3.8	2.2	3.3
Natural	MM Tons	5.3	4.3	3.9	4.0	3.4
Excess Residues Removed	MM Tons	5.3	5.1	4.6	2.9	3.9
Activity	MM Tons	4.2	4.2	3.8	2.2	3.3
Natural	MM Tons	1.1	0.9	0.8	0.7	0.6
Excess Residues Remaining	MM Tons	4.3	3.4	3.2	3.3	2.7
Total Residues Remaining	MM Tons	14.7	13.8	13.6	13.7	13.1

Desired Future Condition

In Ten Years

The Forest will continue to develop and implement its residue management program to assure the proper retention, use, and disposal of forest residues.

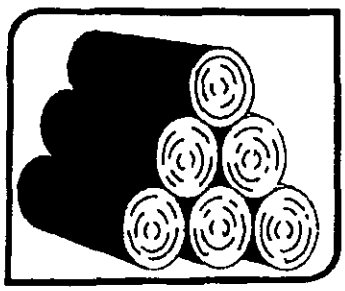
Compared to today, residues (activity slash, etc.) remaining after projects will gradually increase as implementation progresses. A more natural mosaic of residues will provide for greater habitat variety, increased nutrient capital on-site, improved visual variety, and cost-efficient wildfire protection opportunities.

Fifty Years and Beyond

The Forest will have a fully operational residue management program integrated into the project planning and implementation process.

Much of the Forest will have a natural appearing mosaic of residues managed to provide for biological diversity, appropriate nutrient cycling regimes, aesthetics, and a reasonable of level wildfire protection.

Fuelwood



Goal(s)

Provide fuelwood for personal and commercial use, consistent with other resource objectives and environmental constraints.

Objectives

The output of fuelwood shown in Table 4-10 declines over time, primarily as a result of the declining timber harvest. Other fuelwood sources will be increasing (thinning removals, etc.), but will not make up for the difference in lost timber sale slash.

Table 4-10

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Fuelwood	M Cords/Yr	13	12	11	11	11

Desired Future Condition

In Ten years

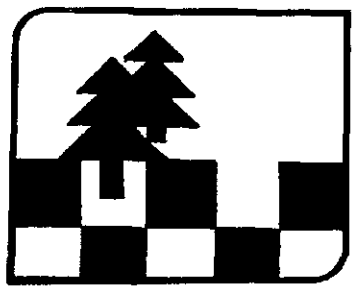
The availability of dead lodgepole will be much less than today. Greater distances will need to be driven to find quality large material.

The supply of firewood in general will be about 13 thousand cords per year until 1995, and then will decline to about 11 thousand cords per year. If present demand continues, it will not be met with the quality and accessibility currently available.

Fifty Years and Beyond

Cull sawlogs that are commonly available for wood cutting today will be very scarce. There will still be tops and limb wood, and thinning size trees four to seven inches DBH. Many people will find gathering this size of wood too time consuming and will elect to buy firewood from commercial cutters. Demand and value of smaller logs for firewood will likely exceed the value for sawlogs, therefore much of firewood needs will be supplied by commercial sales. Opportunities to allow individuals to thin younger stands and use the resulting material for firewood will be available.

Lands



Goal(s)

Permit special land uses that have been evaluated in relationship to land management objectives, that are compatible with other resource objectives and environmental considerations, and that are in the public interest.

Achieve a pattern of land ownership that best supports resource goals, improves the efficiency of resource management, and demonstrates effective forest management.

Objectives

Table 4-11 shows the number of special uses that are projected to increase in the first two decades and then level off.

Table 4-11

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Special Use Permits	Number [1/]	48	54	60	60	60

[1/] At any one time.

Desired Future Condition

In Ten Years

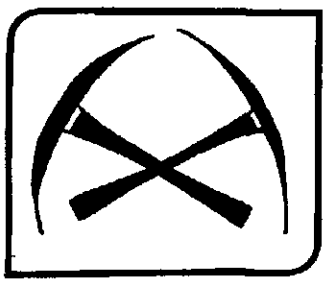
Permits for special recreational events will increase. The National Recreation Strategy will result in additional permits for recreational facilities and activities. The number of permits for electrical and telephone permits will also increase as parcels of private land scattered throughout the Forest are developed for recreational purposes.

Fifty Years and Beyond

The land exchange program will have achieved a more efficient land ownership pattern. Isolated blocks of Forest Service land will have been exchanged for private inholdings; however, inholdings with high recreation and/or real estate values will remain in private ownership.

The number of acres of land in National Forest ownership will remain approximately the same. Land exchanges will result in the acquisition of some private inholdings and the disposal of some isolated parcels of National Forest land.

Minerals and Energy



Goal(s)

Provide for and facilitate the exploration, development, and production of mineral and energy resources in coordination with other resource objectives, environmental considerations, and mining and leasing laws.

Objectives

Oil and Gas

The Forest will respond to industry demand for oil and gas leasing. On the Forest, 807,521 acres (96 percent of the Forest) are available for leasing. Of these acres, 718,370 (85 percent of the Forest) are classified as prospectively valuable for oil and gas. This is assumed to be the maximum acreage that would be leased. Presently, approximately 140,000 acres of Forest land are under lease. Approximately 670,000 acres have been under lease historically.

Domestic demand for oil and gas leasing is directly related to International production and prices. Increases in the cost of imported oil trigger increased domestic exploration and production, and probably an increase in leasing on the Forest. However, a competitive bidding system for the sale of leases could result

in higher lease costs, and thus, fewer acres of land leased. Changes in the International situation, changes in technology, failure to discover a valuable deposit, or depletion of deposits would then result in a decline in the acres listed. Table 4-12 shows projected estimates of future leased acres.

Table 4-12

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Oil and Gas	M Acres Leased [1/]	140	670	40	400	400

[1/] At any one time.

Geothermal

The Oregon Department of Geology and Mineral Industries (DOGAMI) has classified the entire Forest as "favorable for the discovery at shallow depth (less than 1,000 meters) of thermal water of sufficient temperature for direct heat applications." However, approximately three-quarters of the state is given this classification, and DOGAMI states "it is probable that only small areas of this region are truly underlain by such thermal water." For the purposes of this Plan, it is assumed that geothermal exploration in Oregon during the next five decades will be concentrated in those areas where it is now occurring, and the Forest will not issue any geothermal leases, as illustrated in Table 4-13.

Table 4-13

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Geothermal	Acres Leased	0	0	0	0	0

Locateable Minerals

The Forest will encourage and facilitate responsible mining exploration and development in a manner consistent with other resource objectives. On the Forest 804,510 acres (95 percent of the Forest) are open to mineral entry. Of this amount, 81,460 acres are classified as having either high or moderate potential for gold or mercury. Gold exploration activity has increased during this decade. The discovery of a valuable gold deposit would result in increased development and exploration activities. Conversely, the failure to make a valuable discovery could result in a decrease in mining interest (and therefore mining claims) on the Forest. Table 4-14 shows projected estimates of future claims.

Table 4-14

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Locatable (Gold, Mercury, Silver, etc.)						
Lode Claims	Number [1/]	981	1,000	1,000	1,000	1,000
Placer Claims	Number	31	30	30	30	30
Tunnel Site Claims	Number	10	0	0	0	0

[1/] At any one time.

Common Variety Minerals

The aggregate mined on Forest land is mostly used to surface Forest Service, State, and County roads. The demand for this material is expected to remain constant over the next five decades. Table 4-15 shows projected estimates.

Table 4-15

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Common Variety (Gravel, Cinders, etc.)	M Cubic Yards/Yr	85	85	85	85	85

Desired Future Condition

In Ten Years

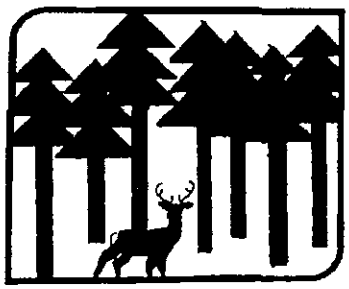
Exploration and development of locatable (hard rock) and leaseable (oil and gas) minerals will be allowed on the Forest, except in locations specifically withdrawn from mineral entry (see Standards and Guildelines, Section 3). The actual amount of exploration and development is expected to remain at existing levels throughout the first decade, then rise rapidly for oil and gas exploration due to an expected increase in the nation's demand. Up to 80 percent of the Forest may be leased for oil and gas exploration, if this occurs. If a large, valuable deposit is discovered, mining activity could result in a significant increase in both exploration and development (but is not predicted at this time). Extraction of saleable (common variety) minerals will be limited to existing pits or new locations that have approved operating plans, and is not expected to increase significantly during the first decade.

Fifty Years and Beyond

Oil and gas exploration is expected to rise nearly four-fold after the first decade due to an increase in the nation's demand. It is predicted that this will level off to a somewhat lower level thereafter, and remain constant past fifty years. Geothermal exploration is zero now, and no increases are expected for the next five decades. No substantial increase in mining activity is projected, and it will

remain at about constant levels throughout the next fifty years, barring the discovery of a large, valuable deposit. Extraction of common variety minerals is expected to remain relatively constant for the next five decades and beyond.

Old Growth



Goal(s)

Provide stands of old growth throughout the Forest for wildlife habitat, ecosystem diversity, and aesthetic diversity.

Objectives

Old growth stands will be present in various areas of the Forest, even though total acres will be declining over time Table 4-16 displays how total acres of existing old growth will slowly decline over the next five decades. Units are expressed as totals, rather than as an average annual output.

Table 4-16

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Allocated Old Growth For Dependent Species	M Acres [1/]	18 0	18.0	18 0	18.0	18.0
Unallocated Old Growth in Wilderness, Roadless & Research Natural Areas	M Acres	30.3	30.3	30.3	30.3	30.3
Limited Harvest Areas [2/]	M Acres	6.8	6.3	5.8	5.3	4.8
Full Harvest Areas [3/]	M Acres	38.7	29 3	20.1	10.9	2.0
Total Old Growth	M Acres	93.8	83 9	74.2	64.5	55.1

M = Thousand

[1/] This does not include an additional 1,270 acres that have been allocated for old growth dependent wildlife species. These acres currently are not "suitable" old growth, they are currently "capable" and are expected to become suitable in the future

[2/] This includes visual and other unique areas like Deep Creek management Area, where management will include extended rotations (150 years plus)

[3/] This includes General Forest, Big Game Winter Range, and the portion of Rock Creek/Cottonwood Creek Unroaded Helicopter Area

Desired Future Condition

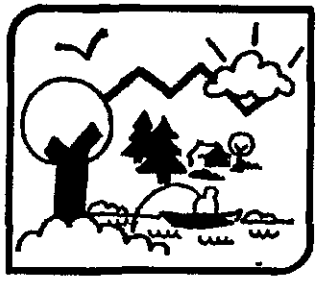
In Ten Years

Approximately 15 percent of the total forested acres on the Forest will be in an old growth condition. The majority will still exist in the General Forest areas, which are available for intensive timber management. Old growth stands allocated for old growth dependent wildlife species (18 thousand acres) will become more isolated as adjacent stands are harvested and placed in a managed condition. Barring a natural catastrophe, old growth found in wilderness, roadless and Research Natural Areas, will be maintained at current levels (about 30 thousand acres), and may even increase as younger stands develop old growth conditions. Stands with old growth characteristics will continue to be found at relatively high levels in visual corridors and other management areas which will be converted to managed stands at a relatively slow rate.

Fifty Years and Beyond

Approximately nine percent of the total forested acres on the Forest will be in an old growth condition. The majority will be found in wilderness, roadless areas and Research Natural Areas (approximately 30 thousand acres). Only two thousand acres of old growth will exist in areas available for intensive timber management, but another 18 thousand acres allocated for old growth dependent wildlife species will be distributed throughout these areas and the Forest as a whole. Stands with old growth characteristics will still be found at relatively high levels in visual corridors and special management areas (about five thousand acres).

Recreation



Goal(s)

Emphasize the National Recreation Strategy.

Provide for a variety of recreational experiences across all areas of the Ochoco National Forest, in a manner consistent with other resource objectives and environmental constraints.

Protect unique natural and recreational features.

Objectives

Developed Recreation

Manage, improve, modernize, and expand the developed recreation sites based on use and needs.

The total supply of developed sites, as well as the projected use expressed in MRVD's (Thousand Recreation Visitor Days), are shown in Table 4-17.

Table 4-17

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Developed Area Supply	M/RVD's	159.4	159 4	159.4	159.4	159.4
Projected Use	M/RVD's	116.1	130.5	143.0	156.6	159.4

Dispersed Recreation

Provide for a wide variety of recreational opportunities.

Table 4-18 shows the estimated supply, plus actual projected use for dispersed recreation, expressed in MRVD's.

Table 4-18

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Dispersed Supply						
Roaded	M/RVD's	1204.1	1220.2	1220.2	1220.2	1220.2
Unroaded	M/RVD's	44.0	44.0	44.0	44.0	44.0
Wilderness	M/RVD's	25.7	25.7	25.7	25.7	25.7
Dispersed Use Projected						
Roaded	M/RVD's	262.4	288.8	312.2	337.6	365.0
Unroaded	M/RVD's	32 2	35.3	38.5	42.0	44.0
Wilderness	M/RVD's	16 3	17.8	19.2	21.0	22.9

Hunting and Fishing Use

Hunting and fishing use occurs across all areas of the Forest, including wilderness areas and developed recreation sites. The use figures, shown in Tables 4-17 and 4-18 for Dispersed and Developed Recreation include projections for hunting and fishing. For informational purposes, they have been extracted and converted to WFUD's (Wildlife Fish User Days), and are shown in Table 4-19.

Table 4-19

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Hunting Use	WFUD's	158.2	155.8	156.8	155.4	151.0
Fishing Use	WFUD's	61.7	71.8	74.0	76.4	79.2

Off-Road Vehicles (ORV's)

ORV use, and trail construction and reconstruction, will be allowed where they are not in conflict with other resource objectives. Routes will be identified on the Forest to encourage use in specific areas by offering a variety of challenges and terrain. No numerical estimates are presently available.

Trails

A managed trail system will be provided for a variety of uses, including hiking, horseback riding, mountain biking, all terrain vehicles (ATV's), cross-country skiing, and snowmobiles.

There are currently 96.8 miles of summer use trails. About 186.9 miles of new construction and 13.0 miles of reconstruction are planned for nonmotorized use in the first decade, along with 95 miles of ATV trail construction, providing a

total of 378.7 miles of summer trails. In the second decade, a similar amount of construction and reconstruction is planned, providing a total of 563.6 miles of summer use trails.

There are currently 84 miles of winter use trails. Of that, 75 miles are designated snowmobile trails and nine miles are cross-country. In the first decade, 100 miles of construction and reconstruction of cross-country trails are planned, providing a total cross-country system of 109 miles. About 210 miles of construction are planned for snowmobile trails in the first decade, providing a total of 285 miles in the snowmobile trail system. Total winter trails will be 394 miles at that time. Construction and reconstruction of winter use trails in the second decade will be less than half of that for the first decade, providing a total winter system of 474 miles. See Table 4-20.

Table 4-20

Resource/Activity	Unit of Measure	Decade 1st	2nd	3rd	4th	5th
Summer Use Trails						
Non-Motorized	Miles	283.7	468.6	468.6	468.6	468.6
Construct/ Reconstruct	Mi./Year	18.7	18.5	0	0	0
ATV (Motorized)	Miles	95.0	190.0	190.0	190.0	190.0
Construct/ Reconstruct	Mi./Year	9.5	9.5	0	0	0
Total Summer Trails	Miles	378.7	563.6	563.6	563.6	563.6
Winter Use Trails						
Cross-Country Skiing	Miles	109.0	149.0	149.0	149.0	149.0
Construct/ Reconstruct	Mi./Year	10.0	4.0	0	0	0
Snowmobile	Miles	285.0	325.0	325.0	325.0	325.0
Construct/ Reconstruct	Mi./Year	21.0	4.0	0	0	0
Total Winter Trails	Miles	394.0	474.0	474.0	474.0	474.0

Desired Future Condition

In Ten Years

A variety of recreational opportunities will be available, focusing on dispersed recreation, backcountry recreation, and developed recreation across the Forest.

The existing campgrounds, picnic areas, and boat ramps will be maintained in the future; in the next 10 years additional camping facilities will be added at Falls, Delintment Lake, and Antelope Reservoir, Ochoco Forest Camp, Ochoco Divide, Sugar Creek, and several horse camps at various locations across the Forest.

Opportunities for nonmotorized recreation will continue to be provided in three wildernesses (Black Canyon, Mill Creek, and Bridge Creek), and three roadless areas (Lookout Mountain, Rock Creek/Cottonwood Creek, and Silver Creek).

Most of the Forest will continue to be open to off-road vehicle (ORV) use, but use will be directed to and encouraged on designated routes that will be developed. Some areas or routes will be closed and are designated on the travel plan map (map packet). ORV use will be managed and monitored to provide for resource protection.

A complex trail system will be available, providing extensive opportunities for both summer and winter use. Some trails will connect to the East-West Intertie, a trail joining the Pacific Crest Trail with the Desert Trail. Thirty-eight miles of existing trails in wilderness will be maintained. Some relocation and reconstruction of trails in Black Canyon will be necessary to reduce sedimentation caused by existing locations in creek crossings and boggy areas.

ATV and mountain bike routes will be available, offering a wide variety of terrain and experience levels. An extensive, marked snowmobile route system and cross-country ski trail system will also be available for winter time use.

Even though the majority of the Forest will be open to snowmobiles in the winter, some areas will be closed in order to emphasize other resource amenities (See Management Area Standards and Guidelines, Recreation, Section 3, this chapter).

Fifty Years and Beyond

Opportunities for dispersed recreation will have increased substantially over today's conditions. A much larger trail system will be in place and most trails will show substantial use. New trailheads, functional for more user types, will be in place. Loop trails, designated for day hikes (in such areas as Stein's Pillar Recreation Area) will include interpretive features.

Most developed recreation sites will have completed construction and reconstruction, and will be under a fee structure with maintenance costs being recovered.

Semiprimitive nonmotorized and semiprimitive motorized areas will be maintained to retain their recreational opportunities as planned today. No permanent road intrusions will have occurred in the three major roadless areas on the Forest, i.e. Rock Creek/Cottonwood Creek, Lookout Mountain (Prescription Area A), and Silver Creek.

Scenic Resources

Goal(s)

Integrate visual quality management into all resource activities which have potential negative impacts on scenery.

Provide natural appearing scenery along major travel ways, at developed and dispersed recreation sites, and in management areas where recreation is emphasized.

Participate in the "National Forest Scenic Byways" program, through nomination of other forest roads that exhibit exceptional qualities and meet national selection criteria.

Objectives

Table 4-21 lists the acres projected for scenic resources by Visual Quality Objective (VQO). In addition to specific road corridors, this includes a number of other management areas, e.g. Bandit Springs Recreation Area, that will be managed with scenic resources as either a primary or secondary objective. See Standards and Guidelines, Section 3, this chapter, for listing of VQO's by Management Area.

Table 4-21

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Preservation	M Acres	42	42	42	42	42
Retention	M Acres	85	85	85	85	85
Partial Retention	M Acres	50	50	50	50	50
Modification and Maximum Modification	M Acres	668	668	668	668	668

Desired Future Condition

In Ten Years

The figures shown in Table 4-21 represent a management allocation, but they do not accurately reflect what the Forest will look like in ten years. In reality, a large percentage of the Forest acres will continue to appear natural, as management prescriptions will not have been completely implemented. Timber management schedules for the General Forest areas will still maintain some degree of higher scenic values than Modification or Maximum Modification, even though activities will have occurred on many of the acres, and will continue to do so at a relatively high rate.

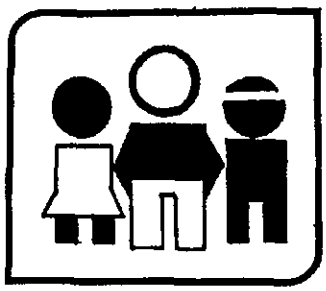
Along major travel routes, the Forest will appear as natural as possible, providing a variety of landscapes, and emphasizing natural features. The major recreation sites will be as natural as possible and facilities will be designed and placed to fit into the natural surroundings. A number of management areas emphasizing recreation will exhibit similar visual qualities in order to meet resource objectives.

In timber stands existing in areas with both partial retention and retention visual quality objectives, the Forest visitor will be able to view large, open park-like stands of ponderosa pine, as well as uneven-aged stands with a variety of age classes. Mixed conifer stands will exhibit a variety of size and age classes, with a focus on species such as larch and aspen, to give seasonal variety.

Fifty Years and Beyond

In fifty years, the figures shown by VQO in Table 4-21 should be reflected on the ground, as the majority of the management area prescriptions have been implemented. Primary scenery will be concentrated along travel routes and in management areas. But, General Forest areas will still appear somewhat natural due to use of uneven-aged management and other management techniques designed to reduce the negative viewing intensity of project activities. Size and color variety will be less in General Forest areas than in management areas allocated for higher Visual Quality Objectives.

Social and Economic



Goal(s)

Manage the Forest to lend support to the social and economic viability of local communities, as well as to the nation as a whole.

Provide equal opportunities to people regardless of race, color, creed, sex, marital status, age, handicap, religion, or national origin.

Maximize net public benefits (36 CFR 219.3).

Objectives

Maximize the overall long-term value to the nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not, in a manner consistent with the principles of multiple-use and sustained yield.

Table 4-22

Resource/Activity	Unit of Measure	Decade 1st	2nd	3rd	4th	5th
Social						
Changes in Jobs	Number	109	NOT AVAILABLE			
Changes in Income	Million $	1.6	NOT AVAILABLE			
Economic						
Total National Forest Planned Budget	Million $	10.2	9.3	9.4	9.8	9.7
Returns to Government	Million $	19.4	22.3	20.8	19.5	21.5
Present Net Value	Million $	475.0	NOT APPLICABLE			
Payments to Counties	Million $	4.9	NOT AVAILABLE			

Desired Future Condition

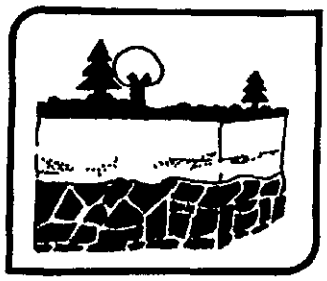
In Ten Years

The management of forest resources will be accomplished in an economically efficient manner. Investments in timber management or timber culture will take in to account site productivity, product value and marginal rates of return. Resources with market value - special uses, minerals, grazing and timber - which contribute to country receipts and the local economy, nonmarket-unroaded recreation, wildlife habitat, and unspoiled scenery - will experience increasing competition. Urban population values and demands for the latter values from the National Forest will increasingly conflict with local utilitarian views and lifestyles. The Forest Service caught in this conflicting dichotomy will continue to seek to balance use, retain options, and to form public partnerships

Fifty Years and Beyond

The dichotomy and competition for resources, and the purposes of the National Forests, will be politically and legislatively addressed and the questions of today resolved, although new issues will arise. Greater uniformity and clarity will exist in how publics view the National Forest, their purpose, and management. The present method of payment to counties,which encourages conflict, will be changed to something other than that requiring local governments to emphasize resource extraction from the National Forests in order to maximize county receipts.

Soil



Goal(s)

Manage soil to maintain, restore, or improve its natural productive potential.

Strive to reduce soil compaction and displacement to get as close to 90 percent of any activity area (including permanent, rocked, and nonsurface roads) in a noncompacted or nondisplaced condition (as is realistically possible) within one year of the projects completion.

Objectives

Land disturbing management activities, such as logging, road building, grazing, and certain recreational uses have potential for dramatic decreases in soil productivity if not managed or mitigated correctly. Soil erosion and compaction are conditions most seriously affected by activities on the Forest. It is the objective of the Ochoco National Forest to prevent or correct long-term soil damage in all activity areas that result in productivity loss on lands dedicated to plant and water production. The following parameters have been established and serve as objectives to measure the affects of activities on the soil resource.

Soil loss (erosion) results primarily from road building and timber harvesting, but also reflects the overall condition of watersheds on the Forest which may be the combined effect of all activities, including recreation and grazing. Watershed condition objectives have been established for the Forest, and are found under "Water," this section, this chapter. The tons of soil loss shown in Table 4-23 assume that watershed condition objectives will be met, and reflect what will be lost over time, despite proper management and mitigation, over the entire Forest.

Soil compaction results primarily from timber harvest and related activities (such as slash disposal). There is an estimated 102 thousand acres of forested soils in a compacted condition today, as a result of past and ongoing activities. In order to meet management requirements for soil, the acres of tillage shown in Table 4-23 (to relieve compaction at the 20 percent level) are planned over the next five decades. There are currently about 1,500 acres of tillage completed annually. Depending on annual management objectives and budgetary constraints, additional acres of tillage (at the 10 percent level) should also be considered.

Table 4-23

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
Soil Loss (erosion)	M Tons/Yr.	1.7	1.5	2.1	.9	1.9
Tillage For Compaction at 20 Percent Level (Maximum Allowed)	M Acres/Yr	1.7	1.3	2.0	.8	1.8
Tillage at 10 Percent Level (Forest Goal)	M Acres/Yr	3.0	2.3	3.6	1.4	3.2

Desired Future Condition

In Ten Years

As more of the Forest acres are affected by vegetation management activities, soil erosion will increase. These activities are mitigated in part by adherence to standards and guidelines. Soil loss is estimated to be limited to 1.7 thousand tons per year Forest-wide.

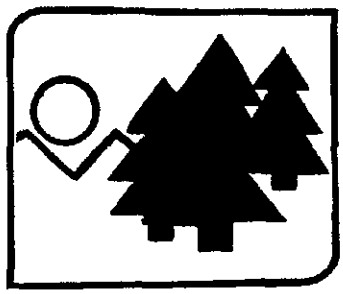
As areas with compacted soils are re-entered with timber sales or other projects, significant achievements in prevention and rehabilitation of compacted soils will be observed. The Forest will be moving closer to achieving a long-term goal of having no more than 10 percent of the managed acres in an unproductive condition.

Fifty Years and Beyond

Most available acres will be under some type of vegetative management, particularly for timber production. Fluctuations in soil loss will vary from year to year, and decade to decade, as a direct result of fluctuations in these activities. With adherence to standards and guidelines, soil loss should be limited to 1.9 thousand tons per year, based on current modeling.

During or near the end of the fifth decade, the Forest will have re-entered most acres of ground previously compacted, and rehabilitated these soils through tillage or other appropriate means, at least 80 percent of the total acres will be in a fully productive condition.

Timber



Goal(s)

Provide for the production of quality wood products, in a manner consistent with other resource objectives, environmental constraints, and economic efficiency.

Objectives

Table 4-24 provides a summary of major timber-related data for five decades in terms of average annual outputs. More detailed data concerning land suitability, comparisons with previous plans, and harvest schedules by management area are contained in Appendix A. These figures are projections of potential timber outputs based on available inventory data and assumptions, subject to annual budgets. All units are based on an average annual output. (MM=Million, M=Thousand.)

Table 4-24

Resource/Activity	Unit of Measure	Decade 1st	2nd	3rd	4th	5th
Long-Term Sustained Capacity	MMCF/Yr.	19.0	19.0	19.0	19.0	19.0
Allowable Sale Quantity						
All Species	MMCF/Yr.	19.0	19.0	19.0	19.0	19.0
	MMBF/Yr.	115.0				
Ponderosa Pine Only	MMCF/Yr.	13.7	13.1	13.5	9.9	11.2
	MMBF/Yr.	82.0				
Estimated Salvage	MMCF/Yr.	0.8	0.5	0.2	0.2	0.2
	MMBF/Yr.	4.0				
Harvest Prescriptions						
Uneven-aged						
Selection	M Acres/Yr	6.2	5.4	5.9	5.5	6.0
Even-aged						
Clearcut	M Acres/Yr	.9	2.0	2.0	2.8	2.7
Shelterwood	M Acres/Yr	2.1	3.5	1.6	.4	.3
Overstory removal on existing stands	M Acres/Yr	5.3	3.2	0	0	0
Commercial Thin	M Acres/Yr	1.3	2.4	6.7	1.6	7.9
Reforestation	M Acres/Yr	3.0	2.5	3.6	3.3	3.0
Timber Stand Improvement	M Acres/Yr	5.4	5.4	8.3	7.2	8.9

Desired Future Condition

In Ten Years

Forest stands will provide the raw material for industry as well as the setting for a variety of recreational experiences, and habitat for native wildlife species. Most of the harvest will still be coming from mature stands, but second growth stands will be providing small amounts, mainly from ponderosa pine. Many of the existing two-story stands (predominately ponderosa pine) will have had selection cutting. Clearcuts will be more common on mixed conifer (predominately fir species), and more young plantations will be visible. Sufficient acres of habitat for defoliators will be existing and will maintain the risk of an epidemic of spruce budworm or tussock moth. Commercial thinning in immature pine stands will be increasing, with an emphasis on prevention of bark beetle damage, but the risk of damage from mountain pine beetle will be reaching a peak in overstocked stands across the Forest. Ripping or cultivation may be needed to reduce soil compaction in existing stands.

Fifty Years and Beyond

Nearly all existing mature or two-story pine stands in the MA-F22 General Forest area will have had selection cuts or an overstory removal, and possibly a commercial thinning. Timber harvest will be coming from remaining mature stands and early commercial thinnings; the only overmature stands will be in wilderness and roadless areas, research natural areas, designated old growth habitat stands, portions of riparian areas, and portions of visual corridors. Most stands in General Forest will be under 130 years old and will be in a managed even-aged or uneven-aged condition. Ponderosa pine will be the major species, followed by western larch, lodgepole pine, Douglas-fir, white fir, and Engleman spruce. Except for pine climax types, nearly all stands will have a mixture of species. Hardwoods such as cottonwood, aspen, alder and willow will be more common than today along streams, meadows and wet areas. Most stands that are presently sapling or pole size will have had one or more commercial thinning, and some will be approaching a final harvest. Two-thirds of the mixed conifer stands will be in a managed even-aged condition from 0 to 60 years of age. All managed stands will be near optimum stocking level for the given management area; risk of damage from most insects and diseases will be reduced below today's level. Cultural activities, such as planting, thinning, and possibly pruning and fertilization, may be seen throughout much of the Forest. The Forest tree improvement program will have identified families best adapted to specific sites and conditions, seedlings from these families will be used in most plantations. A designated skid trail and landing system will be in place and used for most logging operations. Desired levels of snags and down woody material will exist on all timber stands. Soil compaction and disturbance will be within established guidelines.

Transportation System

Goal(s)

Plan, design, operate and maintain a safe and economical transportation system that provides efficient access for the movement of people and materials involved in the use and protection of the National Forest lands.

Objectives

Improve, expand, and maintain the road system to support other resource objectives in accordance with road management objectives, available funding to achieve economy, user safety, and resource protection.

New roads will be constructed to support timber management; some existing roads will be closed on a seasonal or yearlong basis due to structural limitations of the road, safety, or other resource considerations (such as those to meet wildlife needs or off-road vehicle (ORV) travel management needs). Ultimately, the road system will total 5478 miles, an increase of 20 percent over present mileage. By the year 2015, 63 percent of the new mileage will be completed; 81 percent will be completed by the year 2035. Roads will be constructed in roadless areas released from roadless management. Others will replace present low standard roads that are unsafe, causing resource damage, or that do not meet resource management needs. Unneeded roads will be obliterated and revegetated. The majority of the arterial and collector system is established; however, dollars will be allocated annually to maintain, restore to original design capacity, or increase the design capacity of the existing system. See Appendix A11 for proposed road construction and reconstruction schedule.

The miles of road open to passenger vehicles (Maintenance Level 3-5) and high clearance vehicles (Maintenance Level 2), and the miles closed seasonally or yearlong are shown in Table 4-25 and in Appendix D. At the end of the first decade, 67 percent of the Forest development road system will be open and unrestricted for passenger car or high clearance vehicle use, decreasing to 59 percent by the end of the fifth decade as additional road miles are closed on a seasonal or yearlong basis.

Table 4-25

Resource/Activity	Unit of Measure	Decade				
		1st	2nd	3rd	4th	5th
F.S. Roads, Open and Maintained, Total	Miles	4734	4935	5132	5231	5304
Passenger Car Use, Open and Maintained	Miles	844	850	850	850	850
High Clearance Use, Open and Maintained	Miles	2332	2210	2217	2221	2269
Closed, Seasonally or Yearlong	Miles	1558	1875	2065	2160	2185

Desired Future Condition

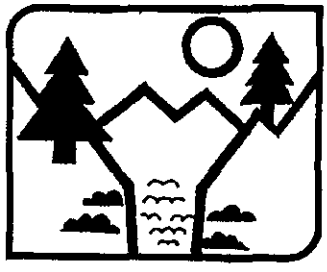
In Ten Years

The principal access roads will be readily identifiable; they will have paved or gravel surfaces and will be suitable for passenger car use. Signs will assist the traveler in finding their destination. The other roads will appear rough or primitive, but most will be available for use by the more experienced traveler. Some will be closed with gates or signs.

Fifty Years and Beyond

Most of the principal road systems will be completed and have paved or improved surfaces. A few may have State Highway designations. Most other roads will be either closed, restricted, or visually inviting to only the high ground clearance type vehicles used by the more seasoned forest traveler.

Water



Goal(s)

Maintain or improve water quality, quantity, and timing of run-off.

Comply with the objectives of the "Clean Water Act" and Oregon State water quality standards.

Provide water of consistently high quality to users and dependent resources.

Objectives

Maintenance or improvement of water quality can best be achieved through proper management of entire watersheds at all times, with special attention given to riparian areas.

Threshold values have been established to disperse harvest activities optimally over the Forest land base (see Soil and Water Standards and Guidelines, Section 3, this chapter). They also serve as benchmarks against which to measure the risk of experiencing a major climatic event in conjunction with a watershed condition or sensitivity that has the potential to result in long-term impacts to stream channels and therefore, to water quality. In Table 4-26, threshold values for individual watersheds have been combined into one average value for the Forest, which is 30.1 percent. No increases in the amount of disturbance above this threshold value have been predicted over the next five decades. More detailed analysis at the individual watershed level has indicated that threshold values may be exceeded on some watersheds, a situation that can be corrected by rescheduling or relocating harvest activities within other watersheds.

A long-term Forest objective is to maintain or improve all riparian areas to "excellent condition." Currently, 9,100 acres (roughly half) of the Forest riparian areas are in excellent condition. The remaining areas are scheduled for improvement over time. As can be seen in Table 4-26, a large portion of the needed improvement work will be completed in the first decade, even though recovery to full biological potential may require 20 to 60 years. See Section 2, Management Area Prescriptions, this chapter, for desired future condition of Management Area F15, Riparian Areas, and Appendices A12 and A15 for schedules of activities to achieve riparian area objectives.

