

Chapter 4

Forest Management Direction

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Introduction

This chapter describes the long-range management direction for the Forest. This direction will guide the process for program development and budgeting so that the goals and objectives of the Forest Plan can be realized. This chapter is divided into the following sections.

- Forest Management Goals, Objectives, and Anticipated Future Condition of the Forest
- Forestwide Standards and Guidelines
- Management Area Direction

Implementation of management direction to achieve the desired goals will be coordinated with the policies, programs, and objectives of other Federal agencies, and State and local governments.

Forest Management Goals, Objectives, and Anticipated Future Condition

The mission of the Forest is to serve as the public's steward of the land and its resources. The Forest will manage these resources for the benefit of all American people, both locally and nationally, and will meet the treaty rights of the Klamath Tribe. In all its activities, the Forest will strive to manage productivity and resource values for current and future generations. The Winema National Forest work force will be dedicated to serving the public and managing the land while emphasizing public safety and economic efficiency.

The Forest Plan is designed to achieve the following forestwide goals. The management objectives are aimed toward achieving these goals. The anticipated future condition summarizes the physical changes which are anticipated to result from carrying out planned management practices at two points in time: at the end of 10 years and at the end of 50 years (the RPA planning horizon).

The overall goal of the plan is to provide a balance between current outputs and land uses and the identified public issues. The majority of the Forest will be managed for high levels of timber production using uneven-aged management where practical. Much of the Forest will be managed to retain its natural-appearing condition through the use of special uneven-aged timber management techniques and limited even-aged management. Special emphasis is provided for two key wildlife habitats: wet lodgepole communities and big game winter range. Harvest and commercial use of lodgepole pine infested by the mountain pine beetle will be a priority in the short term.

Specific goals, objectives, and anticipated future condition for each resource or support area are described here.

Air Quality

Goals

1. Maintain air quality at a level that is adequate for the protection and use of national forest resources and that meets or exceeds applicable Federal and State standards and regulations (Clean Air Act, as amended, and Oregon State Implementation Plan).

Objectives

- Operate within the policies and standards established by the Clean Air Act, Region 6 Smoke Management Policy, and the State of Oregon Implementation Plan.
- Reduce emissions of total suspended particulates resulting from national forest activities
- Manage smoke resulting from prescribed fires on National Forest System lands, ensuring that smoke intrusions are avoided in Class I visibility areas (Mountain Lakes Wilderness and Crater Lake National Park) and in smoke-sensitive areas like the Klamath Falls urban growth boundary.
- Any new "point source" applications will be handled under guidelines promulgated in the Clean Air Act and State Implementation Plan.
- Assure coordination with other agencies. As Forest programs are implemented, close working ties will be strengthened with other forests, Oregon State Department of Forestry, U.S. Fish and Wildlife Service, Crater Lake National Park, Bureau of Land Management, Oregon Department of Environmental Quality, and other Federal, State, and local agencies. Overall program and specific project activities involving air quality will be closely monitored

Anticipated Future Condition

In Ten Years

Smoke emissions will decrease over time and will result in a similar decrease in visibility impairment and potential health hazards.

Fifty Years and Beyond

Emissions will decline and stabilize by the fifth decade. Visibility will improve and stabilize in the same time frames.

Cultural Resources

Goals

2. Provide for the identification, protection, preservation, and enhancement of prehistoric and historic sites, buildings, objects, antiquities, and cultures of local, regional, or national significance to preserve and share their historical, cultural, and scientific values for the benefit of the public and in consultation with the Klamath Tribe.

Objectives

- Remain in compliance with Federal regulations which state: A cultural resource survey will be completed and a consultation/concurrence accomplished with the Oregon State Historic Preservation Officer before any ground disturbance activities.
- Move beyond compliance inventories, and initiate surveys in Forest areas not subjected to disturbance activities, such as wilderness and wild and scenic rivers
- Continue to upgrade site records and report files and to computerize these files to facilitate data extraction for management needs
- Begin to evaluate and study collected data to interpret past human ways of life
- Coordinate with other resources primarily through the environmental analysis process.
- Continue the maintenance and monitoring system.
- Work with the Klamath Tribe to provide for recognition and preservation of the Klamath tribal living culture.

Anticipated Future Condition

In 10 Years

A forestwide inventory will be nearly complete. The emphasis will begin to focus on collected data interpretation and reporting, site interpretation and enhancement, and overall cultural resource management.

Fifty Years and Beyond

Cultural resources, protected on Federal lands, will likely become the final islands of undisturbed site locations nationwide. National forests may develop into centers of prehistoric and historic field investigations. The management of visiting professionals, scholars, and students would be of major concern. Overall management goals would probably center on enhancement and reinterpretation of data as archaeological theory and methods advance in time.

Facilities

Goals

- 3 Provide, operate, and maintain a safe and economical transportation system that meets the access requirements of the public and the Forest resource programs in accordance with land and resource objectives.
- 4 Provide administrative buildings and associated service systems that effectively and safely serve the public, meet the needs of the Forest resource programs, and accommodate the work force

Objectives

- Plan, construct, operate, and maintain the transportation system in accordance with road management objectives (based on public and administrative access needs), and the management area direction, objectives, and standards and guidelines contained in this chapter
- Provide the minimum number of roads needed for management activities and for public access. Roads that are not needed will be returned to vegetative production
- Manage open road densities to the levels needed to meet management area direction and objectives, and close roads when they are not needed for access
- Conduct site planning analysis before facility decision-making
- Maintain a Forest Facilities Master Plan to guide the acquisition, continued use, and disposal of buildings and associated service systems
- Maintain or repair buildings and associated service systems to correct health and safety deficiencies or hazards, prevent deterioration, conserve energy, provide barrier-free access, and increase worker productivity

Anticipated Future Condition

In 10 Years

Continued road system development and improvements will have occurred. Almost all the Forest road system is complete, and new road construction will have consisted of low standard local road construction to provide access for timber harvest and management activities. The main road system providing access into and across the Forest is being maintained for passenger car travel and mixed traffic. Many Forest roads will remain open, but they will be less inviting for use and will be in a rough or primitive state. When road access is not required, the remaining Forest roads are closed to use, yearlong or seasonally, to reduce open road densities and to lower operation and maintenance costs.

Forest facilities will be attractive to users and reflect favorably on the Forest Service. Unneeded facilities will have been removed.

Fifty Years and Beyond

Although this will be the same as the 10-year future condition, the exception will be the further reduction of the total Forest road system, because unnecessary roads will have been closed and returned to vegetative production.

Fish and Wildlife

Goals

5. Maintain or enhance the characteristics of riparian areas, wildlife habitat, and fish habitat near or within riparian ecosystems.
6. Manage habitat for the perpetuation and/or recovery of plants and animals listed as threatened, endangered, or sensitive.
7. Provide habitat for viable populations of all existing native and desired non-native vertebrate species.
8. Improve historic big game winter range habitat

Objectives

- Improve riparian areas to provide enhanced habitat for wildlife and fish.
- Improve fish habitat to provide for increased potential fish populations
- Improve deer winter range habitat for increased carrying capacity for wintering mule deer
- Maintain or improve summer habitat for mule deer.
- Improve and increase bald eagle habitat to achieve recovery plan objectives.
- Maintain mature and old-growth habitat and cavity-nester habitat.
- Develop and maintain a data base record system to facilitate analysis and reporting procedures.
- In cooperation with other agencies, develop and implement a mule deer study in south-central Oregon designed to assess the reasons for mule deer declines, and continue to support the interagency cooperative elk study in south-central Oregon.
- Continue to survey and develop biological evaluations for sensitive species. Develop individual species management guidelines for sensitive species.
- Initiate spatial analysis of wildlife habitat when GIS is available

Anticipated Future Condition

In 10 Years

Cavity-nester habitat will be maintained at or above the 40 percent level, this will be lower than current levels but will provide for viable populations. Mature and old-growth habitat will decrease but will be maintained at or above levels determined to be needed for viable wildlife populations by Region 6 guide. Riparian area condition will have improved.

The habitat effectiveness for historic big game winter range will have improved. Summer range habitat effectiveness for deer will be at current levels or higher. It is not anticipated that mule deer populations will increase above current levels when based on the assumption of a direct relationship between deer

production and habitat. Elk distributional studies will be completed, and elk habitat management guidelines will be developed. A mule deer study to determine causes of decline will have been completed. The Forest will have provided habitat to meet bald eagle recovery objectives.

Fifty Years and Beyond

Mature and old-growth habitat and cavity-nester habitat will be at low but adequate levels to provide for viable populations. Riparian areas and streams will have been improved to provide for increased fish production by the third decade, and the fish program will consist primarily of reconstruction and maintenance of improvements. Deer production and populations will remain low. Plans also will have been implemented for the recovery of threatened and endangered species and for the management of sensitive species.

Lands

Goals

9. Achieve a landownership pattern that will best meet resource management needs and minimize administrative costs
10. Authorize special land uses that conform to land management objectives, that are compatible with resource objectives and environmental considerations, and that are in the public interest

Objectives

- Obtain rights-of-way to provide required Forest access
- Share in the construction cost of roads that serve the Forest and private lands
- Continue cooperative efforts with Klamath County to transfer roads with substantial public use to county public road jurisdiction.
- Consolidate landownership through purchases, exchanges, or donations with private landowners, and State and local government agencies, and through transfer with other Federal agencies.
- Classify all lands according to the groups and criteria set forth in the forestwide standards and guidelines. Public and private lands in and adjacent to the Winema National Forest will be classified to encourage the best land pattern that the Forest can seek.

Anticipated Future Condition

In 10 Years

Most remaining land adjustment opportunities will have been completed, resulting in an efficient landownership pattern. The National Recreation Strategy and demand for recreation will result in additional permits for recreational facilities, events, and activities. The number of authorized special land uses, including permits for utilities, also will increase as parcels of private land scattered throughout the Forest are developed for recreational or other purposes.

Fifty Years and Beyond

The land adjustment program will have been completed, resulting in a highly efficient landownership pattern, and the number of acres of land in National Forest System ownership will remain about the same.

Continuing demand for recreation and other special uses will have resulted in additional permits for recreational facilities, events, and other special land uses (including utilities).

Minerals and Energy

Goals

11. Encourage and facilitate the exploration, development, and production of mineral and energy resources in accordance with mining and leasing laws and regulations, and ensure that activities are conducted in an environmentally sound manner

Objectives

- Respond to and process exploration, development, and production requests in a timely manner, and facilitate coordination with other involved agencies.
- Conduct project environmental analysis to evaluate proposals and applications and to ensure consideration and protection of other resources to the fullest extent possible.
- Develop and require land reclamation needs as part of authorized exploration and development.

Anticipated Future Condition

In 10 Years

Leasable and locatable minerals: Exploration for geothermal resources will have continued. Depending on the results of the exploration, development of the geothermal resource may have occurred. Historically, some limited exploration for locatable minerals has happened, but none is known to have been found. Limited exploration may continue.

Salable mineral materials: The Forest has almost always met the demand for cinder materials. Some limited supplies of quarry rock have occurred in some locations on the Forest. Geological investigations will be done for new rock quarry sources on the Forest, and a few new quarry sites will be developed to meet the demand.

Fifty Years and Beyond

Leasable and locatable minerals: This is the same as the 10-year future condition unless valuable minerals have been found.

Salable Mineral Materials: This is the same as the 10-year future condition, except that additional quarry sites will have been developed to meet the demand.

Protection

Goals

12. Provide well-planned and well-executed fire protection and prescribed fire programs that are cost efficient and responsive to land, air, and resource management goals and objectives.
13. Control endemic levels of Forest pests, and provide controls that are compatible with resource objectives.
14. Provide law enforcement protection for the public, employees, and government property.

Objectives

- The fire protection and prevention program shall be cost efficient and responsive to land and resource management goals and objectives identified in the Forest Plan
- The ecologically sound use of prescribed fire shall be provided as a cost-effective management tool for achieving resource management objectives.
- All wildfires must receive an appropriate suppression response for each management area
- Fuel treatment should provide for reductions in the hazard level of fuels consistent with resource values and long-term site productivity
- Continue external coordination with other agencies so they become an integral part of the fire protection and use program. The primary thrust will be coordination and cooperation involving reciprocal fire protection agreements with neighboring fire protection organizations.
- The Forest will rely on integrated pest management principles to avoid creation of forest pest problems and to suppress existing forest pest problems
- Appropriate action shall be taken on violations of federal laws and regulations that occur on Forest land.

Anticipated Future Condition

In 10 Years

There will be a mosaic of residue levels as a direct result of managed timber stands and the use of prescribed fire. No dramatic changes in the number of acres burned by wildfire will be expected.

The spread of the mountain pine beetle infestation will be subsiding.

Fifty Years and Beyond

No dramatic changes in the number of acres burned by wildfire will be 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.

The lodgepole pine stands previously affected by the mountain pine beetle epidemic will have been regenerated, and will range from saplings to small saw timber. Other insects and diseases are anticipated to remain at endemic levels.

Specific management strategies will have been identified and implemented for treating root rot in true fir stands. A portion of the susceptible stands will have been converted to nonsusceptible species. Other insects and diseases are anticipated to remain at endemic levels.

Range

Goals

15. Improve range condition by improving the administration of the livestock grazing program
16. The demand for livestock grazing will be met only when it does not conflict with other uses.

Objectives

- Manage the range vegetation resource to avoid conflicts with mule deer, to decrease erosion, and to enhance riparian areas. Improve range condition with special emphasis in riparian areas.
- Revise, update, and implement all allotment management plans to meet Forest Plan objectives.
- Range improvements will be installed to facilitate range resource management
- Develop and maintain a data base record system to facilitate analysis and reporting procedures.

Anticipated Future Condition

In 10 Years

Allotment management plans will have been revised or updated and implemented for all range allotments. Allotments will be under more intense management than present. Management changes will have been installed that will result in improvements necessary to enhance riparian conditions, reduce erosion, and decrease other conflicts. Some improvement in the vegetative condition of range will be evident.

Fifty Years and Beyond

Range condition will have improved. All necessary range improvements will have been completed, and the range improvement program will be primarily reconstruction and maintenance. Most riparian areas will be in good condition.

Recreation

Goals

- 17 Implement the National Recreation Strategy, which emphasizes meeting public needs, developing partnerships, and creating customer satisfaction.
- 18 Provide for a variety of quality recreation experiences in a range of Recreation Opportunity Spectrum (ROS) settings.
19. Meet the demand for developed camping.
- 20 Provide barrier-free opportunities

Objectives

- Upgrade existing sites to provide customer-desired facilities, and develop partnerships with user groups, permittees, and other recreation providers and promoters to develop, improve, and market recreation opportunities.
- Concentrate on upgrading, expanding, and adding facilities primarily within existing recreation complexes to meet the projected demand for developed camping and associated activities. Add facilities to enhance the recreation experience of the visitor, facilities include loop trails, interpretative exhibits, group and multifamily sites, and barrier-free access.
- To meet user needs, improve and expand facilities that support dispersed recreation activities, such as trailheads, sno-parks, boating and fishing sites, and smaller no-fee campgrounds and horse camps
- Analyze the current proposal to develop a recreation area, including a downhill ski area, on Pelican Butte.
- Involve user groups in managing recreation opportunities to provide the desired experience and to minimize conflicts between uses.
- Expand the existing winter trail system, construct day-use loop trails near recreation complexes, and develop additional hiking and riding trails outside wilderness. Develop and designate travelways for ORV use
- Manage Yamsay Mountain, Brown Mountain, and Pelican Butte for semiprimitive recreation.

Anticipated Future Condition

In 10 Years

Additional facilities will have been added at developed sites to enhance the experience of the visitor and to accommodate increased use. Additional day-hiking and interpretative opportunities will be provided. Most new and upgraded developed sites will be designed to be barrier-free. Additional trails will have been constructed on all three districts, including some trails specifically designed to accommodate touring and mountain bikes, pack stock use, canoeing, cross-country skiing, and snowmobiling.

Initial development of Pelican Butte, if permitted, will have been completed. The salvage of lodgepole pine on the north end of the Forest and root rot management on the Klamath District will result in extensive areas being converted to a roaded modified ROS class. However, much of the Forest will provide roaded natural or natural-appearing rural ROS settings through implementing uneven-aged management in ponderosa pine and continuing to manage recreation areas and access routes for scenic quality.

Fifty Years and Beyond

The most desirable areas near attractions like Lake of the Woods and Miller Lake will have been developed for concentrated recreation use, and demand for use of these areas can no longer be met. Most of the developed site use will be accommodated through reservation systems. The planned trail system will be in place, and emphasis will be on maintenance and reconstruction. The ROS settings will be similar to the 10-year future condition as second-growth lodgepole pine harvest begins. However, the Forest will have a more overall managed appearance, and additional areas with recreation development will be managed for scenic quality.

Scenic Resources

Goals

21. Provide attractive, visually pleasing forest settings, emphasizing appearance of areas seen from major travel routes, use areas, and bodies of water.
22. Maintain the high quality scenery and natural-appearing condition of the Sycan River corridor to meet the intent of its designation as a wild and scenic river.

Objectives

- Emphasis shall be placed on maintaining high quality, natural-appearing forest settings within identified primary and secondary viewsheds over time. Over the next 10 years, at least one viewshed implementation guide will be prepared for each district to carry out the programmatic Forest Plan decisions in a site-specific manner. Priority will be given to Westside Road, Dead Indian Road, State Highway 62, Silver Lake Road, and Miller Lake Road.
- Use computer applications to predict results of proposed activities, and validate seen area mapping.

Anticipated Future Condition

In 10 Years

Across the Forest, a shift will occur from many large-diameter trees to fewer and scattered clumps of somewhat smaller trees. Large trees will be surrounded by younger trees of all sizes. These younger trees will dominate in a more open appearance when compared with mixed conifer and lodgepole species where even-aged stands of trees and created openings will be evident. Culturing healthy, large-diameter trees to accent and maintain the large tree character over time will be common. Also maintained will be the variety of coniferous tree species and sizes mixed with shrub and deciduous vegetation.

Fifty Years and Beyond

Scenic viewsheds will be natural appearing or will contain slightly altered appearances; emphasis will be on large trees and a mature forest character in the foreground. General Forest areas will appear modified due to management activities. Uneven-aged management in ponderosa pine and pine associated species will have resulted in a continuous forest cover; the emphasis will be on younger growing trees and a more open appearing condition. The mixed conifer and lodgepole species will have a distribution of even-aged stands of varying size classes intermingled with created openings.

Soil and Water (Watershed Management)

Goals

- 23 Water bodies, stream courses, and wetlands, their riparian vegetation, and the immediately adjacent upland areas will be managed to stabilize stream channels; prevent soil erosion; and maintain or improve water quality, fish habitat, recreation opportunities, and riparian/wetland habitat for dependent fish and wildlife species and dependent aquatic species.
- 24 Long-term soil productivity will be maintained

Objectives

- Maintain or improve the soil, water, riparian, floodplain, and wetland resources through implementation of the forestwide standards and guidelines.
- Comply with State requirements in accordance with the Clean Water Act to protect Oregon waters, this includes the antidegradation policy for high quality waters and wild and scenic rivers.
- Refine and update existing Soil Resource Inventory (SRI) information through project-level planning. Because of marginal reforestation and the potential for irreversible damage, lands classified unsuitable for timber production will continue to be identified and removed from the timber base
- Monitor Forest Plan implementation to determine if management practices are altering soil productivity, water quality, floodplains, riparian areas, or stream structure and function.
- Restore deteriorated watershed areas identified in the Watershed Improvement Needs Inventory. Update the inventory as needed.
- Protect habitat and hydrologic values of wetlands and riparian areas and improve fish habitat in streams.
- Meet the requirements of the Klamath Adjudication for filing and protecting Forest water rights and uses.
- Work with the Klamath Tribe to recommend and to file for minimum stream flows within the former reservation lands (Tribal needs coincide with those of the Forest.)