Water quantity outputs shown in Table 4-26 are not the result of any specific proposals to increase run-off, but reflect instead the surface water leaving the Forest as a result of natural run-off, and any increased run-off expected to result from the manipulation of vegetation (mainly timber harvesting). Year to year variations in precipitation are likely to obscure any increase or decrease in run-off resulting from management activities.

Table 4-26

Resource/Activity	Unit of Measure	Decade 1st	2nd	3rd	4th	5th
Water Quality Watershed Condition	Percent Above Threshold	0	0	0	0	0
Watershed/Riparian Improvement	Acres/Yr.	319	50	50	50	50
Total in Excellent Condition	M Acres	10.0	11.2	12.7	15.1	17.5
Water Yield	M Acre Feet/Yr.	57.5	56.3	56.4	55.7	56.7

Desired Future Condition

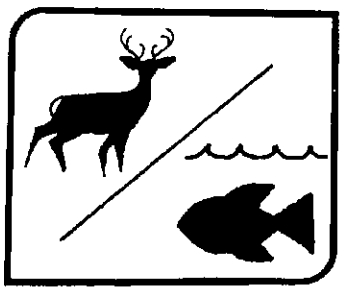
In Ten Years

Individual watersheds on the Forest that are currently in excellent condition are expected to remain so. Activities will be monitored and those watersheds not presently in good condition are scheduled for first priority improvements, but it may take decades before the entire watershed and riparian areas are fully functional again (as intended). The chances of a major storm event causing severe impacts will be even less than today. No significant increases in run-off for the Forest are expected.

Fifty Years and Beyond

It is expected that 90 to 95 percent of the riparian areas on the Forest will be in "excellent condition" by the end of the fifth decade. Additional research and monitoring of watersheds will have resulted in a situation where outputs of Forest resources (mainly timber) may be produced at levels explicitly tied to watershed condition, accounting for yearly and decadal variations in weather patterns and major storm events. Run-off of water is limited by total Forest acres and no significant increases are anticipated.

Wildlife and Fish



Goal(s)

Identify existing populations of any threatened, endangered, or sensitive species and maintain or improve their habitats.

Provide, manage and improve fish and wildlife habitats to maintain viable populations of existing native and desired non-native vertebrate species, including threatened, endangered, and sensitive species.

Objectives

Population management objectives as established by the Oregon Department of Fish and Wildlife (ODFW) are 18,300 for deer and 2,600 for elk on the Forest. The Ochoco National Forest objective is to manage the habitat to meet these population objectives to the extent practical. Populations of deer and elk are limited by habitat capability, which changes over time in response to vegetation manipulation and open road density (see Wildlife and Fish, Forest-wide Standards and Guidelines, for discussion on Habitat Models).

Wildlife habitat improvement will include items such as: prescribed burning, road closures, snag replacement, seeding, planting, mechanical treatment of woody browse species, grasses to improve summer and winter ranges for big game, and protection and improvement of special habitats such as springs, wet meadows, riparian, and aspen communities.

Fish habitat improvements will include rock and log weir installation, large woody debris and boulder placement, juniper rip-rap, riparian fencing, and planting shrubs and trees to restore shade and provide bank protection and stabilization.

Projections for anadromous fish production are derived from smolt habitat production estimates. Fish habitat is a function of both instream condition, and overall condition of the particular watershed.

Habitat for old growth dependent wildlife species is provided in mostly contiguous, allocated stands of old growth ponderosa pine and mixed conifer across the Forest, as well as that provided in wilderness, roadless areas and research natural areas. Other old growth which exists across General Forest and other special management areas, is not generally considered suitable habitat for major indicator species (pileated woodpecker), mainly because of stand size requirements. Even though the total acres of existing old growth will decline over the five decade planning horizon, a long-term allocation of 19,250 acres, as well as 30,300 unallocated acres in wilderness, research natural areas and unroaded areas will ensure maintenance of suitable habitat for the species. In addition, 19,250 acres of supplemental feeding areas surrounding each old growth block will be provided. See Table 4-27 and Table 4-16, with footnote 1/.

Table 4-27

Resource/Activity	Unit of Measure	Decade 1st	2nd	3rd	4th	5th
Deer Population	M Numbers	18.3	18.3	18.3	18.3	18 3
Elk Population	M Number	3.0	2.9	2.9	2.8	2 6
Wildlife Habitat Improvement [1/]	M Acres/Yr	.5	.4	.3	.2	.1
Fish Production (Yearly)						
Anadromous	Smolt Habitat Capability Index (M Smolt)	121.00	136.0	164.0	192.0	220.0
Resident	M Numbers	783.9	1105.0	1639.0	2707.0	2707.0
Fish Habitat Improvement [1/]	Acres/Yr.	639	50	50	50	50
Snag Habitat for Cavity Nesters (Average Across the Forest)	Percent of Potential	47	49	51	55	54
Habitat for Old Growth Dependent Species						
Allocated Old Growth	M Acres	19.3	19.3	19.3	19.3	19.3
Supplemental Feeding Areas	M Acres	19.3	19.3	19.3	19.3	19.3
Unallocated Old Growth [2/]	M Acres	30.3	30.3	30.3	30.3	30.3
Total Habitat [3/]	M Acres	68.9	68.9	68.9	68.9	68.9

[1/] Shown as acres, but is actually a combination of acres and numbers of structural improvements.
[2/] These occur in wilderness, roadless and research natural areas
[3/] Assumes 60 percent occupancy by dependent species, which may or may not occur at any one time

Desired Future Condition

In Ten Years

In ten years, habitat capability on the Forest will continue to exceed that needed to meet Oregon Department of Fish and Wildlife objectives for both deer and elk, based on current modeling procedures and assumptions. Cover is expected to become the limiting habitat factor for big game, especially elk, and will be

declining over time, but decreased open road density and increases in habitat enhancement in winter range and general forest areas are expected to compensate for the cover loss.

As a result of fish habitat improvement and watershed/riparian restoration (see objectives for Water), relatively high populations of both anadromous and resident fish are expected to be available after ten years (as shown in Table 4-27).

The amount of snag habitat across the Forest will remain at current levels Forest-wide. The amount will vary by management area, ranging between 40 and 100 percent of the number needed to support the potential populations of primary cavity excavators. Forest-wide, snag habitat will average about 47 percent in ten years.

In ten years, approximately 68,900 acres of habitat will be available for old growth dependent wildlife species (pileated woodpecker). This includes 19,250 acres of old growth allocated across the Forest, plus 30,300 acres unallocated but available in wilderness, roadless areas, and research natural areas. Supplemental feeding areas (also 19,250 acres), not specifically meeting old growth definitions, will also be available in close proximity to actual, allocated old growth stands.

Fifty Years and Beyond

It is less certain that current ODFW objectives for both deer and elk can be met, due to expected decreases in overall cover across the Forest. It must be noted however, that ongoing research on habitat needs will provide management with better data than is currently available to project population estimates and to balance overall resource objectives. The estimates shown in Table 4-27 for fifty years and beyond are based on current models which are considered insufficient to predict accurate numbers of big game. These models are the best available at the present time.

As a result of fish habitat capability improvement (including watershed/riparian restoration), both anadromous and resident fish numbers are expected to increase in fifty years (as shown in Table 4-27).

The number of snags will actually increase Forest-wide, to an average of about 54 percent of potential. The estimated large acreage of ponderosa pine stands that are currently snag deficient, will be managed to provide levels of 40 percent or greater, along with other management areas at even higher rates.

Barring a major natural catastrophe, habitat for old growth dependent wildlife species will remain about the same as is available today (68,900 acres). Species using these areas will be more limited in terms of movement and selection; a large portion of the habitat will be in isolated stands scattered across the Forest.

TABLE 4-28
SUMMARY TABLE OF
AVERAGE ANNUAL OUTPUTS BY DECADE

	DECADE							
Resource/Activity	Unit of Measure	1st	2nd	3rd	4th	5th	NAS CODE	REMARKS
AIR QUALITY								
TSP Generation by Prescribed Fire	M Tons/Yr	7.4	7 0	6 4	4 2	5 4	FA1	TSP-Total Suspended Sediments
BIOLOGICAL DIVERSITY								
Riparian Areas in Excellent Condition	M Acres	10 0	11 2	12 7	15 1	17 5	CF2	
Riparian Areas Designated For Connective Habitat	M Acres	1 0	1 0	1 0	1 0	1 0	CW112	
Snag Habitat for Cavity Nesters (Average Across the Forest)	Percent of Potential	47	49	51	55	54	CW112	
Old Growth (Allocated plus Unallocated)	M Acres	93 8	83 9	74 2	64 5	55 1	CW112	
Acres of forested land by Successional Stage 1/								
Stage I and II	M Acres	9	30	26	37	34	NA	Stagel-/Grass Forb
Stage III	M Acres	151	151	30	56	63	NA	Stage II-Shrub
Stage IV	M Acres	184	192	333	160	190	NA	Seedling Stage
Stage V	M Acres	134	115	109	255	230	NA	Stage III-Pole
Stage VI	M Acres	94	84	74	64	55	NA	Sapling Stage IV-Young Stage V-Mature Stage VI-Old Growth
Acres of non-forest land by Plant Community Type								
Timberline Meadows	M Acres	3	3	3	3	3	NA	
Meadows	M Acres	9	9	9	9	9	NA	
Juniper Dominant	M Acres	57	57	57	57	57	NA	
Grass Dominant	M Acres	5	5	5	5	5	NA	
Sagebrush Dominant	M Acres	38	38	38	38	38	NA	
Biscuit Root-Scabland	M Acres	7	7	7	7	7	NA	
CULTURAL RESOURCES								
Sites Documented	Number/Yr	120	100	80	70	60	AC111	
Sites Enhanced/Interpreted	Number/Yr	3	3	3	2	2	AC111-1	
Nat'l Register Nomination	Num/ Decade	2	2	2	2	2	AC122	
FACILITIES								
Construction and Improvements (Reconstruction)	Number	27	N/A	N/A	N/A	N/A	HJ231	

Resource/Activity	Unit of Measure	1st	2nd	3rd	4th	5th	NAS CODE	REMARKS
FIRE								
Wildfire Effectiveness Index	$/1000 Ac protected	715	715	715	715	715	PF114	
Prescribed Burning								
Natural & Activity Fuels	M Acres/Yr	24 6	25 2	24 9	19 7	25 6	PF24 & PF25	
FORAGE								
Forage Production	M AUM's/Yr	58	62 5	66 6	63 9	65 6	DN2	AUM Fluctuations Due to Transitory Range
Structural Improvements								
Fencing	Miles/Yr	35 7	0	0	0	0	DN221	
Fencing Removal	Miles/Yr	3 0	0	0	0	0	DN221	
Water Developments	Number/Yr	14 0	0	0	0	0	DN221	
Nonstructural Improvements								
Juniper Removal	Acres/Yr	796	0	0	0	0	DN222	
Range Burning for Forage Enhancement	Acres/Yr	4072	4072	4072	4072	4072	DN222	
Wild Horses	Number	60	60	60	60	60	DW	
FOREST HEALTH								
Integrated Pest Mangement Strategies								
Manual	Acres/Yr	100	100	100	100	100	QC	
Mechanical	Acres/Yr	200	200	200	200	200	QC	
Biological	M Acres/Yr	100	100	100	100	100	QC	
Chemical	Acres/Yr	200	200	200	200	200	QC	
FOREST RESIDUES								
Pretreatment Residues	MM Tons	20 0	18 9	18 2	16 6	17.1	FW111-1	
Minimum Site Requirements	MM Tons	10 4	10 4	10 4	10 4	10 4	FW111-1	
Excess Residues	MM Tons	9 6	8 5	7 7	6 2	6 7	FW111-1	
Activity		4 3	4 2	3 8	2 2	3 3	FW111-1	
Natural		5 3	4 3	3 9	4 0	3 4	FW111-1	
Excess Residues Removed	MM Tons	5 3	5 1	4 6	2 9	3 9	FW111-1	
Activity		4 2	4 2	3 8	2 2	3 3	FW111-1	
Natural		1 1	0 9	0 8	0 7	0 6	FW111-1	
Excess Residues Remaining	MM Tons	4 3	3 4	3 2	3 3	2 7	FW111-1	
Total Residues Remaining	MM Tons	14 7	13 8	13 6	13 7	13 1	FW111-1	
FUELWOOD								
Fuelwood	M Cords/Yr	13	12	11	11	11	ET124	
LANDS								
Special Use Permits	Number	48	54	60	60	60	JL122-1	

Resource/Activity	Unit of Measure	1st	2nd	3rd	4th	5th	NAS CODE	REMARKS
MINERALS AND ENERGY Oil and Gas	M Ac Leased	140	670	400	270	140	GM1	
Geothermal	Acres Leased	0	0	0	0	0	GM1	
Locatable (Gold, Mercury, Silver, etc) Lode Claims Placer Claims Tunnel Site Claims	 Number Number Number	 981 31 10	 1,000 30 0	 1,000 30 0	 1,000 30 0	 1,000 30 0	 GM1 GM1 GM1	
Common Variety (Gravel, Cinders, etc)	M Cubic Yards/Yr	85	85	85	85	85	GM1	
OLD GROWTH Allocated Old Growth For Dependent Species	M Acres	18 0	18 0	18 0	18 0	18 0	CW11	Does not include 1,270 acres capable
Unallocated Old Growth in Wilderness, Roadless & Research Natural Areas Limited Harvest Areas Full Harvest Areas	M Acres M Acres M Acres	30 3 6 8 38 7	30 3 6 3 29 3	30 3 5 8 20 1	30 3 5 3 10 9	30 3 4 8 2 0	CW11 CW11 CW11	
Total Old Growth	M Acres	93 8	83 9	74 2	64 5	55 1	CW11	
RECREATION Developed Area Supply	M/RVD's	159 4	159 4	159 4	159 4	159 4	AN111	
Projected Use	M/RVD's	116 1	130 5	143 0	156 6	159 4	AN111	
Dispersed Supply Roaded Unroaded Wilderness	M/RVD's 1220 2 44 0 25 7	 1220 2 44 0 25 7	 1220 2 44 0 25 7	 1220 2 44 0 25 7	 1220 2 44 0 25 7	 AN111 AN111 AN111		
Dispersed Use Projected Roaded Unroaded Wilderness	M/RVD's 262 4 32 2 16 3	 288 8 35 3 17 8	 312 2 38 5 19 2	 337 6 42 0 21 0	 365 0 44 0 22 9	 AN111 AN111 AN111		
Hunting Use	M/RVD's	158 2	155 8	156 8	155 4	151 0	AN111	Included in Recreation MRVD's above
Fishing Use	M/RVD's	61 7	71 8	74 0	76 4	79 2	AN111	
Summer Use Trails Nonmotorized Construct/Reconstruct	 Miles Mi /Yr	 283 7 18 7	 468 6 18 5	 468 6 0	 468 6 0	 468 6 0	 AT2 AT2	
ATV (Motorized) Construct/Reconstruct	Miles Mi /Yr	95.0 9 5	190 0 9 5	190 0 0	190 0 0	190 0 0	AT2 AT2	

Resource/Activity	Unit of Measure	1st	2nd	3rd	4th	5th	NAS CODE	REMARKS
Total Summer Trails	Miles	378 7	563 6	563 6	563 6	563 6	AT2	
Winter Use Trails								
Cross-Country Skiing	Miles	109 0	149 0	149 0	149 0	149 0	AT2	
Construct/Reconstruct	Mi /Yr	10 0	4 0	0	0	0	AT2	
Snowmobile	Miles	285 0	325 0	325 0	325 0	325 0	AT2	
Construct/Reconstruct	Mi /Yr	21 0	4 0	0	0	0	AT2	
Total Winter Trails	Miles	394 0	474 0	474 0	474 0	474 0	AT2	
SCENIC								
Preservation	M Acres	42	42	42	42	42	AV1	
Retention	M Acres	85	85	85	85	85	AV1	
Partial Retention	M Acres	50	50	50	50	50	AV1	
Modification and Maximum Modification	M Acres	668	668	668	668	668	AV1	
SOCIAL AND ECONOMIC								
Social							N/A	
Changes in Jobs	Number	109	N/A	N/A	N/A	N/A		
Changes in Income	Million$	1 6	N/A	N/A	N/A	N/A		
Economic								
Total National Forest Planned Budget	Million $	10 2	9 3	9.4	9 8	9 7		
Returns to Government	Million $	19 4	22 3	20 8	19 5	21 5		
Present Net Value		475 0	N/A	N/A	N/A	N/A		
Payments to Counties		4 9	N/A	N/A	N/A	N/A		
SOILS								
Soil Loss (erosion)	M Tons/Yr	1 7	1 5	2 0	9	1 9	F111-1	
Tillage for Compaction at 20 Percent Level (Maximum Allowed)	M Acres/Yr	1 7	1 3	2 0	8	1 8		
Tillage at 10 Percent Level (Forest Goal)	M Acres/Yr	3 0	2 3	3 6	1 4	3 2		
TIMBER								
Long-term Sustained Capacity	MMCF/Yr	19 0	19 0	19 0	19 0	19 0	ET114	
Allowable Sale Quantity								
All Species	MMCF/Yr	19 0	19 0	19 0	19 0	19 0	ET114	
	MMBF/Yr	115 0					ET114	
Ponderosa Pine Only	MMCF/Yr	13 7	13 1	13 5	9 9	11 2	ET114	
	MMBF/Yr	82 0					ET114	
Estimated Salvage	MMCF/Yr	0 8	0 5	0 2	0 2	0 2	ET114	
	MMBF/Yr	4 0						
Harvest Prescriptions								
Uneven-aged Selection	M Acres/Yr	6 2	5 4	5 9	5 5	6 0	ET114	

Resource/Activity	Unit of Measure	1st	2nd	3rd	4th	5th	NAS CODE	REMARKS
Even-aged								
Clearcut	M Acres/Yr	9	20	20	28	27	ET114	
Shelterwood	M Acres/Yr	21	35	16	4	3	ET114	
Overstory removal on existing stands	M Acres/Yr	53	32	0	0	0	ET114	
Commercial Thin	M Acres/Yr	13	24	67	16	79	ET114	
Reforestation	M Acres/Yr	30	25	36	33	30	ET24	
Timber Stand Improvement	M Acres/Yr	54	54	83	7.2	89	ET25	
TRANSPORTATION SYSTEM								
Passenger Car Use								
Open and Maintained	Miles	844	850	850	850	850	LT1	
High Clearance Use								
Open and Maintained	Miles	2332	2210	2217	2221	2269	LT1	
Closed, Seasonally or Yearlong	Miles	1558	1875	2065	2160	2185	LT1	
TOTAL Forest Service Roads								
Open and Maintained	Miles	4734	4935	5132	5231	5304	LT1	
WATER								
Water Quality								
Watershed Condition	Percent Above Threshold	0	0	0	0	0	FW1	
Watershed/Riparian Improvement	Acres/Yr	319	50	50	50	50	FW1	
Total in Enhanced Condition	M Acres	10 0	11 2	12 7	15.1	17 5	FW1	
Water Yield	M Acre Feet/Yr	57 5	56 3	56 4	55 7	56 7	FW1	
WILDLIFE AND FISH								
Deer Population	M Numbers	18.3	18 3	18 3	18 3	18 3	CW11	
Elk Population	M Numbers	30	29	29	28	26	CW11	
Wildlife Habitat Improvement	M Acres/Yr	5	4	3	2	1	CW222	
Fish Production (Yearly)								
Anadromous	Steelhead Habitat Capability Index (M Smolt)	121 0	136 0	164 0	192 0	220 0	CF11	
Resident	M Numbers	783 9	1105 0	1639 0	2707 0	2707 0		
Fish Habitat Improvement	Acres/Yr	639	50	50	50	50	CF221	
Snag Habitat for Cavity Nesters (Average Across the Forest)	Percent of Potential	47	49	51	55	54	CF112	
Habitat for Old Growth Dependent Species								
Allocated Old Growth	M Acres	19 3	19 3	19 3	19 3	19 3	CF112	
Supplemental Feeding Areas	M Acres	19 3	19 3	19 3	19 3	19 3	CF112	
Unallocated Old Growth	M Acres	30 3	30 3	30 3	30 3	30 3	CF112	Occurs in Wilderness, etc
Total Habitat	M Acres	68 9	68 9	68 9	68 9	68 9	CF112	

Chapter 4

Forest Management Direction

Section 2

Management Area Prescriptions

Chapter 4

Section 2

Management Area Prescriptions

A management area is composed of lands with similar capabilities or characteristics, and is allocated to emphasize a particular resource or mix of resources. The lands may or may not be contiguous.

All areas of the Ochoco National Forest are managed under the Forest-wide standards and guidelines described in Section 3, and by broader multiple use principles directed by laws, regulations, and policies.

Within this broad multiple use guidance, each management area emphasizes a specific resource or mix of resources. For example, in the Winter Range Management Area (MA-F20), production of big game wildlife species will be emphasized, even though a variety of other compatible uses can occur.

In this section of Chapter 4, 28 management areas are presented to provide the reader with the physical description, management emphasis, and desired future condition of each area Management area standards and guidelines are described in conjunction with Forest-wide standards and guidelines in Section 3.

Table 4-29 contains a list of the 28 Management Areas for the Alternative I (Preferred). Also shown are the acres allocated to each area; acres are mutually exclusive--management areas do not overlap. Locations of the management areas are displayed on the map for Alternative I (Preferred). Individual maps for each management area are located at the end of this section of Chapter 4.

TABLE 4-29
OCHOCO NATIONAL FOREST MANAGEMENT AREAS

Allocations and Resource Emphasis By Area

Management Area	Acres	% Total	Resource Emphasis
MA-F1 Black Canyon Wilderness	13400	2	Wilderness
MA-F2 Bridge Creek Wilderness	5400	<1	Wilderness
MA-F3 Mill Creek Wilderness	17400	2	Wilderness
MA-F4 North Fork Crooked River Wilderness Study Area	1125	<1	Wilderness
MA-F5 Research Natural Areas	4400	<1	Research
MA-F6 Old Growth 1/	19250	2	Wildlife
MA-F7 Summit National Historic Trail	9560	1	Recreation
MA-F8 Rock Creek/Cottonwood Creek	11820	1	Recreation
MA-F9 Rock Creek/Cottonwood Creek Unroaded-Helicopter	2480	<1	Timber/Range
MA-F10 Silver Creek Area	3110	<1	Recreation
MA-F11 Lookout Mountain Recreation	15660	2	Recreation
MA-F12 Eagle Roosting Areas	570	<1	Wildlife
MA-F13 Developed Recreation	1810	<1	Recreation
MA-F14 Dispersed Recreation	1970	<1	Recreation
MA-F15 Riparian	18130	2	Riparian
MA-F16 Bandit Springs Recreation	1580	<1	Recreation
MA-F17 Stein's Pillar Recreation	1070	<1	Recreation
MA-F18 Hammer Creek Wildlife/ Recreation	2560	<1	Wildlife
MA-F19 Deep Creek Recreation	770	<1	Recreation
MA-F20 Winter Range	64130	7	Wildlife
MA-F21 General Forest Winter Range	107360	12	Timber/Wildlife

Management Area	Acres	% Total	Resource Emphasis
MA-F22 General Forest	496850	59	Timber/Range
MA-F23 North Fork Crooked River Recreation Corridor	1830	<1	Recreation
MA-F24 North Fork Crooked River Scenic Corridor	830	<1	Recreation
MA-F25 Highway 26 Visual Corridor	6850	<1	Scenic
MA-F26 Visual Management Corridors	33260	4	Scenic
MA-F27 Round Mountain National Recreation Trail	1000	<1	Recreation
MA-F28 Facilities	460	<1	Facilities
TOTAL FOREST ACRES	844640	100	

1/ Includes 8 old growth units within wilderness, unroaded, and WSA

Modifying Management Areas or Prescriptions

The appropriate setting for each management area is determined by the management goals, objectives, desired conditions, and suitability of the area to achieve these conditions. When a project would result in conditions that do not meet these criteria, the need to modify the management area allocation should be addressed (see Chapter 5, Implementation of the Forest Plan). Evaluation of factors including activity extent, duration of impact, season of operation, sight or sound impacts, or feasibility of rehabilitation would be necessary. Cumulative modifications of management areas should not exceed those described in Chapter 5, Implementation of the Forest Plan.

During implementation, it may be discovered that a management area boundary was inaccurately or inappropriately mapped. In such a case procedures for adjusting boundaries will also follow direction in Chapter 5, Implementation of the Forest Plan (Amendment and Revision Process). Final boundary adjustments will be documented and integrated into the Forest data base by the initiating party.

MA-F1 Black Canyon Wilderness

13,400 acres, 2 percent of the Ochoco National Forest

Description

Black Canyon Wilderness contains approximately 13,400 acres and is located on the Paulina Ranger District. Black Canyon Creek drains into the South Fork of the John Day River and falls from 6,000 feet to 2,800 feet in elevation. It is characterized by steep sides and numerous north-south ridges with rolling to flat benches on the edges. Wolf Mountain and Dry Corner are on the south side. Bearskull Mountain is on the north side. The north facing slopes are covered with mixed conifers. The south facing slopes are predominantly ponderosa pine and juniper. The water produced by the watershed is used by livestock, wildlife, anadromous fish, and irrigation from the John Day River.

Emphasis

Protect the Wilderness ecosystems. Manage use to maintain a natural setting and preserve solitude.

Desired Condition

The Black Canyon Wilderness will be as natural as is possible with reduced or little evidence of human activity. The area will be a place of natural settings with opportunities for solitude. Present road access and hunter caches and camps will

be rehabilitated to the point that their presence is no longer a dominant land feature. Recreational improvements, such as trailheads and access trails, will be evident where they are necessary to control use in order to preserve wilderness qualities. Livestock use will be evident but the successful application of allotment management requirements will also be evident.

Old growth stands will be evident within the management area along with those wildlife species in the Ochoco National Forest which are dependent on old growth habitat Wildlife and fish species indigenous to the area will continue to exist at levels consistent with the available habitat. Tree mortality, resultant of past spruce budworm and other endemic insects and diseases, will be evident, along with associated changes in fuel loadings and plant succession. Fire occurrence will be evident where natural lightning starts occur. (See Appendix H - Wilderness Plans.)

MA-F2 Bridge Creek Wilderness

5,400 acres, less than one percent of the Ochoco National Forest

Description

The Bridge Creek Wilderness, established as a result of the Oregon Wilderness Act of 1984, is managed by the Big Summit Ranger District, Ochoco National Forest. The 5,400 acre wilderness is located in the north central portion of the District.

The topography is benchy, with densely forested slopes, open meadows and some scab flats. Elevations range from 4,700 feet to 6,600 feet. North Point at 6,607 feet is one of the higher peaks on the Ochoco National Forest and provides an outstanding viewpoint. Five springs lie within the area: Thompson, Pisgah, Masterson, Nelson and Maxwell. Bridge Creek and Maxwell Creek flow through the area. A historic diversion and ditch system will continue to exist and be maintained until the permittee no longer needs this to maintain the preexisting water rights.

Vegetation includes lodgepole pine, ponderosa pine, white fir, Douglas-Fir, western larch, sagebrush, snowberry, and other brush species.

Emphasis

Protect the Wilderness ecosystems. Manage use to maintain a natural setting and preserve solitude. The area will be managed as a nontrailed wilderness where people can use their orientation skills.

Desired Condition

The Bridge Creek Wilderness area will be as natural as possible, with reduced or little evidence of human activity. The area will be a place of natural settings where solitude may be sought. Existing roads will be rehabilitated so that its presence is no longer a dominant land feature Recreational improvements, such as trailheads and access trails, will not be evident, but entry points will be signed where necessary to control use and to preserve wilderness qualities.

Livestock use will be evident, but the successful application of allotment management requirements will also be evident. Riparian areas in less than desirable condition will show evidence of recovery from the application of mitigation and rehabilitation measures.

Old growth stands will be evident within the management area along with those wildlife species in the Ochoco National Forest dependent on old growth habitat. Wildlife and fish species indigenous to the area will continue to exist at levels consistent with the available habitat.

Tree mortality resultant of past Mountain Pine Beetle infestations, and other endemic insects and diseases, will be evident along with associated changes in fuel loadings and plant succession. Fire occurrence will be evident where natural lightning starts occur. (See Appendix H - Wilderness Plans.)

MA-F3 Mill Creek Wilderness

17,400 acres, two percent of the Ochoco National Forest

Description

On June 26, 1984, President Reagan signed the Oregon Wilderness Act, and the 17,400 acre Mill Creek Wilderness was created; it is now managed by the Prineville Ranger District. The area is represented by all exposures but is predominately southern. Elevations range from 3,725 feet to 6,240 feet above sea level. The terrain varies from the rugged, rocky cliffs of Desolation Canyon to the flat meadows of Bingham Prairie. Spectacular rock outcrops are present at Twin Pillars and Whistler Point. The Wilderness is within the southwestern extension of the Blue Mountains physiographic unit. Bedrock consists predominantly of older volcanic basalts and pyroclastic sediments. Formations consist of flows, domes, and breccia. Hard basalt forms the steep slopes, ridges, and domes while softer rock dominates the toeslopes, basins, and benches.

Emphasis

Protect the Wilderness ecosystems. Manage use to maintain a natural setting and preserve solitude.

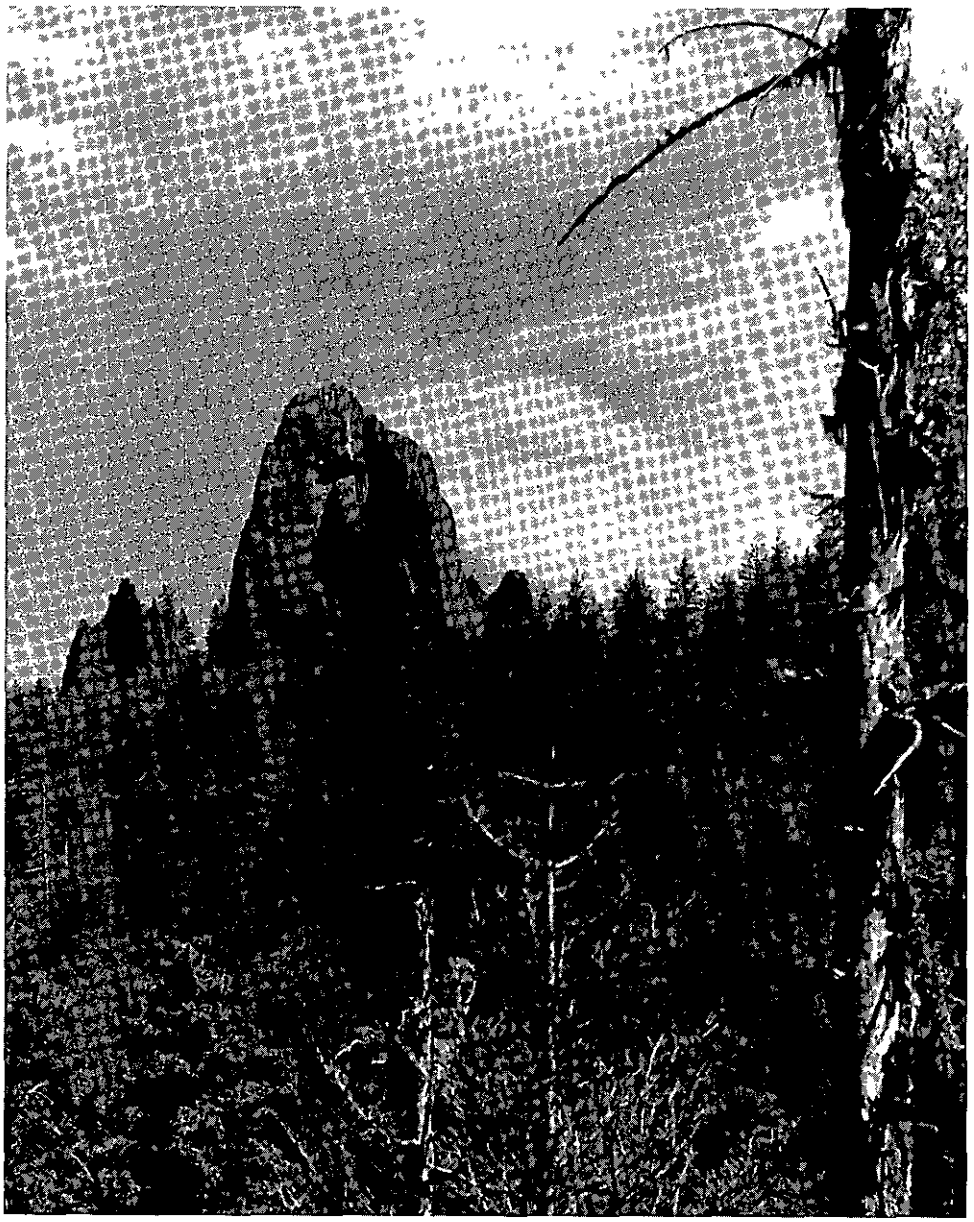
Desired Condition

The Mill Creek Wilderness area will be as natural as is possible with reduced or little evidence of human activity. The area will be a place of natural settings where solitude may be sought. Any existing road will be rehabilitated to the point that its presence is no longer a dominant land feature. Recreation improvements such as trail heads and access trails will be evident where necessary to control use in order to preserve wilderness qualities. Livestock use will be evident, but the successful application of allotment management requirements will also be evident.

Old growth stands will be evident within the management area along with those wildlife species dependent on old growth habitat in the Ochoco National Forest. Wildlife and fish species indigenous to the area will continue to exist at levels consistent with the available habitat.

Tree mortality resultant of past mountain pine beetle and other endemic insects and diseases will be evident along with associated changes in fuel loadings and plant succession. Fuel loadings will become very significant along the south side of Forest Road 27 within the Wilderness and will pose a serious fire risk. Fire occurrence will be evident where natural lightning and human-caused starts occur. There may be planned ignitions to achieve wilderness objectives.

Minerals activities on valid mining claims will be evident along with authorized access under approved plans of operation. (See Appendix H - Wilderness Plans.)



MA-F4 North Fork Crooked River Wilderness Study Area

1,125 acres, less than one percent of the Ochoco National Forest

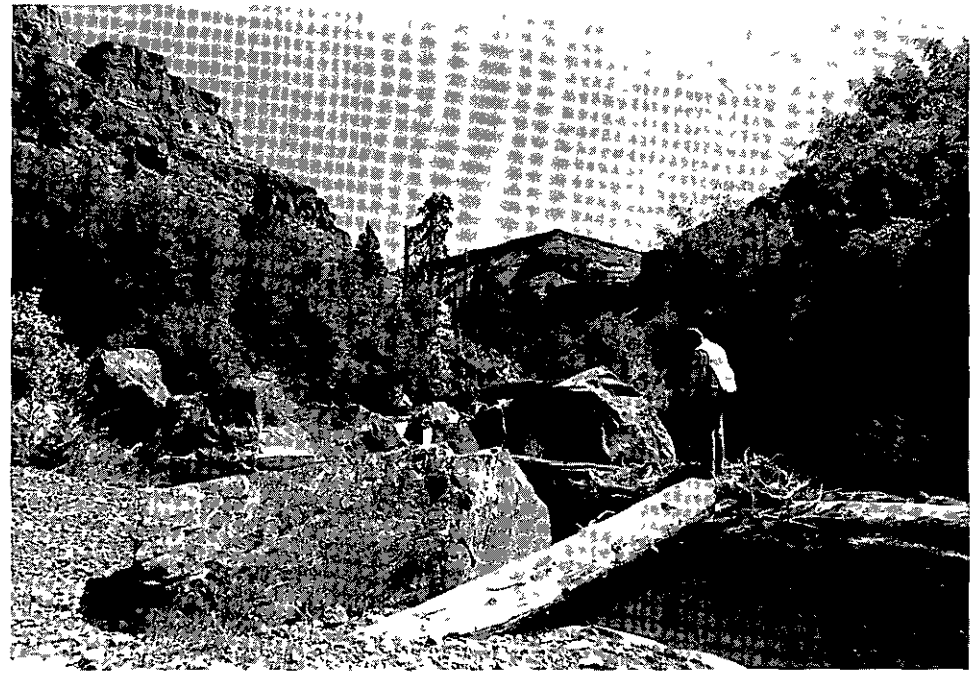
18 percent forested, 82 percent nonforested

Description

The North Fork of the Crooked River Wilderness Study Area includes areas centered on Indian Trail Creek and Fox Canyon Creek which abut BLM land along the North Fork of the Crooked River.

The majority of the area is covered in scabland, although there are islands and stringers of ponderosa pine and juniper stands located along streams on favorable aspects (north facing slopes), and where there are deeper soils than is typical of the area. Part of the area (approximately 300 acres) has been allocated as old growth for dependent species

Primary recreational uses of the area are dispersed camping, hunting, and fishing.



Emphasis

Management will maintain the existing conditions of the area for potential wilderness designation pending a decision by Congress, or until released from further consideration.

Desired Condition

The wilderness study area will be as natural as possible with reduced evidence of human activity. The area will be a place of natural settings where solitude may be sought. Existing roads and hunter caches and camps will be rehabilitated. Recreation improvements, such as trail heads and access trails, will be evident where necessary, to control use in order to preserve wilderness qualities. Livestock use will be evident, but the successful application of allotment management requirements will also be evident. Riparian areas in less than desirable condition will show evidence of recovery from the application of mitigation and rehabilitation measures.

Old growth stands will be evident within the management area along with those wildlife species in the Ochoco National Forest dependent on old growth habitat. Wildlife and fish species indigenous to the area will continue to exist at levels consistent with the available habitat.

The Final Environmental Impact Statement for Wilderness by the BLM is scheduled to be published during the spring of 1989. If these areas are not designated wilderness by Congress, then for the remainder of this planning period, these areas will be managed under old growth, riparian, and general forest standards and guidelines.

MA-F5 Research Natural Areas

4,400 acres, less than one percent of the Ochoco National Forest

83 percent forested, 17 percent nonforested

Description

This management area includes the Ochoco Divide, Dry Mountain, Silver Creek, and Stinger Creek Research Natural Areas (RNA's). RNA's represent both common and unique forest and rangeland ecosystems in a natural state or as close to undisturbed as possible. The RNA's were designated to be large enough to protect features of interest from management activities on adjacent land.

The Ochoco Divide RNA is 2,035 acres in size and is located on the Big Summit District. It is forested with ponderosa pine, western larch, Douglas-fir, and grand fir in associations typical of the Ochoco National Forest. Approximately 880 acres are ponderosa pine forest, 880 acres are mixed conifer, 190 acres are meadows and grasslands, and 85 acres are juniper/mountain mahogany scabs. There are three drainages which run to the north, south and west. The Ochoco Divide RNA (established in 1935) is fenced to exclude cattle. A nonmaintained historic trail passes through this RNA.

Dry Mountain is approximately 1,187 acres in size and is located on the Snow Mountain Ranger District, 27 miles northwest of Burns/Hines. It includes approximately 679 acres of ponderosa pine forest and 508 acres of nonforest and noncommercial woodland (juniper, mountain mahogany). This area is currently grazed.

Silver Creek is approximately 844 acres in size and is located on the Snow Mountain District, 26 miles northwest of Burns. It includes 758 acres of ponderosa pine forest, and 86 acres of dry to wet associated meadow land. Silver Creek is currently grazed.

Stinger Creek is approximately 453 acres in size and is located on the Snow Mountain District, approximately 24 miles northwest of Burns. It includes 355 acres of ponderosa pine forest and 98 acres of nonforest land. This area is currently grazed.

Emphasis

Allow natural processes to occur for research purposes and education. These processes will provide: baselines against which other activities may be measured, sites for study of natural processes in undisturbed ecosystems, and gene pool preserves for both plant and animal species

Desired Condition

Natural conditions will be observed. Any management activities within the RNA's will be directed at maintaining the natural conditions of the area. Human-caused changes to the ecosystem will not be readily evident. Continuing baseline studies may be occasionally visible in terms of equipment, instruments, and related activities.

Fire occurrence will be evident where natural and human-caused fire starts occur.

There is a high probability that grazing will not be evident, but this is still to be determined through the official designation (RNA) process.

MA-F6 Old Growth

19,250 acres, two percent of the Ochoco National Forest.

81 percent forested, 19 percent nonforested

Description

Approximately 19,250 acres of old growth are located across the Forest (outside of wilderness and research natural areas) in stands of mixed conifer and ponderosa pine, averaging 300 acres in saze. An additional 19,250 acres of "feeding areas," averaging 300 acres in size, are to be located in areas adjacent to the old growth stands. In combination, these two systems comprise a "habitat area."

Most of the old growth stands show very few signs of past management and represent uninterrupted succession for major plant community types on the Forest. Due to distributional needs, less than seven percent of the allocated acres are in a "capable" condition, i.e. they are in a younger vegetational stage and are not currently "suitable" as old growth habitat. A multilayered canopy with shaded conditions and a large number of dead snags per acre is considered "optimum" for old growth habitat.

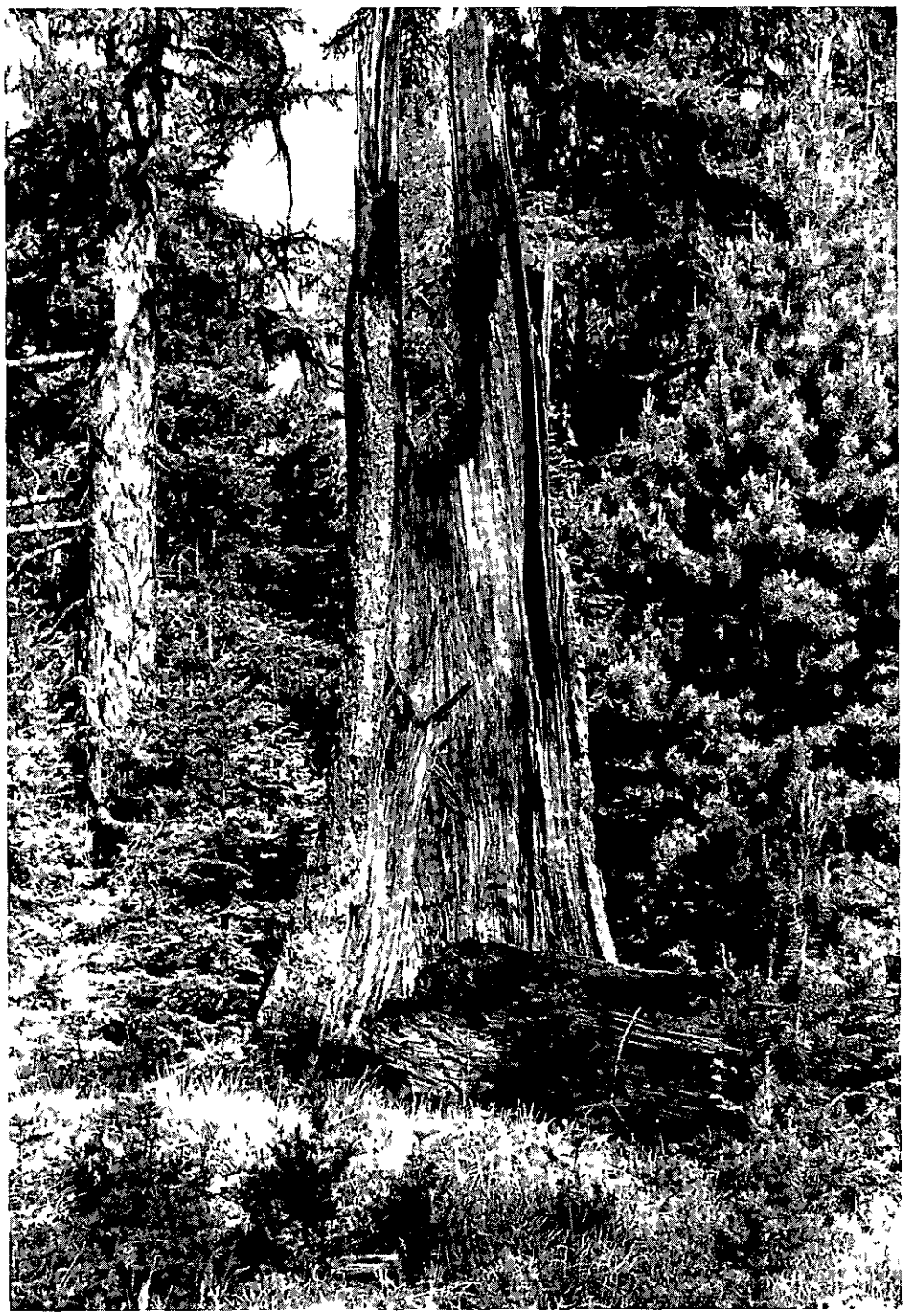
The surrounding feeding habitats provide supplemental snags at relatively high levels (about 90 percent), but are continuous 300 acre areas. These will be located within a 1,000 acre area surrounding each allocated old growth area.

Emphasis

Provide habitat for wildlife species dependent on old growth stands.

Desired Condition

Stands of old growth are not expected to change significantly over the next ten to fifty years, barring a natural catastrophe. They will continue to provide habitat for a number of dependent wildlife species, such as the pileated woodpecker, flying squirrel, white-headed woodpecker, as well as other nondependent species such as deer and elk. This habitat may become more extensively used by these species as the majority of the forest moves towards a "managed condition." High levels of snag habitat will continue as individual trees within the stands die of old age, as well as from periodic infestations by insects and diseases. Management activities and roads will generally not be evident. Fire occurrence will be evident where natural and human-caused starts occur. Prescribed fire may be evident if natural fuels accumulate to dangerous levels, threatening the existence of the old growth stand, or where vegetation manipulation is needed to maintain stand structure and species composition. Grazing by livestock, as well as by big game wildlife species, may or may not be evident.



MA-F7 Summit National Historic Trail

9,560 acres, one percent of the Ochoco National Forest

170 acres - Preservation

5,600 acres - Retention

3,790 acres - Partial Retention

67 percent forested, 33 percent nonforested

Description

The Summit Trail is approximately 74 miles long and traverses the Ochoco National Forest through the Prineville, Big Summit and Paulina Ranger Districts. It was constructed as a pack trail by the U.S. Forest Service in the early 1900's, and was the primary east-west travel route in the Ochoco Mountains until the late 1930's. In the 1920's, lengthy segments of the original trail were widened for motor-vehicles, and subsequent alterations through road building and timber harvest have occurred Despite this, the entire route of the Summit Trail can still be traveled via a combination of foot, horseback, bicycle or motor vehicle.

The Summit Trail is considered a historic resource and was found eligible for nomination to the National Register of Historic Places in January 1987. The Summit Trail Report, a comprehensive survey and evaluation of the trail completed in 1986, also recommended combining this resource with the proposed East-West Intertie Trail (Forest Service, 1986) and/or the proposed New Oregon Recreational Trail (Sullivan, 1986). On January 15, 1988, a Decision

Notice and Finding of No Significant Impact for the Summit Trail was signed by the Ochoco National Forest Supervisor, and established the initial protection and management guidance for this area.

Emphasis

Protect the existing integrity of the Summit Trail. Enhance and interpret significant segments for public enjoyment and education. Pristine segments will be managed to protect, interpret, and preserve their historic qualities.

Desired Condition

The Summit Trail will be a place where Forest visitors can enjoy the cultural and recreational resources offered in a visually pleasing environment. The majority of the trail route is along developed roads and will provide pleasurable travel by highway vehicle, as well as by mountain bike and horse. Vegetation may appear manipulated in widely dispersed areas in order to enhance cultural and recreational resources, but will generally not dominate the landscape. Interpretive facilities such as signs and landmarks may be visible in unique, culturally significant areas.

The outer boundary of the management area will generally not exceed 600 feet on either side of the trail.

MA-F8 Rock Creek/Cottonwood Creek Area

11,820 acres, one percent of the Ochoco National Forest

65 percent forested, 35 percent nonforested

Description

These areas contain mature and old growth ponderosa pine and mixed conifer stands with a predominance of western larch and lodgepole pine. The stand ages and size classes are largely a function of past fires; these areas have had very little direct human-caused disturbance from timber harvest, mineral and energy development, or intensive grazing Slopes are generally steeper than 40 percent. In the Rock Creek drainage, there are extensive areas of scabland on steep slopes which result in some natural sheet erosion.

The area contains several important tributaries to the John Day River. Birch Creek and Rock Creek support significant trout and spawning steelhead populations.

The areas are generally summer and transitional range for deer and elk. There is an abundance of cover and consequently less than optimum forage distribution. Because of the relative inaccessibility of the area, it supports a higher proportion of trophy sized animals than in roaded areas to the south and north.

The area supports cattle and sheep allotments

There are several existing and proposed recreational trails, as well as cultural sites associated with early mining that occurred to the north of the Forest.

Recreational use of the area is currently light, consisting largely of hunting, fishing, horseback riding and hiking, and is presently limited by the existing access.

Emphasis

Provide protection of soil, water, and fisheries, and provide opportunities for nonmotorized recreational use and enjoyment. Maintain vegetation on steep slopes to prevent erosion, and to protect water quality and the anadromous fishery.

Desired Condition

Recreationists will see natural appearing areas free from motorized vehicle use. Recreational use, livestock grazing, prescribed fire and wildfire will occur, but the area will appear natural. These activities, along with any desired recreational improvements such as trails, will be the only visible impacts of direct human activities.

Riparian areas in less than desirable condition will show evidence of recovery from the application of mitigation and rehabilitation measures. Old growth stands will be evident within the management area along with those wildlife species in the Ochoco National Forest which are dependent on old growth habitat. Wildlife and fish species indigenous to the area will continue to exist at levels consistent with the available habitat. Structures may be constructed, or other work may be done to maintain or improve habitat for the anadromous fishery. The area will remain one where there are above average numbers of trophy sized elk and deer. Tree mortality, resultant of past spruce budworm infestations, and other endemic insects and diseases, will be evident along with associated changes in fuel loadings and plant succession. Fire occurrence will be evident where natural and human-caused starts occur.

MA-F9 Rock Creek/Cottonwood Creek Unroaded-Helicopter Area

2,480 acres, less than one percent of the Ochoco National Forest

70 percent forested, 30 percent nonforested

Description

This is a roadless area adjacent to Rock Creek/Cottonwood Creek Roadless Area. It includes those areas within Cottonwood, Birch and Payten Creeks which can be harvested by helicopter logging This area has not been harvested except for incidental amounts removed from along the Forest boundary on the north slope. This area is generally heavily forested with mixed conifer or ponderosa pine community types. The steep slopes generally exceed 40 percent.

This area is tributary to the John Day River with Cottonwood and Birch Creeks supporting significant resident trout and anadromous fisheries. It also provides summer and transitional range for elk. There is an abundance of cover and consequently less than optimum forage distribution Due to the relative inaccessibility of the area, it supports a higher proportion of trophy sized animals than in the roaded areas to the south and north.

The area is part of a sheep and cattle allotment in which most of the forage removed is by herded sheep.

Recreational use of the area is currently light, consisting of hunting, fishing, horseback riding and hiking.

Emphasis

Allow timber harvest while protecting the anadromous fishery, sensitive soils on steep slopes, and big game habitat.

Desired Condition

The area will be unroaded with evidence of timber harvest and associated activities using helicopter systems. Prescribed fire use will also be evident in some areas where its use is desirable to attain management objectives. The area will remain unroaded with landings located outside the management area. Visible harvest impacts will generally be limited to vegetation modification with little soil or other surface disturbance.

Recreational improvements such as trailheads and access trails will be evident where necessary to enhance access. Livestock use may be evident, but the successful application of allotment management requirements will show accept-

able grazing practices. Riparian areas in less than desirable condition will show evidence of recovery from the application of mitigation and rehabilitation measures. Old growth stands will be evident within the management area along with those wildlife species dependent on old growth habitat on the Ochoco National Forest. Wildlife and fish species indigenous to the area will continue to exist at levels consistent with the available habitat. Tree mortality resultant of spruce budworm and other endemic insects and diseases will be evident along with associated changes in fuel loadings and plant succession. Fire occurrence will be evident where natural and human-caused starts occur.

MA-F10 Silver Creek Roadless Area

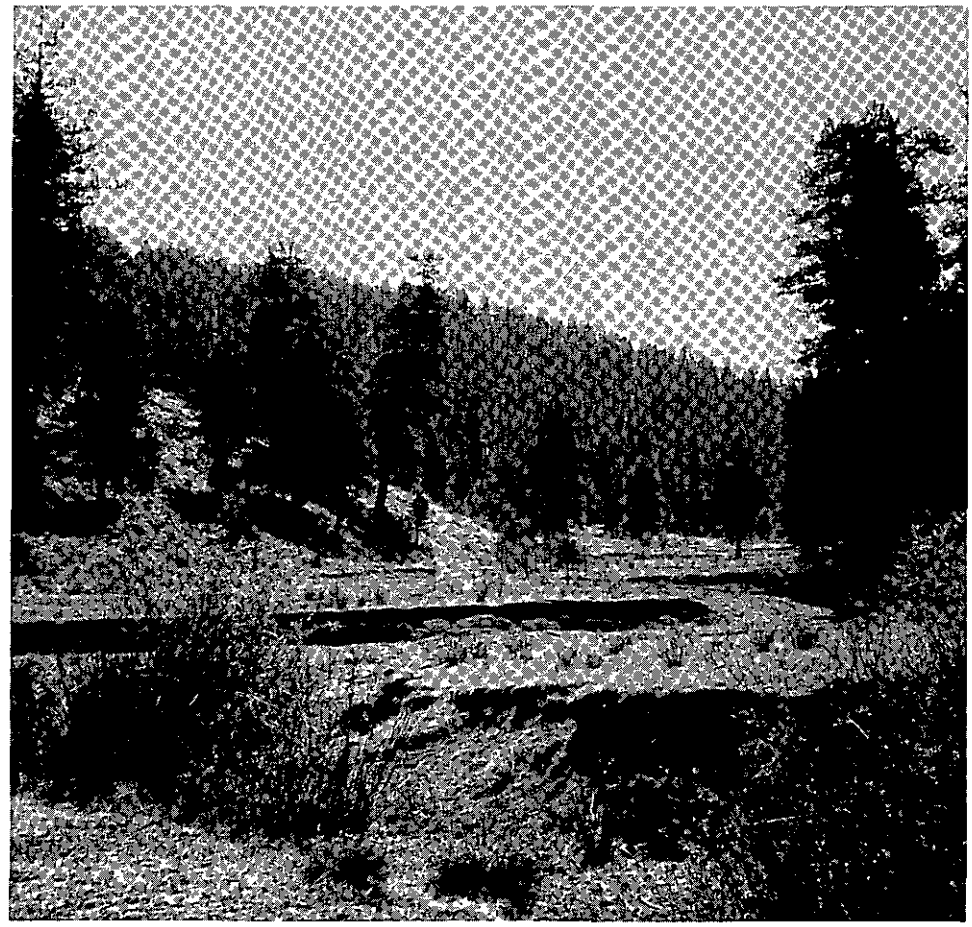
3,110 acres, less than one percent of the Ochoco National Forest

64 percent forested, 36 percent nonforested

Description

The Silver Creek area lies within the canyon rims of Silver Creek. The area is one fourth to one mile wide from rim to rim, and ranges in elevation from 4,600 feet at its south boundary to 5,200 feet at the northern end. The area is dominated by open grown ponderosa pine forests and juniper woodlands. It contributes 574 AUM's to five permittees within two allotments. It supports a yearlong mule deer population, and a resident elk and antelope herd. The bottom land and riparian areas show evidence of heavy overgrazing.

The Silver Creek roadless area contains sections of Silver, Delintment, Short, and Dodson Creeks. There is a resident rainbow trout fishery in Silver Creek which receives light fishing pressure. Recreational use is generally light. Primary recreational activities are fishing, hunting, hiking and horseback riding.



Emphasis

Protect and enhance the roadless qualities and provide nonmotorized recreational use.

Desired Condition

Recreationists will see natural appearing areas free from motorized vehicle use. Recreational use, livestock grazing, prescribed fire and wildfire will be evident. These activities, along with any desired recreational improvements such as trails, will be the only visible impacts of human activities within the management area.

Riparian areas in less than desirable condition will show evidence of recovery from the application of mitigation and rehabilitation measures. Old growth stands will be evident within the management area along with those wildlife species dependent on old growth habitat in the Ochoco National Forest. Wildlife and fish species indigenous to the area will continue to exist at levels consistent with the available habitat. Tree mortality resultant of past spruce budworm and other endemic insects and diseases will be evident along with associated changes in fuel loadings and plant succession. Fire occurrence will be evident where natural and human caused starts occur.

MA-F11 Lookout Mountain Recreation Area

15,660 acres, two percent of the Ochoco National Forest

72 percent forested, 28 percent nonforested

Description

Lookout Mountain is located on the Big Summit Ranger District, about 25 miles east of Prineville. It rises above the surrounding topography, and can be seen from many points along Highway 26 as well as from other nearby mountains. Approximately 90 percent is forested. Elevations range from 3,793 feet to 6,926 feet. Most plant communities associated with the Blue Mountains are found in the area. Lookout Mountain is well-known for its scenery, big game habitat, and recreational opportunities.

The forest composition is white fir and Douglas-fir, which generally replace seral species ponderosa pine and western larch. At lower elevations, especially on southern exposures, open stands of ponderosa pine occur. Scattered western larch, evident during the fall, are interspersed in the mixed conifer stands, but are gradually decreasing with time due to plant succession. Steep slopes occur in drainage heads; the west side of the mountain drops off with a precipitous scarp. Above 6,000 feet in elevation, nonforested grasslands, subalpine meadows, and basalt rock outcrops dominate the landscape.

The subalpine, and more gentle, open pine areas, in particular, provide an excellent setting for a variety of recreational activities, including snowmobiling, cross-country skiing, hiking and hunting.

The Lookout Mountain Recreation Area is a roadless area managed to provide big game habitat and semiprimitive recreational opportunities within a natural setting. It has twice been considered for wilderness designation, but was left with Congressional advice to "examine the feasibility of continuing the current use in the National Forest Plan and determine the land allocation in the Forest Plan."

Emphasis

Maintain a natural setting; provide continued opportunities for high quality, semiprimitive recreational activities, and wildlife habitat; while maintaining healthy forests.

Desired Condition

General

The Lookout Mountain Management Area will become a well known area for year-round recreation activities, and will provide excellent habitat for big game.

Prescription Area A

This area will comprise approximately 7,550 acres of forest land in a semiprimitive state with no vegetation manipulation planned. The recreational user and sightseer will experience a highly diverse, natural landscape with interspersed stands of trees, openings, rock outcrops, and talus. A tree species mix to include early successional species such as ponderosa pine, western larch and lodgepole pine will be seen across the lower elevations of the landscape, and lodgepole pine, sub-alpine fir, white fir and Douglas-fir will dominate at the higher elevations. Pockets of mixed conifer old growth will be an integral part of the vegetation mosaic. Natural tree mortality will be evident.

Big game habitat will be excellent due to the secluded nature of the area, high elevation moist meadows, and good year-round springs with heavy dense cover. Elk wallows will be numerous and big game use will be evident.

The area will be roadless, with currently existing roadbeds exhibiting evidence of rehabilitation activities, and eventually revegetation. Man-made improvements will be subordinate to the natural landscape and will be present to enhance recreational use of the area. Typical improvements apparent to the recreational user may include trails, trailheads, signing, trail shelters, livestock fencing, and possible wildlife habitat enhancement projects.

Prescription Area B

This area will comprise about 8,110 acres in a relatively natural appearing condition.

A variety of trails, roads, trail shelters, signs and other improvements for the benefit of recreational users may exist, but will be designed and managed to be subordinate to the natural landscape. Approximately one mile of Forest Road 4205 and one mile of Forest Road 4200-250 will remain open for motorized travel to dispersed campsites and mining activities associated with them.

Vegetation may appear manipulated in widely dispersed places in order to enhance recreational opportunities and wildlife habitat resources, but will not dominate the landscape, nor generally be evident to the casual Forest visitor. Various vegetation manipulation techniques will be used to promote healthy forested stands that are more resistant to catastrophic events that may detract from big game habitat or a recreational experience. As a result of these limited entries, ponderosa pine and western larch, which are tree species valued for their appearance to recreationists, will be maintained and/or become more abundant over time. These species will be interspersed in a mosaic of other mixed conifer species of various size and age classes, including stands of old growth mixed conifer and ponderosa pine.

Minimum standard roads designed for specific projects will exist in low densities on the more gentle ground. Road use will be restricted to project activities and roads will be closed upon completion of each project. Roadbeds and banks will be seeded with mixtures of legumes and grasses to improve wildlife habitat. Activities occurring at any one time will be limited by duration and amount.

MA-F12 Eagle Roosting Areas

570 acres, less than one percent of the Ochoco National Forest

60 percent forested, 40 percent nonforested

Description

This management area includes existing roosting areas for bald and golden eagles. The bald eagle in Oregon is classified as a threatened species under the Endangered Species Act of 1973, and therefore protection of habitat is required by law. On the Ochoco National Forest, the eagle habitat of concern is winter byosting areas. Eagle roosting areas are generally stands with large open crown trees adjacent to feeding areas. Common food sources include large game and livestock carrion, fish, waterfowl and ground squirrels. Consequently, creeks and meadows are typical feeding areas. Preferred trees are often large ponderosa pine and Douglas-fir, although other species such as cottonwood may be used.

Emphasis

Provide winter roosting habitat for migrating bald eagles annually during the period December through April.

Desired Condition

The areas will have uneven-aged stands which contain large trees at least 22 inches DBH, and a few trees which are 36-40 inches DBH. Roost trees generally are at least 22 inches DBH and have an open structure allowing eagles to land easily. Roost trees actively in use will be preserved, along with replacement trees that will be located in the same vicinity to the degree possible.

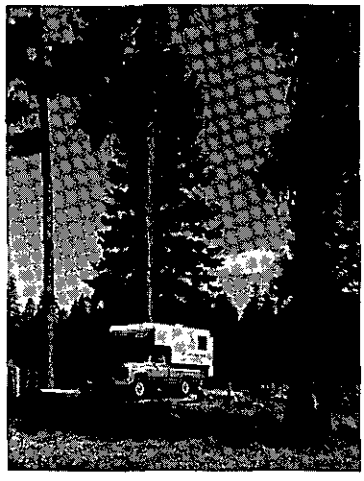
The area will be free of potentially disturbing human activity in the vicinity of roosting areas from December 1 to May 1. When roosting areas overlap with areas which have more restrictive prescriptions, the area will be managed under the most restrictive prescription as long as roost trees are maintained. This management prescription will also apply to any roosting sites discovered in the future.

MA-F13 Developed Recreation

1,810 acres, less than one percent of the Ochoco National Forest

62 percent forested, 38 percent nonforested

Description



This management area applies to sites currently developed or planned for camping, boating, trailhead parking, and other developed recreational activities. Developed recreation sites are located throughout the Forest and provide a variety of recreational experiences.

This management area includes the developed site and a visual influence area that surrounds each site. The visual influence area is variable in size depending on the topography.

Emphasis

Provide safe, healthful, and aesthetic facilities for people to utilize while they are pursuing a variety of recreational experiences within a relatively natural outdoor setting.

Desired Condition

Developed recreation areas will be natural appearing areas, but with obvious man-made controls and structures to direct users, provide for comfort and sanitation, and protect the natural resources while providing a variety of outdoor recreational opportunities. Developed sites will be provided for a broad range of recreational opportunities.

New and upgraded sites will incorporate a barrier-free design in order to accessible to the handicapped.

Timber activities will normally not be visually evident, but may be used for safety and visual enhancement. Scenic views may be enhanced through harvest or thinning but will appear natural.

Facilities, roads, and trails will have a well maintained appearance and provide a safe recreational environment Public use may be prohibited, or discouraged on a seasonal basis, depending on management objectives.

MA-F14 Dispersed Recreation

1,970 acres, less than one percent of the Ochoco National Forest

76 percent forested, 24 percent nonforested

Description

This prescription applies to dispersed recreation sites located throughout the Forest. These sites generally occur along roads, and many are concentrated near riparian areas and stream courses. The prescription applies to the actual site and the influence area immediately around it.

Emphasis

Provide and maintain a near-natural setting for people to utilize while pursuing outdoor recreation experiences.

Desired Condition

The dispersed site will exhibit a relatively natural appearance, even though management activities (such as timber harvest) may be highly visible nearby. Primitive, user-constructed structures or facilities, consistent with the sites use, may be seen. Sites will be managed so that users tend to feel relatively isolated from the sights and sounds of civilization. A strategy will be developed that encourages individuals or groups to "find their own place."

Livestock grazing may be evident but the successful application of allotment management requirements will also be evident.

MA-F15 Riparian

18,130 acres, two percent of the Ochoco National Forest

90 percent forested, 10 percent nonforested

Description

Riparian areas include land adjacent to water, where plants that are dependent on a perpetual source of water occur. They normally have high water tables and soils which exhibit characteristics of wetness. On the Ochoco National Forest, riparian areas exist along 800 miles of designated streams (see Riparian Area Map). They often contain stands of ponderosa pine and mixed conifer, as well as water-loving plant species such as sedges, alder, and willow; and they are among the most productive places on the Forest. Because of this, they are often the most intensively and extensively used areas on the Forest. Signs of past or current management can be seen in most riparian areas across the Forest, and the majority of the Forest road system lies near or adjacent to these areas. Camping, grazing, recreation, and timber harvest are all established uses within streamside areas.

Riparian areas are among the most critical wildlife habitats on the Forest. Over 75 percent of the Forest wildlife species are directly dependent on riparian zones or utilize them more than other habitat areas Wildlife use streamsides as "connectors," or travel lanes between forested habitats.

Fully functional riparian areas are essential for the maintenance of viable fish populations on the Forest. Riparian areas provide food, cover, and a source of large woody material for aquatic insects, fish and land animals. The vegetation of streamside areas filter sediment and shade the water surface to help maintain stable stream temperatures.

Significant investments have been made to rehabilitate or enhance primary streams on the Forest, and restrictions have been placed on uses which have historically had a negative impact on water resources within these areas.

Emphasis

Manage streamside vegetation and habitat to maintain or improve water quality. Meet temperature and turbidity levels as required by state standards under the Clean Water Act (see Forest-wide Standards and Guidelines, Water, and Best Management Practices (BMP'S), FEIS Appendix G).

Desired Condition

Riparian areas will exhibit a low, but apparent level of management. Vegetation

may or may not appear manipulated, depending on the condition of the stream. Suitable amounts of large woody material will be apparent within the riparian area to provide streambank stability and habitat. An abundance of wildlife species should be evident as a result of restrictions on management activities and level of habitat provided. Due to management restrictions and the low risk associated with these areas, the signs of natural or man-caused fire will be infrequent.

For management purposes, a special protection area (100 feet from the edges of perennial bodies of water) will be apparent. In addition, the streams listed below will receive extra protection to 200 feet from the stream edge to provide "connective habitat" for a variety of wildlife species on the Forest:

Prineville District	Big Summit District	Paulina District
Trout Creek	Allen Creek	Cottonwood Creek
Pine Creek	Indian Creek	Baldy Creek
Bear Creek	Porter Creek	Little Windy Creek
Drake Creek	Howard Creek	Windy Creek
	Nicoll Creek	
	Fox Creek (Pisgah)	
	West Fork Bridge Creek	

Roads not planned for future use, through and across riparian areas, will be obliterated and revegetated to a natural or near natural condition.

Within the limits of ecological potential, a shady, brushy condition with a canopy of alder, willow, aspen, or other deciduous vegetation will exist.

Where coniferous evergreens are a natural component of the ecosystem, a variety of size classes will exist to perpetuate the supply of shade and woody debris over time. Sites unable to support a canopy of deciduous or evergreen species will be characterized by vigorous stands of forbs, grasses, and grass-like riparian species.

Bank slopes containing high plant densities, thick root masses, embedded angular boulders, and old logs will also characterize these areas. Extensive scouring of streambanks will be an uncommon occurrence as will soil deposition outside the norm for the individual stream system. Streambeds will be commonly covered by native aquatic growth on assorted sizes of rocks and boulders.

Where cobble and gravel bars are prominent, they will become covered by sandy loam soils as riparian vegetation filters and traps stream sediments. As stream banks are re-built and cutbanks stabilized, a narrower, deeper channel will gradually develop.

Springs and wet meadows are not specifically included in this management area prescription, but should receive appropriate protection as stated in Forest-wide Standards and Guidelines for Water, Section 3, this chapter.

MA-F16 Bandit Springs Recreation Area

1,580 acres, less than one percent of the Forest

97 percent forested, three percent nonforested

Description

The Bandit Springs Recreation Area is between the Mill Creek Wilderness and U.S. Highway 26, on the Big Summit and Prineville Ranger Districts. It has become a popular cross-country ski area due to it's normally satisfactory snowpack and easy access. The area (Ochoco Divide) also has an Oregon State Rest Area and a nearby National Forest developed campground and sled hill. Scenic resources are created by mature stands of ponderosa pine and mixed conifer. Recreational development consists of several miles of established cross-country ski trails.