Anticipated Future Condition

In 10 Years

Much of the detrimental compaction from previous entries will have been mitigated through tillage or other appropriate means. Ground-disturbing activities will cause detrimental effects on less than 20 percent of an activity area.

Water quality and channel conditions will be sufficient to support at least the current level of beneficial uses.

Watersheds currently in excellent condition will remain so. All watershed improvements currently scheduled will be completed, however, it may take many years for the beneficial effects of the improvements to be fully realized.

Fifty Years and Beyond

Most detrimental compaction will have been mitigated Ground-disturbing activities will cause detrimental effects on less than 20 percent of an activity area, even after repeated entries.

At least 90 percent of the riparian areas will be in good condition.

Timber

Goals

25. Manage the timber resource to provide vigorous, healthy stands that meet management area objectives.
26. Maintain a sustained yield of sawtimber consistent with management area objectives

Objectives

- Manage the ponderosa pine and pine associated working groups with uneven-aged management practices as long as healthy stands are maintained.
- Salvage harvest affected acres of the suitable lodgepole pine working group consistent with management area objectives.
- Reforest all nonstocked, suitable timberlands and other lands as needed to meet other resource objectives.
- Maintain genetic tree improvement to support the reforestation program.
- Plant portions of all selectively harvested areas to maintain prescribed species diversity.
- Maintain optimum stocking levels to meet all resource objectives.
- Use integrated forest pest management practices to maintain forest health.
- Develop and maintain a stand level inventory of the timber growing stock on all lands suitable for timber production.

Anticipated Future Condition

In 10 Years

Most of the dead lodgepole pine will have been harvested, and the mountain pine beetle epidemic will have subsided. Armillaria root rots will continue to cause substantial mortality in the mixed conifer type. About one third of the acres planned for uneven-aged management will have been entered. The tree improvement program will have been fully implemented.

Fifty Years and Beyond

Uneven-aged management will have been fully implemented. Most of the stands will have been entered twice, and the average diameter of the cut trees will be lower. Maintaining disease-free healthy stands will be difficult in multistoried, uneven-aged stands. Lodgepole pine stands will have fully recovered from the mountain pine beetle mortality, and new regeneration harvests of the new stands will be starting. Data from the tree improvement evaluation plantations will be providing information leading to higher growth rates.

Wilderness

Goals

27. Preserve the wilderness values and character of Mountain Lakes, Sky Lakes, and Mount Thielsen Wildernesses, and at the same time allow compatible recreation, scenic, scientific, educational, and historical uses.

Objectives

- Manage these areas in accordance with the Wilderness Act of 1964 and the Oregon Wilderness Act of 1984.
- Implement management direction in the Wilderness Implementation Schedule (WIS) for each wilderness. Coordinate this management with Crater Lake National Park and the other forests that jointly administer Sky Lakes and Mount Thielsen Wildernesses.

Anticipated Future Condition

In 10 Years

The Limits of Acceptable Change (LAC) system will have been implemented in each wilderness, and monitoring selected resource and social indicators will have been initiated. In some areas, recreation use restrictions will have been put into effect, and rehabilitation of areas not meeting LAC standards will have begun. However, most of the areas will be essentially unchanged, modified only by natural processes. A fire management plan will have been completed for each area, and some evidence of natural fire occurrence will be seen.

Fifty Years and Beyond

Wilderness demand will have exceeded available wilderness capacity. As a result, access to these areas will be limited by a permit system. Some travel zones will be limited to day-use only. Maintenance of natural vegetation at popular campsites and near lakeshores will be an ongoing process; a rest-rotation system will be used. Most of the area will remain essentially unchanged, but it will be modified only by natural processes like natural fire.

Forest Resource Outputs and Activities

This section describes the output and activity objectives of the Forest Plan under full implementation of the plan. These outputs and activities are expected to achieve the previously stated goals, objectives, and anticipated future condition.

Proposed Outputs

The projected Forest outputs, table 4-1, are estimated average annual values for a year's activities. Table 4-2 shows estimates of the average annual costs needed to implement the Forest Plan in the first decade. Although this is a 10-year plan, outputs are listed by decade for the next 50 years in order to note the trends that would result from the continuation of management initiated in the first period.

The average outputs and activities which are planned may not be accomplished in any given year because of scheduling, limited budgets, or personnel ceilings. Should appropriated budgets or personnel ceilings vary significantly from planned levels, the outputs and activities will be adjusted and evaluated to determine whether revision of the Forest Plan is necessary.

**TABLE 4-1
Resource Outputs and Activities**

Outputs and Effects (Units of Measure)	Decade 1	Decade 2	Decade 3	Decade 4	Decade 5	NAS Code
Lands Tentatively Suitable for Timber Production (1,000 acres)	825 4	-	-	-	-	-
Lands Suitable for Timber Production (1,000 acres)	720 8	-	-	-	-	-
Full Yield	506 3	-	-	-	-	-
50%-99% of Full Yield	207 3	-	-	-	-	-
1%-49% of Full Yield	7 2	-	-	-	-	-
Allowable Sale Quantity (MMCF/year) Sawlog Volume	19 4	19 4	19 4	19 4	24 1	-
Allowable Sale Quantity (MMBF/year) Sawlog Volume	117 2	-	-	-	-	-
Timber Sale Program Quantity (MMBF/year) Sawlog Volume	166 8	-	-	-	-	-
Allowable Sale Quantity by Working Group (MMCF/year)						
Ponderosa Pine	7 1	8 9	10 5	7.2	14 1	-
Pine Associated	5 0	4 3	4 9	3 9	5 0	-
Mixed Conifer	7 3	4 1	2 1	4.5	4 8	-
Lodgepole Pine	0 0	2 1	1 9	3.8	0 2	-
Harvest Type Summaries (1,000 acres/year)						
Commercial Thins	2 7	0 0	0 0	2 2	2 9	-
Overstory Removal	1 6	0 9	0 0	0 0	0 0	-
Regeneration Harvest	0 5	6 5	5 9	3 5	1 1	-
Selection Harvest	8 4	10 4	12 5	8 4	15 6	-
Salvage Cut in Lodgepole Pine	13 7	0 0	0 0	0 0	0 0	-
Reforestation (1,000 acres/year)	6 4	6 5	5 9	3.5	1 1	ET24
Timber Stand Improvement (1,000 acres/year)	14 4	15 0	9 2	9 3	13 2	ET25
Fuel Treatment (1,000 acres/year)	27 6	32 9	-	-	37 6	PF2
Developed Recreation Use (1,000 RVDs/year) (Excluding Pelican Butte)	204	284	357	403	454	AN1
Developed Recreation Sites (PAOTs) Construction	695	590	550	0	0	AN2
Total Nonwilderness Dispersed Recreation Use (1,000 RVDs/year) (Excluding WFUDs)						
Roaded	214	271	326	371	423	AW
Unroaded	26	31	37	43	50	AW

TABLE 4-1 (continued)
Resource Outputs and Activities

Outputs and Effects (Units of Measure)	Decade 1	Decade 2	Decade 3	Decade 4	Decade 5	NAS Code
Wilderness Use (1,000 RVDs/year)	31 0	37 4	43 2	47 2	47 2	AW
Trail Construction/Reconstruction (miles)	124	72	25	25	25	AT2
Visual Quality Objectives (1,000 acres)						
Preservation	94 4	-	-	-	-	AV
Retention	191 1	-	-	-	-	AV
Partial Retention	195 8	-	-	-	-	AV
Modification	37 1	-	-	-	-	AV
Maximum Modification	523 3	-	-	-	-	AV
Wildlife and Fish Use-Hunting (1,000 WFUDs/year)	20	21	22	22	23	CW1
Wildlife and Fish Use-Fishing (1,000 WFUDs/year)	25	28	30	31	33	CA1
Wildlife and Fish Use-Viewing and Other Nonconsumptive Uses (1,000 WFUDs/year)	22	27	31	34	38	CW1
Wildlife Habitat Improvement (Acre Equivalents)	-	-	-	-	-	CW1
Forest in an Old-Growth Condition (1,000 acres)	577	436	-	-	279	-
Management Indicator Species						
Three-Toed Woodpecker (pairs)	1,820	1,463	-	-	1,215	CW1
Marten (Each)	138	138	-	-	140	CW1
Northern Spotted Owl (pairs)	23	22	-	-	24	CW1
Pileated Woodpecker (pairs)	159	143	-	-	126	CW1
Resident Trout (1,000s)	12.2	14 0	-	-	28.0	CA1
Mule Deer (1,000s)	12 9	14 7	-	-	14.7	CW1
Bald Eagle (pairs)	32	32	-	-	32	CW1
Northern Goshawk (pairs)	169	155	-	-	148	CW1
Permitted Grazing (1,000 AUMs/year)	13	13	13	13	13	DN1
Water Yield (1,000 Acre Feet/year)	700	700	700	700	700	FW1
Sediment (tons/decades)	2,980	3,233	-	-	3,161	FW1
Watershed Improvement Work (acres/year)	10	10	10	10	10	FW22
Arterial and Collector Road Reconstruction (miles/year)	20	5	5	5	5	LT222
Timber Purchaser Road Construction and Reconstruction (miles/year)	31	33	36	21	21	LT222
Other Local Road Construction and Reconstruction (miles/year)	2	2	2	2	2	LT222

**TABLE 4-1 (continued)
Resource Outputs and Activities**

Outputs and Effects (Units of Measure)	Decade 1	Decade 2	Decade 3	Decade 4	Decade 5	NAS Code
Roads Suitable for Public Use (miles)						
Passenger Car	510	510	510	510	510	LT233
High-Clearance Vehicle	2,120	2,120	2,120	2,120	2,120	LT232
Roads Intermittently Available for Use (Miles)	2887	2486	2630	2630	2630	-
Transportation System (Total) (Miles)	5517	5116	5260	5260	5260	-
Energy Minerals Produced (Billion BTU/year)	0.0	-	-	-	-	GM
Nonenergy Minerals Produced (million dollars/year)	0.10	0.12	0.12	0.12	0.13	GM
Changes in Forest-Related Jobs (Change in Number)	-22	-	-	-	-	-
Changes in Forest-Related Personal Income (million dollars/year)	-1.5	-	-	-	-	-
Payments to Counties (million dollars/year)	9.5	8.2	-	-	10.8	-
Total Forest Budget (million dollars/year)	14.6	14.0	-	-	15.1	-
Total Forest Receipts (million dollars/year)	36.6	31.6	-	-	41.5	-
Area Available for Specific Resource Uses (1,000 acres)						
Timber Harvest	720.8	-	-	-	-	-
Grazing	686.0	-	-	-	-	-
Mineral Exploration						
Leasable	950.0	-	-	-	-	-
Locatable	310.0	-	-	-	-	-

TABLE 4-2
Average Annual Costs for First, Second, and Fifth Decades
(Thousand Dollars/in 1982 Dollars)

Activity	Activity Code	Decade 1	Decade 2	Decade 5
Recreation				
Cultural Resource Management	AC	152 5	153 6	110 9
Recreation Administration and Maintenance	AN12	411 1	407 4	407.4
Recreation Construction (Facilities and Roads in Rec Sites)	AN22	207 3	145 7	53.3
Trail Construction	AT22	127 0	28 3	9.5
Trail Maintenance and Administration	AT1-2	38 8	38 8	38 8
Visual Resource Management	AV	109 2	27 6	6 9
Visual Monitoring	AV121	4 5	4 5	4 5
Wilderness Management	AW	35 8	35 8	35 8
Wildlife and Fish				
Wildlife and Fish Administration	CW/CI/ CT1	348.3	348 3	348 3
Wildlife and Fish Structure Improvement	CW/CI/ CT221	195 1	195 1	195 1
Wildlife and Fish Nonstructure Improvement	CW/CI/ CT222	125 3	125 3	125 3
Wildlife and Fish Improvement Maintenance	CW/CI/ CT23	15 2	15 2	15 2
Wildlife and Fish Monitoring	CW/CI/ CT121	127 0	127 0	127 0
Range Management				
Range Administration	DN1	186 0	178 0	158.0
Range Structure Improvement	DN22	30 4	30 4	30 4
Range Improvement and Maintenance	DN23	19 9	19 9	19 9
Range Monitoring	DN121	32 9	32 9	32 9
Timber Sales				
Timber Support	ET11	968 8	1022 5	1033 8
Sale Preparation	ET114	2,633 4	2,505 4	3,084 7
Sale Administration	ET12	624 0	597 0	764 0
Reforestation	ET24	1,533 0	1,533 0	1,533 0
Timber Stand Improvement	ET25	1,708 1	1,710 2	2,040 4
Genetic Tree Improvement	ET27	69 5	69 5	69 5
Watershed and Air				
Soil and Water Resource Operation	FW1	69 6	69 6	69 6
Soil Inventory	FW1111	20 6	20 6	20 6
Water Inventory	FW1112	4 3	4 3	4 3
Soil and Water Monitoring	FW121	113 4	113 4	113 4
Soil and Water Resource Improvement Construction	FW22	148 5	148 5	148 5
Soil and Water Resource Improvement Maintenance	FW23	10 9	10 9	10 9
Lands and Minerals Administration				
	GM/JL	284 8	185 2	148 1
Facilities				
Construction	LF22	222 0	222 0	222 0
Maintenance	LF23	126 6	126 6	126 6
Road Preconstruction	LT21	231 0	254 9	265 1
Road Construction, PRC(1)	LT22	209 9	178 7	168 8
Road Construction, FRP(2)	LT22	269 1	217 2	204 2
Road Maintenance	LT23	495 0	495 0	495 0
Land Management Planning				
General Administration	ML TG	220 0 1,700 0	220 0 1,700 0	220 0 1,769 1

TABLE 4-2 (continued)
Average Annual Costs for First, Second, and Fifth Decades
(Thousand Dollars/In 1982 Dollars)

Activity	Activity Code	Decade 1	Decade 2	Decade 5
Protection				
Fire Management	PF1	1,032 6	1,032 6	1,032 6
Activity and Natural Fuels	PF2	634 6	603 2	763 8
Law Enforcement	PL	168 3	168 3	168 3
Total Capital Investment		6,257.8	6009 0	6375 9
Total Operations		8,948 9	8,655 8	9,362 0
Grand Total		15,664 3	15,122 4	16,195 5

(1)PRC Purchaser Road Credits (2)FRP. Forest Road Capital Investment Program

Resource Summaries

Timber management has included nine additional tables and one graph to give greater detail and further insight into the allowable sale quantity (ASQ) and timber sale program quantity (TSPQ). Tables 4-3, 4-4, and 4-5 give detail on the ASQ by harvest methods and by harvest locations by management area, working group, and ranger district. Tables 4-6 and 4-7 and figure 4-1 show the vegetation management practices planned during the decade and the timber management intensities planned that produce the ASQ and long-term sustained yield. Tables 4-8, 4-9, 4-10, and 4-11 give details about the land base and the present and future condition of the timber growing stock on the land base.

Table 4-3 shows the ASQ and the TSPQ. The ASQ is only live green sawtimber that meets sawtimber merchantability specifications. The timber sale program quantity is the ASQ, plus all other convertible wood products which either are dead or do not meet sawtimber merchantability specifications. The ASQ and TSPQ are both given in millions of cubic feet (MMCF), and then an estimate of both the ASQ and TSPQ is given in millions of board feet (MMBF).

Tables 4-4 and 4-5 give the ASQ in detail by ranger district, working group, and management area.

TABLE 4-3
Allowable Sale Quantity and Timber Sale Program Quantity
(Average Annual for Decade 1)

Harvest Method	Allowable Sale Quantity	
	Sawtimber (MMCF)	Other Products (MMCF)
Regeneration Harvest	2.8	0.0
Clearcut	NE	NE
Shelterwood and Seed Tree		
Preparatory Cut	NE	NE
Seed Cut	NE	NE
Removal Cut	4.6	0.0
Selection	9.6	0.0
Intermediate Harvest		
Commercial Thinning	2.4	0.0
Salvage/Sanitation	0.0	15.1
Totals	19.4	15.1
Additional Sales Total for All Harvest Methods	0.0	0.2
	MMCF	MMBF
Allowable Sale Quantity	19.4	117.2
Timber Sale Program Quantity	34.7	166.8

TABLE 4-4
Allowable Sale Quantity by Management Area, Ranger District, and Decade

		Chemult					Chiloquin					Klamath					Forest Totals				
MA	Units	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
3A FGRT	MAcres	00	00	03	00	00	00	00	04	00	01	0.1	00	00	02	01	01	00	07	02	02
	MMCF	0.0	00	03	0.0	00	00	00	03	00	01	0.3	0.2	02	04	02	0.3	02	08	04	03
	MMBF	00	0.0	15	0.0	01	00	00	18	01	05	17	10	11	17	13	17	10	44	18	19
3B FGPR	MAcres	00	00	00	0.0	00	00	00	05	00	01	01	01	00	01	01	0.1	01	05	01	02
	MMCF	00	00	00	0.0	00	00	0.0	05	00	0.1	02	02	02	03	03	02	0.2	07	03	04
	MMBF	00	00	0.0	00	00	01	0.1	2.7	01	0.4	1.2	1.5	1.3	16	12	13	16	40	17	16
3C MGPR	MAcres	01	02	05	0.1	02	00	01	09	01	07	16	03	03	1.1	1.4	17	06	17	13	23
	MMCF	01	02	05	0.1	02	01	02	09	01	07	31	14	14	2.3	30	33	18	28	25	39
	MMBF	05	14	34	04	12	02	09	56	06	32	186	83	76	110	151	193	106	166	120	195
8 Riparian	MAcres	00	0.0	06	02	01	00	00	10	00	01	03	00	01	03	00	03	00	17	05	02
	MMCF	00	01	06	02	01	00	00	09	00	01	08	00	02	04	00	08	01	17	06	02
	MMBF	00	03	35	04	05	00	01	51	01	04	50	00	11	24	02	50	04	97	29	11
9B Eagle Replace- ment	MAcres	00	00	00	0.0	0.0	00	00	02	00	00	02	01	00	00	05	02	01	02	00	05
	MMCF	00	00	00	00	00	00	00	01	00	00	02	06	00	0.0	0.7	02	06	01	00	07
	MMBF	00	00	0.2	00	00	00	00	0.8	00	0.1	13	38	01	01	38	13	38	11	01	39
10 Big Game Wtr. Range	MAcres	00	00	00	0.0	0.0	00	05	18	00	06	00	00	00	00	00	0.0	05	18	00	06
	MMCF	00	00	00	00	00	00	07	17	00	05	00	00	00	00	00	00	07	17	00	05
	MMBF	00	00	0.0	00	00	00	38	106	00	28	00	00	0.0	00	00	00	38	106	00	28
12 Timber	MAcres	41	72	53	52	61	59	78	47	6.1	91	08	03	01	06	02	108	153	101	119	154
	MMCF	56	50	40	68	68	63	87	61	76	103	27	17	02	1.2	07	146	154	103	156	178
	MMBF	333	294	238	295	325	385	530	350	393	521	168	95	14	42	34	886	919	602	730	880
15 Upper Williamson	MAcres	00	01	0.2	00	00	00	11	04	00	03	00	00	00	00	00	00	12	06	00	03
	MMCF	00	00	02	0.0	00	00	04	1.1	00	03	0.0	00	00	00	00	00	04	13	00	03
	MMBF	00	02	1.1	00	00	00	1.7	6.7	00	19	00	00	00	00	00	00	19	78	00	19
Total	MAcres	42	75	69	5.5	64	59	9.5	99	62	110	31	08	05	23	23	13.2	178	173	140	197
	MMCF	5.7	5.3	5.6	7.1	7.1	64	100	116	7.7	121	7.3	4.1	22	46	49	194	194	194	194	241
	MMBF	338	313	335	303	343	388	596	683	402	614	446	241	12.6	210	250	1172	1150	1144	915	1207

TABLE 4-5
Allowable Sale Quantity by Management Area, Ranger District, and Working Group

MA	Units	Chemult					Chiloquin					Klamath					Forest Totals				
		PP	PA	MC	LP	Total	PP	PA	MC	LP	Total	PP	PA	MC	LP	Total	PP	PA	MC	LP	Total
3A FGRT	Acres	0	0	0	0	0	0	0	0	0	0	0	0	71	0	71	0	0	71	0	71
	MCF	0	0	0	0	0	0	0	0	0	0	0	0	276	0	276	0	0	276	0	276
	MMBF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17	0.0	17	0.0	0.0	1.7	0.0	1.7
3B FGPR	Acres	0	0	0	0	0	0	10	0	0	10	0	0	48	22	70	0	10	48	22	80
	MCF	0	0	0	0	0	0	10	0	0	10	0	0	177	18	195	0	10	177	18	205
	MMBF	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	1.0	0.1	1.1	0.0	0.1	1.0	0.1	1.2
3C MGPR	Acres	0	53	0	16	69	0	14	0	0	14	3	0	1,589	0	1597	8	67	1,589	16	1,680
	MCF	0	74	0	13	87	0	29	0	0	29	6	0	3,122	0	3128	6	103	3,122	13	3,244
	MMBF	0.0	0.4	0.0	0.1	0.5	0.0	0.1	0.0	0.0	0.1	0.0	0.0	18.6	0.0	18.6	0.0	0.5	18.6	0.1	19.2
8	Acres	0	0	0	0	0	0	6	0	0	6	3	0	284	0	287	3	6	284	0	293
	MCF	0	0	0	0	0	0	7	0	0	7	2	0	789	0	791	2	7	789	0	798
	MMBF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	5.0	0.0	0.0	5.0	0.0	5.0
9B	Acres	0	0	0	0	0	0	0	0	0	0	0	0	211	0	211	0	0	211	0	211
	MCF	0	0	0	0	0	0	0	0	0	0	0	0	229	0	229	0	0	229	0	229
	MMBF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	1.3	0.0	0.0	1.3	0.0	1.3
10	Acres	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MCF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MMBF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Acres	2,459	1,634	0	0	4,093	4,458	1,482	0	0	5,940	19	0	779	0	798	6,936	3,116	779	0	10,831
	MCF	2,575	3,002	0	0	5,577	4,519	1,796	0	0	6,315	16	0	2,740	0	2,756	7,110	4,798	2,740	0	14,648
	MMBF	161	17.2	0.0	0.0	33.3	28.3	10.3	0.0	0.0	38.6	0.1	0.0	16.8	0.0	16.9	44.5	27.5	16.8	0.0	88.8
15	Acres	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MCF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MMBF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	ACRES	2,459	1,687	0	16	4,162	4,458	1,512	0	0	5,970	30	0	2,982	22	3,034	6,947	3,199	2,982	38	13,166
	MCF	2,575	3,076	0	13	5,664	4,519	1,842	0	0	6,361	24	0	7,333	18	7,375	7.1	5.0	7.3	0.0	19,400
	MMBF	161	17.6	0.0	0.1	33.8	28.3	10.5	0.0	0.0	38.8	0.1	0.0	44.4	0.1	44.6	44.5	28.1	44.4	0.2	117.2

Tables 4-6 and 4-7 and figure 4-1 show the acres of vegetation management practices planned during the decade and the timber management intensities planned that produce the ASQ and long-term sustained yield. Table 4-6 shows the vegetation management planned on suitable timberland during the next decade. The acres in this table relate to the volumes shown in table 4-3. The acres of even-aged regeneration harvest are given as a lump sum and are not broken down by clearcut, shelterwood, and seedtree

Many timber management intensities were evaluated during the preparation of the Forest Plan. It is important to note that neither the most intensive timber management nor the least intensive timber management has been chosen for the Forest Plan, but a mixture of each has been chosen. Table 4-7 shows the timber management intensity chosen for all acres with a programmed harvest by working group by silviculture treatment by management area. The lodgepole pine working group generally has little commercial thinning planned, and several acres of visuals and riparian management acres have no planned harvest. The pine associated working group uses uneven-aged management on about half the acres available, and the remaining acres get even-aged management with one commercial thinning during the rotation. The ponderosa pine working group will be managed with uneven-aged management. The mixed conifer working group generally gets even-aged management except in the riparian areas. One commercial thinning will occur on most acres during the rotation, except for the visual management areas where long rotations will get five commercial thinnings during the rotation

Figure 4-1 simply shows that the ASQ starts at 19.4 MMCF per year and increases by the 11th decade to the long-term sustained yield capacity of 30.4 MMCF per year.

FIGURE 4-1
Long-Term Sustained Yield Capacity and Allowable Sale Quantity

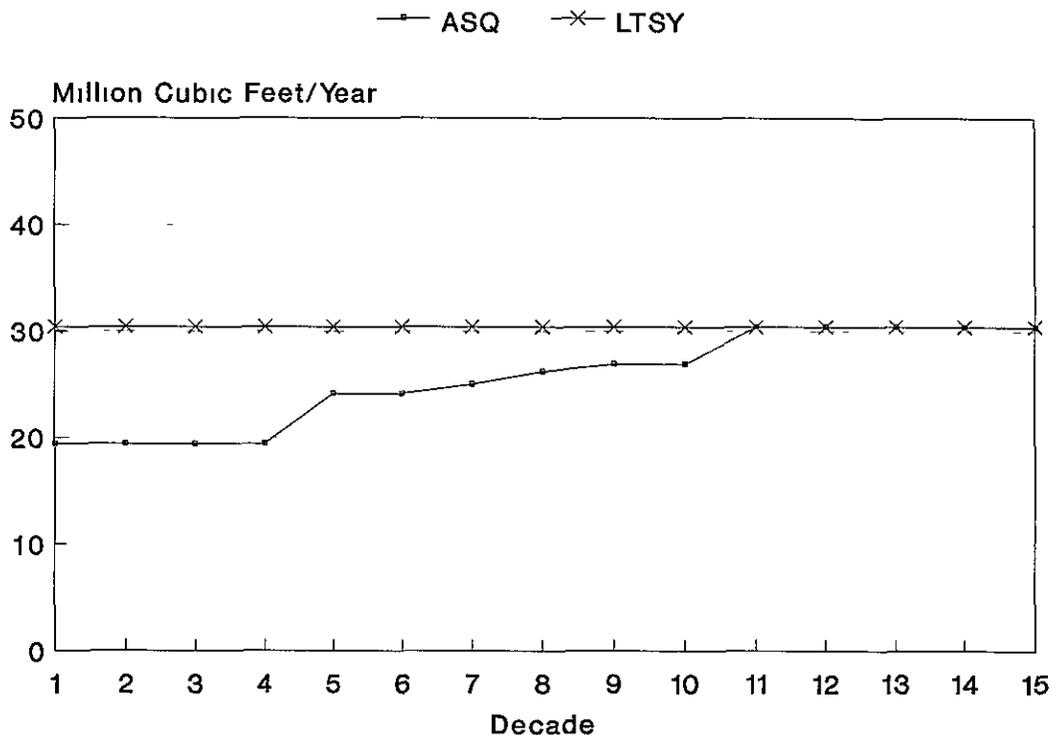


TABLE 4-6
Vegetation Management Practices on Suitable Forestlands
During the Next Decade

Silvicultural Practice	Average Annual Treatments (1,000 acres)
Regeneration Harvest	0.5
Clearcut and Seedtree (Seedcut)(1)	NE
Shelterwood and Seedtree	
Preparatory Cut	NE
Seed Cut	NE
Removal Cut(2)	1.6
Selection(3)	8.4
Intermediate Harvest	
Commercial Thinning	2.7
Salvage/Sanitation Harvest(4)	13.7
Timber Stand Improvement	14.4
Reforestation (1-4)	6.4

(1) Includes reforestation resulting from timber sales and from replacement of stands containing little merchantable volume where future growth is likely to be poor because of effects of insects, disease, or past suppression.

(2) Includes removal harvest from seedtree system and final removal from unmanaged two-story stands

(3) Sanitation salvage volume includes anticipated mortality due to insects, disease, and wildfire. Should this mortality fail to occur, volume will be sold as live timber and stands will be treated by other harvest methods.

(4) Includes natural and artificial reforestation where appropriated funds and Knutson-Vandenberg (KV) are used for site preparation, planting, or direct seeding.

**TABLE 4-7
Timber Management Intensities for Management Areas with a Programmed Harvest (Acres)**

Working Group/Intensities Lodgepole Pine		FG RT 3A	FG PR 3B	MG PR 3D	Riparian 8	Eagle Replacement 9B	Big Game Winter Range 10	Timber 12	Upper Williamson 15
Existing Forest	Future Forest								
FH	FH	-	-	-	-	-	-	3,647	-
FH	PCT, FH	-	-	-	384	-	-	2,006	-
FH	PCT, 1CT, FH	150	-	-	-	-	-	-	-
FH	PCT, 2CT, FH	-	3,658	4,991	-	-	-	-	-
Salvage, FH	FH	-	-	-	-	-	-	55,208	-
Salvage, FH	PCT, FH	-	-	-	15,428	-	-	47,226	-
Salvage, FH	PCT, 1CT, FH	4,307	-	-	-	-	267	-	12,581
Salvage, FH	PCT, 2CT, FH	499	-	-	145	1,454	-	-	-
OSR, 1CT, FH	FH	20	-	-	-	-	-	-	-
OSR, 1CT, FH	PCT, FH	-	-	-	83	145	-	-	-
OSR, 1CT, FH	PCT, 1CT, FH	-	-	247	-	-	-	2,972	-
PCT, FH	FH	-	-	-	-	-	-	31,168	-
PCT, FH	PCT, FH	-	-	-	-	-	-	8,473	-
PCT, 1CT, FH	PCT, 1CT, FH	-	-	-	-	-	-	3,153	-
PCT, 2CT, FH	PCT, 2CT, FH	-	-	1,014	1,773	64	-	-	-
SUIT MINLEVEL		1,257	108	1,633	2,326	-	-	-	1,423
Total Lodgepole Pine Suitable Acres		6,233	3,766	7,885	20,139	1,663	267	153,853	14,004

NOTE Information for No Change Alternative not available

Existing Forest the timber stand condition inventoried in 1981

Future Forest the forest that will grow after the existing forest is regenerated.

FH Final harvest (the regeneration harvest)

OSR Overstory removal

PCT. Precommercial thinning.

1CT One commercial thinning before final harvest

2CT Two commercial thinnings before final harvest

5CT Five commercial thinnings before final harvest

SEL HAR 1st Per Selection harvest during the first decade

SEL HAR 2nd Per: Selection harvest during the second decade.

SEL HAR 3rd Per: Selection harvest during the third decade.

SUIT Lands suitable for timber harvest

MINLEVEL No planned timber harvest.

TABLE 4-7 (continued)
 Timber Management Intensities for Management Areas with a Programmed Harvest (Acres)

Working Group/Intensities Mixed Conifer		FG RT 3A	FG PR 3B	MG PR 3D	Riparian 8	Eagle Replacement 9B	Big Game Winter Range 10	Timber 12	Upper Williamson 15
Existing Forest	Future Forest								
FH	PCT, 1CT, FH	-	-	-	-	-	-	3,612	-
FH	PCT, 2CT, FH	-	-	-	-	-	-	83	-
FH	PCT, 5CT, FH	3,146	2,624	4,255	-	2,317	-	-	-
OSR, PCT, 1CT, FH	PCT, 1CT, FH	-	-	-	-	-	-	1,859	-
OSR, PCT, 5CT, FH	PCT, 5CT, FH	609	537	4,094	-	157	-	-	-
1CT, FH	PCT, 1CT, FH	-	-	-	-	-	-	3,274	-
1CT, FH	PCT, 5CT, FH	-	-	2,556	-	1,984	-	-	-
3CT, FH	PCT, 5CT, FH	-	-	10,692	-	1,956	-	-	-
PCT, 1CT, FH	PCT, 1CT, FH	-	-	-	-	-	-	4,607	-
PCT, 5CT, FH	PCT, 5CT, FH	1,386	749	7,506	-	661	-	-	-
SEL HAR 1st Per SUIT MINLEVEL	Selection Harvest	-	-	-	4,017	-	-	-	-
		-	422	-	-	-	-	-	-
Total Mixed Conifer Suitable Acres		5,141	4,332	29,103	4,017	7,075	0	13,435	0

TABLE 4-7 (continued)
Timber Management Intensities for Management Areas with a Programmed Harvest (Acres)

Working Group/Intensities Pine Associated		FG RT 3A	FG PR 3B	MG PR 3D	Riparian 8	Eagle Replacement 9B	Big Game Winter Range 10	Timber 12	Upper Williamson 15
Existing Forest	Future Forest								
FH	PCT, 1CT, FH	-	-	-	-	-	-	18,459	-
FH	PCT, 2CT, FH	-	-	-	-	-	850	-	-
FH	PCT, 5CT, FH	-	29	1,960	-	-	-	-	-
OSR, PCT, 1CT, FH	PCT, 1CT, FH	-	-	466	-	-	-	13,786	-
OSR, PCT, 2CT, FH	PCT, 2CT, FH	-	-	-	-	-	284	-	-
1CT, FH	PCT, 1CT, FH	-	-	-	-	-	-	11,390	-
PCT, 1CT, FH	PCT, 1CT, FH	-	-	-	-	-	-	790	-
SEL HAR 1st Per	Selection Harvest	43	93	938	212	-	-	16,108	-
SEL HAR 2nd Per	Selection Harvest	-	-	1,021	518	-	332	14,570	-
SEL HAR 3rd Per	Selection Harvest	335	-	2,620	2,285	-	72	5,147	20
Total Pine Associated Suitable Acres		378	122	7,005	3,015	0	1,538	80,250	20
Working Group/Intensities Ponderosa Pine		FG RT 3A	FG PR 3B	MG PR 3D	Riparian 8	Eagle Replacement 9B	Big Game Winter Range 10	Timber 12	Upper Williamson 15
Existing Forest	Future Forest								
SEL HAR 1st Per	Selection Harvest	1,579	1,173	8,844	2,545	492	2,794	133,702	4,736
SEL HAR 2nd Per	Selection Harvest	-	144	287	15	34	3,016	84,435	-
SEL HAR 3rd Per	Selection Harvest	7,312	4,618	10,674	14,111	2,377	17,733	40,606	16,274
Total Ponderosa Pine Suitable Acres		8,891	5,935	19,805	16,671	2,903	23,543	258,743	21,010
Total Suitable Acres		20,643	14,155	63,798	43,842	11,641	25,348	506,281	35,034

Tables 4-8, 4-9, 4-10, and 4-11 give detail about the land base and the present and future condition of the timber growing stock on the land base.

Table 4-8 is the land classification for the Forest Plan. Table 4-8 starts with the total areas within the forest boundary and then subtracts the private land acres and the nonforested lands to determine the total forested lands. Next, the withdrawn lands and the unsuitable forested lands are subtracted to show the lands tentatively suitable for timber production. Then the acres requiring no programmed harvest to meet management requirements and other resource objectives are subtracted to show the lands suitable for timber production in the Forest Plan.

Table 4-9 is an estimation of the timber productivity of the lands suitable and unsuitable for timber production under the Forest Plan.

Table 4-10 summarizes the present growing stock, estimates the future growing stock, and shows the average rotation of regenerated stands. Current growing stock changes very little over time, but the growth rates increase substantially as mature trees are harvested and replaced by younger rapid growing trees.

Table 4-11 shows the estimated age of the acres suitable for timber production at the present and then at the end of the planning horizon.

**TABLE 4-8
Land Classification**

	Forest Plan
Total National Forest Area	1,101,787
<i>Other ownerships</i>	58,240
Net National Forest Area	1,043,547
Nonforested land	38,318
Lands developed for other than timber production	2,941
Total nonforested land	41,259
Forested Lands	1,002,288
Legislatively Withdrawn From Timber Production	
Mountain Lakes, Sky Lakes, Mount Thielsen Wildernesses	87,530
Blue Jay Springs Research Natural Area	256
Total withdrawn forested lands	87,786
Unsuitable for Timber Production	
Irreversible resource damage	0
Regeneration difficulty on lands capable of growing more than 20 cubic feet/acre/year	22,427
Noncommercial species (Juniper and Aspen)	14,356
Regeneration difficulty on lands growing less than 20 cubic feet/acre/year	52,325
Total unsuitable forested land	89,108
Net National Forest Area Not Suitable for Timber Production	218,153
Forested Lands Tentatively Suitable for Timber Production	825,394
Lands Needed to Meet Management Requirements	
Old Growth	29,970
Eagle Nests	4,265
Eagle Winter Roost	1,810
Subtotal Less Overlapping Acres	36,045
Lands Needed to Meet Other Resource Objectives	
Additional Old Growth	25,309
Snag Management Areas	23,941
Water Quality	1,306
RNA Additions	1,939
Semiprimitive Recreation	4,243
Unique Areas	11,833
Subtotal Less Overlapping Acres	68,571
Lands Not Suitable for Timber Production	322,769
Lands Suitable for Timber Production	720,778

**TABLE 4-9
Timber Productivity Classification**

Potential Growth (cubic feet per acre CMAI)	Suitable Lands (1,000 acres)	Unsuitable Lands (1,000 acres)(1)
Less than 20	0.0	232.7
20-49	423.1	48.8
50-84	210.5	0.0
85-119	46.8	0.0
120-164	32.4	0.0
165-224	8.0	0.0
225+	0.0	0.0
Total	720.8	281.5

(1) Productivity for unsuitable forested lands is estimated based on sparse data.

**TABLE 4-10
Present and Future Forest Conditions**

	Unit of Measure	Suitable Land	Unsuitable Land
Present Forest			
Growing Stock	MMCF	1,022	406
	MMBF	6,174	2,209
Live Cull	MMCF	6	NE
	MMBF	30	NE
Salvageable Dead	MMCF	140	NE
	MMBF	431	NE
Annual Net Growth	MMCF	10.3	NE
	MMBF	62.2	NE
Annual Mortality	MMCF	NE	NE
	MMBF	NE	NE
Future Forest			
Growing stock	MMCF	1,021	NA
Annual net growth	MMCF	31.9	NA
Average Rotation Age for Regenerated Stands			
Ponderosa Pine		All uneven-aged	
Pine Associated	Years	100 to NE	
Mixed Conifer	Years	90 to 130	
Lodgepole Pine	Years	70 to NE	

NOTE: NE means not estimated

**TABLE 4-11
Age Class Distribution
on Suitable Forestlands
(1,000 acres)**

Age Class	Present Forest	Future Forest
0-20	122	95
30-60	82	175
70-100	7	82
110-150	280	37
160+	230	332

Forestwide Standards and Guidelines

Standards and guidelines state the bounds or constraints within which all practices will be carried out in achieving the planned objectives of the Forest Plan. Standards and guidelines supplement, but do not replace, direction from Forest Service Manuals and Handbooks and the Regional Guide for the Pacific Northwest Region, and they are not intended to conflict with existing applicable State and Federal laws. The standards and guidelines are intended to help the manager achieve the goals and objectives, while staying within the constraints prescribed by law along with the constraints designed to provide environmental safeguards. The nature and design of the standards and guidelines are intended to mitigate effects, to cause an action to become less harsh or severe. Mitigation is extremely important in the design and implementation of all projects. The monitoring prescribed in chapter 5 will be required to assure that the standards and guidelines are followed and that the anticipated results are achieved.