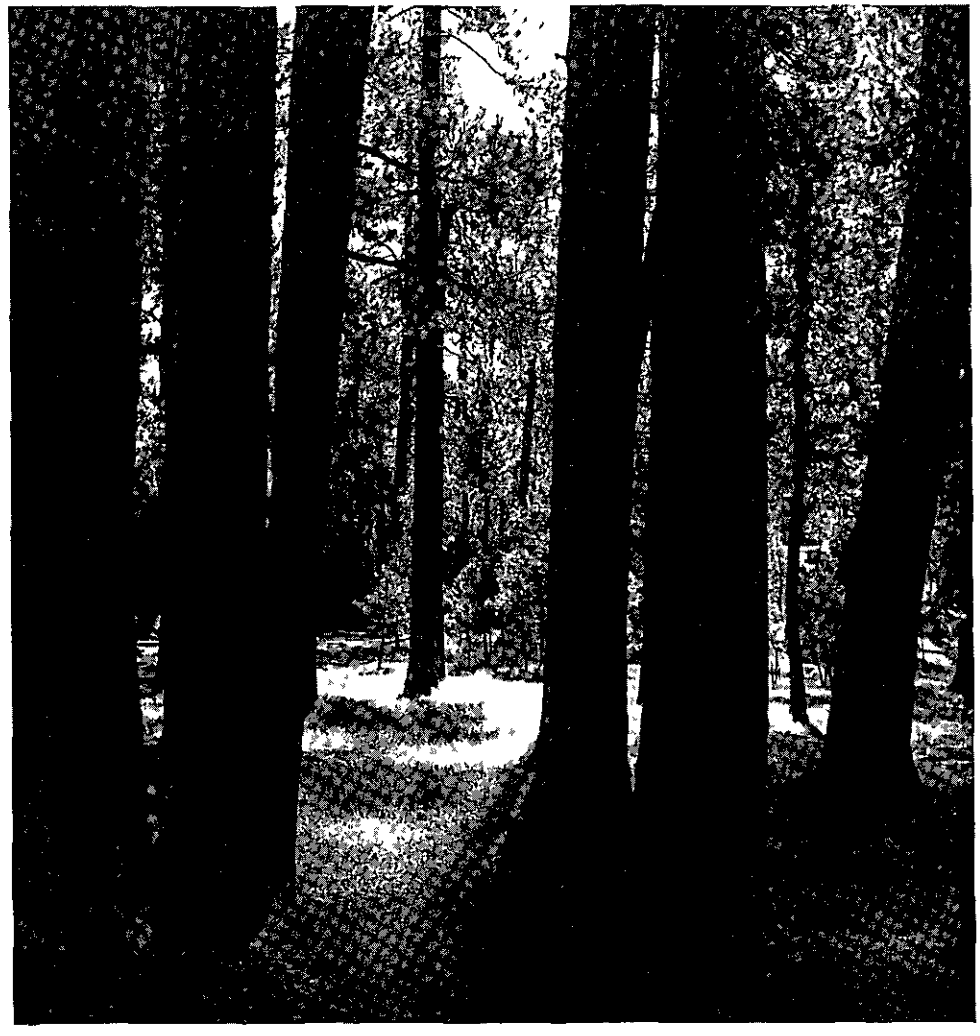
Emphasis

Provide dispersed, nonmotorized recreational opportunities within a setting where most management activities (timber harvest) are generally not evident to the casual observer. Expand the recreational activities and opportunities beyond winter recreation to year-round activities. Provide hubs of more developed facilities to reach a broader recreation audience.

Desired Condition

The Bandit Springs Recreation Area is expected to become an important winter sports use area on the Forest, as well as a setting for other year-round recreational activities, including: environmental education, mountain bike riding, day hiking, hunting, and horseback riding. Developments to accommodate a broad spectrum of nonmotorized recreationists' needs will be built to enhance their experience. Emphasis will be on enjoying the natural scenery, with interpretation aiding the casual visitor. Developments may include: trail shelters, maintained trails, horse unloading ramps, toilets, information areas, parking, picnic areas, and signs.

Periodic manipulation of vegetation to meet recreational and visual objectives for the area will be apparent to the user. Timber stands will be managed to develop and maintain resistance to catastrophic events that would detract from the recreational experience. Both uneven- and even-aged silvicultural practices will be used. A road system will be visible, but secondary to the natural setting. Livestock use will also be evident.



MA-F17 Stein's Pillar Recreation Area

1,070 acres, less than one percent of the Ochoco National Forest.

94 percent forested, six percent nonforested

Description

Located about 20 miles northeast of Prineville, the Stein's Pillar Management Area has forested, rugged terrain with scattered juniper plateaus. There are volcanic plugs and unique geologic formations that offer contrast and interesting views. Stein's Pillar, 300 feet in height, is the most prominent volcanic plug in the area.

The unroaded, conifer forest is dissected by streams running into Mill Creek. The ponderosa pine stands have a dense Douglas-fir understory and are beginning to lose their natural open character. The stands of white fir and Douglas-fir are very dense. Some of the forest is old growth, with large trees, as well as various-aged trees and snags. The entire area is important winter range for deer and elk, which also use it in the summer.

There are no structures in the area, few signs, and one trailhead and trail. A rustic trail accesses Stein's Pillar. The main access to the area is provided by Forest Road 3300-500 along the southern part of the area, and leads to the Stein's Pillar Trailhead. Forest Road 3350 accesses the northern boundary. Forest Road 3300 offers panoramic views of Stein's Pillar.

Current recreational activities are mostly day-use, nonmotorized activities. These activities include hiking, sightseeing, rockclimbing, horseback riding, and some group activities. Both individuals and families enjoy the quiet, natural setting close to Prineville. They have the opportunity to see Stein's Pillar and views of the Ochoco and Cascade Mountains. Many people picnic, as well as participate in the above-mentioned activities in this area.

Emphasis

Maintain a scenic, natural or natural-appearing setting associated with unique geologic formations, particularly Stein's Pillar. Provide roadless nonmotorized recreation, with various opportunities to enjoy nature.

Desired Condition

The area will be a natural or natural-appearing place with a variety of volcanic plugs, topography, plant communities, and wildlife where recreationists can enjoy nonmotorized recreation.

Ponderosa pine stands will have large, yellow-bark trees, particularly along the Stein's Pillar Trail. There will be a mosaic of these large-tree, open pine stands interspersed with juniper scab flats and fir stands. Created openings will blend with the natural appearance of the area. Scenic views will be created, but most management activities (timber harvest) will not be evident to the casual observer.

The area will offer scenic views of Stein's Pillar and other volcanic plugs, as well as the Ochoco and Cascade Mountains. Recreationists will enjoy closeness to nature in their nonmotorized activities, including hiking, picnicking, rockclimbing, sightseeing, horseback riding, and group activities. These activities will mostly be day use.

Nonmotorized recreation opportunities and facilities will be provided. A rustic trail, designed and maintained for family day walks, will access Stein's Pillar. There will be an associated trailhead and access route. The trail system may be extended to the north to tie to the Benefield Road. Also, a safe way to the base of the pillars will be constructed to allow easier access for climbers and others. Interpretive facilities will highlight geological, recreational, historical, old growth, and wildlife features, and the nearby wilderness

Streamsides will be extremely shady and brushy with an abundance of tall overstory conifer trees and/or shorter hardwoods of alder, willow, and aspen, meeting the Riparian Management Area objectives.

Deer and elk may use the area for winter cover, feed, and security. Deer and elk may summer throughout the area. A 300-acre Old Growth Management Area will be available for wildlife, such as the goshawk and pileated woodpecker. Snags will occur naturally, providing habitat for woodpeckers, nuthatches, owls, and other cavity nesters.

Livestock use will be evident but the successful application of allotment management requirements will also be evident.

MA-F18 Hammer Creek Wildlife/Recreation Area

2,560 acres, less than one percent of the Ochoco National Forest

44 percent forested, 56 percent nonforested

Description

Located in the western Maury Mountains, the Hammer Creek Management Area is a mixture of conifer forest on mostly north-facing slopes, old growth in steep stream drainages, and large juniper plateaus. Existing stands are primarily composed of an overstory of large size ponderosa pine with an understory of Douglas-fir, although stands containing only pine and Douglas-fir are also found within the area. Hammer Creek flows through the northern part of the area and Sherwood Creek bounds the area's western edge. The area is the largest block of land in the Maury Mountains that has not had intensive timber management activities. The area has evidence of a few primitive roads.

The main access to the area is provided by Forest Road 16, which follows the area's western boundary. The area can also be reached by Forest Road 1750 and the Hammer Creek Trail from the south.

The Hammer Creek Area provides habitat diversity not found in the rest of the Maury Mountains. This diversity combined with minimal access makes the area valuable habitat for a wide variety of animal species.

Emphasis

Provide and maintain habitat diversity for a variety of wildlife species where open road density is minimal; and provide a scenic, seminatural or natural-appearing setting for nonmotorized recreational opportunities.

Desired Condition

Forested areas of ponderosa pine will be seen as a wide variety of size/age classes with a major component of large, yellow-barked pine. Mixed conifer areas will be a mosaic of open and closed canopy stands of various size classes to provide an optimum forage and cover mix for big game. Nonforested areas will generally appear natural in character, but with periodic evidence of livestock grazing. Riparian areas will be shady and have an appearance of consisting of a mixture of trees and shrubs. Management activities will remain visually subordinate to the characteristic landscape.

Developed facilities such as trailheads, picnic/camp areas, and associated access routes will be evident on the periphery of the unit. Interpretive facilities will be available to highlight historical, recreational, and wildlife features.

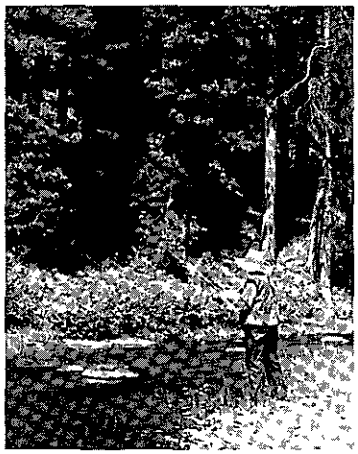
Access roads to trailheads will be open. All other roads will be closed to motorized use and rehabilitated after management projects are completed.

MA-F19 Deep Creek Recreation Area

770 acres, less than one percent of the Ochoco National Forest

66 percent forested, 34 percent nonforested

Description



The Deep Creek Recreation Area is located on the Paulina Ranger District, near the boundary with the Big Summit Ranger District. The area is located along Deep Creek and follows Forest Road 4250 from the junction with Forest Road 42 north to Forest Road 4256. The boundary for this management area is located on the slope break on either side of the Deep Creek drainage.

This area is popular year-round, for fishing, dispersed camping, hunting and sightseeing. Several dispersed recreation sites are located in the area. Forest Road 4250 is used heavily for commercial, public, and administrative traffic.

Conifer vegetation in the area consists of a mixture of Douglas-fir, western larch, ponderosa pine, and lodgepole pine. Some exceptional stands of old growth western larch occur on the north slopes of the drainage. Ponderosa pine occurs more on the south facing slopes. Lodgepole pine occurs primarily in the drainage bottom. Riparian vegetation is present along the creek, and alder is a common occurrence. An old growth area is located contiguous with the boundary of this management area.

Emphasis

Provide a near natural setting for recreational pursuits within the area where management activities are not visually evident.

Desired Condition

Forested areas will contain large size class trees of larch and ponderosa pine. Nonforested areas will generally appear natural in character with little immediate evidence of management activities. The riparian area will contain abundant alder and other riparian hardwood species, where naturally occurring.

Dispersed recreational areas will be protected. Opportunities for camping in developed sites will be provided at Deep Creek Campground.

Trails may be developed that provide day hiking or interpretive recreational opportunities.

Management activities including timber harvest and prescribed burning will not be evident to the casual observer. Livestock use will be evident but the successful application of allotment management requirements will also be evident.

MAF-20 Winter Range

64,130 acres, seven percent of the Ochoco National Forest

45 percent forested, 55 percent nonforested

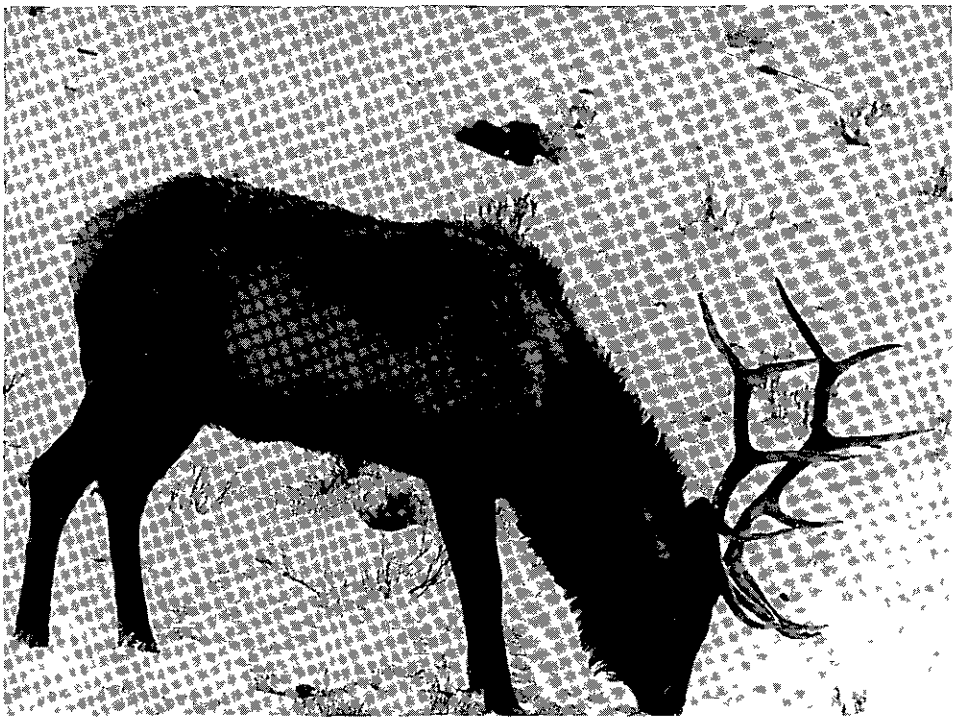
Description

These sites are typically located along the exterior boundaries of the Forest. They are among the lowest elevation sites on the Forest. Ponderosa pine, occasionally associated with Douglas-fir and white fir, functions as the primary cover. Juniper woodlands, wet and dry meadows, sagebrush-grassland and other shrubland, as well as scabland types, provide species that furnish forage.

Several major arterial and collector roads go through designated winter range areas. Many of the arterials are used as snowmobile and winter sports routes to higher elevation areas.

There are both developed campgrounds and dispersed campsites within designated winter range areas.

There are several actual bald eagle winter roost sites within the winter range, in addition, several old growth areas are located within the management area. Most of the winter range management areas incorporate grazing allotments which are utilized during the summer months.



Emphasis

Manage for big game winter range habitat.

Desired Condition

Big game use on winter range will be seen as the primary activity with other management activities and human intervention restricted, from December 1 to May 1. Habitat effectiveness for big game will be improving over time, due to increases in both quality and quantity of thermal cover, and reductions in open road density. Road and trail use will be limited to one mile of open access per section, from December 1 to May 1, a greater density of trail and road access will be available during the remainder of the year, up to three miles per section.

Vegetation cover types, key species condition, big game use, and domestic livestock grazing will be inventoried and mapped. Treatment units will be identified; treatments will be prescribed on a scheduled basis to maintain key forage and browse species. Treatments will be monitored to assure appropriate forage and browse allocations for big game.

Management, including vegetation manipulation, structures, and prescribed fire to maintain or improve winter range, may be apparent. Livestock use of forage is planned, but will be conducted in harmony with big game winter range habitat needs.

Tree mortality, resultant of past spruce budworm and other endemic insects and diseases, may be evident in areas reserved for big game cover, along with associated changes in fuel loadings and plant succession.

MA-F21 General Forest Winter Range

107,360 acres, 12 percent of the Ochoco National Forest

58 percent forested, 42 percent nonforested

Description

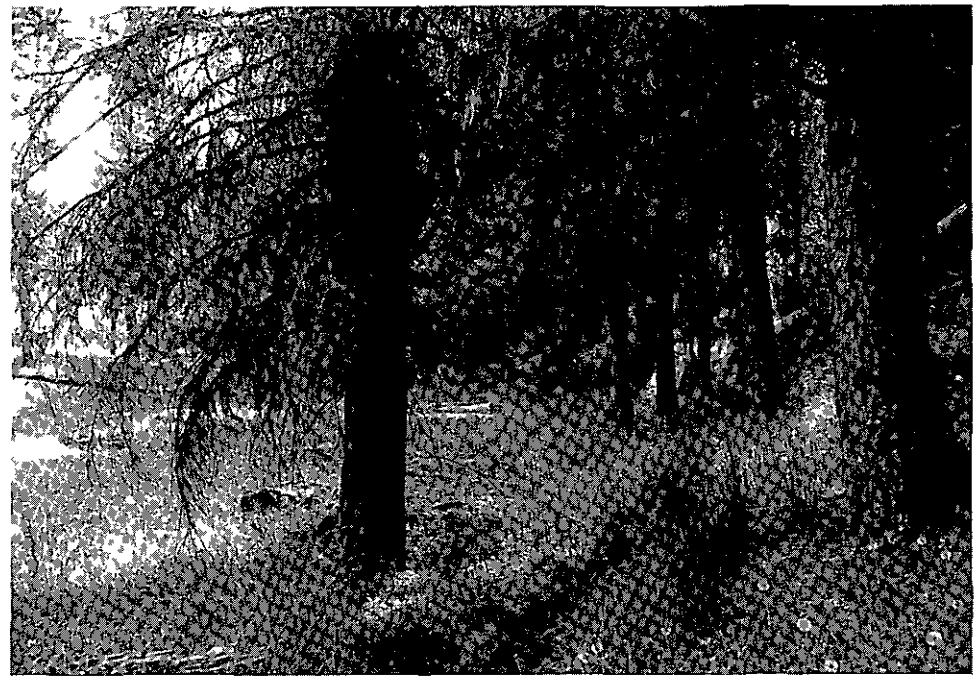
These sites are typically located along the exterior boundaries of the Forest, and they are among the lowest elevation sites on the Forest. Ponderosa pine, occasionally associated with Douglas-fir and white fir, function as cover. Juniper woodlands, wet and dry meadows, and scablands furnish forage. These sites are in addition to those designated as MA-F20 Winter Range.

Several major arterial and collector roads go through designated winter range areas. Many of the arterials are used as snowmobile and winter sports routes to higher elevation areas.

Both developed campgrounds and dispersed campsites are within designated winter range areas.

There are several bald eagle winter roost sites designated as separate management areas within the general forest winter range; several old growth management areas are also located within this area.

Most of the general forest winter range management areas incorporate grazing allotments which receive use during the summer months.



Emphasis

Manage for timber production with management activities designed and implemented to recognize big game habitat needs.

Desired Condition

Big game use on winter range from December 1 to May 1 will be the primary activity, with other management activities and human intervention restricted. Habitat effectiveness will be slowly decreasing in this area, mainly due to future reductions in quality and quantity of thermal cover. This decrease will not be as rapid as in MA-F22 General Forest due to specified road closures and other incidental wildlife improvements. Road and trail use will be limited to one mile of open access per section during December 1 to May 1, but a greater density of trail and road access will be available during the remainder of the year, up to three miles per section.

Fire occurrence will be visible where natural and human-caused starts occur, and where prescribed fire was applied.

Management activities will take into account vegetation types and successional responses of those types in order to apply prescriptions which have beneficial results for habitat. Areas of particular importance as big game habitat will be identified and management activities modified to complement, protect, or improve habitat. Livestock use of forage is planned, but will be conducted in harmony with big game winter range habitat needs.

Tree mortality, resultant of past spruce budworm and other endemic insects and diseases, may be evident in areas reserved for big game cover, along with associated changes in fuel loadings and plant succession.

MA-F22 General Forest

496,850 acres, 59 percent of the Ochoco National Forest

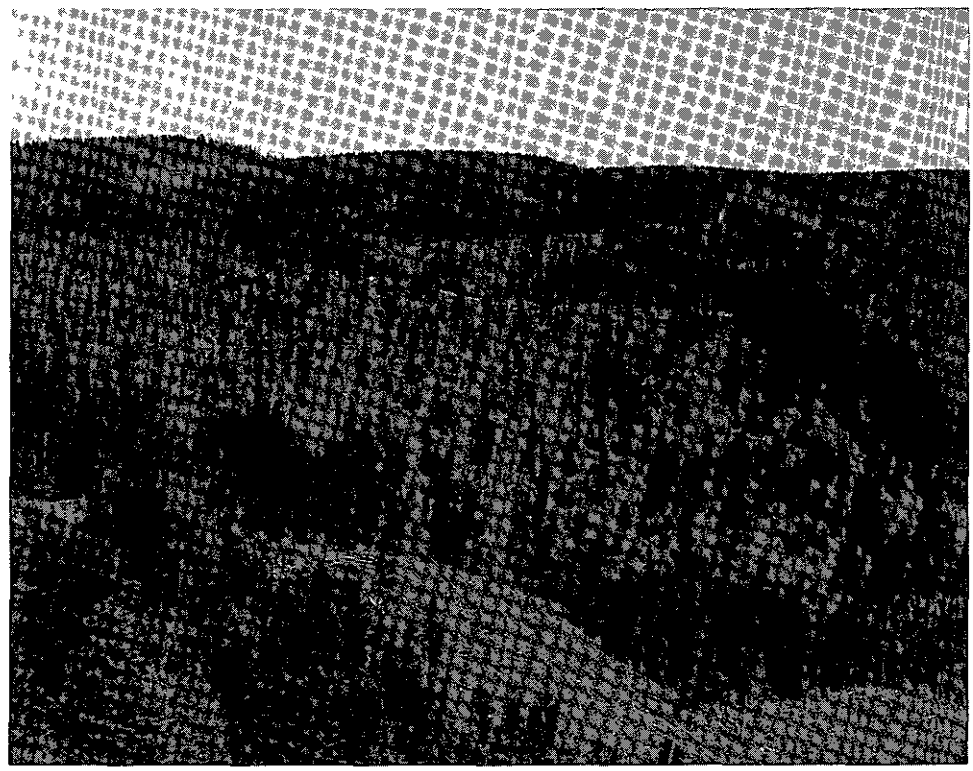
72 percent forested, 28 percent nonforested

Description

The areas of the Forest where this management area is applied contain a wide variety of land types and vegetative cover. Most of the area has some type of tree cover, including ponderosa pine, mixed conifer and juniper. The area also contains scablands, meadows, rock outcrops, seeps and springs.

Emphasis

Produce timber and forage while meeting the Forest-wide standards and guidelines for all resources. In ponderosa pine stands, management will emphasize production of high value (quality) timber.



Desired Condition

Many ponderosa pine stands on slopes less than 30 percent, and some mixed conifer stands on slopes less than 30 percent, will exhibit the application of uneven-aged management. Trees up to 20 inches DBH will be seen in these stands; the evidence of trees managed for high quality lumber where the first log is relatively free of limbs will be noted.

Except in seedling and sapling stages, most mixed conifer timber stands, all stands on slopes greater than 30 percent, and some pine stands not suitable for uneven-aged management, will be even-aged with trees somewhat evenly spaced and fully occupying the site. Regenerated stands will generally be 20 to 40 acres in size. A mix of species with emphasis on the seral species such as pine and larch will be evident where conditions permit. The largest trees will generally be 18 to 22 inches DBH, but occasional larger ones may be found where left for snag replacements or other resource reasons. Trees will have full crowns and be relatively free of defect. Snags will be apparent over the area as the cavity nesters requirement will be at the 40 percent level.

A variety of native grasses, sedges and forbs will be available for grazing animals. Competition from nonforage species such as sagebrush and juniper will not be a major problem. Most of the forested range lands will be in fair and good forage condition class. Forage use will be apparent, and improvements installed to facilitate stock distribution and effective use of available forage will be evident.

Following use for timber haul, local access routes with planned future use will generally be open to high clearance access (maintenance level 2), and for Forest visitor and administrative use, unless there are significant reasons to do otherwise. Access routes/trails will be developed to offer a variety of terrain and experience levels for ATV's, and users will be restricted to these areas. Recreational off-road, motorized use will be allowed, but user's will be encouraged to use designated routes in order to protect forest resources such as soils and water quality.

The area will have dispersed sites scattered throughout which will be maintained in as natural a condition as possible.

Fire occurrence will be visible where natural or human-caused starts occur, and where prescribed fire was applied

MA-F23 North Fork Crooked River Recreation Corridor

1,830 acres, less than one percent of the Ochoco National Forest

52 percent forested, 48 percent nonforested

Description

This management area contains a segment of the North Fork of the Crooked River which extends from the source at Williams Prairie to Big Summit Prairie, and from Big Summit Prairie to Deep Creek Campground. This has been designated as a Recreational River segment in the National Wild and Scenic Rivers System.

The upper-most segments of this river flow through open grassland flats with little riparian vegetation along the banks. Evidence of heavy grazing occurs here. This is a spring fishing stream, but generally flows are too low and temperatures too high to support fish populations during the summer months.

Forest Road 42, a major arterial on the Ochoco National Forest, parallels the lower North Fork of the Crooked River recreation segment along the length of this segment, generally staying within 200 to 600 feet of the river bank. It carries considerable amounts of industrial, administrative, and recreational traffic during late spring, summer, and fall.

There has been some timber harvesting along the north shore of the river. Generally the trees were selected for harvesting on a sanitation-salvage basis.

The majority of the stands on the south side of the river have never been harvested; part of the area is designated as old growth management. The area is grazed by cattle.

Primary recreational uses of the area are camping, fishing, and hunting. There is a developed campground called Deep Creek Campground at the eastern end and several dispersed camping sites along the river. Water flows are generally low during late summer and fall, and are unable to support fish during these times because water temperatures are too high.

Emphasis

Management will maintain the appearance of a natural landscape in the foreground view from Forest Road 42 to enhance recreational and scenic values. Management activities will protect and enhance public use and enjoyment of the river segment. Further planning for this management area will be forthcoming, as required by the Omnibus Oregon Wild and Scenic Rivers Act of 1988.

Desired Condition

This segment of the North Fork of the Crooked River will be a free-flowing river whose shorelines may be accessible by roads. The immediate river environment (up to one-quarter mile from the river) will appear natural, though there may be evidence of past and ongoing timber harvest, as well as grazing. Developed and dispersed campsites and interpretive signing will be seen throughout the area to assist in its enjoyment and protection. The use of prescribed fire may be evident where used to enhance the retention of featured tree species in viewing areas, such as old growth ponderosa pine or western larch

MA-F24 North Fork Crooked River Scenic Corridor

830 acres, less than one percent of the Ochoco National Forest

46 percent forested, 54 percent nonforested

Description

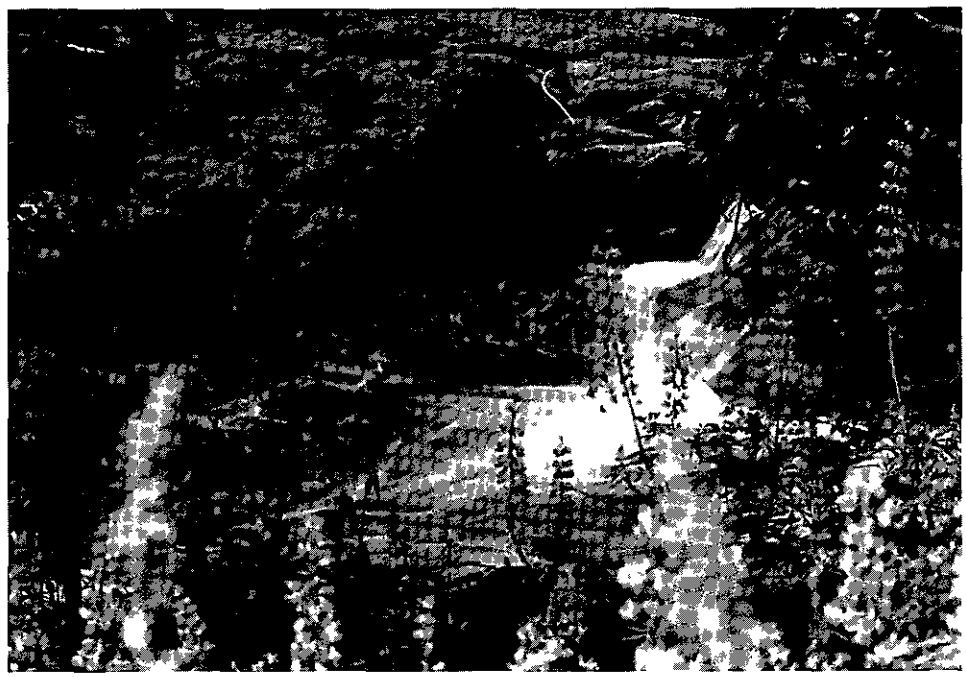
This management area includes the segment of the North Fork of the Crooked River which extends from Deep Creek Campground south to the Forest boundary. It has been included in the National Wild and Scenic Rivers System, designated as a Scenic River segment.

The area is accessed by Forest Road 4260-230 on the east side of the river. Though there can be a considerable amount of industrial traffic on Forest Road 4260; the traffic on Forest Road 4260-230 is recreational and administrative. Access on the west side occurs by Forest Road 4240. This route actually fords the river just above the upper falls on private land.

Part of the area has been designated for old growth; the area is grazed by cattle.

Primary recreational uses of the area are dispersed camping, hunting, fishing, and for a short time in the spring, white-water rafting. Deep Creek Campground borders the north end of the unit, and there are several dispersed campgrounds.

Steep canyon walls, large old growth ponderosa pine, and perennial water make this unit a visually striking area.



Emphasis

Management will maintain and enhance the natural appearing landscape and protect the scenic river designation.

Several stands have been designated for old growth within the scenic river corridor. Where old growth restrictions are more restrictive than scenic river restrictions, the old growth prescriptions will apply. Further planning for this management area will be forthcoming, as required by the Omnibus Oregon Wild and Scenic Rivers Act of 1988.

Desired Condition

This segment of the North Fork of the Crooked River will be seen as a free-flowing river whose shoreline is accessed by a road. The immediate river environment (up to one-quarter mile from the river) will have an overall natural appearance, though there may be evidence of past timber harvest. Other management activities will be evident, including developments such as dispersed campsites and interpretive signing to enhance the public's use of the area while protecting resources. A low standard trail will be developed that will require wading or rock-to-rock natural crossings to cross through the river corridor. Prescribed burning will be apparent where used to enhance the retention of featured tree species such as large old growth ponderosa pine and western larch.

MA-F25 U.S. Highway 26 Visual Corridor

6,850 acres, less than one percent of the Ochoco National Forest

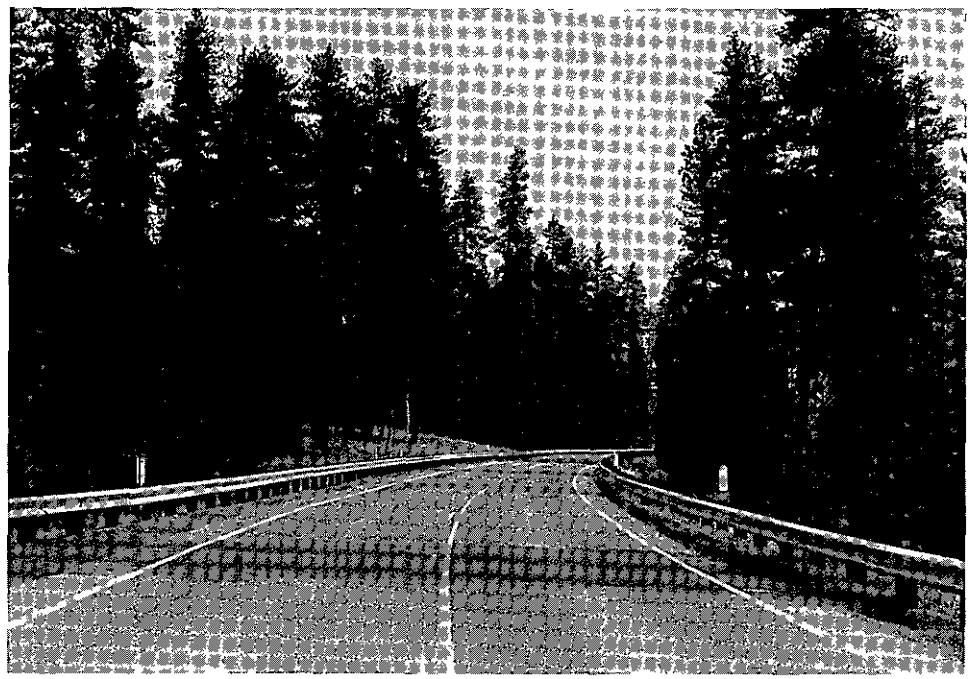
85 percent forested, 15 percent nonforested

Description

This visual corridor includes foreground viewing areas classified as "retention" adjacent to 13 miles of U.S. Highway 26, which traverses the Ochoco National Forest through the Big Summit and Prineville Ranger Districts. It lies within two major drainages, Marks Creek to the south and West Branch Bridge Creek to the north; this is the primary visual corridor on the Forest. The highway constitutes a major east-west route through Oregon and is a designated "National Bike Trail."

In April 1985, a fifty year implementation plan was developed and approved for the area, and is incorporated here to provide specific direction for long-term management.

The corridor contains outstanding stands of old growth ponderosa pine, some of which have been maintained in an open park-like condition through management activities. Other features of the corridor include mixed conifer stands of various ages and visual character, ungrazed meadows, occasional aspen stands, and unique geologic features such as basalt cliffs along Marks Creek. Marks Creek is a Class I stream that supports native trout populations and has received major investments for stream habitat improvement.



Emphasis

Maintain and enhance the scenery for travelers along U.S. Highway 26.

Desired Condition

The U.S. Highway 26 Corridor will be managed to maintain the big tree appearance; primary management activities will not be evident to the casual Forest visitor. Vegetation will be manipulated in order to provide a variety of size and age classes of timbered stands - from open park-like stands of old growth ponderosa pine, to dense, shaded stands of mixed conifer, to small openings with planted and natural tree seedlings. Both uneven- and even-aged stand conditions will exist over time.

An established road system will be in place, but will have been designed to minimize the visual effect on the landscape. Prescribed livestock grazing is planned. Pastoral scenes will add to visual variety. Prescriptive grazing will be designed to be in concert with the visual quality objectives of the area.

Wildlife may be viewed in the corridor. This might include big game, a variety of bird species, and fish. The affects of fire will be periodically evident, as a result of natural and prescribed burning.

Dispersed recreation sites will be abundant throughout the corridor for year-round use. Camping will be encouraged, except where restricted for other resource reasons, such as streamside management areas along Mark's Creek. Snowparks for winter recreation will be constructed to blend into the surroundings.