Two categories of standards and guidelines are applied to management of the Forest. **FORESTWIDE STANDARDS AND GUIDELINES APPLY TO ALL MANAGEMENT AREAS, UNLESS SPECIFICALLY EXCEPTED BY DIRECTION FOR AN INDIVIDUAL MANAGEMENT AREA. MANAGEMENT AREA STANDARDS AND GUIDELINES SUPERSEDE FORESTWIDE STANDARDS AND GUIDELINES.** The standards and guidelines specific to the management areas are presented in the following section of this chapter on management prescriptions.

The type of direction and degree of restriction are identified by the terminology in the standards and guidelines. To understand the intent of the direction, interpretation of the terms used is critical. (Refer to FSM 1110.8.)

The first intent is conveyed by the words **"shall"** or **"must."** With this degree of restriction, the action is mandatory in all cases.

The second is conveyed by the words **"should"** or **"ought."** With this degree of restriction, action is required, unless justifiable reason exists for not taking action. This direction is intended to require a practice unless it entails unacceptable hardship or expense. Exceptions to "should" restrictions are expected to occur infrequently.

The third type of direction uses the word **"practicable"** and acknowledges that a given practice is not always feasible and practical in every situation. It is intended to encourage but not to require a practice.

The fourth uses the words **"may"** or **"can"** and pertains to activities which may or may not be appropriate, depending on circumstances. For example, grazing may be consistent with the objectives of certain management areas, but specific sites may or may not contain suitable forage. This direction is intended to allow for taking advantage of compatible opportunities or to provide for exceptions when objectives of a particular standard can be met through alternate methods.

Levels of resource management prescribed in the standards and guidelines must be met. Prescribed activities will be consistent with the goals of each management area. However, land managers will employ all available inventory information to maximize enhancement and minimize impairment of every resource value involved.

The standards and guidelines describe what will and will not occur in a particular area to achieve the desired goal. Because of the great variety of resources and circumstances, however, provision has been made for unusual and unforeseen implementation problems. Some of these problems will be the result of insufficient or inaccurate inventory data. The NEPA process will guide project planning and Forest Plan implementation, and must be followed to make a departure from the standards and guidelines. This could result in an amendment to the Forest Plan. A situation must be fully described, alternatives

must be developed, and costs must be evaluated. Mitigation measures will be employed to produce a result as close as possible to that directed. The long-term goal for a particular management area will not change.

Wilderness management plans, viewshed plans, and bald eagle nest site plans will supplement direction contained in the Forest Plan. All other planning documents, except for contingency plans responding to *special circumstances*, are superseded by the Forest Plan. Other operational plans and policy statements which do not provide resource management direction will remain in effect but are not tied in writing to the Forest Plan.

As an aid to the user, the direction statements are in bold type so they can be quickly discerned from the explanatory information and examples that are present in some sections.

The following is a list of standards and guidelines that apply forestwide. These standards and guidelines are numbered according to resource.

Air Quality

- 1-1 Management activities shall be planned to maintain air quality at a level adequate for the protection and use of the national forest resources and to meet or to exceed applicable Federal and State standards and regulations (36 CFR 219.27[a][12]).
- 1-2 The Forest shall coordinate with the appropriate air quality regulatory agencies. Prescribed burning operations shall comply with the procedures identified in the Smoke Management Operations Plan (Oregon State Forestry Directive 1-4-1-601).
- 1-3 The Forest shall demonstrate reasonable progress in reducing total suspended particulate (TSP) emissions from prescribed fire.
- 1-4 The best available predictive methods and models and the most cost efficient technology should be used to minimize the impact of prescribed burning on smoke-sensitive areas and designated Federal Class I areas.
- 1-5 Three basic strategies may be used to manage prescribed fire smoke: reduction, dilution, and avoidance.
 - A The strategy of reduction focuses on reducing the amount of smoke (particulates) produced by increasing the efficiency of burning and reducing the amount of fuel consumed by fire. This may be accomplished by such methods as:
 - 1. Increasing wood utilization standards and the continued use of YUM and PUM specifications (yarding or piling unmerchantable material), consistent with the objectives for large woody material, in timber sale contracts.
 - 2. Specifying logging methods that reduce timber breakage and minimize creation of unmerchantable debris (for example, directional felling and tree lining).
 - 3. Selecting fuel moisture parameters that reduce the total consumption of fuel and reduce the smoldering phase of combustion.
 - 4. Selecting ignition (fire-starting) methods and techniques that lower TSP production.
 - 5. Utilizing alternative slash treatment methods, such as chipping or burying, in place of prescribed fire.
 - 6. Requiring, where feasible, prompt and vigorous mop-up (extinguishing remnant traces of fire to prevent its recurrence)
 - 7. Increasing the air supply to slash piles and burn bays (specially created areas along roads for accumulating and treating slash).
 - 8. Changing the merchantability specifications of logs.
 - B The dilution or dispersion strategy may also be used to mitigate air quality impacts. This strategy is governed by weather-related processes. The capability of these processes determines the amount of fuels that may be consumed, as well as the time, location, and amount that could be released into the atmosphere. Specific mitigation measures that could be utilized in respect to the dispersion strategy include:

1. Scheduling burns over a period of several days rather than all on a single day.
 2. Igniting the units during unstable atmospheric conditions.
 3. Limiting burning when transport wind speeds are less than 9 miles per hour and the morning mixing height is less than 1,500 feet above the burn site.
 4. Selecting a combination of prescription parameters--such as fuel conditions, weather conditions, and ignition techniques--that will generate an elevated plume which mixes well with the surrounding air mass.
 5. Using precipitating cloud systems as a "scrubber" to remove particulates and soluble gases.
 6. Coordinating prescribed burning activities with adjacent agencies and land managers to reduce the total impact on local airsheds.
- C. The third strategy, avoidance, may also be used in a Forest smoke management program. This strategy involves the selection of on-site and meteorological conditions that will put the smoke either up and over smoke-sensitive areas or away from these areas. Practices that may be followed include:
1. Burning when wind direction is favorable to avoid smoke-sensitive areas.
 2. Selecting a combination of burning prescription parameters to generate an elevated plume that exceeds the ceiling of the smoke-sensitive area and then moves quickly over or away from the area
 3. Using the combination of terrain elevation and inversion layers to prevent smoke from settling into sensitive areas.

1-6 Public understanding of prescribed fire and smoke management will be most helpful in ensuring that any one of the strategies, or a combination of strategies, is successful. Some measures that may be employed include:

1. Educating the public as to the objectives of prescribed fire use in the local environment, the steps taken to reduce smoke, and how smoke is managed.
2. Informing the public before the ignition of potentially troublesome units

1-7 Coordination with other local agencies that also are responsible for maintaining air quality is a key in ensuring a viable air quality maintenance program for the Forest. Some measures that may be taken to ensure overall air quality are:

1. Cooperating with local air pollution authorities in monitoring activities that may result in new or modified sources of emissions which may impact Class I areas.
2. Completing review of any air quality studies that are part of new source permits.

Cultural Resources

- 2-1 The Forest will comply with all applicable legal requirements for management of cultural resources, including the National Historic Preservation Act of 1966, the National Environmental Policy Act of 1969, the American Indian Religious Freedom Act of 1978, and the Archaeological Resources Protection Act of 1979.
- 2-2 The Forest cultural resource overview shall be maintained and updated.
- 2-3 A cultural resource inventory program will be conducted under the supervision of a professional archaeologist on a project-specific level before ground-disturbing activities occur, in compliance with applicable Federal historic preservation legislation. The results of project-level cultural resource inventories shall be documented in a cultural resource report and in the project planning records.
- 2-4 The significance of inventoried sites shall be evaluated by applying the criteria for eligibility to the National Register of Historic Places; qualifying sites ("eligible" cultural resources) should be nominated.
- 2-5 The effects of all management activities on significant cultural resources shall be considered, and measures shall be developed to avoid or mitigate any adverse effects. Measures shall be developed in consultation with the Oregon State Historic Preservation Officer (SHPO) and, if necessary, the National Advisory Council to protect significant sites from adverse effects due to ground-disturbing project activities
- 2-6 Eligible cultural resources will be considered for protection from degradation due to vandalism, unauthorized public use, and natural deterioration. They should be monitored by means of a recurring inventory to assess whether their condition has been affected by vandalism, unauthorized use, and natural deterioration. Stabilization or rehabilitation may be carried out on significant sites which have been damaged.
- 2-7 Antiquities permits may be issued to qualifying academic institutions or other organizations and individuals for the study and research of cultural resource sites.
- 2-8 Suitable cultural resource properties may be interpreted for the recreational use and educational benefit of the general public. Preferred methods include brochures, signs, displays, interpretative trails, tours, and video or slide programs.
- 2-9 Any long-term management of cultural resources shall be coordinated as necessary with the State Historic Preservation Office, the Klamath Tribe, and other groups or individuals. Cultural resources shall be managed according to the following priorities:
1. Nonimpactive data collection (including mapping, photo documentation, and reporting) to preserve cultural resources for future scientific study and to guide development of the cultural resource program.
 2. Encouragement of understanding and ownership of the cultural resource program through public information efforts with special emphasis for members of the Klamath Tribe and local publics.
 3. Adaptive use of historical structures by considering them for interpretative purposes; for example, administrative sites, residences, and interpretative centers.

4. Adherence to a consultation process with the Klamath Tribe, recognizing the tribe's interest in sites related to its tribal history.
 5. When cultural resource sites are damaged, controlled data recovery by means of testing, excavating, and analyses will be done in consultation with the Klamath Tribe.
- 2-10 Management of culturally significant, traditional use, and religious sites shall be coordinated with the Klamath Tribe. Information about planned project activities shall be presented to the Klamath Tribe for coordination concerning effects on these sites.

Facilities

Transportation System

- 3-1 Development and management of the Forest transportation system shall be in accordance with an approved transportation system plan. This plan shall be the official description of the transportation system. The plan consists of a series of base maps showing the location of each facility and an inventory record defining their characteristics.
- 3-2 Management of the Forest transportation system shall be in accordance with an approved Forest road management plan. The purpose of this plan is to determine the proper combination of development, traffic management, and maintenance of the existing road system to meet the management area objectives the best. This plan shall contain specific road management objectives, multiyear development plans, traffic management and maintenance plans, and the road plans of other agencies.
- 3-3 Temporary roads may be constructed where there is a one-time need for a transportation facility. After the need is fulfilled, the road shall be closed and returned to vegetative production. Temporary roads left from past activities shall be evaluated as they are encountered during project-level analysis.
- 3-4 Roads shall be constructed and maintained to the standards and levels necessary to meet the resource management objectives.
- 3-5 All roads shall have approved road management objectives contained in the road management plan. These objectives state the intended purpose of the road; the resource objectives served; and the selected design, maintenance, and operation criteria that apply to the road.
- 3-6 Road construction, reconstruction, maintenance, and signing shall be in accordance with management area objectives, and should meet recognized engineering standards contained in Forest Service manuals, design handbooks, and other technical guides.
- 3-7 Existing roads not needed for future transportation purposes shall be closed and returned to vegetative productivity.
- 3-8 Whenever practical, roads should be located in areas with the lowest erosion potential.
- 3-9 Road construction activities shall be scheduled to minimize soil erosion when heavy rain or heavy surface runoff is most likely to occur.
- 3-10 Where existing roads or trails are affecting air and water quality, steps should be taken to mitigate the problem.
- 3-11 Road drainage shall be designed and maintained to minimize road runoff sediment directly into riparian areas.
- 3-12 Culverts or bridges shall be of adequate size to accommodate anticipated high stream flows and fish passage.
- 3-13 Stream crossings should not change floodplain or stream flow characteristics.

- 3-14 Stream crossing construction shall be scheduled during low stream flow and/or outside spawning periods
- 3-15 Traffic management shall be considered as an alternative to road reconstruction when the existing facility is inadequate for mixed traffic
- 3-16 All new major transportation and utility facilities should be placed within or beside existing corridors to the extent practicable.
- 3-17 Road construction or reconstruction activities within an existing utility corridor shall be coordinated with the appropriate utility company to determine which precautions are necessary to safely cross the corridor.
- 3-18 Existing roads not needed for access should be closed until access is required. Roads should be closed based on one or all of the following criteria: (1) need to protect the road, soil and water, or wildlife; (2) expected access need or road use; (3) safety of expected users; (4) need to protect cultural resources; (5) need to maintain or improve habitat effectiveness for wildlife; (6) need to provide planned recreation experience opportunities; and (7) reduction in road maintenance costs.

Administrative Sites

Site Planning

- 3-19 An approved site development plan must be completed before expenditure of funds on new construction or additions to existing structures, including utilities.
- 3-20 New facilities and additions to existing facilities shall be designed to provide barrier-free access.

Construction, Reconstruction, and Operational Management

- 3-21 Acquisition, use, and disposal of Forest facilities (including historic structures) shall be in accordance with an approved facilities master plan.
- 3-22 Design standards shall be based on site management objectives, including environmental constraints, user safety, national and local uniform building codes, traffic requirements, and economics.
- 3-23 All new sites shall be planned, constructed, and managed to provide the anticipated uses safely with a minimum impact to adjacent uses and landowners. Completed projects shall include provisions for reducing adverse environmental effects of sight, sound, odor, and drainage.
- 3-24 Site or structure closures may be implemented to meet health and safety needs or to reduce damage and maintenance costs.
- 3-25 Facility condition surveys shall be conducted to determine maintenance needs and to identify needed corrective actions.
- 3-26 Building maintenance funds and quarters collections will be allocated to cover operation, maintenance, and management proposals for facilities, and shall be guided by the following: (1) health and safety--hazard elimination; (2) prevention of further deterioration--of facilities, grounds maintenance, and other site improvement; (3) program support--maintenance that

contributes to increased resource production and/or decreased unit costs for projects; (4) energy conservation; and (5) compliance with other laws and regulations.

- 3-27 Protection, stabilization, preservation, rehabilitation, restoration, and reconstruction of buildings and structures that are on, or have been nominated to, the National Register of Historic Places shall follow the Secretary of the Interior's standards for historic preservation projects.

Temporary Structures

- 3-28 Construction of "temporary facilities" should normally be discouraged. Structures planned and constructed as "temporary" shall be removed or obliterated when the need is satisfied. Methods used and timing should be in accordance with the project plan. Structures that subsequently are needed for additional use or are not removed or obliterated as planned shall be included in the site plan.

Fish, Wildlife, and Sensitive Plants

- 4-1 At the Forest level, fish and wildlife habitat shall be managed to maintain viable populations of all existing native and desired non-native plant and animal species. Distribution of habitat shall provide for species viability and maintenance of populations throughout their existing range on the Forest.

Endangered, Threatened, or Sensitive Species

- 4-2 Endangered, threatened, and sensitive species shall be identified and managed in cooperation with the USDI Fish and Wildlife Service, Oregon Department of Fish and Wildlife (animals), and Oregon Department of Agriculture (plants). Legal and biological requirements for the conservation of endangered and threatened species and species proposed for listing as threatened or endangered status shall be met.

Habitat for existing federally classified threatened and endangered species shall be managed to achieve objectives of recovery plans.

- 4-3 All Forest Service projects, programs, and activities conducted, funded, or permitted shall be reviewed for possible effects on threatened, endangered, and sensitive species of animals and plants.

Biological evaluations shall be prepared for each project authorized, funded, or conducted on National Forest System land to determine the possible effects the proposed activity will have on endangered, threatened, proposed, or sensitive species.

- 4-4 If endangered, threatened, or proposed species are found in a project area, consultation requirements with the USDI Fish and Wildlife Service shall be met in accordance with the Endangered Species Act (Public Law 93-205). Before a project can be carried out, protection or mitigation requirements shall be specified (NFMA, 36 CFR 219.27[a][8]).

- 4-5 Lists of endangered, threatened, and sensitive plant and animal species shall be maintained and updated periodically as new information is collected. Pertinent information shall be submitted to the Regional Office for updating the Regional Forester's Sensitive Species Lists and to the appropriate agencies for inclusion in statewide data bases.

- 4-6 Forest personnel shall not identify (to the public) specific location information that could jeopardize the welfare of an endangered, threatened, proposed, or sensitive species.

- 4-7 Habitat use of the Winema National Forest by these species shall be evaluated. Habitat requirements sufficient to maintain the species shall be provided.

- 4-8 Where appropriate, standards and guidelines developed by the Oregon Department of Fish and Wildlife may be used for species that are considered sensitive by ODFW and that are on the the Regional Forester's Sensitive Species List.

- 4-9 Where appropriate, standards and guidelines developed by the Klamath Tribe may be used for species that are considered to have traditional cultural significance to the Klamath Tribe.

Raptors and Colonial Nesting Birds

4-10 Active roost and nest sites (including rookeries) shall be protected from disturbing human activities during their respective nesting seasons. Table 4-12 indicates protection zones and nesting and roosting seasons of some important bird species on the Winema National Forest.

Each nest site is assumed potentially active until June 1. If monitoring has shown that no nesting attempt has been initiated or that a nesting attempt has failed by June 1, the nest site will be considered inactive, and nest site restrictions may be waived. Monitoring will be supervised and evaluated by a qualified wildlife biologist.

Site management guides shall be developed for all consistently occupied (more than two years) nest sites, roosts, and rookeries.

TABLE 4-12
Important Wildlife Nesting and Roosting Seasons
and Required Protection Zones

Species	Status	Nesting/Roosting Season	Protection Zone
American peregrine falcon	endangered(2)	February 1-August 31	700 yards
Bald eagle	threatened(2)	January 1-August 31	440 yards
Northern spotted owl	threatened(2)	March 1-September 30	880 yards
Northern goshawk	low density	March 1-August 31	440 yards
Pileated woodpecker	low density	March 1-July 31	440 yards
Three-toed woodpecker	low density	April 15-July 15	440 yards
Golden eagle	low density	February 1-July 31	440 yards
Great blue heron	low density	February 1-July 31	440 yards
Osprey	low density	March 1-August 31	440 yards
Great gray owl	low density	March 1-July 31	440 yards
Prairie falcon	low density	March 1-August 31	440 yards
Flammulated owl	low density	March 1-August 31	440 yards

(1) Radius of an approximately circular area around a nest tree, ledge, or cliff

(2) Federal listing.

(3) Regional Forester Sensitive Animal List.