MA-F26 Visual Management Corridors

(This includes all visual management areas outside of other special management areas, i.e. Highway 26, Summit Trail, etc.)

33,260 acres, four percent of the Ochoco National Forest

9,300 acres - Retention

23,960 acres - Partial Retention

70 percent forested, 30 percent nonforested

Description

This management area includes all foreground areas that are adjacent to approximately 260 miles of roads across the Forest that serve as significant travel ways for the visiting public. In most cases these roads provide recreational access to specific destinations, such as Walton Lake Campground and the Black Canyon Wilderness.

Vegetation in these corridors are of primary importance to the scenic landscape as they represent "The National Forest" to the majority of the visiting public. At lower elevations, a mosaic of juniper, grasslands and ponderosa pine gives an impression of a semi-arid, almost desert environment As one travels deeper into the Forest, this character gradually disappears and is replaced with stands of large, old ponderosa pine interspersed with nonforested grasslands and occasional rock outcrops. Continuing to most higher elevations within the Forest, one will experience a much more diverse and heavily forested setting, with stands of mixed conifer dominating a more subdued area of old growth ponderosa pine, aspen and high mountain meadows. As most of these corridors are located in

drainage bottoms along major streams, the chances of a Forest visitor viewing a number of wildlife species are good.

Emphasis

Maintain the natural appearing character of the Forest along major travel routes, where management activities are usually not evident or are visually subordinate to the surrounding landscape.

Desired Condition

Prescription Area A

This area will encompass about 86 miles of Forest roads and include approximately 9,300 acres of associated landscape. The outer boundary of the management area will generally not exceed 600 feet on each side the road. Retention will be the visual quality objective, which will result in long-term management where primary activities are not visually evident to the casual observer. Forest visitors will encounter a landscape which is diverse, and reflects ecosystems where management activities appear as a natural condition.

Vegetation will be manipulated, but will reflect a natural forest setting where stands of trees exist in multiple age classes, from young seedlings to mature old growth in both uneven- and even-aged conditions. Unique characteristics of the landscape, such as rock bluffs and aspen clones, will appear highlighted, where they are currently hidden from view due to existing vegetation.

Prescription Area B

This area will encompass about 174 miles of Forest roads and include approximately 23,960 acres of associated landscape. The outer boundary of the management area will generally not exceed 600 feet on each side the road. Partial retention will be the visual quality objective, which will result in long-term management where activities may be evident but are visually subordinate to the characteristic landscape. Forest visitors will encounter a near-natural scenic view, with a diverse ecosystem reflecting a low level of management.

Vegetation will appear manipulated and reflect a forest setting where stands of trees exist in multiple age classes in both uneven- and even-aged conditions, set in a more subdued background of rock outcrops, aspen clones and native grass communities.

Prescription Areas A and B

An established road system will be in place, but will have been designed to minimize the visual effect on the landscape. Grazing by livestock may or may not be visible immediately adjacent to these roads, but will be an acceptable resource use within the area

As a consequence of visual management, an abundance of wildlife may be viewed in the corridor, this might include big game, a variety of bird species, and fish. The affects of fire will be periodically evident as a result of natural and prescribed burning.

MA-F27 Round Mountain National Recreational Trail

1,000 acres, less than one percent of the Ochoco National Forest

71 percent forested, 29 percent nonforested

Description

Round Mountain trail goes from the 148 spur of Forest Road 22 at its north end to Forest Road 4205 at its south end. It connects the Walton Lake Campground area on the north, to Forest Road 42, the main access route from the west to Big Summit Prairie. Total trail length is 7.5 miles. It is of low to moderate difficulty, and open to hikers, horseback riding, and mountain bikes. It is also used by cross country skiers and snowmobilers during the winter, and portions of the trail location have been signed for winter use.

From Spur 148 at an elevation of 5,200 feet, the trail is a gradual climb to the base of Round Mountain. At that point, the trail becomes considerably steeper switchbacking to reach the summit of Round Mountain at 6,750 feet. South from the summit of Round Mountain, the trail gradually descends to the 5,500 foot elevation.

The trail goes through ponderosa pine and mixed conifer stands, as well as an existing rock pit. There is no water along the trail except Scissor Springs. The trail goes through a sheep allotment Wild horses may be observed from the trail.

The view from the summit of Round Mountain includes Big Summit Prairie to the east, Lookout Mountain to the south, and Prineville and the Cascade Range to the west.

Emphasis

Protect and manage for scenic qualities which make the trail corridor an attractive recreational setting. Rehabilitate trail sites where management activities conflict with National Recreation Trail objectives.

Desired Condition

The visitor will note a natural appearing forest along the majority of the trail route (visual quality objective of retention). The outer boundary of the management area will generally not exceed 600 feet on either side of the trail. The Round Mountain National Recreation Trail will be linked to trails on Lookout Mountain and the access road to the Summit of Round Mountain, as well as Walton Lake Campground, through appropriate signing. Recreational improvements will be evident in locations necessary to protect the land, for public safety, and to enhance the public's enjoyment of the area.

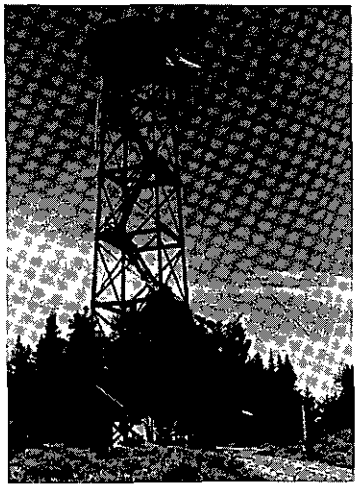
Old growth stands will be seen within the management area. Fire occurrence will be evident where natural and human-caused starts occur. Rehabilitation will be done in areas visually impacted by past management activity along the trail route.

MA-F28 Facilities

460 acres, less than one percent of the Ochoco National Forest

26 percent forested, 74 percent nonforested

Description



This prescription applies to administrative sites located on the Forest. These include ranger stations, work centers, lookouts, and electronic sites.

This prescription does not include the Forest Road System (approximately one percent of the total Forest acres).

Emphasis

Provide a safe, efficient, and healthful working environment where structure design and layout of the site blend with the surrounding area.

Desired Condition

Sites will be efficiently designed work areas consistent with type and intensity of use. Employee wellness and public safety will be the primary design criteria. Color and design of structures and facilities will appear to blend with the surrounding environment

Traffic controls and signing will be apparent and designed to provide a safe driving environment. Roads and trails will be planned, designed, operated and maintained to levels sufficient to provide safe use for the intended traveler and use period.

The historical significance of buildings and structures will be considered during any modifications to sites.

Employee residential areas will be designed to fulfill employee needs for housing and recreation.

Management activities, such as timber harvest, thinnings, and fuel treatments for the protection of facilities from wildfire, may be visually apparent on a short-term basis.

Figure 4-1

BLACK CANYON WILDERNESS (MA-F1)

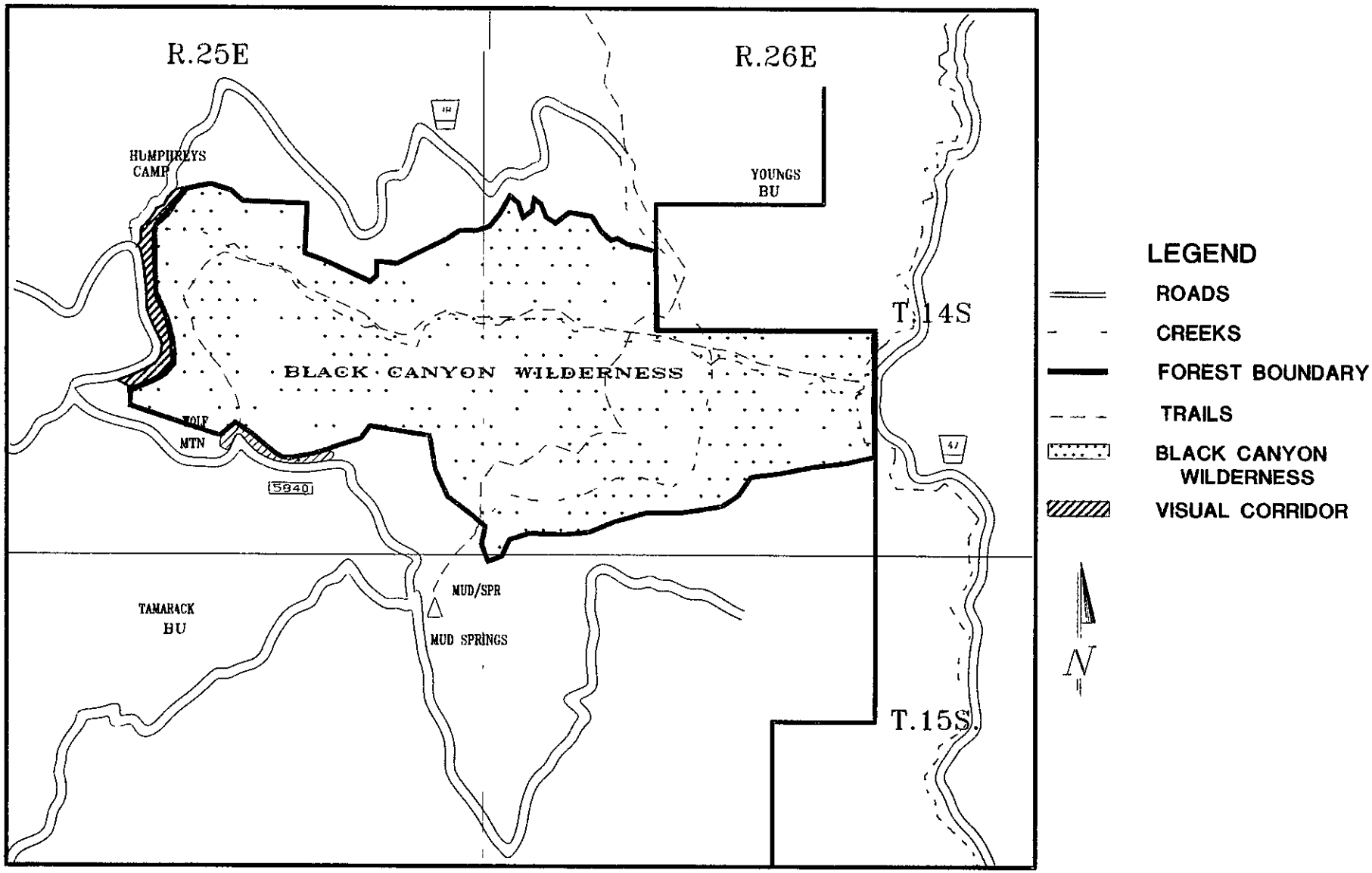


Figure 4-2

BRIDGE CREEK WILDERNESS (MA-F2)

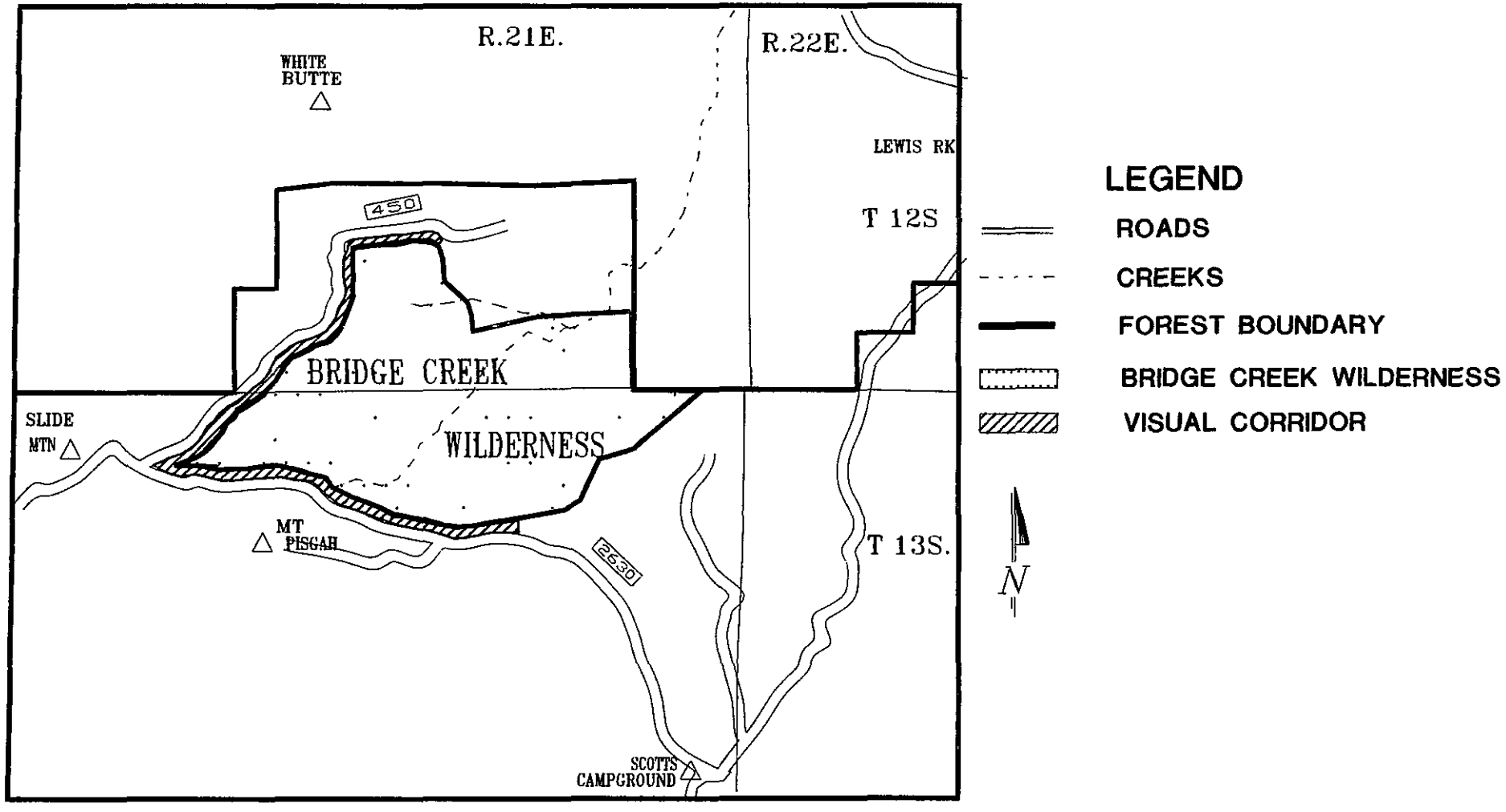


Figure 4-3

MILL CREEK WILDERNESS (MA-F3)

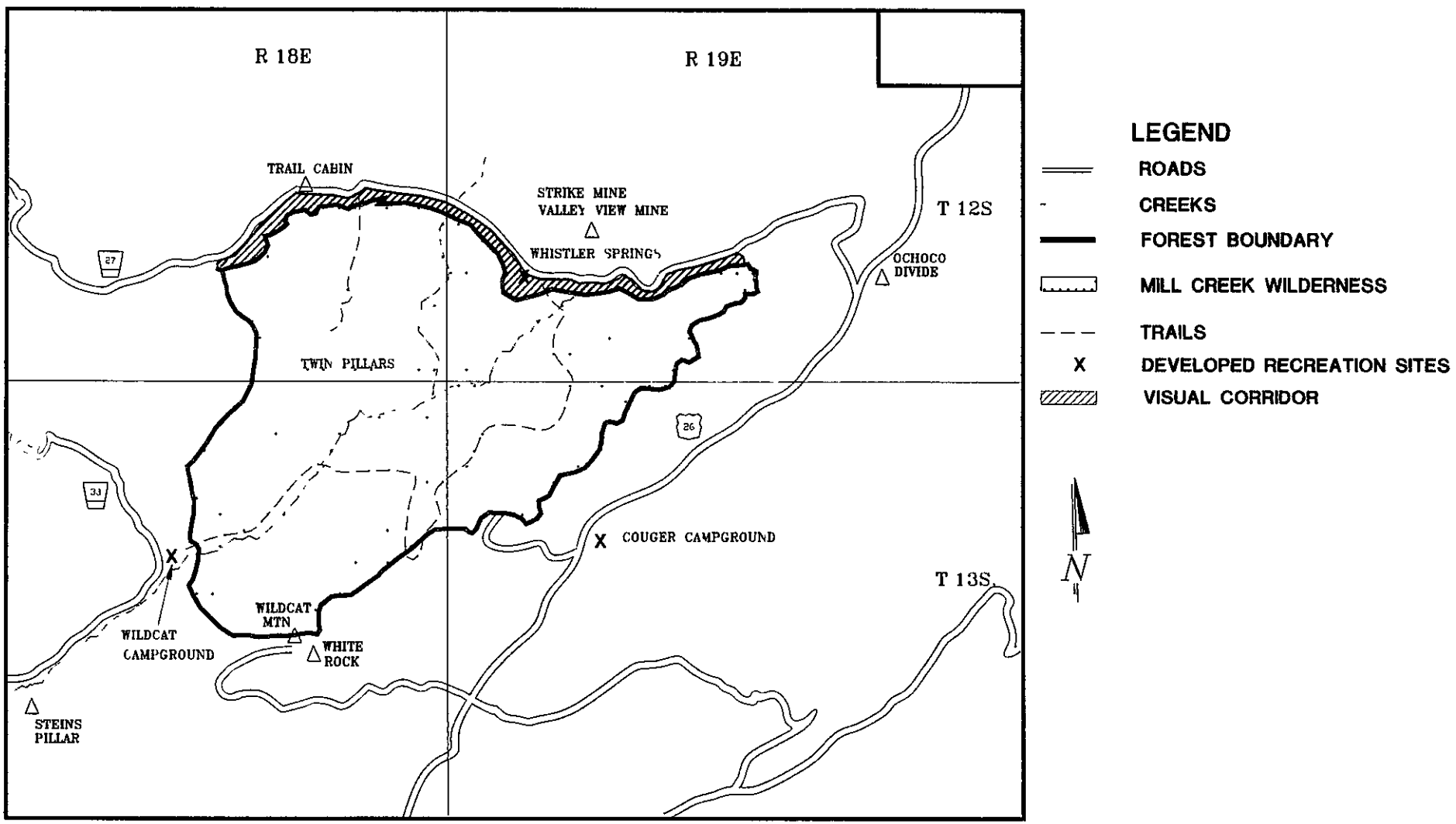


Figure 4-4

NORTH FORK CROOKED RIVER WILDERNESS STUDY AREA (MA-F4)

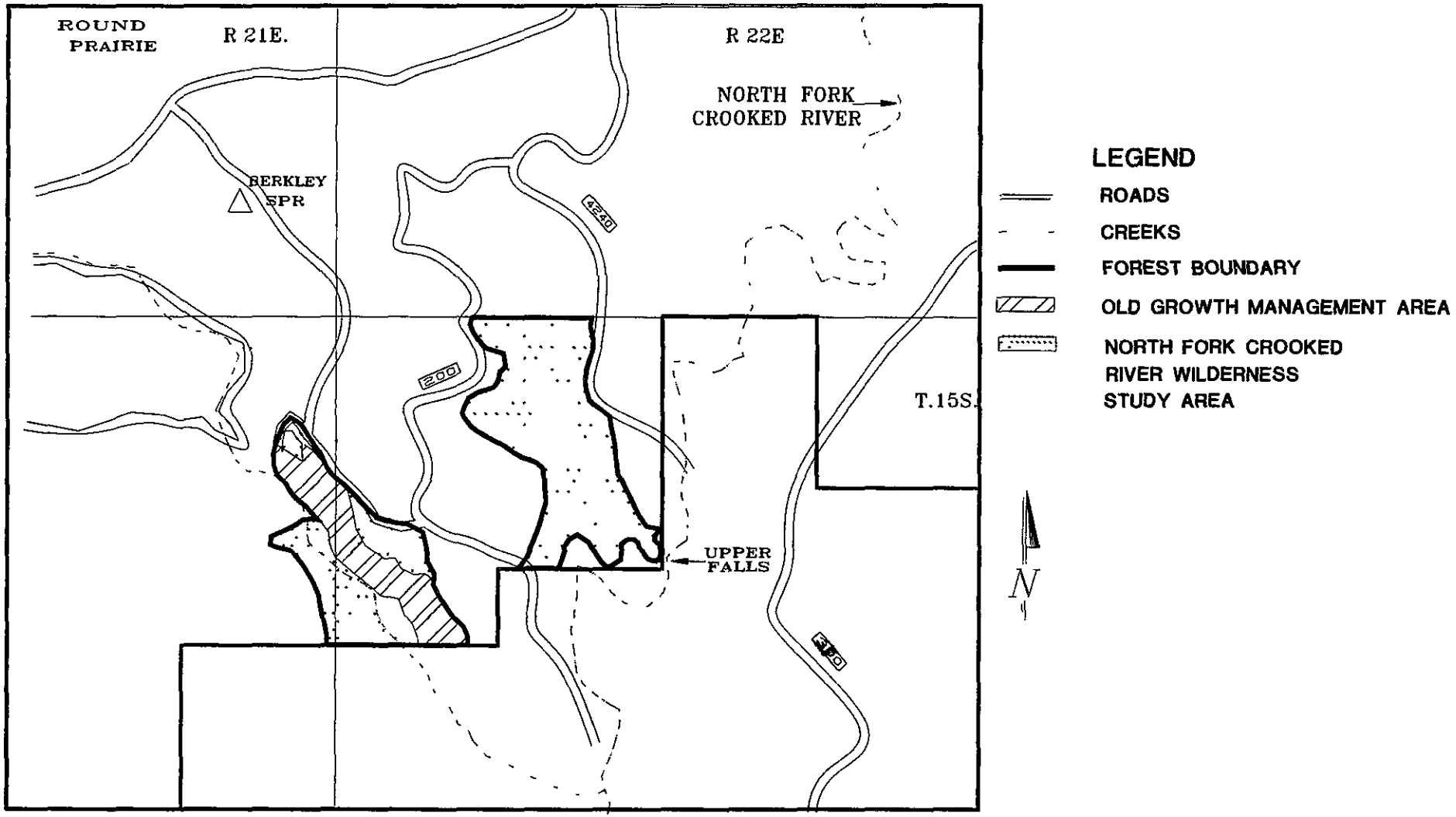


Figure 4-5

ROCK CREEK/COTTONWOOD CREEK ROADLESS AREA (MA-F8)

ROCK CREEK/COTTONWOOD CREEK UNROADED HELICOPTER AREA (MA-F9)

LEGEND

- ROADS
- CREEKS
- FOREST BOUNDARY
- ROCK CREEK/COTTONWOOD CREEK UNROADED HELICOPTER AREA
- ROCK CREEK/COTTONWOOD CREEK AREA
- OLD GROWTH MANAGEMENT AREAS
- SUMMIT TRAIL CORRIDOR
- TRAILS

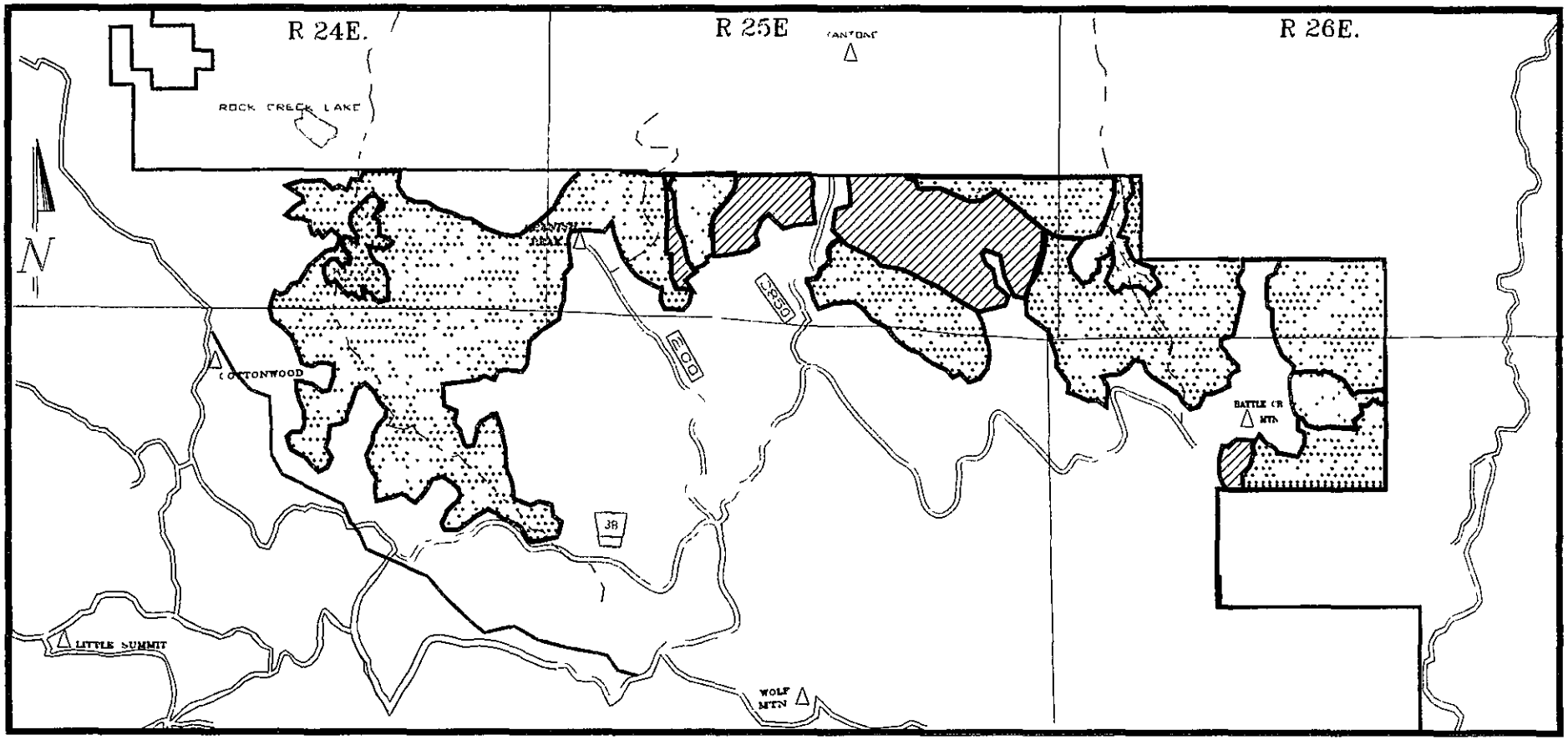
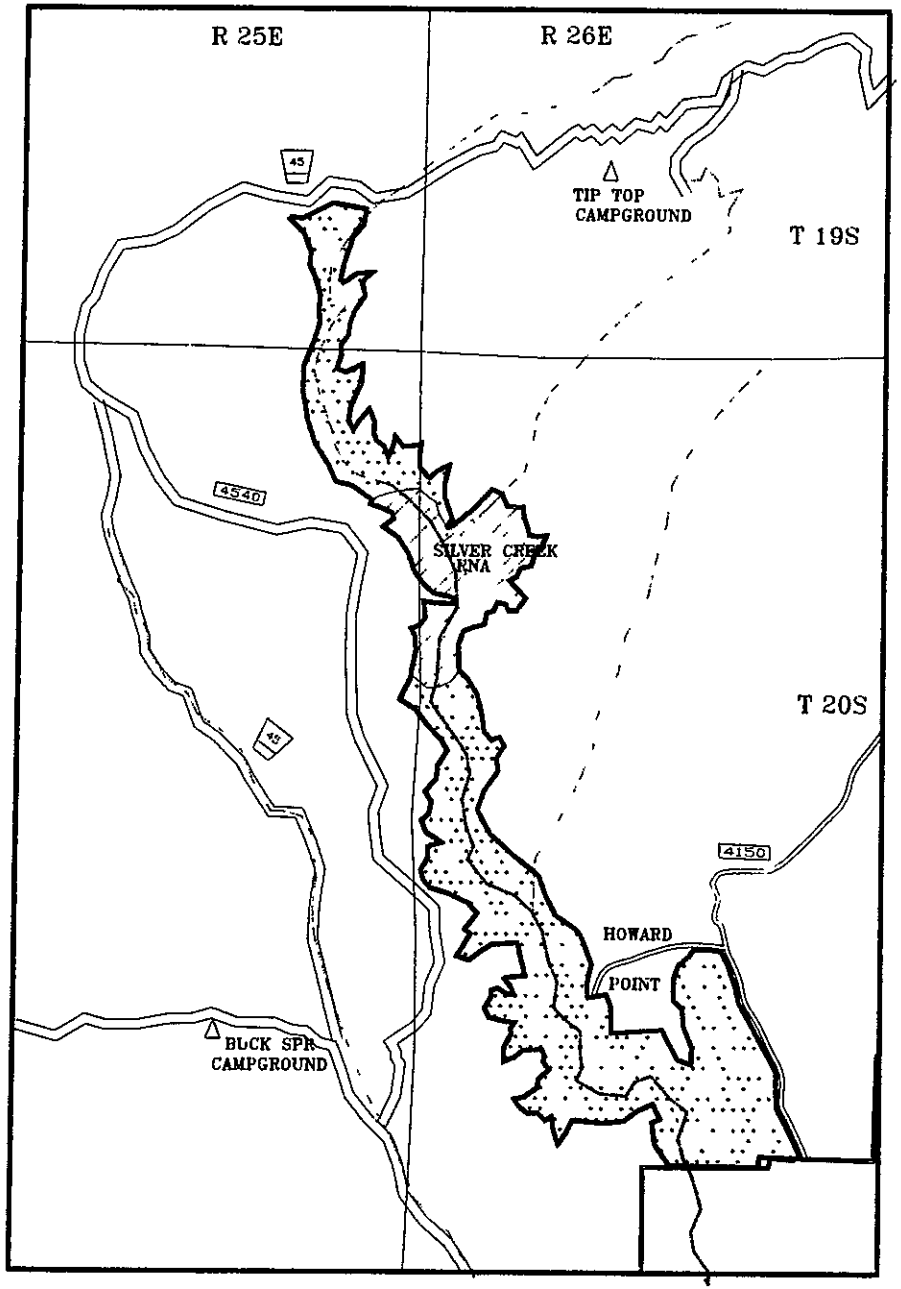


Figure 4-6

SILVER CREEK ROADLESS AREA (MA-F10)



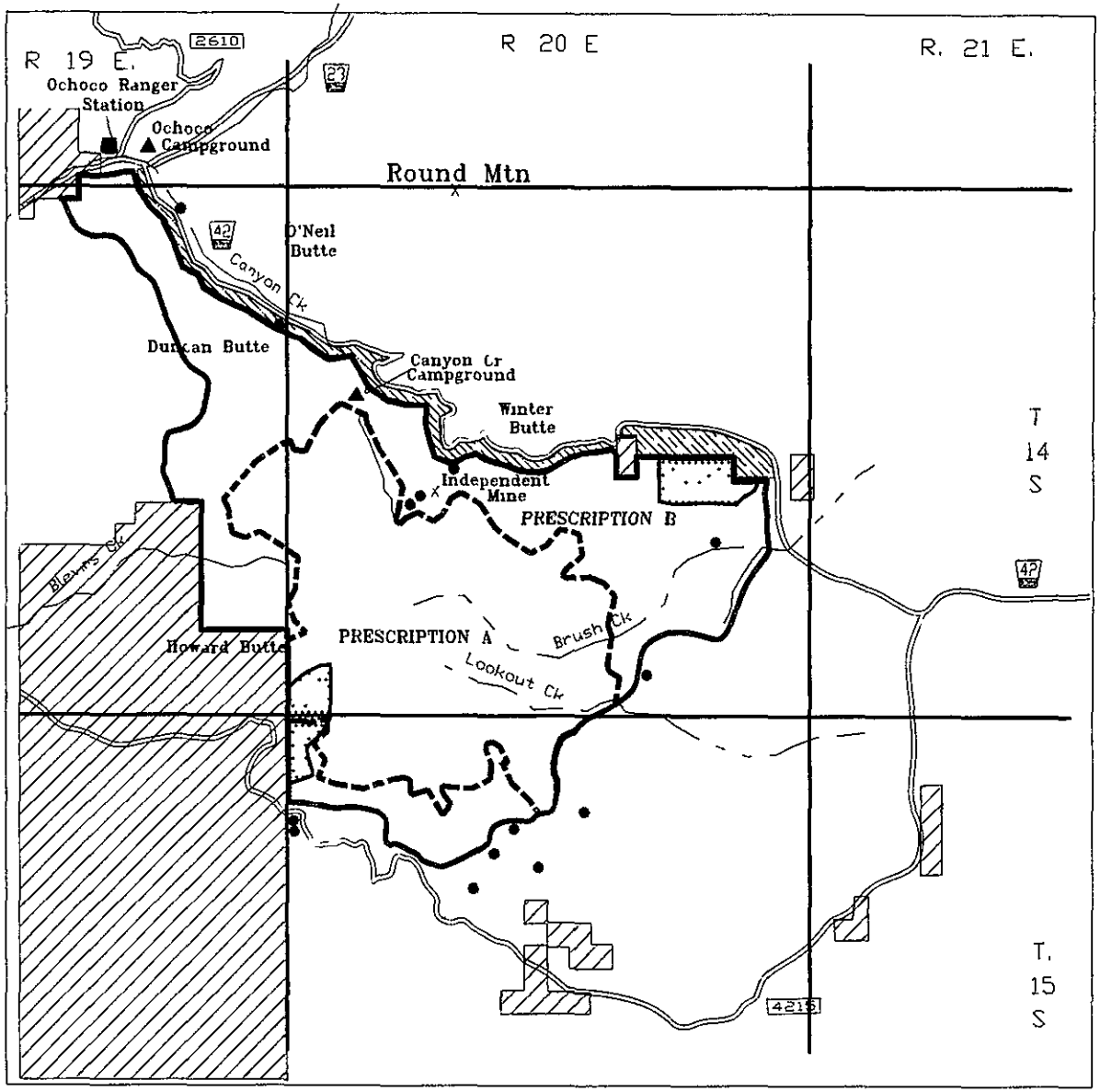
LEGEND

- ROADS
- CREEKS
- FOREST BOUNDARY
- SILVER CREEK RESEARCH NATURAL AREA
- ROADLESS

N

Figure 4-7

LOOKOUT MOUNTAIN RECREATION AREA (MA-F11)



LEGEND

- Roads
- Creeks
- Round Mountain Trail
- Dispersed Recreation Sites
- Campgrounds
- Lookout Mountain Mgmt Area Prescription A
- Lookout Mountain Mgmt Area Prescription B
- Old Growth Mgmt Areas
- Private Land
- Visual Corridor