Deer and Elk Habitat

- 4-11 Deer (mule and black-tailed deer) habitat shall be managed, considering all factors such as roads, cover, forage, water distribution, and livestock competition so that habitat capability to support deer is maintained or improved. On limited site-specific instances, short-term decreases (less than 10 years) are acceptable to achieve long-term benefits. Effects shall usually be calculated for projects on areas ranging from 8,000 to 60,000 acres. Habitat suitability models, such as the Interagency Technical Advisory Committee Mule Deer Model, 1985 as amended, may be used in projects such as but not limited to timber sales, grazing plans, road construction and water development.
- 4-12 Road access will be restricted and human activities will be discouraged between May 1 and June 30 in areas that have been identified as having traditional elk calving, only an area on the north end of Klamath District has been identified. Migration corridors of continuous coniferous cover no less than 600 feet wide will be retained to access calving areas as they are identified. Riparian areas and old-growth areas may contribute to migration corridors. As other elk calving areas are identified, this standard will be applied.
- 4-13 With the exception of calving areas, habitat east of Highway 97 will not be managed specifically for elk until completion of a cooperative elk study and the cooperative development of elk management guidelines.
- 4-14 The Forest shall provide a minimum of 30 percent of its area as cover for deer. Generally 15 percent of the area will be hiding cover, 10 percent will be thermal cover, and 5 percent will be cover for fawning. Whenever possible, all cover also will be hiding cover. A short-term (10-year) reduction of cover to 15 percent of an area may be justified on a project-specific basis if reduction below 30 percent cover will provide long-term (greater than 10 years) benefits for deer.
- 4-15 To provide adequate diversity of forage structure for deer, activities shall be planned to achieve multiple age classes in the brush vegetative component.

Wildlife forage will be allocated firstly to meet the needs of big game, secondly to meet the needs of other animals.

Fish and Aquatic Habitat

- 4-16 Streams shall be managed to maintain or to improve the present level of native fish habitat capability. Stream inventories shall be maintained and updated to: assess habitat capability; monitor changes due to natural or management-related events; and identify opportunities for rehabilitation or enhancement.
- 4-17 Fisheries habitat enhancement shall be conducted according to Forest basin priorities. Basin priorities and plans should be prepared in cooperation with the Klamath Tribe and the Oregon Department of Fish and Wildlife. The plans will evaluate the current condition of habitat, fish populations, opportunities for enhancement, and the associated costs and benefits. Enhancement projects shall be monitored to evaluate effectiveness. Emphasis will be placed on maintenance or improvement of spawning, rearing, and migration habitats.

Wildlife Tree (Snag) Habitat

- 4-18 Habitat capability for woodpeckers (indicators for cavity-nesting species) shall be continually maintained throughout the Forest at not less than 40 percent of potential population levels (Thomas et al 1979) in all forested lands except lodgepole pine. In lodgepole pine, the decrease in large diameter trees because of catastrophic mountain pine beetle infestation may preclude achieving the 40 percent level. In lodgepole pine, the highest potential population level possible shall be achieved up to the 40 percent level. With the possible exception of lodgepole pine, this will result in maintenance of self-sustaining populations of cavity-nesting species.
- 4-19 In new sale areas, additional individual wildlife trees or wildlife tree clumps shall be left to offset lower numbers in older units in the vicinity. In these situations, the objective is to maintain an average 40 percent habitat level within as small an area as feasible (such as a small drainage basin).

Established for forests in Region 6, wildlife tree management standards shall be followed (1920/2600 letter from Regional Forester dated September 9, 1988). This direction provides, in part, that snag densities needed to meet Management Requirement direction for cavity excavators must be provided within land areas that are generally no larger than normal unit size (not more than 40 acres). These densities will be maintained through the full rotation on these areas by providing for green replacement trees that will become snags of adequate size when existing snags fall.

Tables 4-13 and 4-14 should be used to meet the 40 percent habitat capability level. Table 4-13 identifies the number of acres of clumps needed to produce snags at the 40 percent level per 40 acres based on the Forest average for major timber working groups from the timber inventory. Table 4-14 identifies the number of snags and green trees needed per 40 acres to meet the objective 40 percent level.

Snags with the largest diameter breast height (DBH) last longer and make the best wildlife habitat, and should be selected whenever possible. However, wildlife trees that will continue to grow for another 30 years to 35 years before becoming snags may be of smaller diameter than those which die at the beginning of a rotation. Snags with diameters (DBH) over 20 inches meet the standard and guideline for large woody material.

Wildlife trees designated in riparian areas may be counted toward snag objectives only if they are excess to those needed to provide shade in stream corridors (essential shade trees shall not be killed to provide snag habitat) or large woody debris requirements.

- 4-20 Wildlife trees should be clumped where this technique is usable and feasible and meets the 40 percent standard. Individual trees may be used if stand conditions preclude clumping and safety considerations are met.
- 4-21 Designated wildlife trees or wildlife tree clumps shall be protected from woodcutting and Forest management activities.

TABLE 4-13
Estimated Acres for Each 40 Acres to Produce a 40 Percent
Potential Population Level for Cavity Nesters

Working Group	Acres Needed
Ponderosa Pine	2
Pine Associated	2
Mixed Conifer	1
Lodgepole Pine	1

TABLE 4-14
Number of Snags and Green Trees for Each 40 Acres to Produce
a 40 Percent Potential Population Level for Cavity Nesters

DBH Class	Dead trees needed per 40 acres	Green trees needed per 40 acre
10 - 12	12	24
12 - 20	22	33
20+	2	2
Total	36	59

Dead and Down Woody Material

4-22 Class I or II logs shall be left to maintain dead and down woody material habitat. This material shall be left in the following numbers and size classes by working group.

1. Ponderosa Pine: two or more logs/acre, 12 inches or greater diameter at the small end, greater than 8 feet long.
2. Pine Associated: six or more logs/acre, 12 inches or greater diameter at the small end, greater than 8 feet long.
3. Mixed Conifer: six or more logs/acre, 12 inches or greater diameter at the small end, greater than 8 feet long.
4. Lodgepole Pine: 10 or more logs/acre, 6 inches or greater diameter at large end, greater than 8 feet long.

Charring of down material should be minimized in prescribed burning where practicable. The suitability of logs as vertebrate and invertebrate habitat is reduced by charring.

Live or dead standing trees shall be left to become down material when Class I and II logs are not available on the ground. Since these live or dead trees will become dead and down woody material habitat, they must be in addition to the snag or green tree replacement habitat requirements.

(See page 80 in Wildlife Habitats in Managed Forests the Blue Mountains of Oregon and Washington for dead and down log class definitions and diagrams.)

- 4-23 To provide habitat for small animals, at least one pile of slash or natural piles of limbs shall be retained per acre. Slash piles should be at least 3 feet in height and 6 feet in diameter.

Cliffs, Caves, and Talus Habitat

- 4-24 Individual projects shall be designed to protect the value of cliffs (including rimrock), caves, and talus habitat for wildlife. Protection shall include vegetative protection zones: at least 200 feet adjacent to cliff, cave, and talus habitat receiving nesting or denning use by mammals; and at least 200 feet adjacent to this habitat receiving nesting or rearing use by birds.

Rock quarries should be located at sites exhibiting the least desirable characteristics as wildlife habitat.

Hardwood Habitat

- 4-25 Maintain or enhance hardwood (aspen and cottonwood) production on the Forest. Maintain a variety of hardwood age classes on the Forest. Hardwood stands mixed with conifer make a substantial contribution to visual, wildlife habitat, and vegetative diversity.

Meadows

- 4-26 Protect and enhance meadows as a forest habitat component. Protection and enhancement includes stopping or reversing forest tree encroachment. A buffer of shrub or tree vegetation may need to be preserved on the perimeter of the opening.

Miscellaneous Wildlife Sites

- 4-27 During the life of this Forest Plan, habitat sites will be found. These sites will have special value for wildlife or botanical resources, and are not otherwise addressed in the standards and guidelines. Management of these sites should be dealt with individually as part of the environmental analysis process for specific management activities. Each Ranger District shall maintain a list of sites to be considered for special management consideration as Wildlife or Botanical Sites at the next revision of the Forest Plan

Plant Collecting (Including Sensitive Species)

- 4-28 Federally listed threatened and endangered species are protected by the Federal Endangered Species Act (1982 amendments). The Forest Service cannot issue permits to collect these species for any purpose. This authority is granted only to the U.S. Fish and Wildlife Service.

The Forest Supervisor may issue permits to collect sensitive or restricted plants or plant parts for legitimate scientific or educational purposes. Such collection must not jeopardize the continued vigor or existence of a plant population. Sensitive or restricted plants shall not be collected for commercial or personal use.

Collecting plants or plant parts for any commercial purpose requires a commercial use permit issued by the Ranger District where the collecting activity is proposed. District rangers shall issue or deny commercial permits after review of a proposal presented by the collecting party. When evaluating applications for commercial collecting permits, consideration shall be given to the impacts on all Forest resources, including plant and animal diversity.

Botanical collection permits may be issued by the Forest Supervisor to authorize collection of species other than endangered, threatened, sensitive, or restricted species.

The above standards and guidelines regarding plant collection do not apply to the harvest of trees for timber and firewood.

Lands

Land Adjustment

- 5-1 All National Forest System and non-Federal lands inside and adjacent to the Winema National Forest boundary shall be classified into one of the five landownership planning groups listed below. The Forest may develop more specific adjustment plans by area or with specific ownerships as a supplement to the Forest Plan.

Group 1 - Congressional Direction

This group includes those lands in which Congress has directly or indirectly instructed the Forest Service to retain in ownership and to acquire non-Federal lands for a designated purpose, such as wilderness or wild and scenic rivers. Acquisition of less than fee (full) title would be considered if direction and land management objectives could be met.

Group 2 - Special Management Areas

This group includes those lands that the Forest Service has recognized the need for a special kind of management through the land and resource management planning process. Examples include special interest, roadless recreation, and research natural areas. The landownership direction is to retain National Forest System ownership and to acquire non-Federal land as the opportunity and/or need arises. Acquisition of less than fee title would be considered if land management objectives could be met.

Group 3 - General Forest

This group includes lands that are characteristically general forestland or general rangeland where management direction emphasizes commodity production. These lands will be available for land adjustment and will usually provide most of the land considered in exchange projects. The basis for group 3 is the assumption that lands in this group will be managed to provide similar types of outputs, whether in private or public ownership. Landownership direction is to acquire and to dispose of lands as necessary to facilitate exchanges.

Group 4 - Isolated National Forest Tracts and Intensively Developed Non-Federal Land

Land in this group consists of (1) small isolated tracts of National Forest land situated away from contiguous blocks of National Forest land; and (2) non-Federal lands that are managed for intensive uses such as agriculture, residential subdivision, industrial development, ditch lines, and State and county highways. Landownership direction for this group characteristically is to make National Forest land available for acquisition of non-Federal lands in groups 1, 2, or 3. Non-Federal lands in this group will generally not be acquired.

Group 5 - Lands Needing Further Study

This group includes situations where more intensive study and planning are necessary before landownership decisions can be made. The primary factor that determines the need for intensive study is the necessity for close coordination with local and State governments. Intensive study generally involves private expansion around National Forest ownership. Examples are: residential community growth, industrial development, or conversion of timberlands and rangelands to a more intensive type of agriculture.

Land Line Location

- 5-2 Property boundary surveys, posting, and marking shall be accomplished to support planned or ongoing resource projects (such as timber harvest) to solve or to prevent trespass and to identify administrative and private land boundaries. Adjacent landowners should be encouraged to share the costs of surveying common boundaries.

Land surveying shall be accomplished in accordance with existing objectives, priorities, and standards.

- 5-3 To protect the values of congressionally designated areas like wilderness, national parks, and wild and scenic rivers, boundaries shall be located before project implementation.

Rights-of-Way

- 5-4 Appropriate rights-of-way shall be acquired for all roads and trails necessary for the operation and administration of the Forest.

- 5-5 In areas where national forest intermixes with large areas of private land or other land under a single ownership, the Forest Service should enter into a Road Rights-of-Way Construction and Use Agreement for cost-sharing any joint road system. (This should be done when it is feasible and advantageous to the United States.) Roads within agreement areas shall be added to the agreement by supplement before commercial use commences.

Special Uses

- 5-6 Special use management provides for the use and occupancy of National Forest land when such use is consistent with Forest management area goals and objectives. This use should be permitted only by law, when such uses are in the public interest, and when such uses cannot be served by reasonable development on private land. Special use applications shall be evaluated through environmental analysis before the permit is issued, and appropriate site-specific requirements and mitigation measures shall be developed and included in the permit.

- 5-7 Private landowners shall be granted reasonable access across National Forest System land, subject to applicable regulations and policies. Where reasonable access alternatives across other ownerships exist, authorization to cross National Forest land will not be granted.

- 5-8 Existing withdrawals shall be reviewed by 1991 to determine whether, and for how long, the continuation of the existing withdrawals would be consistent with the statutory objectives of the programs for which the lands were dedicated.

- 5-9 All special-use permits shall be revised when renewed to reflect Forest Plan direction.

- 5-10 All recreation special uses shall be compatible with the Recreation Opportunity Spectrum classification of the area. Facilities shall be designed to meet the designated services to be provided. The number of permits for a specific use should be limited in order to create or to maintain economical operations, to reduce administrative costs, and to provide high quality services. Prospective permittees must demonstrate that they have the financial resources to undertake the proposed venture, or the permit shall not be issued.

- 5-11 All special uses shall be inspected to ensure compliance with the permit.
- 5-12 In project planning and execution, care should be taken to prevent damage to permitted uses, such as summer homes, water developments, and private utilities.
- 5-13 The facilities located within existing transportation and utility corridors shall be managed by the agency that acquired the rights-of-way, in accordance with the requirements of the easement, special-use permit, or authorization.
- 5-14 Additional transportation and utility corridors that major utilities may need shall be designated through an interagency environmental analysis following procedures in the Regional Guide. Future corridor planning and subsequent environmental analysis shall be in accordance with management area goals and objectives. These areas have management goals or environmental constraints that are not, or may not be, compatible with certain types of utility or transportation facilities.
- 5-15 To avoid the proliferation of rights-of-way, the use of existing corridors shall be considered first in determining the best location for a new utility proposal. New transportation and utility proposals shall be accommodated within existing corridors to the maximum extent feasible.
- 5-16 Existing sites used for electromagnetic communications shall be protected from interferences generated by power transmission lines. This may require the power transmission lines to be rerouted or redesigned to protect those sites, or it may otherwise require the proponent of the power line to equitably mitigate the uses established for those sites.
- 5-17 The following actions should be taken in connection with electronic sites:
1. Develop site plans for existing sites which have facilities in place.
 2. Identify potential sites for future development during environmental analyses.
 3. Develop site plans for new sites prior to development.
 4. Issue new permits to direct use of the sites in the following order:
 - a. Utilize residual capacity of existing sites;
 - b. Utilize identified potential sites; and
 - c. Utilize other sites deemed suitable through environmental analysis after preparation of a site plan
- 5-18 Utilities should be designed and located so that they are not highly visible from sensitive transportation corridors or other sensitive viewer locations.
- 5-19 Utility lines shall be buried when it is technically and economically feasible.

Minerals and Energy

- 6-1 Access for exploration and development of locatable or leasable mineral resources shall be analyzed in response to a proposed operating plan. A decision on approval of reasonable access shall be made as a result of the environmental analysis.
- 6-2 Approved operating plans shall include reasonable requirements needed for coordination with other resources and for mitigation of resource concerns.
- 6-3 The following standards apply to mineral leases.
1. Mineral lease applications shall be reviewed in a timely manner. Required conditions and appropriate special stipulations necessary to protect surface resources shall be determined and provided to the Bureau of Land Management.
 2. A "no surface occupancy" stipulation shall be applied to leases only when (a) surface occupancy would cause significant resource disturbance which cannot be mitigated by any other means, (b) where resource impacts would be irreversible or irretrievable, or (c) the occupancy is incompatible with the surface management objectives.
- 6-4 Salable mineral material sources located within state or interstate transportation and utility corridors normally should not be developed.
- 6-5 Removal of salable mineral materials shall be administered on a sale or permit basis. Removals shall be in accordance with approved site development and rehabilitation plans.
- 6-6 A mineral materials management plan shall be prepared and approved, providing or updating the following: (1) an inventory of presently developed mineral materials sources, (2) identification of developable mineral materials reserves; (3) identification of present and projected mineral materials demands; (4) strategy to meet future mineral materials demands; and (5) resource protection and site rehabilitation requirements.
- 6-7 New salable mineral material sources or expansions of existing sites shall be evaluated through the environmental analysis process. Priority should be given to utilization of existing sources before development of new sources. Development shall occur only when other resources are adequately protected and when reclamation is determined to be feasible.
- 6-8 Withdrawal of lands from appropriation or entry under the mining or mineral leasing laws shall be in accordance with Section 204 of the Federal Land Policy and Management Act of 1976 (FLPMA), or as revised. Areas with mineral potential should be recommended for mineral entry withdrawal only when mitigation measures would not adequately protect other resource values that are determined to be of greater public benefit. In such determination, full consideration shall be given to potential mineral values.
- 6-9 All proposals for developing solar, hydroelectric, or wind electrical generating facilities shall be evaluated through the environmental analysis process.

Native American Rights and Claims

7-1 The Forest is committed to fulfilling its obligations as an agency of the United States under the Klamath Treaty of 1864. Since management of the forest may affect the resources on which the tribe depends for exercise of its treaty rights, the Forest will determine through the NEPA process whether each land and/or resource management decision may affect resources subject to the tribe's treaty rights. The Forest, through the NEPA process, will analyze, disclose, and consider potential effects on the tribe.

All management activity on former reservation lands shall meet applicable requirements of the Klamath Treaty of 1864, the Act of August 13, 1954, as amended (Termination of Federal Supervision of the Klamath Tribe), the Restoration Act, and the terms of the Consent Decree of 1981. Appendix D contains the major portions of the treaty and consent decree.

7-2 The Forest will inform and invite participation from the Klamath Tribe in planning of resource management activities. This will include holding an annual coordination meeting with the tribe to discuss anticipated projects. This meeting will be used to identify interest in specific projects.

7-3 The American Indian Religious Freedom Act shall be complied with on all Forest land.

Protection

Fire Management

- 8-1 All wildfires shall receive an appropriate suppression response. The response shall be safe, timely, and cost efficient and shall meet management objectives for the area, including objectives for plant and animal diversity.
- 8-2 Using the lowest cost suppression option, aggressive suppression action shall be applied to control and extinguish wildfires that threaten life, private property, public safety, improvements, or investments.
- 8-3 An escaped fire situation analysis shall be prepared for any wildfire that escapes initial attack and/or threatens to exceed established parameters, or is no longer consistent with fire management direction.
- 8-4 Retardant drops shall be carefully controlled in proximity to open bodies of water (lakes and streams) to preclude retardant from entering lakes or live streams.
- 8-5 Utility companies shall be notified of any fire situation originating on or threatening their permitted use area to ensure the safety of firefighters and to allow utilities to be prepared to temporarily suspend use if needed.
- 8-6 Prescribed fire may be used in natural fuels; to reduce fire hazard; to enhance diversity in the structure and composition of plant communities; to enhance the production and protection of commercial timber yields; and to enhance other resource outputs such as wildlife habitat, forage, and browse. Prescribed fire may include both planned and unplanned ignitions.
- 8-7 Prescribed fire in wilderness (see "Protection," Management Area 6 - Wilderness).
- 8-8 Proposed activity units (harvest, thinning, conversion, and release, for example) should be designed and coordinated on the ground. This is done to consider size, shape, location, timing, spatial distribution, and management risk for fire management and other resource requirements and to help make the fuel treatment and fire protection of the units as practical and economical as possible.
- 8-9 Fuel treatments shall conform with all Federal and State standards and regulations for air quality.
- 8-10 Prescribed fire prescriptions shall be consistent with management area objectives.

Integrated Pest Management

- 8-11 All planned activities shall include integrated pest management practices. All insect and disease control projects shall be carried out in ways that meet management area objectives
- 8-12 Silvicultural methods and cultural treatments should be applied to reduce susceptibility to hazards of insects and disease. If normal insect surveillance indicates the threat of an epidemic, project-level detection and control operations, including coordination with other landownerships, shall be accomplished on a forestwide basis

- 8-13 The Forest Plan incorporates the Pacific Northwest Region's FEIS for Managing Competing and Unwanted Vegetation. In implementing the Forest Plan through project activities, the Forest will comply with the Record of Decision issued by the Regional Forester dated December 8, 1988, and the Mediated Agreement of August 1989. Use of all vegetation management techniques is allowed only when other methods are ineffective, or will unreasonably increase project costs. Emphasis must be on prevention and early treatment of unwanted vegetation and on full public involvement in all aspects of project planning and implementation. Information about the vegetation management FEIS, ROD, and Mediated Agreement is available at the Forest Supervisor's Office.

Noxious Weed Control

- 8-14 Treatment priorities and strategies shall be in accordance with the Oregon State Comprehensive Classification List:
- 'A' Classification (isolated distribution) - eradicate existing populations;
 - 'B' Classification (general distribution) - intensively control or eradicate; and
 - 'C' Classification (general distribution) - control or (if feasible) eradicate.
- 8-15 Under any funding level, funds available for weed control activities shall be distributed in the following order:
1. Cooperation with the Oregon State Department of Agriculture;
 2. Treatment of Forest infestations through internal funding; and
 3. Treatment of waived private lands within Forest boundaries through internal funding.
- 8-16 In project planning, all available methods of control (for example, manual, mechanical, biological, chemical, cultural, fire, and regulatory methods) shall be fully considered.

Law Enforcement

- 8-17 Aggressive, appropriate actions will be taken to enforce Federal laws, rules, and regulations as set forth in Titles 16, 18, and 21 of the U.S. Federal Code as they pertain to lands managed by the U.S. Forest Service. These actions will be accomplished by professional law enforcement persons within the Forest Service.
- 8-18 Priorities for law enforcement will be:
1. Protection of employees and the public from harassment, bodily injury, and/or death while using the national forest or working on the national forest;
 2. Timber theft in the form of sawlogs and firewood;
 3. Drug manufacturing and the related violence and contamination; and
 4. Cultural resource theft and vandalism and the related losses.
- 8-19 The goals of the Forest Law Enforcement Program are: (1) to ensure compliance with Federal laws and regulations pertaining to the national forests; (2) to provide for the protection of the

Forest's property and resources; (3) to provide for the safety of Forest visitors and their property in a cooperative effort with local law enforcement agencies; and (4) to provide for the safety of Forest Service employees.

These goals will be accomplished by:

1. **Prevention** - Preventing violations through voluntary compliance by Forest users is the main objective of the program. This can normally be accomplished by means of education.
2. **Cooperation** - Cooperative Law Enforcement is authorized by Public Law 92-82. Under this law, the Forest Service will reimburse the cooperator for those extraordinary expenditures incurred by providing additional services requested by the Forest Service for recreational users.
3. **Enforcement** - Line officers are responsible to assure that effective action is taken against persons violating Federal laws and regulations on the Forest.

Range

General

- 9-1 The forage and browse resource shall be managed to at least satisfactory range condition (see glossary) and to improve range vegetation vigor (a plant's ability to produce at or near maximum potential herbage and reproduce). Forage and browse will be allocated firstly to provide for the health and vigor of range vegetation and secondly to provide for wildlife management objectives for species including but not limited to big game. Forage in excess of these needs may be allocated for livestock grazing.
- 9-2 The following range vegetation allowable use standards (table 4-15) shall be used as a guide to provide for the health and vigor of range vegetation on suitable range outside riparian areas. Alternative methods that meet vegetation health and vigor objectives may be used if identified in range analysis and developed and implemented through the allotment management plan (AMP). See table 4-15. Allowable use is expressed as biomass, but will be monitored as stubble height by developing stubble height/biomass conversion tables.

TABLE 4-15
Suitable Range (Except Riparian)
Allowable Use of Available Forage(1)

Range Resource Management Level	Maximum Annual Utilization (Percent)(2)					
	Forest		Grassland		Shrublands	
	Sat. Cond.(3)	Unsat. Cond.(3)	Sat. Cond.	Unsat. Cond.	Sat. Cond.	Unsat. Cond.
B - Livestock use managed within current grazing capacity by riding, herding, and salting, and cost-effective improvements used only to maintain stewardship of 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 to maintain plant vigor include fencing and water development.	45	0-35	55	0-35	45	0-30
D - Livestock managed to optimize forage production and utilization. Cost-effective culture practices improving supply, forage use, and livestock distribution may be combined with fencing and water development to implement complex grazing systems.	50	0-40	60	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 lower or rarely higher when associated with intensive grazing systems and specific vegetation management objectives that will meet resource objectives. Includes cumulative annual use by big game and livestock.
- (2) Utilization based on percent removed by weight for grass, grasslike, and forbs.
- (3) Glossary has definitions of satisfactory and unsatisfactory range conditions.

- 9-3 In riparian areas, management practices shall provide for regrowth of riparian plants after use or shall leave sufficient vegetation at the time of grazing for maintenance of plant vigor and stream bank protection. See table 4-16. Allowable use is expressed as biomass, but will be monitored as stubble height by developing stubble height/biomass conversion tables.

TABLE 4-16
Riparian Forage Utilization
Allowable Use of Available Forage(1)

Range Resource Management Level	Maximum Annual Utilization (Percent)			
	Grass and Grasslike(2)		Shrubs(3)	
	Satisfactory Condition(4)	Unsatisfactory Condition(4)	Satisfactory Condition	Unsatisfactory Condition
B - Livestock use managed within current grazing capacity by riding, herding, and salting, and cost-effective improvements used only to maintain stewardship of range	40	0-30	30	0-25
C - Livestock managed to achieve full utilization of allocated forage. Management systems designed to obtain distribution and to maintain plant 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 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 allotment management plans. Allotment management plans may include utilization standards which are either lower or rarely higher when associated with intensive grazing systems and specific vegetation management objectives that will meet objectives for the riparian-dependent resources. Includes cumulative annual use by big game and livestock.

(2) Utilization based on percent removed by weight.

(3) Utilization based on incidence of use, weight, and/or twig length. Example. If 50 leaders out of 100 are browsed, utilization is 50 percent.

(4) Glossary has definitions of satisfactory and unsatisfactory range conditions.

Range Administration

- 9-4 Any change in permit conditions shall be made only after all other resource objectives have been considered.
- 9-5 Extensions of the grazing season shall only be granted when the Forest receives a written request at least two weeks before the end of the season, and a Forest representative has conducted an assessment of range condition and utilization. Extensions granted shall be made to achieve a documented resource objective, or because of conditions, it has been determined that there is excess available forage.
- 9-6 An annual operating plan shall be developed in coordination with the permittee to implement management decisions for the current year and shall include: a salting plan, a water use plan, location and use of bedgrounds, a structural improvement maintenance schedule, and a monitoring schedule.

- 9-7 A documented range inspection shall be conducted periodically through the grazing season for each allotment. The grazing permittee shall be involved either through participation or by receiving a copy of the inspection notes.

Predator Control

- 9-8 These standards and guidelines apply to the predator control efforts under the jurisdiction of the Winema National Forest directed toward carnivorous mammals, whether at the request of forest permittees, adjacent private landowners, or other agencies.
- 9-9 Oregon Department of Fish and Wildlife (ODFW), US Fish and Wildlife Service, and Oregon Department of Agriculture are key agencies responsible for control of depredating wildlife on national forest lands. Animal Plant Health Inspection Services-Animal Damage Control (APHIS-ADC) is the primary agency responsible for carrying out predator control efforts on the forest.
- 9-10 The objectives of the predator control program on the Winema are to:
1. Minimize the impact of predator control on wildlife, including the predators themselves, by directing control activities at offending individuals;
 2. Provide the most effective and humane control methods available, that have the least risk to humans and domestic animals, and that minimize the loss of nontarget individuals;
 3. Evaluate the need for conducting predator control, by examining historic and predicted losses, control requests, results of previous years control activities, and other factors, such as the cultural, social, and aesthetic values of wildlife, in making decisions on authorizing predator control efforts;
 4. Use control methods that pose the least risk to human and domestic animal safety,
 5. Place priority on management activities that would minimize livestock/predator conflict, such as: rotation grazing; not grazing in areas of high coyote numbers; not lambing on the range; and running adult sheep bands;
 6. Maintain a full range of control options that meet Federal, State, and local regulations;
 7. Establish a preference for nonlethal methods of predator control first and if they prove ineffective, lethal methods. The methods to be considered for control efforts are described under control methods, section 9-16.
 8. Provide for public review of the predator control program through the development of an annual work plan.

Annual Work Plan

- 9-11
1. A work plan for predator control efforts to be conducted on the forest will be developed annually and approved by the Forest Supervisor;
 2. To provide for public review, the annual work plan will be developed and updated by the forest, in cooperation with appropriate State and Federal agencies, such as APHIS-ADC, ODFW, National Park Service, US Fish and Wildlife Service, the Klamath Tribe, permittees, and other interested and affected publics;

3. An annual meeting with representatives of the cooperating agencies and groups will be held to assist in the development the annual work plan. The potential participants will be notified in advance of the meeting and their written comments solicited if they are unable to attend.

The annual work plan meeting will include APHIS-ADC's analysis of the results and effectiveness of the previous year's control efforts and areas where requests for control have been received, or are expected. The annual work plan will identify: areas where protection of livestock and wildlife from predators is needed; human safety zones; and areas where, for management reasons, predator control methods will be restricted or excluded, including seasonal restrictions on control methods, and make any further recommendations considered necessary to implement these standards and guidelines;

4. Authorized agents/agencies will be responsible for ensuring all predator control efforts on the forest meet applicable Federal, State, and local regulations;
 5. Within areas occupied by species on the Regional Forester's sensitive species list, approval of the annual work plan will be contingent on determination of no adverse effect on threatened, endangered, and sensitive species. That determination will require a biological evaluation;
 6. Decisions documented in the annual work plan will be reflected in forest permittee's annual operating plans.
- 9-12 Provide opportunities for testing and monitoring of control methods to evaluate their effectiveness.
- 9-13 Provide opportunities for research, studies, and monitoring of the influences that forest management activities may have on predation of wildlife and domestic livestock.
- 9-14 To meet the cooperation objectives identified in the Consent Decree, provide for predator control to be conducted on the forest if requested by ODFW or the Klamath Tribe.

Unanticipated Requests

- 9-15 To allow the forest to respond in a timely manner (usually within one week) to APHIS-ADC requests for authorization to conduct control activities not covered in the annual work plan meeting, ADC should supply the following information at the time of the request: documented losses or anticipated emergency situation; description of proposed activities, including methods, areas, and timing; and alternative methods which have been considered to address the situation. The line officer will consider this information, site-specific factors, and whether the unanticipated request complies with forestwide standards and guidelines and the annual work plan in determining whether to authorize the request.

Control Methods

9-16 Nonlethal and lethal control methods to be considered for use are:

Nonlethal Methods

1. At least one herder will be provided for each band of sheep;
2. The use of guard dogs would be recommended for use with each band. The use of these dogs would depend on their demonstrated effectiveness and compatibility with other users;
3. Other nonlethal methods of control, such as the use of scare devices, hazing methods, donkeys, or llamas, that are recommended by APHIS-ADC, ODFW, participants in the annual work plan review, or requested by permittees, may be tested to determine their effectiveness.

Lethal Methods

4. Calling and shooting could be authorized in areas where losses have occurred or a complaint has been received. Calling and shooting will be used prior to livestock losses only in areas where losses have occurred in the past and will be restricted to areas identified in the annual work plan;
5. Trapping areas for predator control activities will be established by the Forest Supervisor based on recommendations from the annual work plan review. Maps, showing the location and operating period for trapping, will be available to the public following the annual meeting. All access to areas where traps or snares are used would be signed to notify the public.

The objective in using traps for predator control is to remove the offending animal. Because the selectivity and safety of trapping is tied directly to the skill of the trapper, only responsible agencies or their agents would be authorized to use this method. This method would be limited to areas with low recreational activities.

Traps would be used in accordance with Federal and State regulations. To minimize the impact on nontarget animals, and in the interest of humane treatment of animals, traps will be inspected as often as possible by authorized personnel and in conformance with ODFW regulations. Current Oregon APHIS-ADC policy requires equipment to be checked once a week or more frequently as determined by the District Supervisor and Animal Damage Control Specialist.

- 6 M-44 cyanide devices will only be used on the forest after other control methods have proved unsuccessful. The method will be directed to specific target animals and must be approved by the Forest Supervisor on a case-by-case basis. A detailed report will be submitted to the Forest Supervisor by APHIS-ADC within 30 days of ending the project that will include information on livestock lost and predators taken;

Use of this method will follow EPA restrictions for use of the M-44 device (see May 13, 1988 APHIS-ADC use restrictions). Those restrictions include not using M-44 devices in areas within national forests that are set aside for recreational use; where exposure to the public and pets is probable; in federally designated wilderness areas, except for the

protection of listed threatened or endangered species; or where federally listed threatened or endangered animal species might be adversely affected.

Allotment Management Planning

- 9-17 With stated vegetation objectives to obtain specific resource goals, allotment management plans (AMPs) shall be prepared or reviewed for revision for all grazing allotments. (Refer to table 4-17)
- 9-18 Allotment management planning, an interdisciplinary process, shall provide for cost-effective management of range vegetation consistent with land stewardship practices. Planning shall involve grazing permittees, other range users, interested publics, and other agencies. As AMPs are written and updated, management emphasis shall be the intensification of vegetation management and forage utilization consistent with other resource objectives. The emphasis also shall be on cost-effective administration.
- 9-19 Livestock stocking levels shall be determined by range analysis considerations, including: (1) forage condition, suitability, and availability; (2) other resource needs as shown in 9-7 above; (3) permittee's ability to self-monitor management and maintenance in project allotment plans; and (4) economic factors, including development and maintenance of facilities.
- 9-20 Coordination requirements with other resource operations shall include: (1) threatened, endangered, and sensitive plant and animal species; (2) riparian area conflicts; (3) livestock and wildlife conflicts; (4) the reduction in the spread of noxious weeds where present; (5) timing of the timber harvest and associated activities and grazing schedules; (6) protection of livestock barriers or mitigation of these values where desirable; and (7) seeding of livestock and wildlife forage species, considering desirability of seeding palatable and nonpalatable forage species, and species competitive with tree production.
- 9-21 An appropriate season of grazing shall be established based on: soil stability factors, phenological development of plants, wildlife needs (with emphasis on deer fawning needs), and livestock use factors.
- 9-22 Lands in unsatisfactory condition shall be identified with particular emphasis on riparian areas. AMPs shall be revised with specific objectives for improvement of these lands. These objectives will define a desired future condition based on potential values for all resources.
- 9-23 Allotment management plans for range shall include a strategy for managing riparian areas for a mix of resource uses. A measurable desired future riparian condition shall be established based on existing and potential vegetative conditions. When the current riparian condition is less than that desired, objectives shall include a schedule for improvement. The allotment management plans shall identify management actions needed to meet riparian objectives within the specified time frame. Measurable objectives shall be set for key parameters, such as shaded stream surface, stream bank stability, and shrub cover. This process is described in "Managing Riparian Ecosystems (Zones) for Fish and Wildlife in Eastern Oregon and Eastern Washington" (1979). The plan shall address the monitoring needed to determine if the desired rate of improvement is occurring. Allotment management plans currently not consistent with this direction will be developed or revised on a priority basis under a schedule established by the Forest Supervisor. See table 4-17.
- 9-24 Allotment management plans shall be developed or revised on a priority basis under a schedule established by the Forest Supervisor.

TABLE 4-17
Allotment Plan Update Scheduling Matrix
Winema National Forest

District	Allotment	Current Management Land Classification				Current AMP	Forest	District
		PC(1)	PB(2)	PA(3)	QE(4)	Date	Priority	Priority
Chemult	Antelope C & H		I, A, F	X		1981	9	1
	Bear S & G					1966	17	3
	Jack Creek S & G		I, A, F			1971	10	2
	Three Creeks Ridge S & G		I, A, F			1966	10	2
Chiloquin	Applegate S & G		A, F			1965	15	11
	Coyote-Bucket C & H		I, A, F			1966	4	5
	Dams Meadow C & H		A, F			1966	14	10
	Deep Creek C & H		I, A, F			1978	6	3
	Dice-Crane C & H		F			1983	13	9
	East Chiloquin Ridge C & H		I, A, F			1963	8	6
	Long Prairie C & H		A, F			1966	12	8
	No Name C & H		I, A, F			1972	2	2
	Saddle Mountain C & H				X	1965	16	12
	Skellock C & H		I, A, F			1966	6	3
	Switchback C & H		I, A, F			1967	7	7
	Sycan C & H		I, A, F			1967	3	4
	Yamsi C & H	X				1979	1	1
Klamath	Buck C & H		I, A, F			1979	5	1
	Fourmile Spring C & H				X	1976	18	3
	Indian C & H		A, F			1976	5	1
	Jack Springs		I, A, F			1976	11	2

(1)A "PC" classification indicates that basic resource damage is occurring on the allotment. In all cases identified, riparian degradation in the form of gullying has occurred on the allotment. The gullying may or may not have been caused by livestock, but livestock use of the area aggravates erosion by breaking gully banks and preventing the establishment of stabilizing vegetation

(2)A "PB" classification indicates that allotments that have potential to be managed under a quality management strategy. Basic resource damage is not occurring. Reasons for the classification are identified: a "P" indicates lack of permittee interest/participation, an "I" indicates lack of total AMP implementation; an "A" indicates lack of reliable range analysis data, and an "F" indicates lack of funding to implement quality management.

(3)A "PA" classification indicates a vacant allotment.

(4)A "QE" classification indicates extensive management with a lack of problem

- 9-25 Allotments with riparian areas in unsatisfactory condition (see glossary) shall be identified: (1) On suitable range, forage condition is not at least fair with a stable trend; or (2) classification is PC (basic resource damage) or PD (other resource damage).

Range Improvements

- 9-26 On an equitable basis, permittees shall be assigned the maintenance of structural improvements essential to management of the forage base on National Forest System lands or Forest-controlled lands. This maintenance shall be performed annually until the improvements are removed. A line officer shall document and approve exceptions to assigned or required maintenance.
- 9-27 *Structural and nonstructural improvements shall meet current approved standards. In planning improvements, the needs of other resources and publics shall be considered. Structural and nonstructural improvements shall be responsive to cultural resources, sensitive plant and animal species, and State water rights; they also shall be cost effective. When constructed, Forest boundary fences shall be located on surveyed property lines.*
- 9-28 Maintenance activities for each allotment shall be completed before turning out livestock onto the range.
- 9-29 Fire may be used as a tool to maintain or enhance forage production. Fire also may be used as a tool to control the encroachment of non-meadow vegetation.

Noxious Weed Control

(Refer to Protection Standards and Guidelines.)