N

Figure 4-8

RIPARIAN MANAGEMENT AREA (MA-F15)

PRINEVILLE

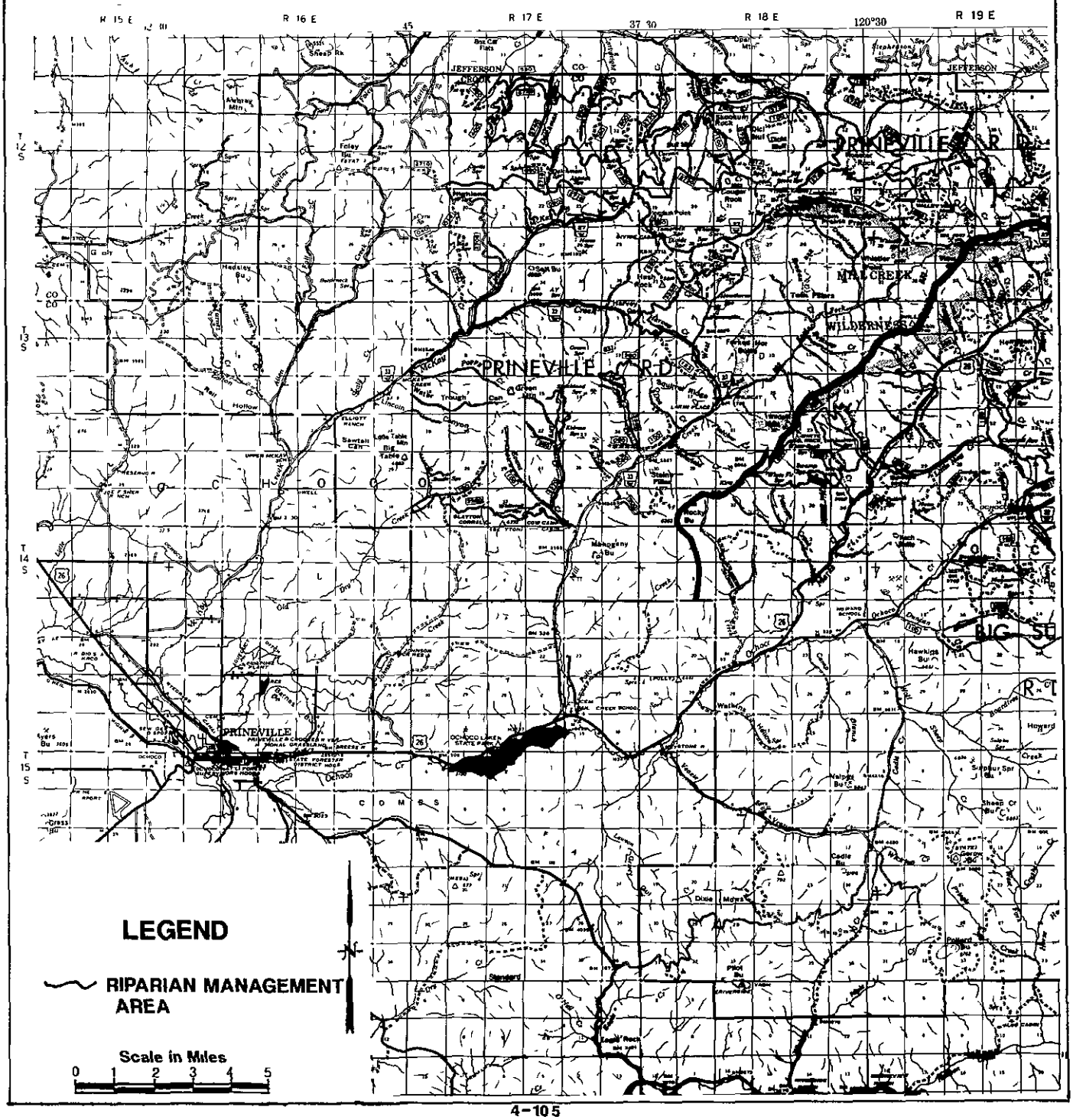


Figure 4-9

RIPARIAN MANAGEMENT AREA (MA-F15)

PRINEVILLE (MAURYS)

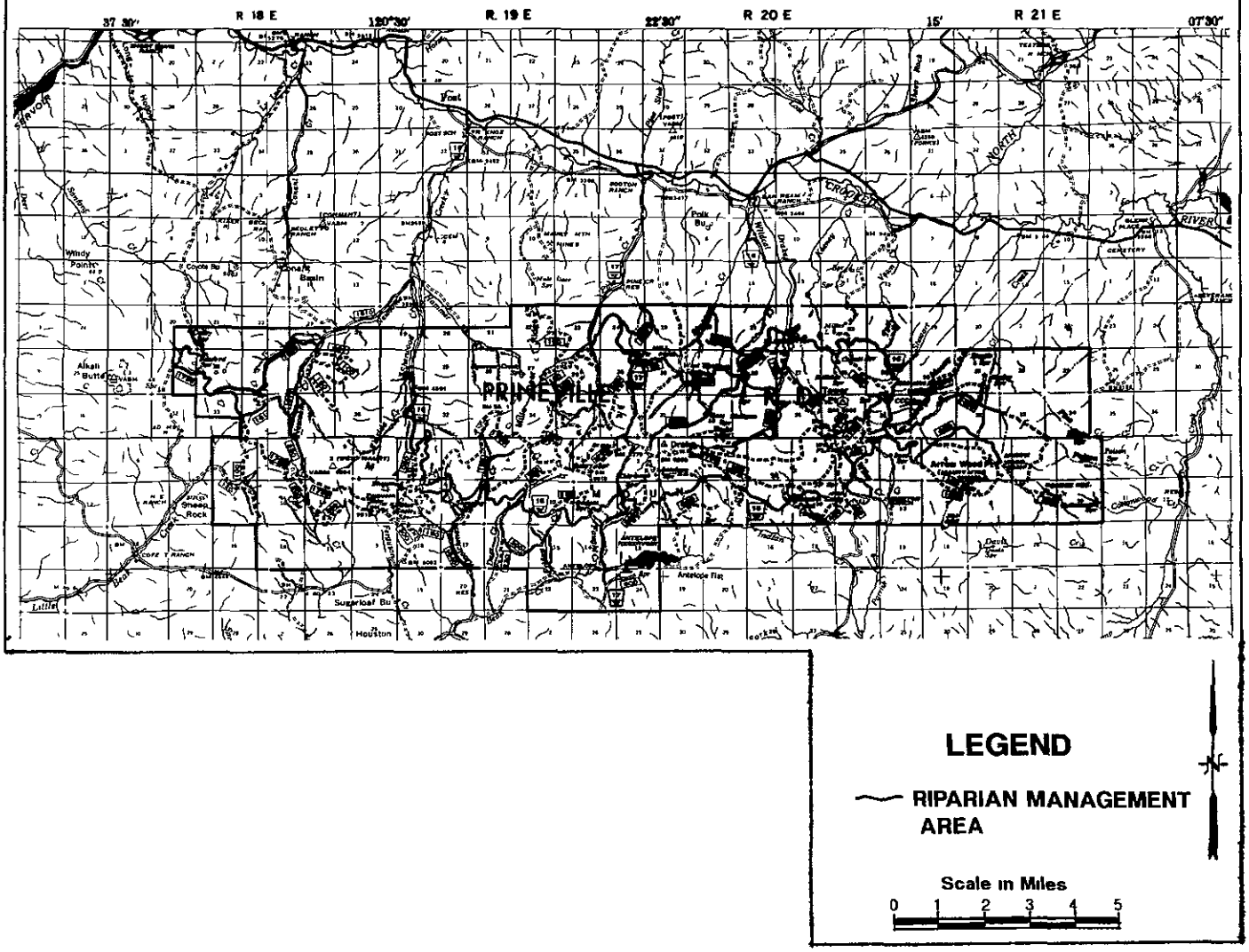


Figure 4-10

RIPARIAN MANAGEMENT AREA (MA-F15)

BIG SUMMIT

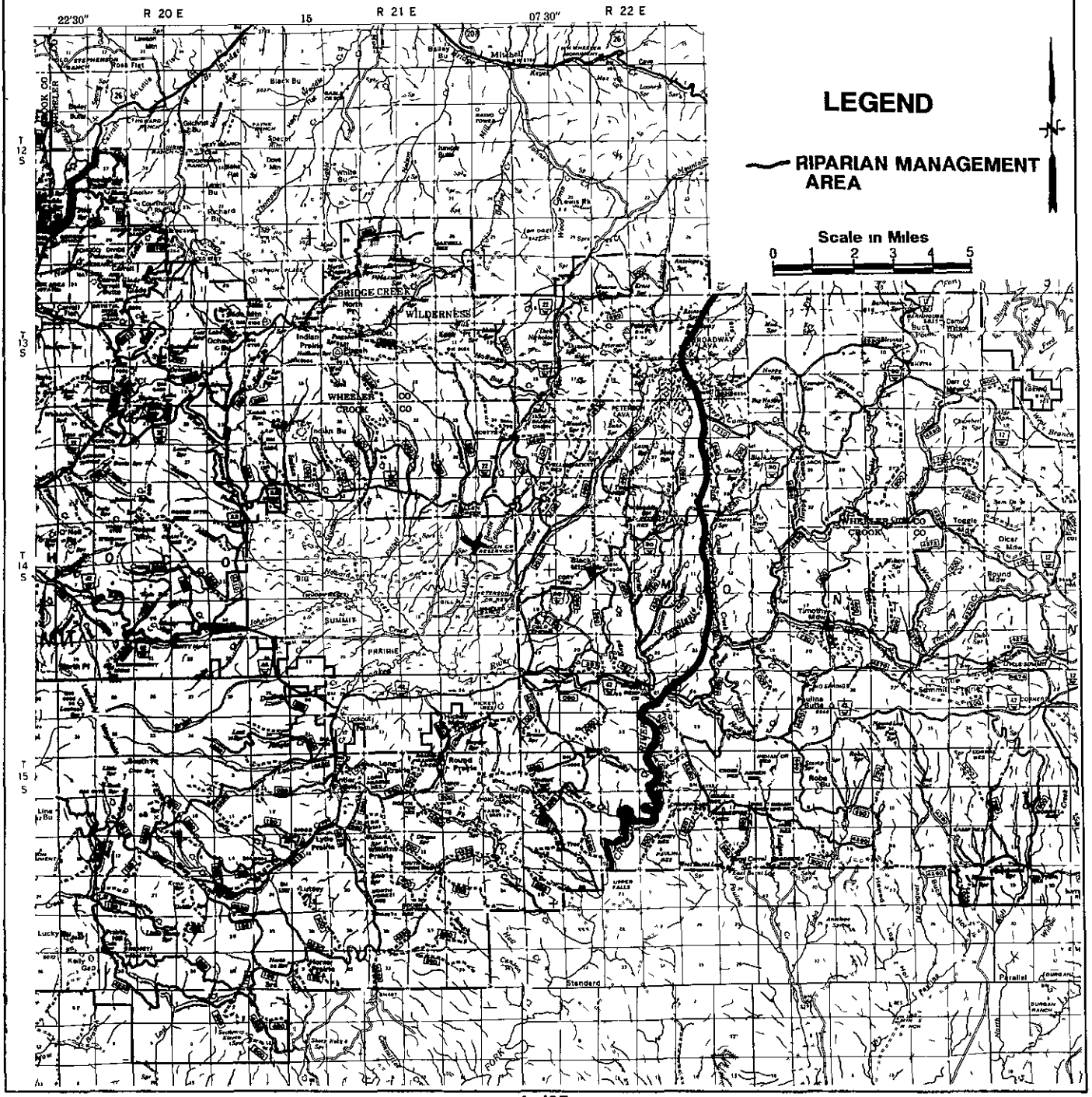


Figure 4-11

RIPARIAN MANAGEMENT AREA (MA-F15)

PAULINA

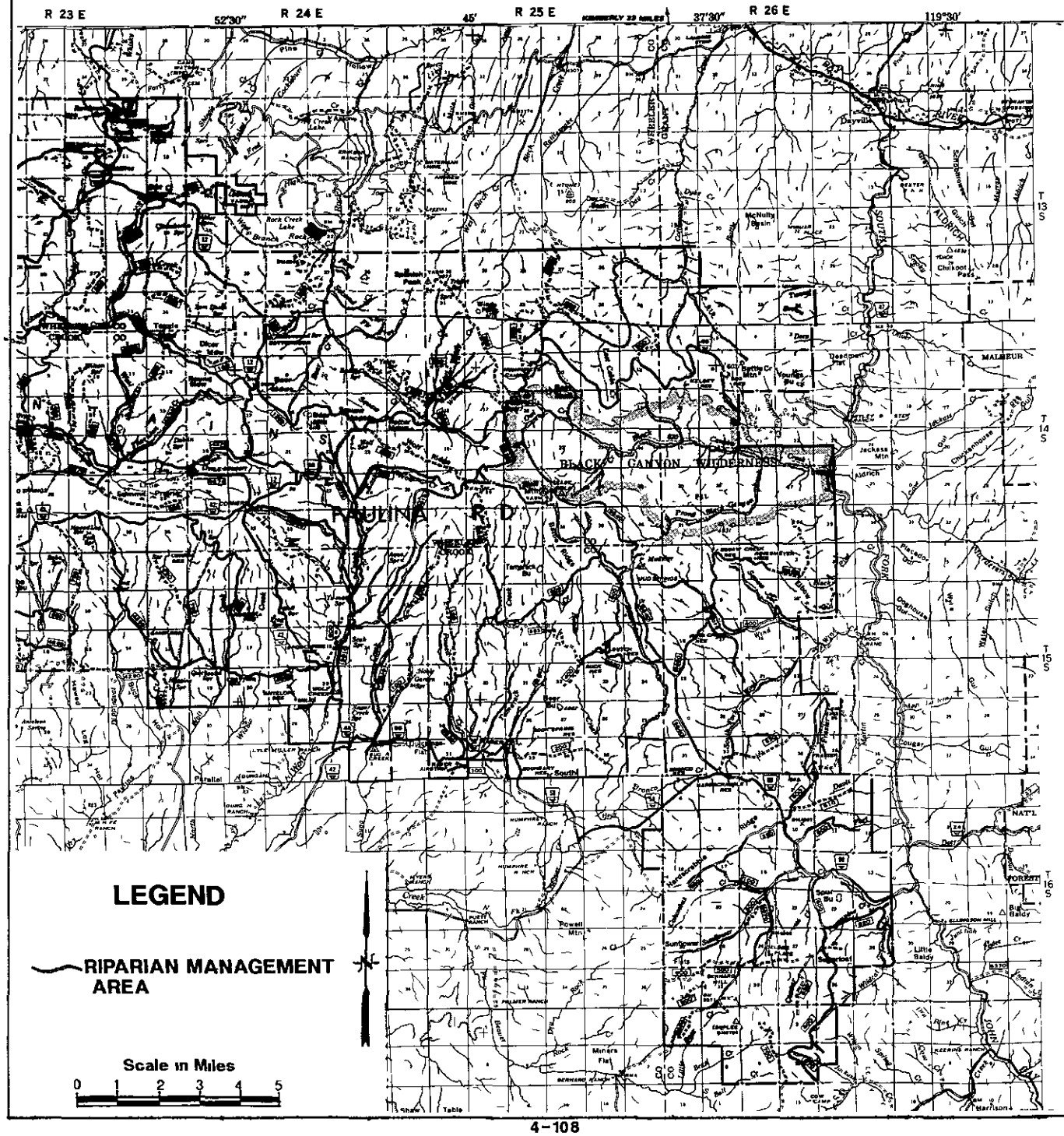


Figure 4-12

RIPARIAN MANAGEMENT AREA (MA-F15)

SNOW MOUNTAIN

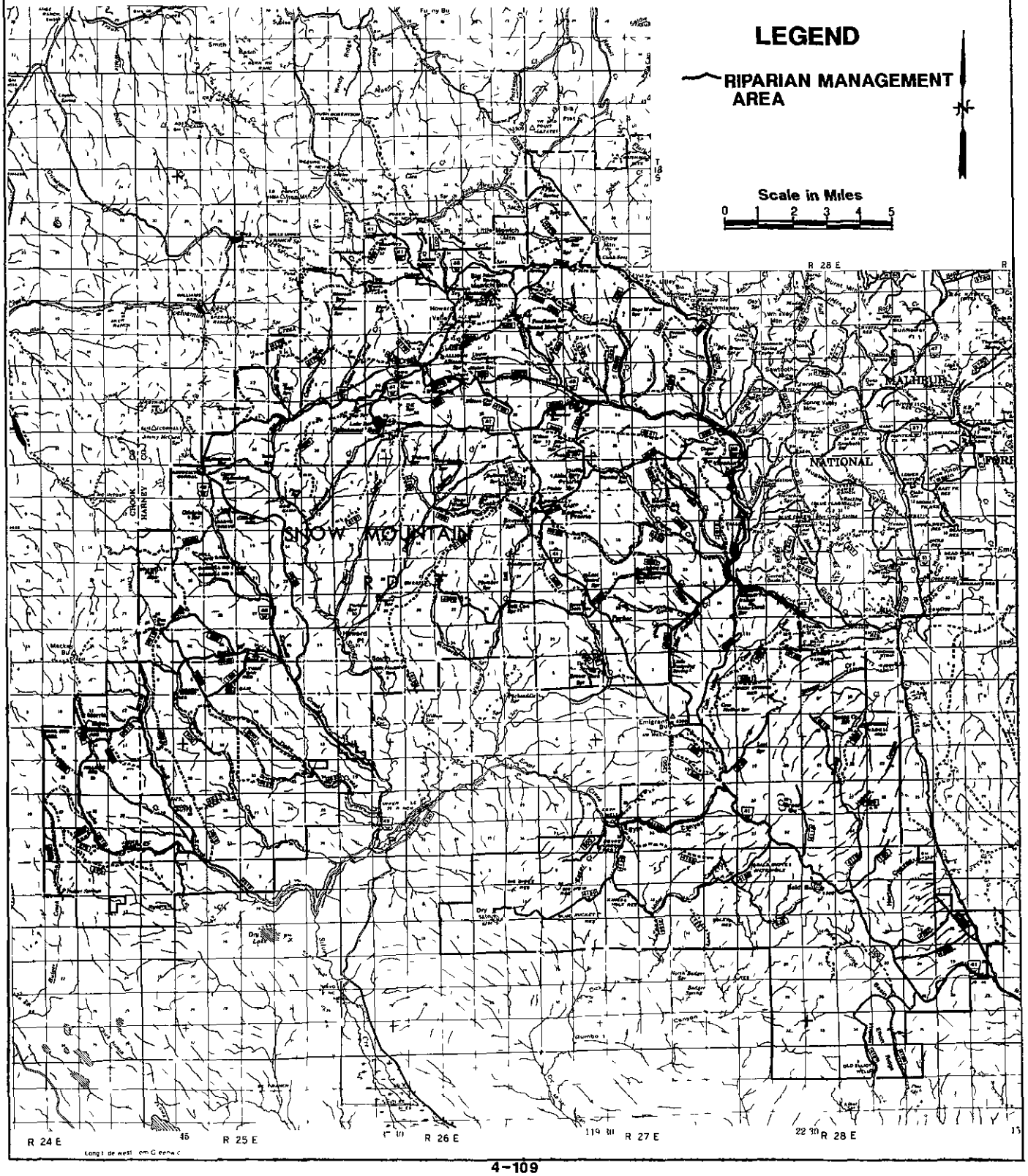


Figure 4-13

BANDIT SPRINGS RECREATION AREA (MA-F16)

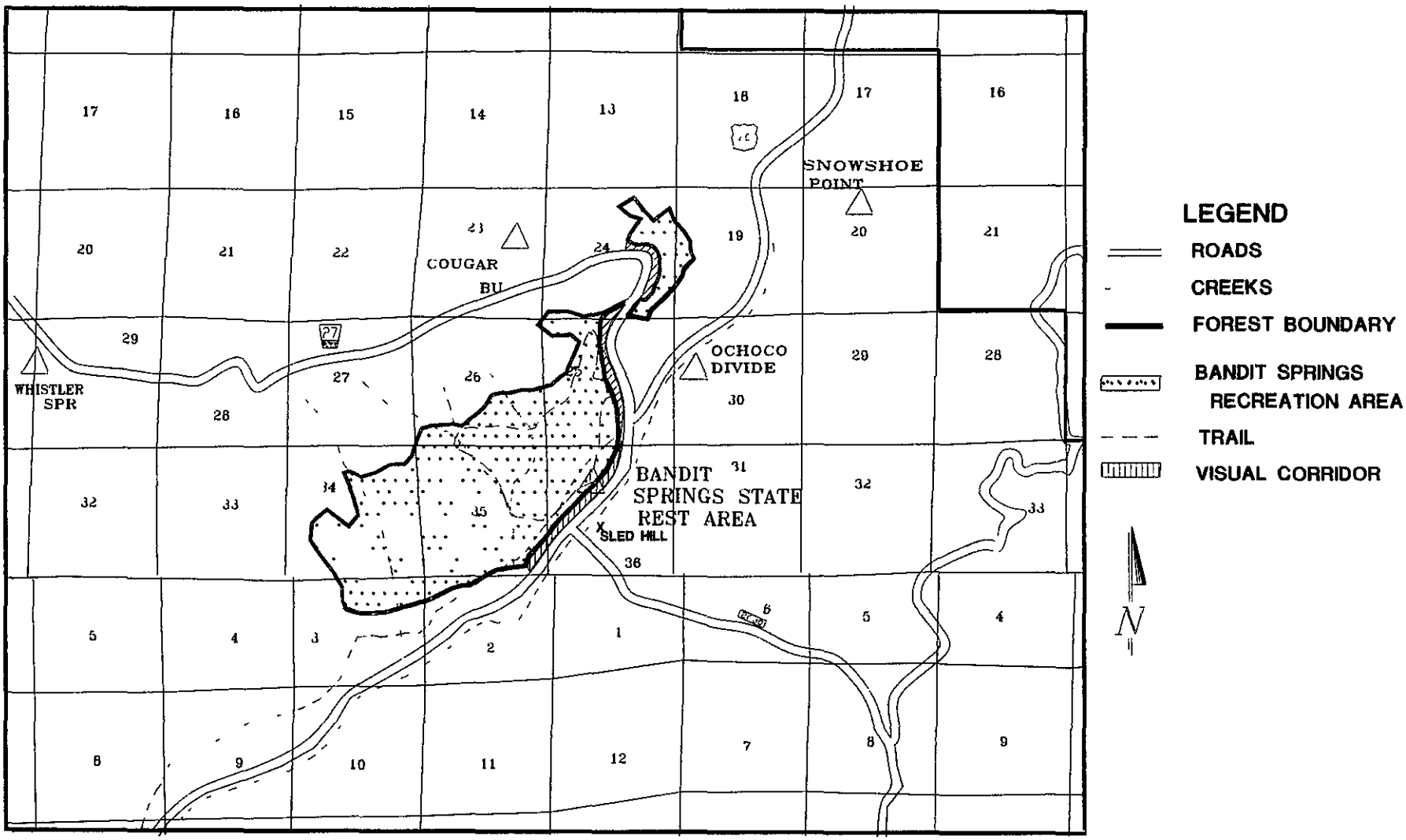


Figure 4-14

STEINS PILLAR RECREATION AREA (MA-F17)

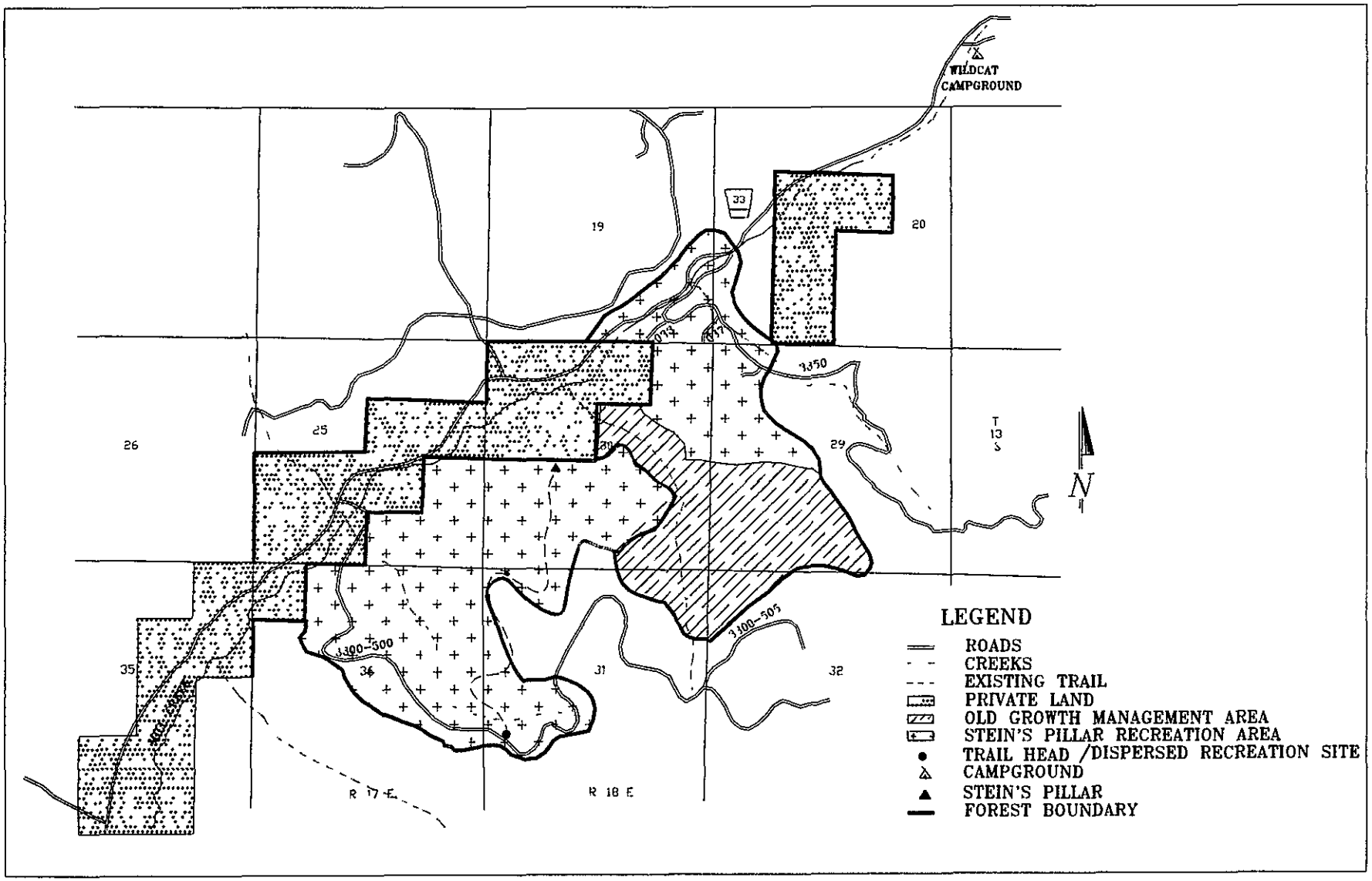
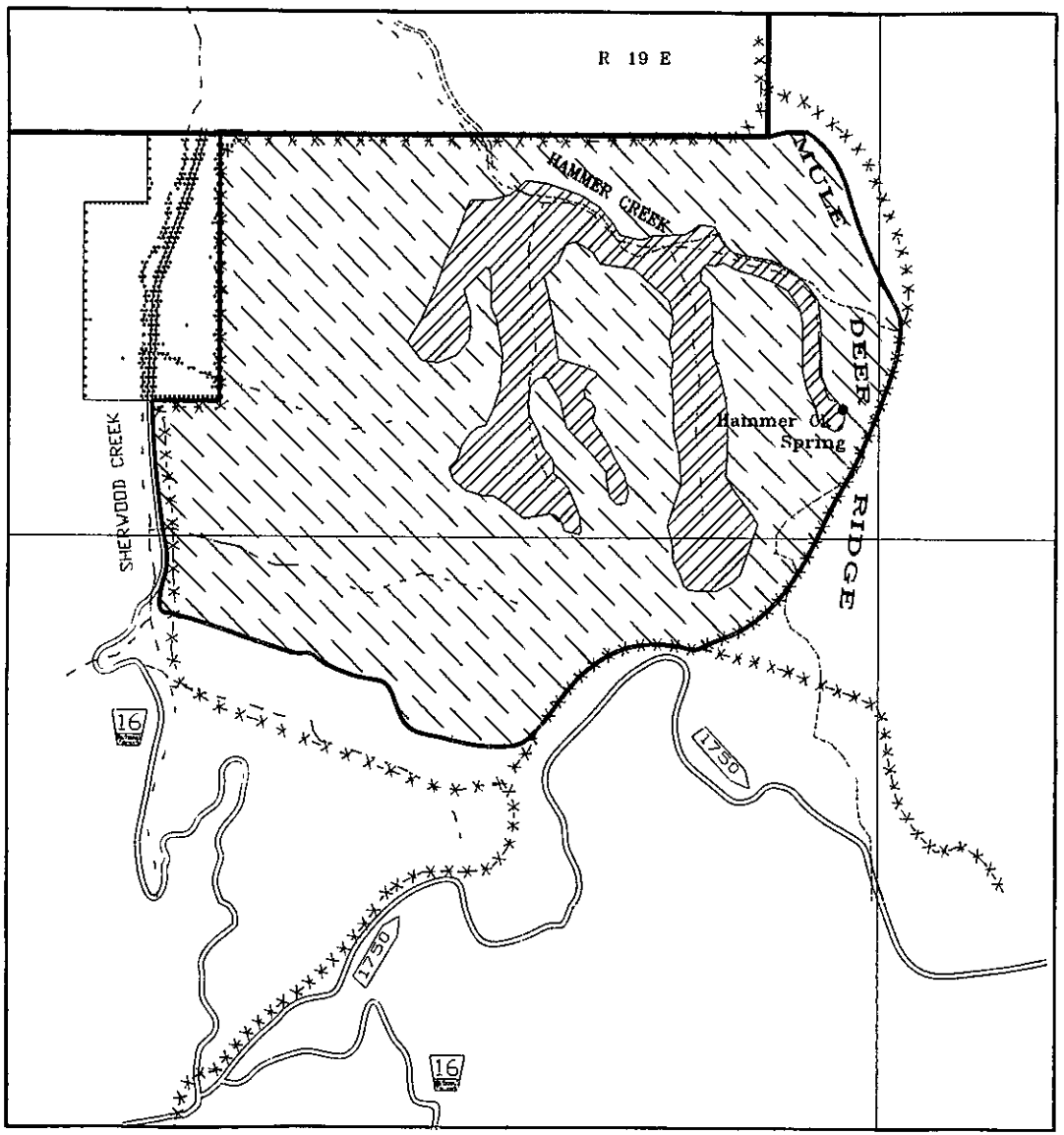


Figure 4-15

HAMMER CREEK WILDLIFE/RECREATION AREA (MA-F18)



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16
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LEGEND

- ROADS
- CREEKS
- FENCE
- HAMMER CK TRAIL
- FOREST BOUNDARY
- PRIVATE LAND
- OLD GROWTH MGMT AREA
- HAMMER CREEK WILDLIFE/ RECREATION AREA
- TRAILS

Figure 4-16

DEEP CREEK RECREATION AREA (MA-F19)

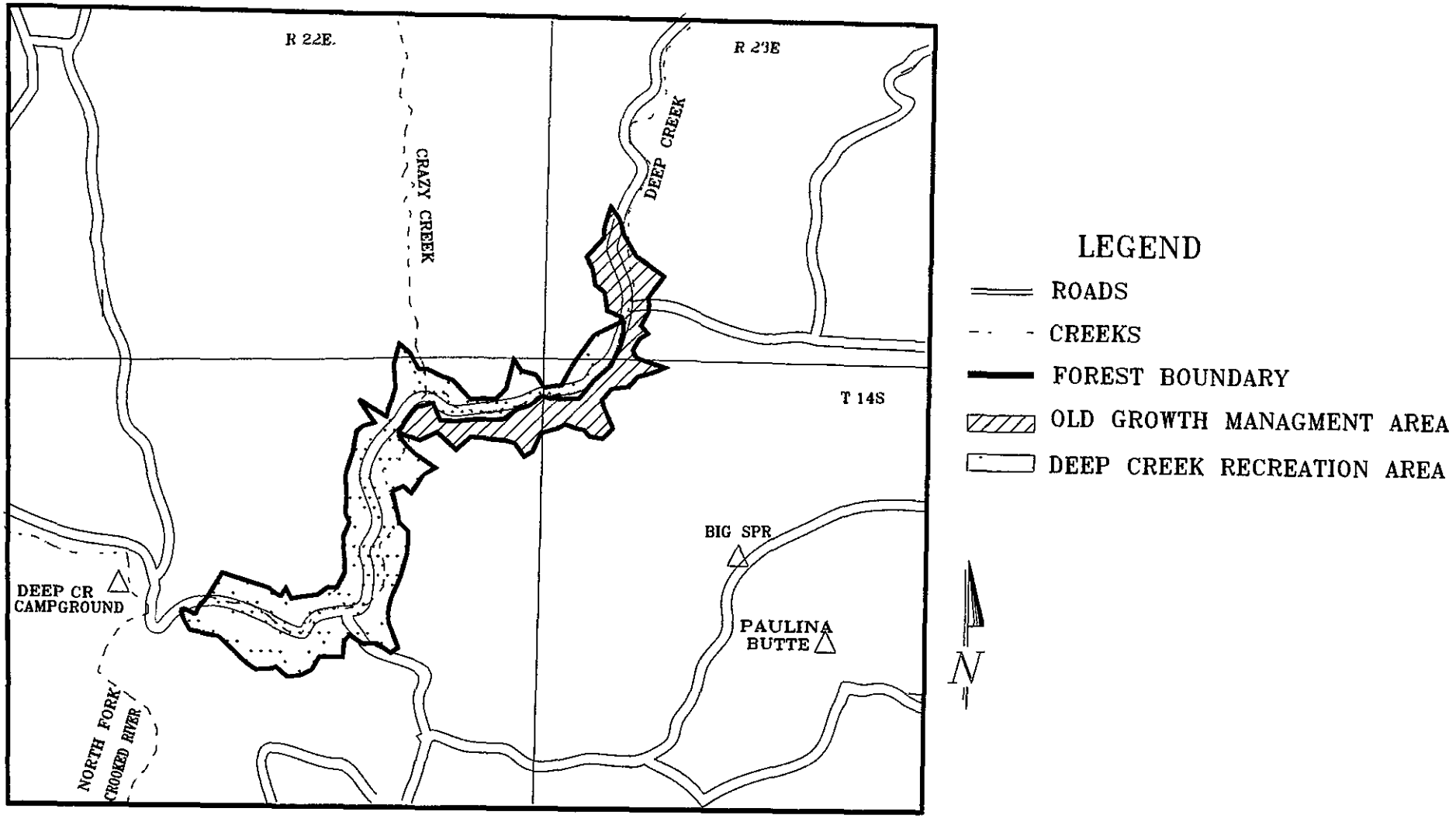


Figure 4-17

NORTH FORK CROOKED RIVER RECREATION CORRIDOR (MA-F23)