Recreation

- 10-1 The Forest shall coordinate with adjacent forests and other recreation providers (public and private) to provide a full range of recreation settings and opportunities.
- 10-2 An interpretative plan shall be developed for each district to coordinate efforts to provide interpretation of natural and cultural features and management activities and to provide outdoor education. Interpretative facilities, techniques, and materials selected shall be compatible with the assigned Recreation Opportunity Spectrum (ROS) classes and development levels.
- 10-3 The public shall be informed of recreation opportunities and conditions on a continual basis using a variety of media.
- 10-4 Construction and reconstruction projects shall be planned and implemented as outlined in the Region 6 (R-6) Recreation, Facilities, and Trails Development Process.
- 10-5 Only facility designs that are approved for use in R-6 and that are compatible with the ROS class and designed development level shall be installed. All recreation signs shall be in accordance with applicable Regional standards.
- 10-6 New facilities shall be designed to be barrier-free to the extent feasible. Selected existing facilities shall be modified to remove barriers.
- 10-7 The project feasibility report shall include estimates of existing and potential demand for the type, design, and location of proposed recreation facilities. Demand estimates should be based on market surveys, customer surveys, or user group requests.
- 10-8 New or reconstructed sno-parks should be designed in accordance with the Oregon Department of Transportation "Guidelines and Criteria for Designating Sno-parks." Designs and snow-plowing needs should be coordinated with local State or county highway maintenance departments.
- 10-9 Areas that are important to Forest visitors include undeveloped campsites; places with scenic, geologic, or biological values; and other areas that receive significant dispersed recreation use. These special places shall be identified and evaluated for significance during project planning. These areas shall be considered for protection and/or enhancement in project design.
- 10-10 The Forest shall emphasize educating dispersed area users to the principles of minimum-impact use of the Forest, such as the "Pack it Out," "Without a Trace," and "Tread Lightly" programs.
- 10-11 Off-road vehicle (ORV) use shall be managed to: minimize resource damage, promote user safety, minimize conflicts with others, and be compatible with management area objectives. Where ORV use is causing resource or facility damage, use may be restricted or prohibited. An ORV implementation schedule shall be developed with user groups to designate ORV travelways and to list restricted and closed areas.
- 10-12 Trails shall be planned, designed, constructed, and maintained as recreation facilities that complement the objectives of the management areas being served, in accordance with documented trail management objectives.
- 10-13 The Forest trail system shall be designed to provide users with a wide range of ROS and WRS settings and difficulty levels. The system shall provide for a wide variety of user types, including both summer and winter users.

- 10-14 A trail management plan shall be developed for each district. These plans shall include a trail inventory, trail management objectives for each trail, and a prioritized listing of construction and reconstruction needs.
- 10-15 *Trails and related facilities shall be protected with appropriate mitigation measures during management activities. Measures that may be used to mitigate effects of activities include vegetative screening, temporary or permanent rerouting, temporary closure, interpretative signing, and modification of treatments along the trail corridor.*
- 10-16 *Trail and road locations shall be planned to minimize conflicts. New road crossings of existing trails should be avoided.*
- 10-17 *Displacement of system trails by new roads or other management activities should be avoided. Where displacement occurs, trails shall be relocated to maintain the integrity of the system and to ensure the quality of the recreation experience.*
- 10-18 An automated recreation information system (R6RIM) shall be maintained. This includes an inventory of facilities and a record of estimated use by site or area.

Scenic Resources

- 11-1 A higher visual quality objective than that stated in the management area may be met when consistent with management area objectives.
- 11-2 Treatment of catastrophic occurrences, such as insect or disease outbreaks or major wildfires, may suggest a deviation from scenic management direction. This will be documented through the environmental analysis process before implementation.
- 11-3 Landscape architects should assist with the planning and design of those projects that have the potential to affect the scenic resources, especially considering cumulative effects.
- 11-4 All management activities, as practicable, shall be shaped and blended to fit the natural landscape character as viewed from background distances.
- 11-5 Inventories of visual quality shall be maintained or updated; existing visual condition and desired condition, as a minimum, shall be mapped. Use and demand for scenic quality will be reflected in mapping.
- 11-6 Evidence of management activities throughout project implementation such as signing, tagging, tree marking, and staking should be located to minimize negative effects on scenery and recreation settings. These should be removed following completion of projects.
- 11-7 During project environmental analyses, identified existing conditions that do not meet scenic management direction shall be considered for rehabilitation.
- 11-8 For project planning, the "National Forest Landscape Management Series" handbooks may be used for technical guidance.
- 11-9 The State Highway 140 Viewshed Implementation Guide shall be used for guidance in project planning within that viewshed.

Soil and Water

- 12-1 The Forest shall cooperate with local Soil and Water Conservation Districts and other agencies to improve soil, water, and riparian resources.
- 12-2 Cooperative snow courses, buffers, and improvements shall be protected as required by current agreement with the Soil Conservation Service. Existing sites include: Billie Creek, Chemult, Cold Springs, Fourmile Lake, Sevenmile Marsh, and Taylor Butte
- 12-3 Land management activities shall be planned and conducted to maintain or to improve soil productivity and stability.

Forest management activities shall meet or exceed the stated objectives in the Organic Act of 1897, the Multiple Use-Sustained Yield Act of 1960, and the National Forest Management Act of 1976. Floodplains and wetlands on the Forest shall be managed according to Executive Order 11988 (*Floodplain Management*) and Executive Order 11990 (*Protection of Wetlands*).

- 12-4 The current Soil Resource Inventory shall be revised and updated as needed to meet management needs.

Detrimental Soil Conditions

- 12-5 *The cumulative effects of detrimental soil conditions should not exceed 20 percent of the total acreage within the activity area; any reason for exceeding the limitation shall be documented in an environmental assessment. Detrimental soil conditions include compaction, displacement, puddling, and moderately or severely burned soil from all activities (including roads, skid trails, and landings). Sites where the standards for displacement, puddling, and compaction are not currently met will require rehabilitation such as ripping, backblading, or fertilization. The potential for creating detrimental soil conditions will be specifically addressed through project environmental analyses. If needed, alternative management practices will be developed, and mitigating measures will be planned and implemented.*

Detrimental conditions occur when one or more of the following criteria are exceeded.

1. **Compaction:** Detrimental compaction is that beyond the following limits--(a) on volcanic ash/pumice soils, an increase in soil bulk density of 20 percent or more over the undisturbed level; (b) on other soils, an increase in soil bulk density of 15 percent or more over the undisturbed level, a macropore space reduction of 50 percent or more, and/or a reduction below the 15 percent level as measured by an air permeameter.
2. **Puddling:** Soil puddling is a physical change in soil properties due to shearing forces that destroy soil structure and reduce porosity.
3. **Displacement:** Detrimental displacement is the removal of more than 50 percent of the topsoil- or humus-enriched A1 or AC horizons from an area of 100 square feet or more which is at least 5 feet in width.
4. **Severely burned soil:** Leave a minimum of 90 percent of a project area unaffected by severely burned conditions. Soils are considered to be severely burned when the top layer of mineral soil is significantly changed in color, usually to a reddish color, and the next 0.5 inch is blackened from organic matter charred by heat conducted through the top layer.

Soil Erosion

- 12-6 To stay within acceptable levels of soil loss and meet soil management objectives, the minimum percent effective ground cover after any soil disturbing activity should be as follows in table 4-18. Exceptions to these standards may be made after completing the environmental assessment process with input from a soil specialist.

TABLE 4-18
Minimum Percent Effective Ground Cover

Surface Soil Erosion Potential(1)	General Slope Percentage Range for Erosion Potential	Minimum Percentage of Effective Ground Cover(2)	
		First Year	Second Year
Low	0 - 20	20 - 30	30 - 40
Moderate	20 - 35	30 - 45	40 - 60
High	35 - 50	45 - 60	60 - 75
Severe	50 - 70	60 - 75	75 - 90

(1)For interpretation of adjective ratings, see "Soil Resource Inventory" (Carlson 1979).

(2)Effective ground cover is all living or dead herbaceous or woody materials and all rock fragments greater than 0.5 inch in diameter in contact with the ground surface. (This includes trees, shrubs, seedlings, grasses, forbs, litter, and chips.) Specified cover is generally not required on pumice and ash soils with slopes less than 10 percent.

- 12-7 Tractor logging should generally not be prescribed when slopes exceed 35 percent.

Organic Residues

- 12-8 Management activities should be planned to retain small woody (dead and down) material to sustain soil nutrients and a healthy forest ecosystem. As a goal, 10 tons or more per acre of 9-inch diameter or smaller woody material should be maintained where practicable.

Riparian Ecosystems (Streams, Stream-Side Areas, Floodplains, and Wetlands)

- 12-9 For those projects that could adversely affect riparian ecosystems, water quality, or stream structure and function, specific objectives for the management of riparian areas shall be developed during project environmental analysis. These objectives will be based on: stream classification, site-specific topographic and vegetative characteristics, water quality standards and goals, and other resource objectives (as appropriate).

- 12-10 In riparian ecosystems, hydrologic conditions and riparian habitat shall be maintained or improved.

No management practices shall be permitted within riparian areas that cause detrimental changes in water temperature or chemical composition, blockages of water courses, or deposits of sediment which seriously and adversely affect water conditions or fish habitat.

- 12-11 Any vegetative management activity within a riparian area should meet the following standards.
1. Sufficient amounts of ground cover should be maintained within a riparian area to prevent erosion and the direct movement of potential pollutants into a stream. Refer to table 4-18.
 2. Riparian areas should be managed to maintain stream banks in a stable condition along at least 85 percent of a stream's length in any given drainage.
 3. In stream-side areas for Class I, II, and III streams, present and future sources of large woody material should be provided. Existing instream material should be maintained or enhanced. Specific quantitative criteria should be developed on a stream-by-stream basis.
 4. Vegetation should be managed to provide adequate shading in areas along streams to meet State of Oregon temperature standards. Shade may be provided by overhanging grasses, shrubs, trees, and topography.
 5. Riparian areas should be managed to maintain or achieve a range forage condition class of good.
 6. Riparian areas should be managed to maintain or improve the habitat of fish and aquatic and terrestrial wildlife. Vegetation and natural debris should be maintained and managed to: (1) maintain or enhance stream channel and bank structure so as to maintain or enhance water quality and (2) provide structural fish habitat to support natural populations of fish in Class I and II streams.
- 12-12 Management activities shall meet the aquatic resource protection standards of Oregon's Removal-Fill Law (ORS 541.695) unless otherwise exempted.
- 12-13 New water development and reconstruction of existing developments shall be coordinated through the environmental analysis process. Water developments may need to be fenced to protect riparian vegetation and wildlife habitat from damage by livestock or other resource activities.

Stream-Side Areas and Floodplains

- 12-14 Activities that could have short-term adverse effects on floodplain values may occur only if specific mitigation measures designed to minimize the effects are implemented and documented in project planning records. Natural floodplain characteristics shall be restored shortly after the activity has stopped. Floodplain values include those characteristics of a floodplain that facilitate the safe passage of flood flows with minimal damage on-site or downstream. Vegetation, topography, and other features that contribute to the safe dissipation and release of peak flows and maintenance of base flows should be maintained or improved.
- 12-15 Intensity of harvest treatments and spatial distribution of cutting units shall ensure that hydrologic conditions are maintained or improved.

Water Quality (Best Management Practices)

- 12-16 The Forest shall comply with State requirements in accordance with the Clean Water Act for protecting waters of the State of Oregon through planning, applying, and monitoring Best Management Practices (BMPs) in conformance with the Clean Water Act, regulations, and Federal guidance.

In cooperation with the State of Oregon, the Forest shall use the following process:

1. Select and design BMPs based on site-specific conditions; technical, economic, and institutional feasibility; and the water quality standards for those waters potentially impacted.
2. Implement and enforce BMPs.
3. Monitor to ensure that practices are correctly applied as designed.
4. Monitor to determine the effectiveness of practices in meeting design expectations and in attaining water quality standards.
5. Evaluate monitoring results and mitigate where necessary to minimize impacts from activities where BMPs do not perform as expected
6. Adjust BMP design standards and application when it is found that beneficial uses (including domestic, recreation, irrigation, industrial, and fish and wildlife habitat uses) are not being protected and water quality standards are not being achieved to the desired level or if it is found that BMPs are more restrictive than necessary. Evaluate the appropriateness of water quality criteria for reasonably assuring protection of beneficial uses. Consider recommending adjustment of water quality standards.

Use the existing arranged process to implement the State Water Quality Management Plan on lands administered by the Forest Service as described in Memoranda of Understanding (MOU) between the Oregon Department of Environmental Quality and U.S. Department of Agriculture, Forest Service (February 12, 1979, and December 7, 1982), and "Attachments A and B" referred to in this MOU ("Implementation Plan for Water Quality Planning on National Forest Lands in the Pacific Northwest" (December 1978) and "Best Management Practices for Range and Grazing Activities on Federal Lands," respectively).

Individual, general Best Management Practices are described in "General Water Quality Best Management Practices," Pacific Northwest Region, November 1988. Site-specific BMPs are developed at the project level.

- 12-17 BMPs relating to protection of water quality shall be followed for any chemical application projects. In the event of an accidental spill of hazardous materials, procedures shall be followed as set forth in the Oil and Hazardous Substances Pollution Contingency Plan.
- 12-18 As part of implementing BMPs, the following standards shall be met:
1. Management activities in and around Class I and II streams shall not cause a measurable water temperature increase when the existing stream temperatures are 58 degrees F or greater, or cause more than a 2 degrees F increase due to cumulative effects when the existing stream temperatures are 56 degrees F or less.

2. No more than 10 percent increase over natural stream turbidities should occur. Temporary changes to the above standard may occur, but must be transitory in nature. Changes as a result of management activities must be minimal and adequately monitored.
3. Management activities in and around Class III and IV streams will not contribute to the deterioration of water quality for downstream Class I and II streams. However, these activities are allowed, provided the standards for Class I and II streams continue to be met.

- 12-19 Management activities, particularly timing of road building and timber harvest, shall be scheduled to minimize long-term detrimental changes in watershed conditions. Spatial distribution and timing of activities will be the principle factors used to avoid unacceptable cumulative impacts.
- 12-20 Areas in which water quality is being adversely affected shall be given high priority for treatment to minimize the effects and eliminate the cause.
- 12-21 Effluents shall be disposed of in a manner which will prevent the contamination of surface or subsurface water. Sewage treatment and disposal facilities shall be approved by the Oregon Department of Environmental Quality or its contract agents and shall be in compliance with the rules of the Environmental Quality Commission.

Instream Flow

- 12-22 Wetland, floodplain, riparian, and watershed characteristics shall be maintained to provide for storage and routing of ground and surface water, including floodwaters.
- 12-23 The Forest shall follow national and regional policy when obtaining water rights, protecting existing water rights, and protecting instream flows.
- 12-24 The Forest shall conform with any minimum stream flow established by law.

Cumulative Effects

- 12-25 A cumulative effects assessment shall be made in watersheds where project scoping identifies an issue or concern regarding the cumulative effects of activities on water quality or stream structure and function. This will include land in all ownerships in the watershed. Activities on National Forest System lands in these watersheds should be dispersed in time and space to the extent practicable and at least to the extent necessary to meet management requirements. On intermingled ownerships, scheduling efforts shall be coordinated to the extent practicable.

Coordinate Federal Water Claim

- 12-26 The Forest will coordinate the development, timing, and content of its water rights claim in the Klamath Basin Adjudication with those of the Klamath Tribe and other Federal agencies (including U S Fish and Wildlife Service, National Parks Service, and U.S. Bureau of Reclamation).

Timber

- 13-1 Programmed timber harvest activities shall occur only on lands classified as suited for timber production. However, harvest activities may occur on other lands for the following purposes:
1. Removal of timber from road locations.
 2. Construction or protection of capital improvements like campgrounds, buildings, fuelbreaks, and dispersed recreation sites; or projects designed to enhance other resource values.
 3. Removal of hazards to human life and health.
 4. Removal of timber killed by catastrophic events, such as fire, windthrow, drought, insects or disease (36 CFR 219.27[c][1]). The decision to salvage harvest an area shall be based on an analysis of existing conditions following the disturbance.
 5. Where small inclusions in harvest units that otherwise are suitable will allow use of more logical management units and road locations resulting in less resource impacts.
 6. As part of a research study to test the feasibility of silvicultural and harvesting practices that could be successful on these lands.
- 13-2 During project-level planning, the inventory of suitable lands shall be corrected as needed using the following process:
1. Boundary adjustments to refine mapping lines shall be documented in the project planning records and maintained in the Ranger District resource inventory system.
 2. Where changes in classification are needed, the analysis and rationale for the needed change shall be documented by the Ranger District and sent to the Forest Supervisor for inclusion in the Forest planning process records. These changes shall be reviewed by the Forest Supervisor for consistency, and amendments will be made to the Forest Plan as needed.
- 13-3 The selection of the appropriate harvest cutting method shall be guided by the criteria provided in the *Regional Guide* on page 3-2.
- 13-4 A silvicultural prescription shall be written for all stands scheduled for silvicultural treatment. A prescription will describe the proposed treatment following an analysis of present stand conditions, physical site factors, management direction, and silvicultural objectives. Information needed to evaluate stand conditions and to develop and verify silvicultural prescriptions should be gathered from a stand examination or other type of adequate data collection survey.
- 13-5 Logging systems shall be compatible with silvicultural systems and resource protection objectives. Timber sales requiring special logging systems shall be planned by a person trained in logging systems.
- 13-6 Tractor logging generally should not be prescribed when slopes exceed 35 percent.

13-7 Forest openings created by the application of even-aged silviculture shall not exceed 40 acres. The openings should be shaped or blended with the natural terrain to achieve scenic, plant and animal diversity, and wildlife habitat objectives to the extent practicable. Exceptions are permitted for catastrophic events (such as windstorms, or insect and disease attacks) or on an individual basis after a 60-day public notice period and review by the Regional Forester.

In addition, the 40-acre limit may be exceeded by as much as 50 percent without necessitating review by the Regional Forester or a 60-day public notice when exceeding the limit will produce a more desirable combination of net public benefits and when any one of the following criteria is met:

1. When a larger created opening will enable the use of an economically feasible logging system that will lessen the disturbance to soil, water, wildlife, fish, riparian resources, or residual vegetation.
2. When created openings meeting this size limit cannot completely encompass groups of trees infected with dwarf mistletoe or root disease and, therefore, need to be expanded to include these trees in order to avoid infection of adjacent susceptible timber.
3. Where visual quality objectives require shaping and blending of openings to fit the landform.
4. When larger openings are needed to achieve regeneration objectives in harvest areas being cut by the shelterwood method and when destruction of the newly created stand of reproduction would occur as a result of delayed removal of shelter trees. This exception applies only to existing shelterwood units and shelterwood units under contract before approval of the Forest Plan. Newly planned shelterwood units should not exceed the opening size limitations.

13-8 Created openings shall be separated by areas generally not classed as created openings. The areas between created openings shall contain one or more logical harvest units. These areas shall be large enough and contain a stand structure to meet resource requirements. *Resource requirements may include needs for wildlife habitat, watershed, scenic management, and other resources.*

Created openings adjacent to 30-acre or larger natural openings should be limited to an area not exceeding one-third the size of the natural opening and not occupying more than one-third of the natural opening perimeter. Openings created adjacent to any natural openings should be designed to protect wildlife values and visual quality levels.