(East)

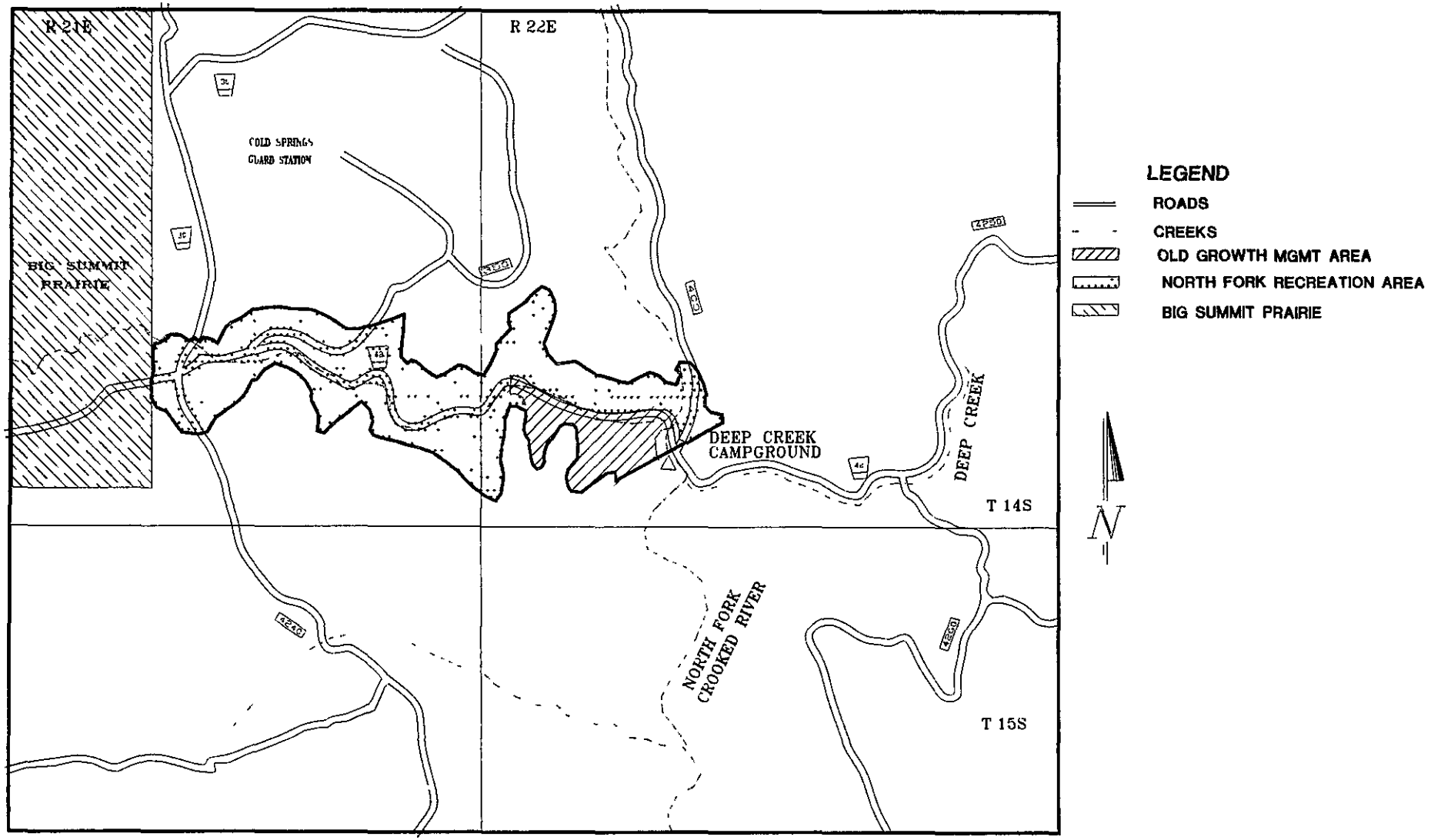


Figure 4-18

NORTH FORK CROOKED RIVER RECREATION CORRIDOR (MA-F23)

(West)

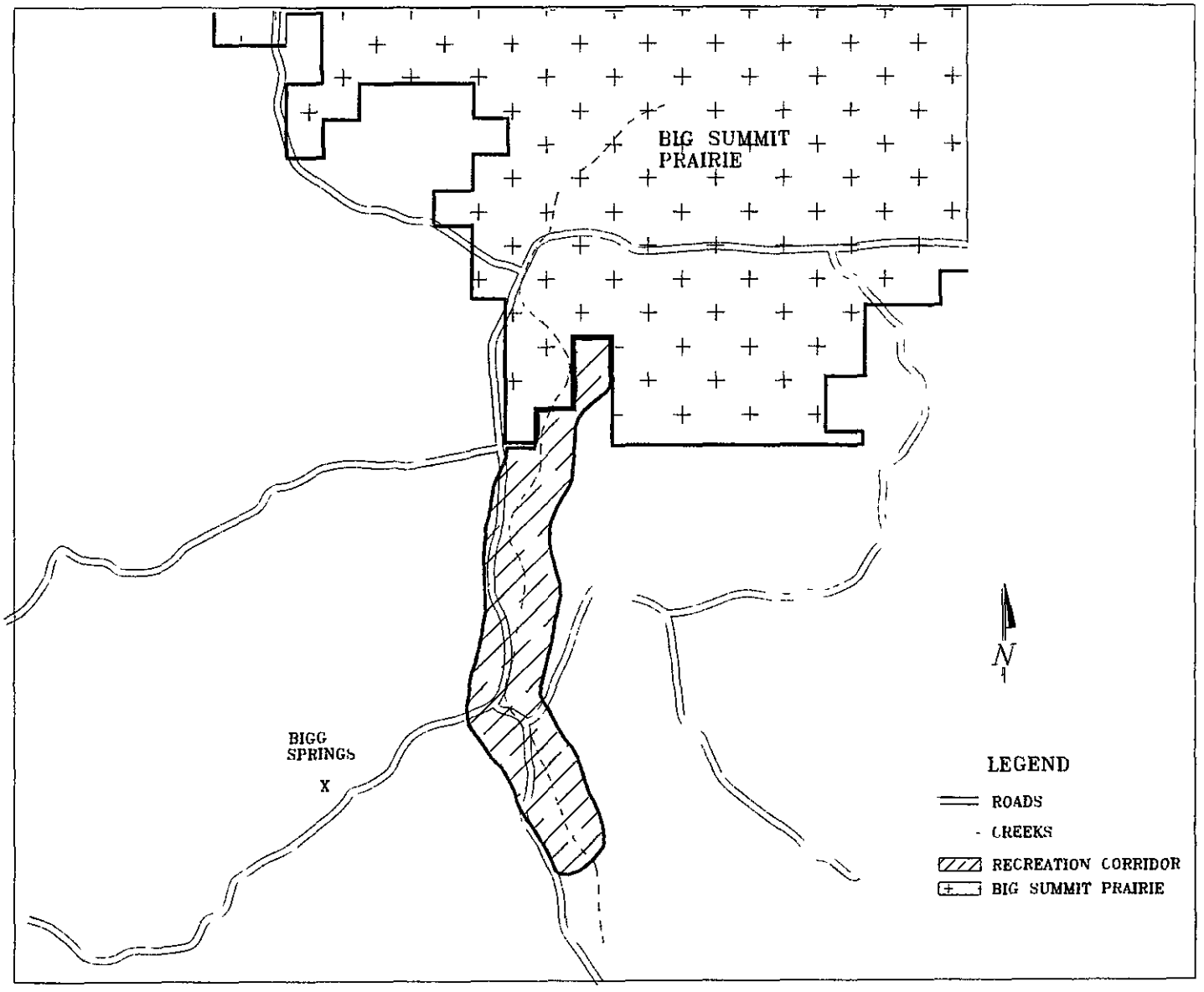


Figure 4-19

NORTH FORK CROOKED RIVER SCENIC CORRIDOR (MA-F24)

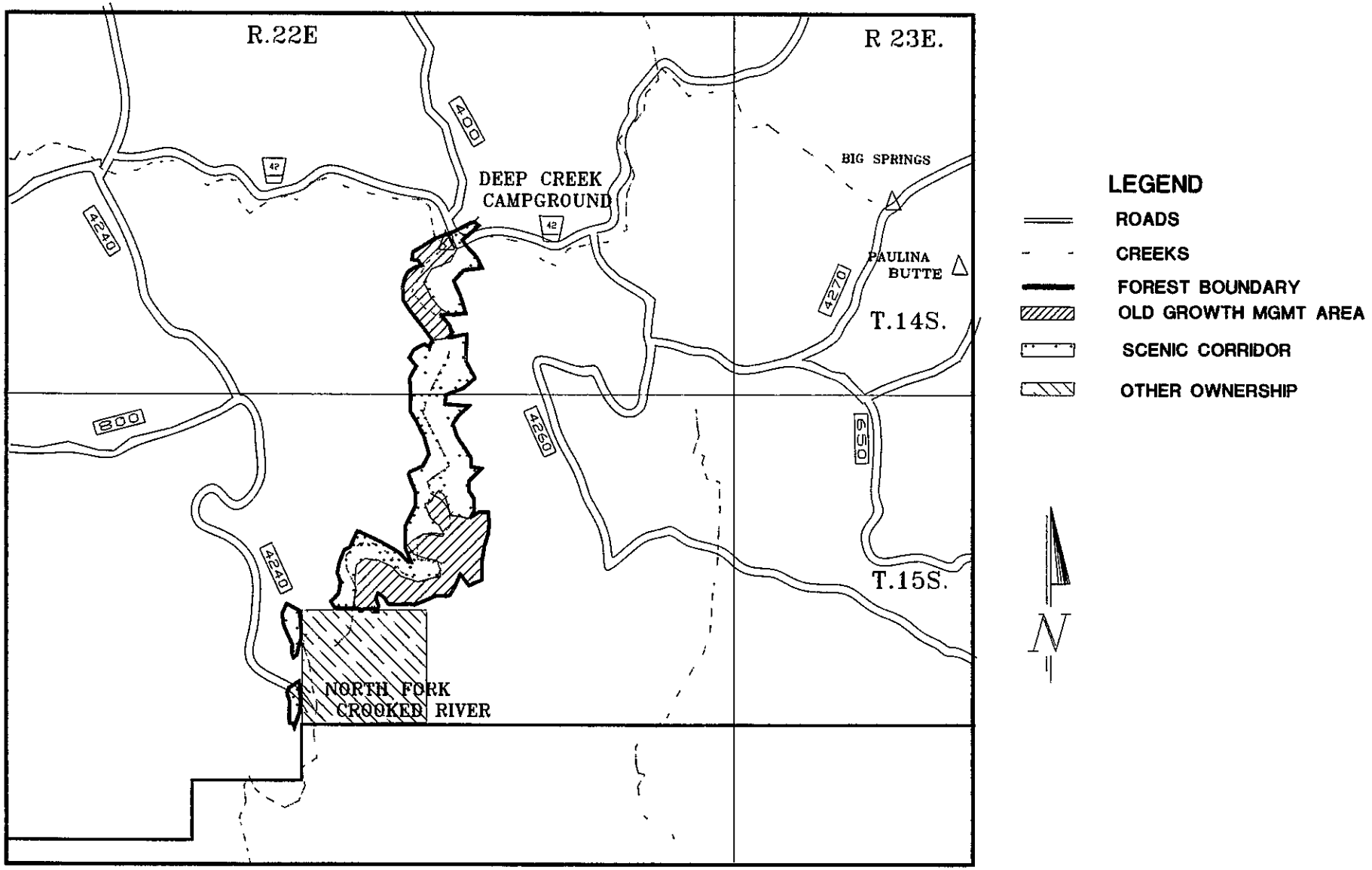


Figure 4-20

U.S. HIGHWAY 26 VISUAL CORRIDOR (MA-F25)

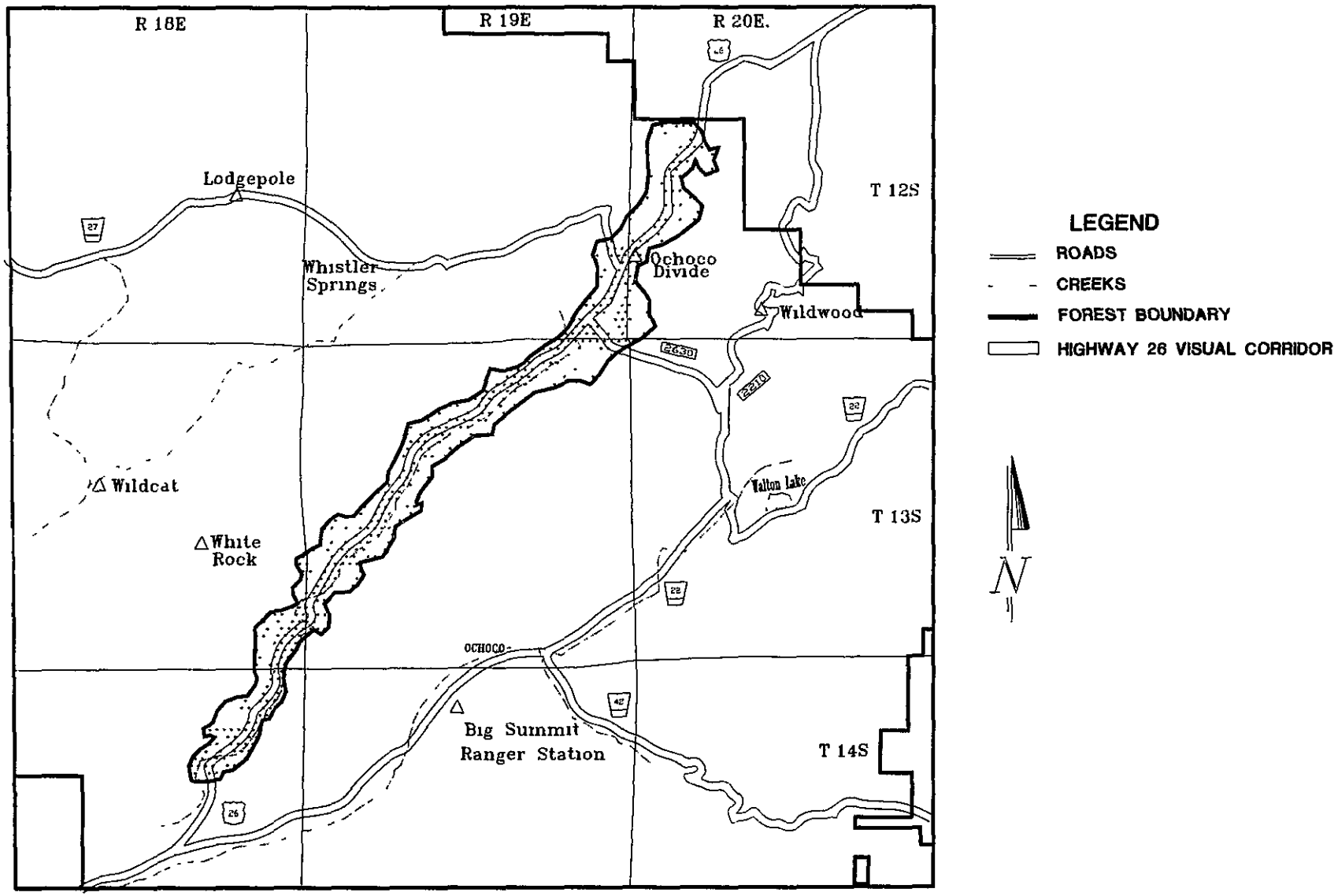
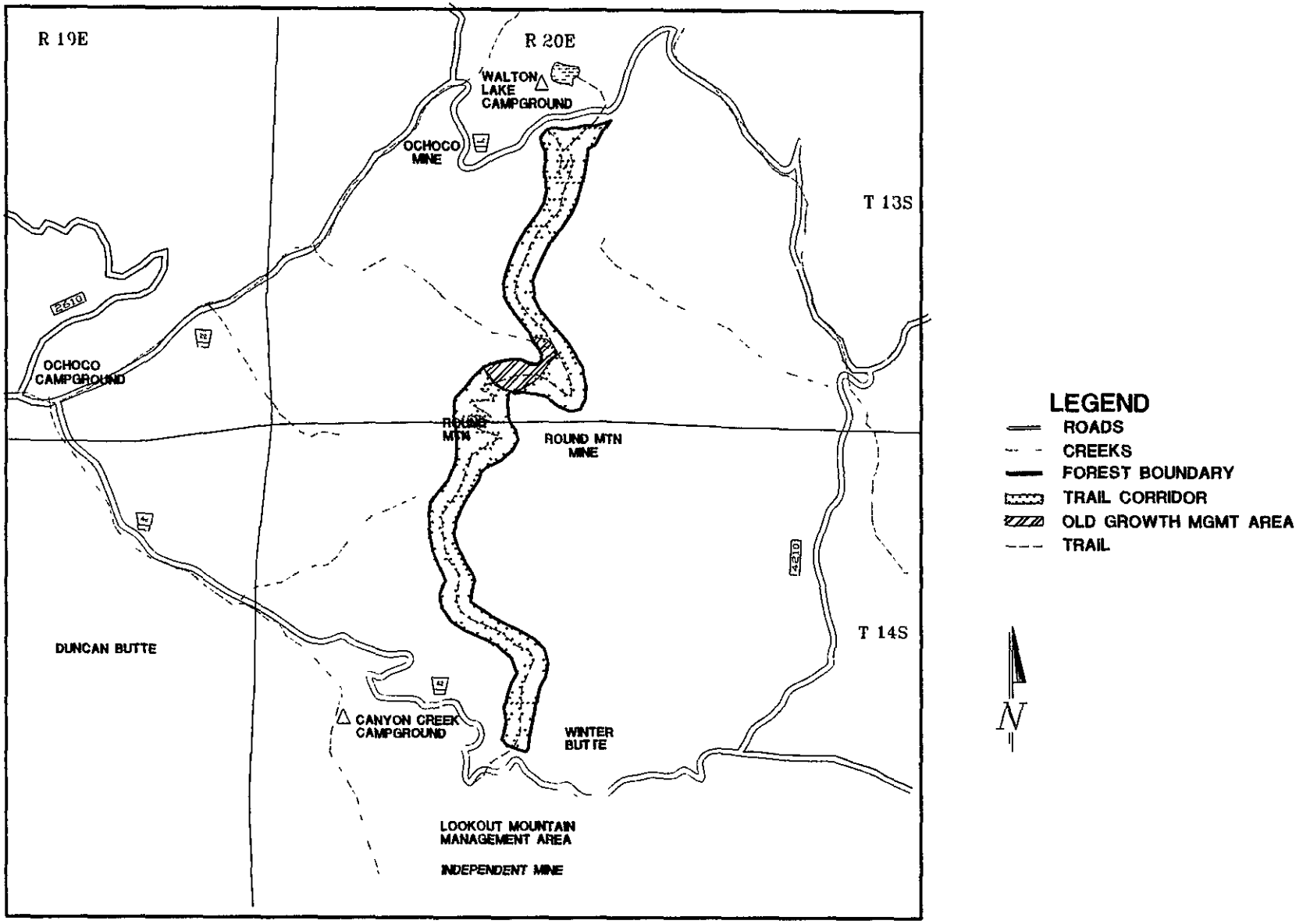


Figure 4-21

ROUND MOUNTAIN NATIONAL RECREATION TRAIL (MA-F27)



Chapter 4

Forest Management Direction

Section 3

Forest-Wide and Management Area Standards and Guidelines

Chapter 4

Section 3

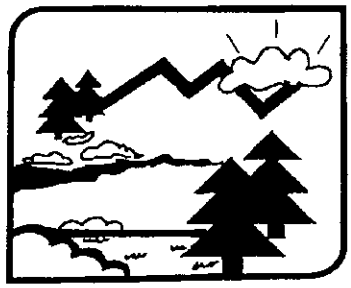
Forest-Wide and Management Area Standards and Guidelines

Standards and guidelines state the bounds or constraints within which all practices are to be carried out in achieving the planned goals, objectives and desired future condition. They are intended to supplement, but do not replace, policy direction found in Forest Service Manuals and Handbooks, and the Regional Guide for the Pacific Northwest Region. They also must comply with applicable State and Federal laws and regulations.

Forest-wide and management area standards and guidelines are grouped together by resource (or functional area), so that the user will have the total management direction available in one package, Management area standards and guidelines are more site-pecific than Forest-wide standards and guidelines, and must be in compliance with them (Forest-wide) as well as higher order policy, regulation and law.

Some resource direction is only applicable on a Forest-wide basis and does not vary by management area. Hence, no management area standards and guidelines are presented for the following resources: Air Quality, Biological Diversity, Old Growth, and Social and Economic.

Air Quality



Forest-Wide Standards and Guidelines

Comply with regulations of the Clean Air Act, as amended, and coordinate activities with the Oregon State Department of Environmental Quality and the Oregon State Department of Forestry.

Demonstrate reasonable progress in reducing total suspended particulate (TSP) emissions from prescribed burning. The starting point for this reduction has been established as 9,200 tons per year for the Forest. Monitor particulate emissions originating from Forest activities as outlined in Chapter 5, Implementation of the Forest Plan.

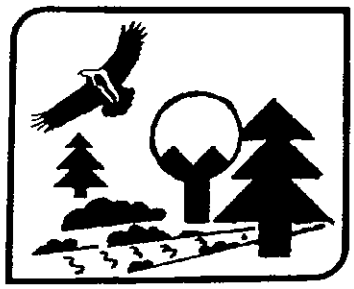
Conduct prescribed burning in accordance with State smoke management plans.

Follow Regional standards and guidelines for smoke emissions as stated in Regional Vegetation Management Final Environmental Impact Statement.

Use the best available predictive methods and models and most cost-efficient technologies to minimize the impact of prescribed burning on designated smoke sensitive areas and Class I areas. Comply with regulations of the Oregon State Implementation Plan for Protection of Visibility in Class I Areas.

Protect the Forest air resources against pollution sources outside the Forest boundaries through application of the Prevention of Significant Deterioration (PSD) regulations contained in the Clean Air Act. Take appropriate action to contact the Oregon State Department of Environmental Quality when outside air pollution sources, in particular those originating on a regular seasonal basis from the Madras basin and the Willamette Valley, exceed Forest standards.

Biological Diversity



Forest-Wide Standards and Guidelines

Protect Research Natural Areas (RNA's) from influences which detract from their purposes. Monitor vegetation to insure that all major vegetative types and unique plant communities are preserved for future knowledge and gene pool diversity.

Manage and protect wildernesses in a manner that allows ecological processes, succession, fire, and similar influences to play a natural role, while protecting resources outside the areas from unnecessary risk of catastrophic fire.

Maintain viable populations of all threatened, endangered, and sensitive plant and animal species (see Standards and Guidelines for Wildlife and Fish).

A minimum of two percent of the Forest, in addition to areas in wilderness and some RNA's, will be managed for old growth, representing climax or near climax forest stand conditions.

Identify and protect unique ecological situations, through the Forest implementation and monitoring process. Examples of these include: eagle roosting, anadromous fish spawning, representative examples of old growth forest, aspen clones, river canyons, riparian areas and important connective habitat.

Disperse created openings and limit their size(s) to that described under the timber management guidelines.

Maintain soil productivity through management practices which reduce erosion and the application of guidelines that limit use of heavy equipment and skid road densities.

Incorporate plant association information (Hall, 1973 and 1989; Hopkins, et al, 1983) and their management implications, into project design and implementation.

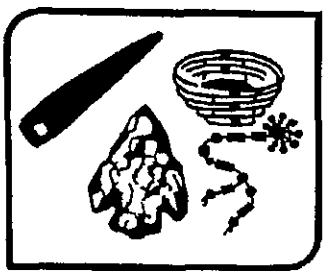
Protect fragile sites such as shallow soil areas (scablands) and natural meadows.

Incorporate and design habitat-specific species requirements--such as those for cavity excavators--into guidelines and prescriptions for individual projects.

Monitor plant communities/associations to determine conditions and trends. Encourage recovery or prevent deterioration where activities may be leading to poor conditions, downward trends, the displacement of native plants or plant communities by undesirable weedy, annual or noxious vegetation, or where cover is unusually low for the particular plant associations (see Hall, 1973 and Hopkins et al, 1983). Manage aspen stands to produce a vigorous population, Forest-wide.

Limit the frequency of underburning of plant communities to the natural fire cycle, or less frequently, until research is completed on ecological effects of burning.

Cultural Resources

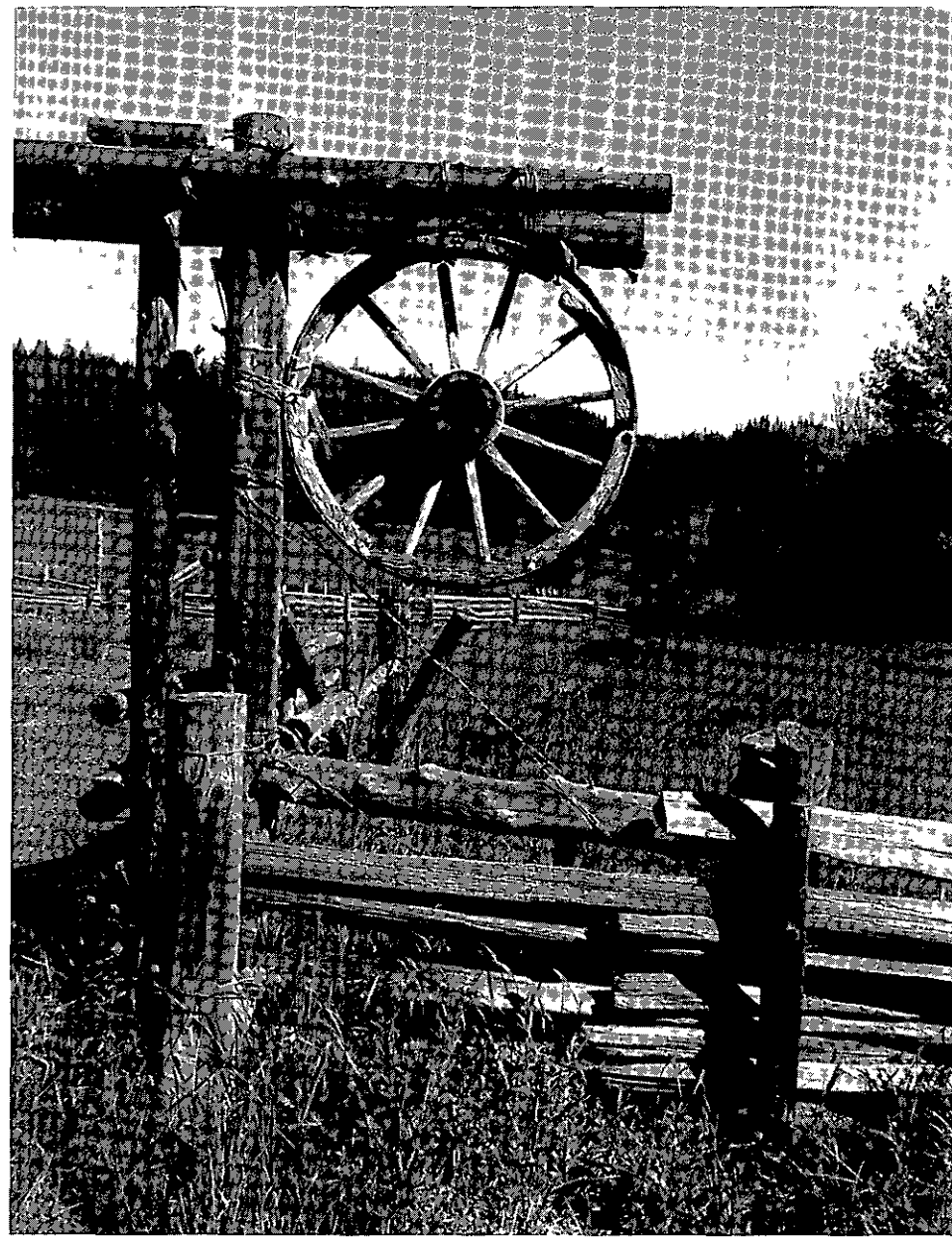


Forest-Wide Standards and Guidelines

Update the existing Cultural Resource Overview each decade to incorporate all known cultural resource information on each District. The Overview will provide a framework for evaluating cultural resources located through survey efforts, will assist in the development of a Forest Inventory Plan approved by the Oregon State Historic Preservation Office (SHPO), and will help to identify opportunities for site interpretation.

Conduct cultural resource surveys (inventories) in advance of all ground-disturbing actions. Accomplish this through the implementation of the Interim Inventory Design (Dyrden, 1988) or Forest Inventory Plan (when formally approved). Survey both project and non-project areas during the earliest stages of the planning (NEPA) process. Submit project Cultural Resource Reports for SHPO review and Section 106 (National Historic Preservation Act, as amended) compliance prior to issuance of the Decision Notice and Environmental Assessment or Environmental Impact Statement.

Evaluate cultural resource properties located during inventory to determine their eligibility to the National Register of Historic Places. This will be accom-



plished through the Lithic Scatter Programmatic Memorandum of Agreement (PMOA), individual site and thematic Determinations of Eligibility.

Develop contexts and themes from which to evaluate all classes of sites through thematic Determinations of Eligibility. Develop management plans, Memorandums of Agreement (MOA's), and PMOA's in cooperation with the State Historic Preservation Office, the Advisory Council on Historic Preservation, and other interested publics (Native Americans, local historical societies, groups and professional organizations) to facilitate cultural resource treatment and future management.

Document through the NEPA process the results of cultural resource surveys for all proposed ground-disturbing projects (Federal, Federally-funded or permitted) or projects determined to have an effect upon cultural resource sites or values.

Prepare a Determination of Effect for all projects and submit for Oregon SHPO review and consultation (i.e. No Effect, No Adverse Effect, or Adverse Effect).

Mitigate adverse effects to eligible and significant sites under consultation with the Oregon SHPO, Advisory Council on Historic Preservation, and interested publics. In ranked order of preference , the following treatment options will be considered:

Avoidance through project design modification or abandonment (No Effect).

Combination of project modification and scientific data recovery under an approved data recovery plan (No Adverse Effect or Mitigation of Adverse Effect).

Data recovery and analysis such that cultural resource values are protected and preserved in forms useful to various scientific, government, ethnic and local groups (Mitigation of Adverse Effect).

Cultural resource sites, districts and thematic classes of such will be nominated to the National Register of Historic Places. Schedule nominations incrementally until the Forest-wide inventory of cultural resources is completed. Protect significant sites from degradation due to public use or natural deterioration. Protection methods may include, but are not limited to, scientific study and collection, the use of fences or barriers, prudent use of signs, site stabilization, closure orders, site monitoring, area patrolling, and restriction of access to site locational information as provided for under the provisions of the Freedom of Information Act.

Interpret and enhance selected sites for the education and enjoyment of the general public. A priority will be given to sites within or adjacent to public use areas, and which are being degraded through natural or human impacts. Produce scientifically accurate and culturally sensitive displays, brochures, posters, tours, lectures, etc. Support the distribution of scientific reports, monographs, video tapes, and books for the benefit of interested members of the public. Promote

public-private partnerships which will benefit Forest visitors through enhancing and interpreting sites.

Burial Sites

Treat historic or prehistoric burial remains as follows:

Evaluate the site to determine if the skeletal material is human and to what time period or ethnic group it may be ascribed.

Contact local authorities, Native American Tribal Group(s), other ethnic groups and County Historical Societies where appropriate.

For Native American burials, reinter in-place with involvement by the appropriate representatives of a federally recognized Tribe or Native American group. Project planning for management activities in the site vicinity shall consider burial location in planning decisions and if necessary modify implementation so as to avoid direct and indirect impacts to the burial site.

Where reinterment in-place is not feasible or prudent, alternative locations for reinterment will be reviewed and selected in consultation with the appropriate Indian Tribal representatives. In situations where a direct link cannot be made to an existing Federally recognized Tribe, this consultation shall take place with the nearest tribe or confederation.

Religious Freedom

Meet all requirements of the American Indian Religious Freedom Act (AIRFA). This law makes it the policy of the Federal government "to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise [their] traditional religions." This protection includes, but is not limited to, access to sites, use and possession of sacred objects, and the enactment of ceremonies and traditional rites. Related activities include the gathering and processing of plants for food, medicinal, or craft uses; the construction of sweat lodges, or "vision quest" structures, and the like.

AIRFA addresses the religious freedom of all Native Americans without regard for Federal tribal recognition, but does not convey exclusive use of areas or free use of Forest products. In considering access to properties or sites within its boundaries, the Forest will examine other potential or existing uses and activities. Publicly owned properties, sites, objects of antiquity, etc. remain the property of the United States government. Activities which may effect such properties, sites, or objects are subject to existing laws, regulations and treaties.

Treaty Rights

Honor the rights reserved by the Confederated Tribes of Warm Springs Indians for lands ceded to the Federal Government through the Treaty of 1855.

On the ceded lands, the Tribes have the right to take fish in streams running through and bordering the Reservation and at all other usual and accustomed stations in common with the citizens of the United States.

The right of hunting, gathering roots and berries, and pasturing stock on unclaimed lands in common with citizens was also secured within the ceded lands.

Management Area Standards and Guidelines

Resource - Cultural Resources

Practice
Enhancement and Interpretation

Standard and Guideline
On-site interpretation and enhancement of cultural resources will not be done. Off-site interpretation and enhancement is permissible.

Applicable Management Area
MA-F1 Black Canyon Wilderness
MA-F2 Bridge Creek Wilderness
MA-F3 Mill Creek Wilderness
MA-F4 North Fork Crooked River Wilderness Study Area
MA-F5 Research Natural Areas

Standard and Guideline
Enhancement and interpretation of cultural resources will not be emphasized. Significant cultural resource sites and features may be enhanced and interpreted if the action does not detract from the management area objectives.

Applicable Management Area
MA-F6 Old Growth
MA-F8 Rock Creek/Cottonwood Creek Area
MA-F10 Silver Creek Area
MA-F11 Lookout Mountain Area(A)

Standard and Guideline
Selectively enhance and interpret cultural resources, with priority on identifying sites that will complement the management emphasis of the specific areas.

Applicable Management Area
MA-F7 Summit National Historic Trail
MA-F12 Eagle Roosting Areas
MA-F13 Developed Recreation
MA-F14 Dispersed Recreation
MA-F15 Riparian Areas
MA-F16 Bandit Springs Recreation Area

MA-F17 Stein's Pillar Recreation Area
MA-F18 Hammer Creek Wildlife/Recreation Area
MA-F19 Deep Creek Recreation Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
MA-F25 Highway 26 Visual Corridor
MA-F27 Round Mountain National Recreation Trail
MA-F28 Facilities

Standard and Guideline

Enhance and interpret cultural resources while meeting Forest-wide standards and guidelines.

Applicable Management Area

MA-F9 Rock Creek/Cottonwood Creek Unroaded Helicopter Area
MA-F11 Lookout Mountain Area(B)
MA-F20 Winter Range
MA-F21 General Forest Winter Range
MA-F22 General Forest
MA-F26 Visual Management Corridors

Practice

Structures

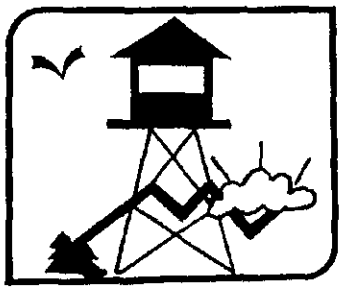
Standard and Guideline

Structures, such as old fences, that do not qualify for the National Register of Historic Places, will be removed or allowed to deteriorate naturally.

Applicable Management Area

MA-F1 Black Canyon Wilderness
MA-F2 Bridge Creek Wilderness
MA-F3 Mill Creek Wilderness
MA-F4 North Fork Crooked River Wilderness Study Area
MA-F5 Research Natural Areas

Facilities



Forest-Wide Standards and Guidelines

Buildings, utility systems and related facilities should be planned, developed, maintained and operated for safe use, support of Forest resource programs, and cost effectiveness. Historic buildings will be managed in accordance with the Programmatic Memorandum of Understanding (PMOA) for Depression-Era Administrative Buildings.

Construction of new buildings, or additions to existing buildings and utility systems, shall comply with approved site development plan.

Provide and manage administrative facilities in a manner sufficient to accomplish land and resource management and protection objectives of the Forest. Prepare administrative site development plans for all Forest administrative sites. Long-term development and maintenance costs will be a consideration in facilities planning.

Management Area Standards and Guidelines

Resource - Facilities

Practice
Construction, Reconstruction and Maintenance of Administrative Buildings and Structures

Standard and Guideline
No administrative buildings or structures allowed.

Applicable Management Area
MA-F1 Black Canyon Wilderness
MA-F2 Bridge Creek Wilderness
MA-F3 Mill Creek Wilderness
MA-F4 North Fork Crooked River Wilderness Study Area
MA-F5 Research Natural Areas

Standard and Guideline
Allow no administrative facilities within floodplains unless no feasible alternative sites exist. (Executive Order 11988).

Applicable Management Area
MA-F15 Riparian Areas

Standard and Guideline
Locate and design facilities to blend into the natural terrain as much as possible; properly use the site; and provide for traffic control, sanitation, public safety, site protection, and use distribution. New and upgraded facilities will incorporate a barrier-free design in order to be accessible to the physically handicapped.

Applicable Management Area
MA-F13 Developed Recreation

Standard and Guideline
Primitive structures will be allowed when they are consistent with management area objectives and are not damaging to resources.

Applicable Management Area
MA-F14 Dispersed Recreation

Practice
Nonconforming Structures

Standard and Guideline
Remove, eliminate, or disguise all nonconforming structures. Retain existing bridges until unusable, then remove without any replacement structures.

Applicable Management Area
MA-F3 Mill Creek Wilderness

Standard and Guideline
Except for facilities necessary to protect fragile resources, limit nonconforming structures to trail shelters, and as needed for sanitary and safety needs. All should be of simple design, and of native, rustic materials. Site modifications for facilities should be very minimal to none.

Applicable Management Area
MA-F8 Rock Creek/Cottonwood Creek Area
MA-F9 Rock Creek/Cottonwood Creek Unroaded Helicopter
MA-F10 Silver Creek Area
MA-F11 Lookout Mountain Recreation Area

Fire

Forest-Wide Standards and Guidelines

Fire Management

Planning

Use the National Fire Management Analysis System to determine the most cost-efficient fire protection organization. Reevaluate organization as conditions change and better information is developed. Due to the nature of intermixed land ownerships, including a number of wildland subdivisions, interagency cooperation must be considered in the planning process.

Prevention

Monitor current and recent fire reports to target specific risks. Coordinate activities through the Central Oregon Fire Prevention Cooperative (or its equivalent).

Detection

Periodically review the mix of aerial and ground detection activities to maintain the most cost-effective combination.

Initial Attack

Apply aggressive suppression action to wildfires that threaten life, private property, public safety, improvements, or investments.

Where wildfires do not threaten to exceed acceptable sizes and intensities, apply the lowest cost suppression option.

If a wildfire escapes initial action and threatens to exceed established limits, prepare an escaped fire situation analysis. Weigh the cost of suppression against the resource potential losses. Suppression costs should be commensurate with the values threatened.

Secondary Attack Forces

Provide equipment and training for Forest Service employees outside of the fire management organization to assist in initial attack.

Fuel Treatments

Burn excess residues from management activities or natural events only after an interdisciplinary team evaluation of site needs and appropriate utilization efforts have been considered. The Ochoco National Forest Residue Management Plan, 3/89, will be used as a guide for identifying site-specific treatment selections. All treatments will comply with Forest-wide and Management Area Standards and Guidelines for Forest Residues.

A desired "protection" residues profile will be identified using an economic efficiency model, such as the Fuels Analysis Process recently developed by Region 6. This will be a guide for developing the appropriate share of cost in helping meet the overall desired residue profile(s) described in Forest-wide and Management Area Standards and Guidelines for Forest Residues.

Prescribed Fire

All planned prescribed fires will have prescriptions approved by the appropriate line officer.

Unplanned ignitions may be used as prescribed fires if:

1) a prescribed fire plan has been prepared and approved,

2) the fire is burning within prescription, and

3) there are enough personnel and equipment available to provide the staffing necessary to carry out the existing prescribed fire plan.

Conduct prescribed burns within existing Federal and State regulations affecting the timing, duration, and dispersal of emissions. Coordination with adjacent local smoke management groups and local agency offices will be required.

Construct water diversions on firelines in hilly or steep terrain to drain water into areas with sufficient vegetation or other protection to avoid erosion.

Provide for a protective strip of undisturbed surface between the prescribed burn area and perennial water courses, considering local topographic, vegetation, and soil characteristics.

Avoid intense prescribed fires on soils that are highly erodible and/or are subject to the development of hydrophobic (nonwettable) conditions.

Fuelbreaks
Use existing transportation and topographic features as much as possible for planned fuel breaks.

Use fuelbreaks only where risk analysis indicates this to be the most economically viable alternative treatment, and where doing so meets the objectives of *management area prescriptions, listed in Section 2, this chapter.*

Piling and Burning
Locate piles outside of the normal high water flow area of natural and man-made drainages or water courses.

Burn slash piles located within mapped floodplains within one year after piling.

Remove slash created within the normal highwater zone of a stream, unless needed for soil protection purposes.

Slash will not be piles on scablands unless there is no other feasible location, i.e. under circumstances dictated by topography or at a skyline landing (See Soils Standards and Guidelines).

Chipping, Burning, Lopping Scattering
Dispose of material so it will not reach stream courses.

Disperse material over a wide area when practical.

Management Area Standards and Guidelines

Resource - Fire

Practice
Fire Suppression (P04)

Standard and Guideline
Confine and contain will be the principle suppression strategies on most natural ignition (lightning) fires. Control strategy will be invoked when lightning fires threaten to escape the Wilderness Areas or pose unacceptable risks to life or wilderness values. Use the "light hand on the land" techniques.

Suppression activities should minimize disturbances of the land surface.

Use of chainsaws, helicopters, air tankers, or pumps must be approved by the Forest Supervisor. Allow no helispot construction for initial attack.

Crawler tractors will not be used without prior approval from the Regional Forester.

Applicable Management Area
MA-F1 Black Canyon Wilderness
MA-F2 Bridge Creek Wilderness
MA-F3 Mill Creek Wilderness
MA-F4 North Fork Crooked River Wilderness Study Area

Standard and Guideline

Fire encroaching on research natural areas should be suppressed as quickly as possible. Confine and contain will be the principle suppression strategies on most natural ignition (lightning) fires.

Ground disturbing activity to suppress fires will be avoided if possible, and only water will be used as fire retardant.

Applicable Management Area

MA-F5 Research Natural Areas

Standard and Guideline

Wildfires within or threatening designated old growth areas will be suppressed with emphasis on the tactical strategy of "contain." The objective is to minimize the acreage affected by wildfire. Minimize damage from suppression activities.

Applicable Management Area

MA-F6 Old Growth

Standard and Guideline

The confine, contain and control strategies may be considered as per preattack block economic efficiency analysis. However, confine and contain will receive emphasis. Emphasize minimum physical disturbance by suppression activities.

Applicable Management Area
MA-F8 Rock Creek/Cottonwood Creek Area
MA-F10 Silver Creek Area
MA-F11 Lookout Mountain Area (A and B)
MA-F16 Bandit Springs Recreation Area
MA-F17 Stein's Pillar Recreation Area
MA-F18 Hammer Creek Wildlife/Recreation Area
MA-F19 Deep Creek Recreation Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor

Standard and Guideline
Suppression activities in these prescriptions should emphasize minimum physical disturbance. Confine, contain or control strategies are to be considered and utilized as directed in preattack block economic efficiency analyses.

Applicable Management Area
MA-F7 Summit National Historic Trail
MA-F25 Highway 26 Visual Corridor
MA-F26 Visual Management Corridors
MA-F27 Round Mountain National Recreation Trail

Standard and Guideline
Strategy is to control all wildfires. Suppression should emphasize minimum physical disturbance.

Applicable Management Area
MA-F13 Developed Recreation
MA-F14 Dispersed Recreation
MA-F28 Facilities

Standard and Guideline
Suppression activities should be very limited within the riparian zone. The objective is to minimize soil and vegetation disturbance. Confine and contain are the principle strategies.

Applicable Management Area
MA-F15 Riparian Areas

Standard and Guideline
All three suppression strategies (confine, contain, or control) will be utilized in accordance with the economic efficiency analysis for each preattack block.

Applicable Management Area

MA-F9 Rock Creek/Cottonwood Creek Unroaded Helicopter Area
MA-F12 Eagle Roosting Areas
MA-F20 Winter Range
MA-F21 General Forest Winter Range
MA-F22 General Forest

Maximum acceptable individual wildfire size by Fire Intensity Level, and total area by decade can be found in Fire Management Direction Table, in Appendix A3, for all management areas.

Practice

Treatment of Activity Fuels (P11)

Standard and Guideline

Fuel treatment (particularly mechanical treatments) should be very limited within riparian areas. In particular, activities which reduce the shading potential or woody debris sources of the site should be avoided. Greater levels of wildfire risk are acceptable in these areas.

Nonmechanized treatments will receive preference. When mechanized treatments are necessary they shall be carefully managed to meet the objectives of the management area.

Applicable Management Area

MA-F15 Riparian Areas

Standard and Guideline
Slash treatment should be completed currently with project work and should not be visible for more than one season. Avoid total slash clean up that removes all native vegetative cover. Prescribed burn areas should not exceed 250 acres.

Applicable Management Area
MA-F7 Summit National Historic Trail
MA-F25 Highway 26 Visual Corridor
MA-F26 Visual Management Corridors
MA-F27 Round Mountain National Recreation Trail

Standard and Guideline
Projects will meet retention visual objectives and emphasis will be on non-mechanized treatments.

Applicable Management Area
MA-F8 Rock Creek/Cottonwood Creek Area
MA-F10 Silver Creek Area
MA-F11 Lookout Mountain Recreation Area (A & B)
MA-F16 Bandit Springs Recreation Area
MA-F17 Stein's Pillar Recreation Area
MA-F18 Hammer Creek Wildlife/Recreation Area
MA-F19 Deep Creek Recreation Area
MA-F23 NFCR Recreation Corridor
MA-F24 NFCR Scenic Corridor

Standard and Guideline
Fuels usable by recreationists should be stacked or piled in convenient locations. Unusable fuels should be piled and burned.

Applicable Management Area
MA-F13 Developed Recreation
MA-F14 Dispersed Recreation
MA-F28 Facilities

Standard and Guideline
Meet Forest-wide Standards and Guidelines.

Applicable Management Area
MA-F9 Rock Creek/Cottonwood Creek Unroaded Helicopter Area
MA-F12 Eagle Roosting Areas
MA-F20 Winter Range
MA-F21 General Forest Winter Range
MA-F22 General Forest

Practice
Treatment of Natural Fuels (P12)

Standard and Guideline
With the consent of PNW Station Director, manage prescribed fire in natural fuels to perpetuate conditions that the RNA represents, but with prudent measures to avoid catastrophic fire within, and outside the RNA.

Applicable Management Area
MA-F5 Research Natural Areas

Standard and Guideline
Naturally caused ignitions may be allowed to burn if they meet conditions in an approved prescribed burn plan, and funds and necessary staffing are available.

Planned ignitions may be used within wilderness areas if that is the best way of returning fire to its natural role and thus reducing the fuels profile to natural levels and lessening the risk of damaging the wilderness resource. Planned ignitions within the Wilderness are also permitted if there is no other practical and economic way to lessen the likelihood of the escape of damaging wildfire from the Wilderness.

Applicable Management Area
MA-F1 Black Canyon Wilderness
MA-F2 Bridge Creek Wilderness
MA-F3 Mill Creek Wilderness
MA-F4 NFCR Wilderness Study Area

Standard and Guideline
No prescribed burning allowed.

Applicable Management Area
MA-F6 Old Growth

Standard and Guideline
Fuel treatment (particularly mechanized treatments) should be very limited within riparian areas. In particular, activities which would reduce the shading potential or woody debris sources of the site should be avoided. Greater levels of wildfire risk are acceptable in these areas.

Applicable Management Area
MA-F15 Riparian

Standard and Guideline

Maintain a vegetative type similar to natural conditions as identified through fire history and to meet specific visual resource management objectives on each corridor plan. Planned ignition prescribed burns will be scheduled as follows:

	Years
Ponderosa pine	20-25
Noncommercial	20-25
Grassland	20-25
Mixed Conifer	50-60
Tree shrub	Spot burning

Applicable Management Area

MA-F7 Summit National Historic Trail
MA-F25 Highway 26 Visual Corridor
MA-F26 Visual Management Corridors
MA-F27 Round Mountain National Historic Trail

Standard and Guideline

Maintain a vegetation type similar to natural conditions as identified in the desired residue photos Prescribed burns should be scheduled as follows:

	Years
Ponderosa pine	20-25
Noncommercial	20-25
Grassland	20-25
Mixed Conifer	50-60
Tree shrub	Spot burning

Applicable Management Area

MA-F8 Rock Creek/Cottonwood Creek Area
MA-F10 Silver Creek Area
MA-F11 Lookout Mountain Recreation Area (A & B)
MA-F16 Bandit Springs Recreation Area
MA-F17 Stein's Pillar Recreation Area
MA-F18 Hammer Creek Management Area
MA-F19 Deep Creek Recreation Area
MA-F23 NFCR Recreation Corridor
MA-F24 NFCR Scenic Corridor

Standard and Guideline

Natural fuels on managed stands may be treated by prescribed fire where stand age is 25 years or more when necessary to maintain desired protection residue

profile if this activity is consistent with other management objectives. Emphasis is placed on consideration of cover objectives.

Applicable Management Area
MA-F20 Winter Range

Standard and Guideline
Natural fuels on managed stands may be treated by prescribed fire where stand age is 25 years or more, when necessary to maintain desired protection residue profile if this activity is consistent with other management objectives.

Applicable Management Area
MA-F9 Rock Creek/Cottonwood Creek Unroaded-Helicopter Area
MA-F12 Eagle Roosting Areas
MA-F21 General Forest Winter Range
MA-F22 General Forest

Practice
Fuel Break Construction and Maintenance (P13, P14)

Standard and Guideline
Limited shaded fuelbreak segments may be constructed along boundaries to take advantage of logical natural terrain features aiding in the prevention of fire spread across management area boundaries. The majority of such fuel break systems will be outside of the area.

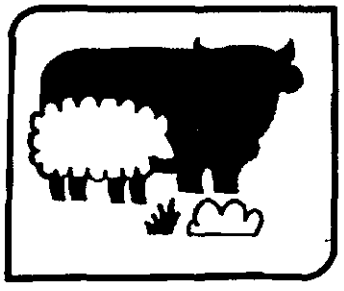
Applicable Management Area
MA-F1 Black Canyon Wilderness
MA-F2 Bridge Creek Wilderness
MA-F3 Mill Creek Wilderness
MA-F4 NFCR Wilderness Study Area
MA-F5 Research Natural Areas
MA-F6 Old Growth
MA-F15 Riparian

Standard and Guideline
Use fuel breaks only where they do not conflict with management area emphasis. Also, see Forest-wide Standards & Guidelines.

Applicable Management Area
MA-F7 Summit National Historic Trail
MA-F8 Rock Creek/Cottonwood Creek Area
MA-F9 Rock Creek/Cottonwood Creek Unroaded Helicopter
MA-F10 Silver Creek Area

MA-F11 Lookout Mountain Recreation Area
MA-F12 Eagle Roosting Areas
MA-F13 Developed Recreation
MA-F14 Dispersed Recreation
MA-F16 Bandit Springs Recreation Area
MA-F17 Stein's Pillar Recreation Area
MA-F18 Hammer Creek Wildlife Area
MA-F19 Deep Creek Recreation Area
MA-F20 Winter Range
MA-F21 General Forest Winter Range
MA-F22 General Forest
MA-F23 NFCR Recreation Corridor
MA-F24 NFCR Scenic Corridor
MA-F25 Highway 26 Visual Corridor
MA-F26 Visual Management Corridors
MA-F27 Round Mountain National Recreation Trail
MA-F28 Facilities

Forage and Livestock



Forest-Wide Standards and Guidelines

Forage Utilization

Utilization tables have been developed for "Primary Range" (Table 4-30) and "Riparian" (Table 4-31). In addition, special seasonal restrictions (for fall green-up) have been directed for individual management areas. See Management Area Standards and Guidelines for detailed information.

Administration and Grazing Systems

Identify allotments with riparian areas in less than satisfactory condition.

Range allotment management plans will include a strategy for managing riparian areas to meet the emphasis and desired future condition stated in management area prescriptions (See Management Area #15-Riparian, Section 2, this Chapter). The process recommended in *Managing Riparian Ecosystems (Zones) for Fish and Wildlife in Eastern Oregon and Eastern Washington,* 1979, was used in establishing these conditions. Management objectives in grazing allotment plans should follow these. When the current riparian condition is less than that described, allotment objectives will include a schedule for improvement. Measurable objectives will be set for key parameters, such as stream surface shaded, streambank stability, and shrub cover. Allotment plans will address monitoring needed to determine if the desired rate of improvement is occurring. Those

plans currently not consistent with this direction will be developed or revised on a priority basis under a schedule established by the Forest Supervisor.

Develop and maintain allotment management plans to incorporate and reflect other Forest Plan direction (tiering).

Administer lands available and suitable for domestic livestock grazing according to the Forest Service grazing permit system.

Use intensive grazing management systems where feasible.

Coordinate transitory range management with timber management.

Encourage demonstration projects that are compatible with other standards and guidelines.

Grazing on scablands will occur through planned use of other plant communities within an allotment. As a result, scablands will contribute some forage; however, they will not be considered or mapped as primary range in an allotment. The installation of structural improvements, or various types of livestock management will be designed specifically not to concentrate livestock use on scablands.

Wild Horse Management

The Big Summit Ranger District wild horse territory will be managed for a base herd of 60 horses, as is outlined in the Wild Horse Management Plan, Appendix I.

TABLE 4-30
RIPARIAN FORAGE UTILIZATION
Allowable Use of Available Forage 1/

	Maximum Annual Utilization (%) By Existing Range Condition			
	Grassland Communities 2/		Shrubland Communities 3/	
Range Resource Management Level	Sat *	Unsat *	Sat	Unsat.
B - Livestock use managed within current grazing capacity by riding, herding, salting, and cost-effective improvements used only to maintain stewardship of the range	40	0-30	30	0-25
C - Livestock managed to achieve full utilization of allocated forage Management systems designed to obtain distribution and maintain plan vigor include fencing and water development	45	0-35	40	0-30
D - Livestock managed to optimize forage production and utilization Cost-effective culture practices improving forage supply, forage use and livestock distribution may be combined with fencing and water development to implement complex grazing systems	50	0-40	50	0-35

1/ This will be incorporated in annual operating plans and Allotment Management Plans Allotment Management Plans may include utilization standards which are either higher or lower than associated with intensive grazing systems and specific vegetation management objectives which will meet objectives for the riparian dependent resources Includes cumulative annual use by big game livestock.
2/ Utilization based on percent of total annual forage production removed by weight.
3/ Utilization based on percent of the current years growth removed Example measure length of current years growth of browsed and unbrowsed leaders and determine incidence of use Calculate percent of current years growth removed
* For satisfactory and unsatisfactory condition see Glossary in FEIS

TABLE 4-31
PRIMARY RANGE (Except Riparian)
Allowable Use of Available Forage 1/

	Maximum Annual Utilization (%) 2/					
	Forested Communities		Grassland Communities		Shrubland Communities	
Range Resource Mgmt Level	Sat	Unsat	Sat	Unsat	Sat	Unsat
B - Livestock use managed within current grazing capacity by riding, herding, salting, and cost-effective improvements used only to maintain stewardship of the range	40	0-30	50	0-30	40	0-25
C - Livestock managed to achieve full utilization of allocated forage Management systems designed to obtain distribution and maintain plant vigor include fencing and water developments.	45	0-35	55	0-35	45	0-30
D - Livestock managed to optimize forage production and utilization Cost-effective culture practices improving forage supply, forage use and livestock distribution may be combined with fencing and water development to implement complex grazing systems.	50	0-40	55	0-40	50	0-35

1/ Incorporate into annual operating plans and allotment management plans Allotment management plans may include utilization standards that are either higher or lower when associated with intensive grazing systems and specific management objectives that meet other resource objectives
2/ Utilization based on percent by weight of total annual forage production removed for grass, grasslike, and forbs, and percent of current years growth removed for shrubs See example in riparian table for shrubs
* For satisfactory and unsatisfactory condition see Glossary in FEIS

Management Area Standards and Guidelines
Resource - Forage

Practice
Forage Utilization

Standard and Guideline
No livestock grazing allowed.

Applicable Management Area
MA-F5 Research Natural Areas*/
MA-F13 Developed Recreation Areas (Core Area Only)

*/ Final determination will bemade during the official RNA designation process.

Standard and Guideline
Follow Table 4-31 of this section, Riparian Forage Utilization.

Applicable Management Area
MA-F15 Riparian

Standard and Guideline
Follow Table 4-30 of this section, Primary Range Utilization.

Applicable Management Area
MA-F1 Black Canyon Wilderness
MA-F2 Bridge Creek Wilderness
MA-F3 Mill Creek Wilderness
MA-F4 North Fork Crooked River Wilderness Study Area
MA-F6 Old Growth
MA-F7 Summit National Historic Trail
MA-F8 Rock Creek/Cottonwood Creek Area Recreation Area
MA-F9 Rock Creek/Cottonwood Creek Unroaded Helicopter Area
MA-F10 Silver Creek Area
MA-F11 Lookout Mountain Recreation Area
MA-F12 Eagle Roosting Areas
MA-F14 Dispersed Recreation
MA-F16 Bandit Springs Recreation Area
MA-F19 Deep Creek Recreation Area
MA-F20 Winter Range
MA-F21 General Forest Winter Range
MA-F22 General Forest

MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
MA-F25 Highway 26 Visual Corridor
MA-F26 Visual Management Corridors
MA-F27 Round Mountain National Recreation Trail
MA-F28 Facilities

Standard and Guideline
Fall green-up after the regularly scheduled grazing season will be reserved for big game. Grazing extensions will generally not be permitted.

Applicable Management Area
MA-F18 Hammer Creek Wildlife Area
MA-F20 Winter Range
MA-F21 General Forest Winter Range

Standard and Guideline
Increased forage production due to vegetation management activities will not be programmed for livestock use. The forage will be allocated for wildlife use.

Applicable Management Area
MA-F11 Lookout Mountain Recreation Area

Practice
Nonstructural Improvements

Standard and Guideline
Nonstructural improvements are not allowed, except in connection with approved research projects.

Applicable Management Area
MA-F5 Research Natural Areas

Standard and Guideline
Seeding for forage improvement prohibited.

Applicable Management Area
MA-F1 Black Canyon Wilderness
MA-F2 Bridge Creek Wilderness
MA-F3 Mill Creek Wilderness
MA-F4 North Fork Crooked River Wilderness Study Area

Standard and Guideline
Allow nonstructural improvements such as seeding and burning unless they conflict with the management emphasis for the area.

Applicable Management Area
MA-F6 Old Growth
MA-F7 Summit National Historic Trail
MA-F8 Rock Creek/Cottonwood Creek Area
MA-F9 Rock Creek/Cottonwood Creek Unroaded Helicopter Area
MA-F10 Silver Creek Area
MA-F11 Lookout Mountain Recreation Area
MA-F12 Eagle Roosting Areas
MA-F13 Developed Recreation
MA-F14 Dispersed Recreation
MA-F15 Riparian
MA-F16 Bandit Springs Recreation Area
MA-F17 Stein's Pillar Recreation Area
MA-F18 Hammer Creek Wildlife/Recreation Area
MA-F19 Deep Creek Recreation Area
MA-F20 Winter Range
MA-F21 General Forest Winter Range
MA-F22 General Forest
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
MA-F25 Highway 26 Visual Corridor
MA-F26 Visual Management Corridors
MA-F27 Round Mountain National Recreation Trail
MA-F28 Facilities

Practice
Structural Improvements

Standard and Guideline
Allow construction and maintenance of structures to exclude livestock from the research area only, except in connection with approved research projects.

Applicable Management Area
MA-F5 Research Natural Areas

Standard and Guideline
Encourage developments to disperse livestock away from riparian areas.

Applicable Management Area
MA-F15 Riparian

Standard and Guideline

Maintain existing developments. New developments can be constructed only to protect the wilderness resource or to alleviate problems or conflicts, and only with the approval of the Regional Forester. Use of power equipment for maintaining range improvements will be for exceptional needs only, and approved on a case-by-case basis by the Forest Supervisor (for chainsaws, etc.), and Regional Forester for mechanized equipment (tractors, backhoes, etc.). Use native or natural-appearing materials and design improvements to blend into the surrounding landscape.

Applicable Management Area

MA-F1 Black Canyon Wilderness
MA-F2 Bridge Creek Wilderness
MA-F3 Mill Creek Wilderness
MA-F4 North Fork Crooked River Wilderness Study Area

Standard and Guideline

Maintain existing developments. New developments may be constructed to alleviate resource problems or to enhance public enjoyment. Fences within view from the river banks should be constructed of native or natural-appearing materials. Exterior boundary fences may be constructed of barbed wire.

Applicable Management Area

MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor

Standard and Guideline

Allow new developments unless they conflict with the management emphasis for the specific management areas.

Applicable Management Area

MA-F6 Old Growth
MA-F7 Summit National Historic Trail
MA-F8 Rock Creek/Cottonwood Creek Area
MA-F9 Rock Creek/Cottonwood Creek Unroaded Helicopter Area
MA-F10 Silver Creek Area
MA-F11 Lookout Mountain Recreation Area
MA-F12 Eagle Roosting Areas
MA-F13 Developed Recreation
MA-F14 Dispersed Recreation
MA-F15 Riparian
MA-F16 Bandit Springs Recreation Area
MA-F17 Stein's Pillar Recreation Area
MA-F18 Hammer Creek Wildlife/Recreation Area
MA-F19 Deep Creek Recreation Area
MA-F20 Winter Range
MA-F21 General Forest Winter Range
MA-F22 General Forest
MA-F25 Highway 26 Visual Corridor
MA-F26 Visual Management Corridors
MA-F27 Round Mountain National Recreation Trail
MA-F28 Facilities

Practice

Use of Motorized Equipment for Improvements and Maintenance

Standard and Guideline

Require permittees to maintain improvements with nonmotorized equipment except where requests to use motorized equipment (chainsaws, etc.) have been approved by the Forest Supervisor, or mechanized equipment (tractors, back-hoes, etc.) by the Regional Forester, on a case-by-case basis.

Applicable Management Area

MA-F1 Black Canyon Wilderness
MA-F2 Bridge Creek Wilderness
MA-F3 Mill Creek Wilderness
MA-F4 North Fork Crooked River Wilderness Study Area

Standard and Guideline
Use of motorized equipment prohibited, except in connection with approved research projects.

Applicable Management Area
MA-F5 Research Natural Areas
MA-F6 Old Growth

Standard and Guideline
Allow use of motorized equipment with District Ranger approval only.

Applicable Management Area
MA-F8 Rock Creek/Cottonwood Creek Area
MA-F10 Silver Creek Area
MA-F11 Lookout Mountain Recreation Area

Standard and Guideline
Use of motorized equipment prohibited from December 1 to May 1.

Applicable Management Area
MA-F12 Eagle Roosting Areas

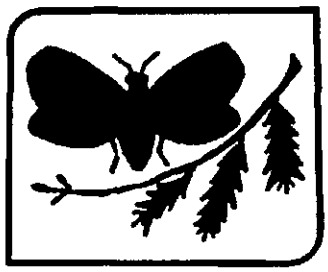
Standard and Guideline
Use of motorized equipment restricted to open roads from December 1 to May 1.

Applicable Management Area
MA-F18 Hammer Creek Wildlife/Recreation Area
MA-F20 Winter Range
MA-F21 General Forest Winter Range
All other management areas within the boundary of winter range or general forest winter range.

Standard and Guideline
No special restrictions.

Applicable Management Area
MA-F22 General Forest

Forest Health



Forest-Wide Standards and Guidelines

Use Integrated Pest Management (IPM) strategies to manage pests within the constraints of laws and regulations, and meet Forest management objectives. IPM strategies include manual, mechanical, cultural, biological, chemical, prescribed fire, and regulatory means. Select strategy through the environmental analysis process, and in compliance with the Regional Vegetation Management, Environmental Impact Statement, 1988.

Coordinate strategies with the Agricultural Pest Health Inspection Service (APHIS) when proposing major Forest-wide control projects.

Pesticide application, if used, will conform with EPA regulations, label restrictions, and the Regional Environmental Impact Statement on chemical applications.

Use the integrated pest management strategies on forested types, as displayed in Table 4-32. Exceptions for individual management areas are discussed in management area standards and guidelines for Forest Health.

Noxious Weeds

Control noxious weeds and invader plants to prevent threats to adjacent agricultural lands or to prevent unacceptable loss of range productivity.

TABLE 4-32
FOREST PEST MANAGEMENT STRATEGIES

Host Type	Pest	Conditions Favoring Damage	Management Strategies
Ponderosa Pine	Mountain Pine Beetle	Overstocked Stands	Control stocking levels by thinning, cleaning, or prescribed burning Keep stands in vigorous condition, i.e. growth at least one inch per decade
	Western Pine Beetle	Overmature, low vigor trees	Employ rotations of 150 years or less when possible Where large, old trees are desired in the stand (1) Salvage infested trees as rapidly as possible, (2) remove high risk trees that exhibit declining crown vigor preferentially during normal entries, and (3) decrease intertree competition by thinning, cleaning, or under burning.
	Western Dwarf Mistletoe	Multistoried host stands with already-infected overstories	Eliminate inoculum by regeneration harvest of infected stands If a seed tree system is employed, remove infected seed trees before regeneration is 3 feet tall or 10 years old Establish mistletoe-free unit boundaries
Lodgepole Pine	Mountain Pine Beetle	Stands of low vigor trees due to overstocking and old age	Keep lodgepole pine stands vigorous Control stocking by thinning, cleaning, or prescribed fire to insure that crop trees are free to grow Use rotations of 80 years or less
	Lodgepole Dwarf Misletoe	Multistoried host stands with already infected overstories	Eliminate inoculum by regeneration harvest of infected stands If a seed tree system is employed, remove seed trees before regeneration is 3 feet tall or 10 years old Establish mistletoe-free unit boundaries
Mixed Conifer*	Defoliating Insects (western spruce budworm and Douglas-fir tussock moth	Stands with major true fir/ Douglas-fir components, multistoried stands	Long-term strategy--develop stands composed of larch and pines Short-term strategy--treat infested fir stands with biological or chemical insecticides

Host Type	Pest	Conditions Favoring Damage	Management Strategies
	Root Diseases** (Laminated root rot, Armillaria root disease, and annosus root disease)	Stands with major true fir/ Douglas-fir components where inoculum is present	Remove all sosts in root disease centers and 50 foot buffers. Regenerate these areas with tolerant or resistant tree species For laminated root rot and Armillaria root disease, discriminate against white and Douglas-fir; favor pines and larch For annosus root disease, discriminate against white fir, favor any other species In areas where white fir management is desired, consider stump treatment with borax within 48 hours of cutting to prevent annosus infection
	Douglas-fir Dwarf Mistletoe	Multistoried host stands with alreasy infected overstories	Alternative I--eliminate inoculum by regeneration harvest If a seed tree system is employed and Douglas-fir regeneration is desired, remove infected seed trees before regeneration is 3 feet tall or 10 years old Establish mistletoe-free unit boundaries Alternative II--favor non-hosts *(any species but Douglas-fir)*
	Larch Dwarf Mistletoe	Multistoried host stands with alreasy infected overstories	Alternative I--eliminate inoculum by regeneration harvest If a seed tree system is employed and western larch regeneration is to be managed, remove infected larch seed trees before regeneration is 3 feet tall or 10 years old Establish mistletoe-free unit boundaries Alternative II--favor non-hosts (any species but western larch and lodgepole pine)
	White Fir Stem Decays (mainly Indian paint fungus)	Stands that contain a major component of white fir and have a history of tree suppression and wounding Do not manage high risk understories Eliminate and start over Where whit fir management is desired, keep rotations under 120 years and promote tree vigor throughout the life of the stand Avoid wounding of white fir crop trees	

*Mixed conifer stands on the Ochoco National Forest are composed of white fir, Douglas-fir, western larch, lodgepole pine, and ponderosa pine with Engelmann spruce at high elevations Firs tend to dominate

**Fir engraver beetles and Douglas-fir beetles are common associates of root diseases Management of the diseases will usually also minimize beetle damage