13-9 A harvest area shall no longer be considered a created opening for silvicultural purposes when stocking surveys carried out in accordance with Regional instructions indicate prescribed crop tree stocking at or above 4.5 feet in height and free to grow. Where other resource management considerations are limiting, such as wildlife habitat and scenic requirements, a created opening shall no longer be considered an opening when the vegetation in it meets the management area prescription objectives.

13-10 Acreage of continuous stand management activity in any one decade for uneven-aged management treatments, intermediate treatments for even-aged stands, overwood removal treatments, and precommercial thinning shall be determined through the interdisciplinary process considering wildlife, scenic, and other resource standards and guidelines for the management area.

- 13-11 Lands should be reforested within five years of final harvest, except where permanent openings are created for wildlife habitat improvement, vistas, recreation uses, and similar practices. Five years after final harvest means five years after clearcutting, five years after final overstory removal, five years after seed tree removal in seed tree harvesting, or five years after selection harvesting where stocking is reduced below minimum levels.
- 13-12 A regeneration prescription shall contain the minimum number, size distribution, and species composition of planned regeneration. The prescription shall plan to prevent unwanted vegetation and animal damage to the seedlings. The prescription shall plan for monitoring the plantation, and aggressive action shall be taken to eliminate unwanted vegetative competition, animal damage, and any other threat that would prevent meeting the reforestation objective.
- 13-13 Natural regeneration opportunities should be prescribed where experience indicates natural regeneration will be successful meeting the standards of 13-11 above.
- 13-14 With a goal of satisfactory stocking within three years, site preparation units should be planted within one year of scarification, except where such units have been prepared for natural regeneration.
- 13-15 Regional or local stocking guides shall be used to assess stocking adequacy on all regeneration units prior to certifying them as satisfactorily reforested.
- 13-16 Where stocking levels are lower than optimum but above minimums, interplanting should be done when it is a manageable and economically feasible method to meet growth requirements.
- 13-17 Stocking level control shall be based on Regional or local site-specific stocking guides.
Stocking level control should be maintained on all acres with a programmed harvest.
Existing stands of seedlings and saplings less than 5 inches DBH may be precommercially thinned. Existing stands of poles that exceed 5 inches DBH should be planned for commercial thinning.
- 13-18 Clearcuts may be prescribed when:
1. Regenerating shade-intolerant species and planning to reforest by natural regeneration or planting;
 2. Regenerating shade-intermediate tolerance species and planning to reforest by planting;
 3. Regenerating shade-intolerant species in heavily diseased or insect infested stands; or
 4. Openings created in the forest do not conflict with wildlife, scenic, or other management objectives.
- 13-19 Seed tree harvests may be prescribed when:
1. Regenerating shade-intolerant species;
 2. Regenerating shade-intolerant species and planning to supplement planted stock with natural seeding of another species;
 3. Regenerating shade-intolerant species where anticipated mortality will be high and supplementing planted stock to ensure adequate stocking is achieved;

4. *Regenerating in areas physically unsuited for plantings such as rocky areas or areas with high potential for animal damage (also see 13-13); or*
5. *Openings created in the forest do not conflict with wildlife, scenic, or other management objectives.*

13-20 Shelterwood harvests may be prescribed when:

1. *Sites need amelioration (for example, reduction in temperature extremes) for establishment of desired species.*
2. *Sites need to be modified to reduce the potential for animal damage or vegetative competition.*
3. *Scenic, wildlife, or other management objectives can best be met by delaying removal of all trees in an area.*

13-21 Final removal of shelter trees should occur as rapidly as possible, providing the following criteria are met:

1. *Reproduction no longer requires protection of overstory shelter trees.*
2. *Reproduction has gone through a minimum of two growing seasons, is healthy, and meets or exceeds minimum stocking levels.*
3. *Removal of overstory shelter trees meets other resource objectives.*

13-22 *Uneven-aged management shall be the preferred silvicultural system on climax ponderosa pine stands and on healthy pine associated stands.*

1. *Even-aged stands of ponderosa pine and pine associated stands should be treated to develop uneven-aged stand structures whenever possible.*
2. *Uneven-aged pine associated stands should be planted as needed to maintain at least 50 percent ponderosa pine species composition.*
3. *Uneven-aged management should be used where stands are free of dwarf mistletoe and root rots. Where stands are lightly infected, uneven-aged management shall be employed only where the dwarf mistletoe and root rot can be managed to maintain stand growth within 80 percent of its disease-free potential. Disease centers should be managed using even-aged silvicultural practices at a large enough scale to prevent reinfection from the perimeter. In stands with small scattered disease centers, group selection may be an appropriate silvicultural practice as long as the disease centers are effectively treated to prevent spread.*

A recordkeeping system will be developed to record the location and past treatment of known disease centers to schedule future treatments to control and to prevent the spread of the disease.

4. *Silvicultural prescriptions should be designed to maintain or to improve the existing size class diversity and uneven-aged structure.*

5. Group selection may be used to: treat diseased stands, convert even-aged stands to uneven-aged stand structures, and maintain or develop early successional species such as ponderosa pine in the pine associated and mixed conifer stands. Group selections shall be 0.25 acre to 2 acres in size.
 6. Timber harvest should not occur before the stand density equals 45 percent of the maximum stand density index or 60 percent maximum basal area.
 7. Individual tree selection shall not reduce stocking levels below 25 percent of the maximum stand density index or 45 percent maximum basal area.
 8. Timber harvest and post sale activities should generally be planned on a 30-year entry cycle for individual tree selection and on a 20-year cycle for group selection. All post sale activities should be completed within five years following the harvest entry.
 9. Stands should not be salvage logged at other than the prescribed entry cycle; the exception is where wildfire, bark beetles, disease, or other conditions have created catastrophic mortality.
 10. Timber marking guidelines should be developed which retain the most vigorous trees of best quality. First priority for leave trees are those with demonstrated good vigor. Second priority are those trees which will produce high value products in the future.
 11. Following each commercial harvest entry, post sale activities should emphasize natural regeneration and stocking level control. Where natural regeneration is a planned objective, post sale activities should be closely coordinated to produce disturbance to the litter and vegetation as necessary for natural regeneration to occur.
 12. Selection harvest units should be planted as needed to maintain stocking levels and to maintain disease-free healthy stands.
- 13-23 Timber harvest, fuels treatment, and site preparation activities should strive not to damage residual crop trees.
- 13-24 Stands receiving overstory removal treatments should meet or exceed minimum crop tree stocking following completion of harvest and postsale activities.
- 13-25 Prescriptions for regeneration harvest should feature maintenance of existing reproduction that has crop tree potential.
- 13-26 Minimum utilization standards to be used in timber harvest operations for all commercial species shall be: (1) 9 inch DBH to a 6 inch top for regeneration harvest, (2) 7 inch DBH to a 5 inch top for commercial thinning and selection harvest, and (3) 7 inch DBH to a 4 inch top for all lodgepole pine harvest.

Where individual market areas or specific products present opportunities for utilizing a higher proportion of the tree, these standards could be exceeded. In some cases, other resource objectives may require leaving a higher proportion of woody material on site. These utilization standards do not apply to materials left to meet fish, wildlife, and soil management objectives.

- 13-27 Miscellaneous forest products such as poles, boughs, Christmas trees, and house logs should be made available to the level compatible with meeting management area objectives.

Management Area Prescriptions - Standards and Guidelines

In addition to forestwide standards and guidelines that apply to all Forest lands, the following standards and guidelines are applicable to specific management areas on the Winema National Forest. The management prescriptions and their associated standards and guidelines are detailed on the following pages. A generalized map of the management areas is included in the accompanying FEIS (see FEIS Preferred Alternative J). The detailed control map for the Forest Plan allocations resides in the Forest's computerized Geographic Information System (GIS). This control map is available for review at the Winema National Forest Supervisor's Office.

If unusual or special circumstances inconsistent with direction for a given management area are discovered, the management area boundary or direction may be modified. Such a modification would be the exception rather than the rule. An example would be the discovery of a bald eagle nesting site within an allocation such as 3B Scenic Foreground Partial Retention. In this case, the site would be redesignated as 9A Bald Eagle Nest Site. Boundaries would be modified and the NEPA process would be used to document the modification. Modifications to correct mapping errors may be made without modifications to the Forest Plan

Table 4-19 (on the following page) displays the acres in each management area allocation.

**TABLE 4-19
Acreages in Management Areas**

Management Area	FEIS Preferred Alternative J
MA 1: Semiprimitive Recreation	
1A Yamsay Mountain	8,872
1B Brown Mountain	2,730
1C Pelican Butte	10,988
MA 2: Developed Recreation	
2A Low Level Development	365
2B Moderate Level Development	1,630
2C High Level Development	2,995
MA 3: Scenic Management	
3A Foreground Retention	27,315
3B Foreground Partial Retention	15,703
3C Middleground Partial Retention	75,984
MA 4: Unique Areas	
4A Geologic Areas	1,110
4B Botanical Area	21
4C Scenic Area	1,982
4D Cultural Resource Area	14,369
MA 5: Wild and Scenic Rivers	
Scenic Classification	4,840
MA 6: Wilderness	
6A Mount Thielsen	27,709
6B Sky Lakes	40,605
6C Mountain Lakes	23,071
Total Wilderness	91,385
MA 7: Old-Growth Management	
No Harvest	59,140
MA 8: Riparian Management	57,937
MA 9: Bald Eagle Habitat	
9A Nest Sites	4,753
9B Replacement Areas	12,038
9C Bald Eagle Winter Roost	2,129
MA 10: Big Game Winter Range	37,132
MA 11: Range Management	0
MA 12: Timber Production	523,272
MA 13: Research Natural Areas	3,045
MA 14: Minimum Management	43,573
MA 15: Upper Williamson	38,361

Designated Transportation and Utility Corridors

Within many of the following management areas are existing transportation and utility corridors with specified right-of-way widths. These corridors are described in tables 4-20 and 4-21. In addition to the corridors described in the tables, sections of U.S. Highway 97 and State Highways 138, 62, and 140 where located on the Forest are designated as existing corridors to their existing right-of-way width.

See figure 4-2 for the general location of these existing right-of-ways.

TABLE 4-20
Railroads

Company	Township and Range	Rights-of-Way		
		Width	Miles	Acres
Burlington Northern	T27S, R8E	100 feet	3.5	42.0
Southern	T27S, T33S, T37S - R8E T37S - R9E T33S, T34S, T36S - R7E	100 feet	19.3	233.9
Oregon, California, & Eastern	T37S, R11-1/2E T37S, R11-1/2E	200 feet	0.5	12.1
		100 feet	5.5	66.7

**TABLE 4-21
Utility Corridors**

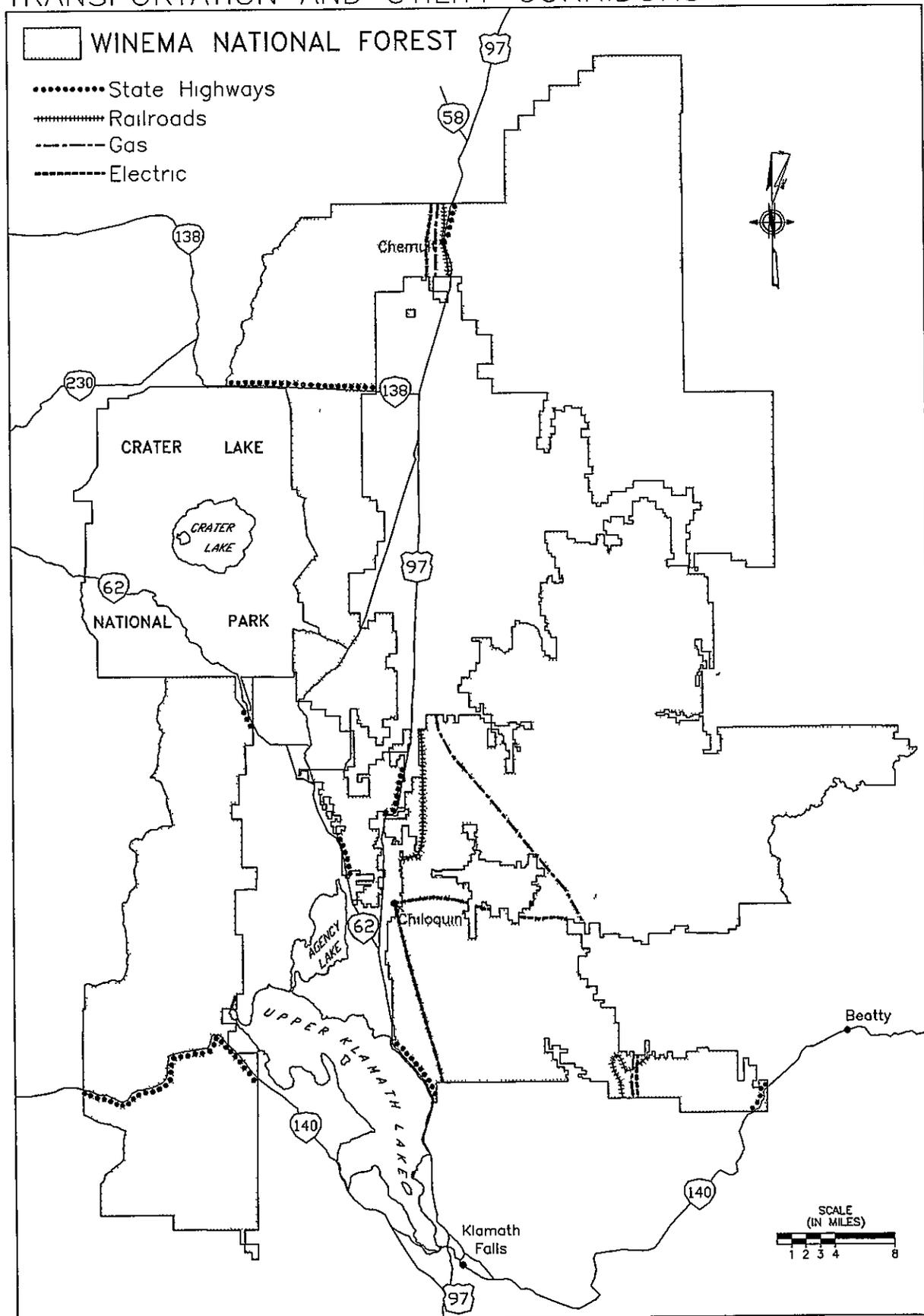
Utility Company	Ranger District Location	Township and Range	Capacity	Rights-of-Way		
				Width	Miles	Acres
PP&L(1)	Chiloquin RD; Chiloquin to Johns Manville Plant	T35S, R8E	130 kv	100 feet	4.4	53.3
PP&L	Chiloquin RD; Sprague River to Chiloquin	T35S, R7&9E	120 kv	100 feet	8.3	100.6
PP&L	Chiloquin RD; Redmond to Klamath Falls Line	T36S, R8E T35S, R7&8E T34S, R7E T33S, R7E	230 kv	125 feet	19.6	296.97
PP&L	Chiloquin RD; Barkley Springs to Modoc Point	T36S, R7E	66 kv	50 feet	<1.0	1.4
PP&L	Chiloquin RD; Barkley Springs to Modoc Point	T37S, R9E T36, R7E	66 kv	varied	4.0	24.0
PP&L	Chiloquin RD "Switchback"	T37S, R11-1/2E T36S, R10E	69 kv	100 feet	3.0	36.4
BPA(2)	Chemult RD; Redmond to Klamath Falls Line	T27S, R8E	230 kv	125 feet	5.0	75.8
Mid-State Electric	Chemult RD	T27S, R8E	69 kv	30 feet	4.8	17.4
Pacific Gas	Chemult RD; Chiloquin RD	T27S, R8E	36-inch pipeline diameter	50 feet	5.2	31.5
Pacific Gas	Chemult RD; Chiloquin RD	T34S, R9E T35S, R9E T36S, R10E T37S, R11-1/2E	36-inch pipeline diameter	50 feet	7.7	46.7
Pacific Gas	Chemult RD; Chiloquin RD	T32S, R8E T35S, R9E	36-inch pipeline diameter	100 feet	12.4	150.3

(1) Pacific Power and Light Company

(2) Bonneville Power Administration.

FIGURE 4-2

TRANSPORTATION AND UTILITY CORRIDORS



Management Area 1 - Semiprimitive Recreation

Goal

Management Area 1 provides dispersed recreation opportunities in a predominately natural or natural-appearing environment and in a semiprimitive Recreation Opportunity Spectrum (ROS) setting.

Description

This management area may be applied to areas that are natural-appearing with no or limited road access. These areas are generally 2,500 acres or larger to provide at least a moderate opportunity for solitude and a feeling of remoteness from the more heavily used and developed areas. These areas provide a semiprimitive experience similar to wilderness, but have fewer use restrictions. The undisturbed environment also provides wildlife habitat for species dependent on old growth and on snags for cavity nesting.

Desired Future Condition

The desired future condition is a variety of natural-appearing vegetation and landforms. These areas will remain primarily unroaded and undisturbed by human activities. Access will be by trail or primitive high clearance road. Recreation use will be relatively light so that users meet infrequently. The areas are managed in such a way that minimum on-site controls and restrictions may be present, but they are subtle.

Standards and Guidelines

Specific standards and guidelines that apply to all management intensities of this management strategy are stated in this subsection.

Recreation

1. Recreation facilities may be installed to protect resources, provide for user safety, and distribute use to meet the goals of this management area. These facilities include rustic toilets, shelters, campfire rings, and recreation stock corrals or hitching rails constructed of native materials,

Scenic

1. Management activities shall be designed to achieve the retention visual quality level.

Timber

1. Timber harvest shall not be programmed.
2. To protect, rehabilitate, or enhance recreation opportunities and scenic qualities, salvage harvest and reforestation activities may be conducted in stands that have been severely damaged by fire, windthrow, insect attack, or other catastrophes.

Wildlife and Fish

1. Habitat improvements are permitted if they are designed to blend with the natural environment.
2. Management activities shall be designed to maintain existing old-growth and cavity-nester habitat.

Range

1. Manage livestock grazing to reduce conflicts with recreation. Generally grazing permits will not be issued.

Minerals and Energy

1. Salable mineral material resources shall not be developed.
2. Surface occupancy should not be allowed for leasable mineral or other energy source development.
3. Firewood cutting permits should not be issued.

Lands

1. Landownership Classification Group 2 applies to this management strategy.
2. Special-use permits shall be allowed for existing structures. No permits shall be issued for new structures, except within designated electronic sites.
3. This management area is an avoidance area for new transportation and utility corridors.

Facilities

1. No new roads will be constructed unless they are needed to meet the management area objectives.

Protection

1. No effort will be made to control insect and disease outbreaks, except when pest or pathogen populations are a threat to adjacent lands. The need for control actions will be evaluated on a case-by-case basis through the environmental analysis process.
2. Prescribed fire may be used to maintain preferred vegetative communities. Burning prescriptions shall be consistent with management strategy objectives.

Management Area 1

Management Intensities

Management Area 1A Yamsay Mountain Semiprimitive Recreation Area

Goal

This management intensity provides semiprimitive nonmotorized recreation opportunities in a predominantly natural-appearing environment in the Yamsay Mountain area.

Description

At 8,900 acres, the Yamsay Mountain Semiprimitive Recreation Area is located on the eastern boundary of the Forest, adjacent to the Buck Creek Roadless area on the Fremont National Forest. Existing roads in the area have been closed, and motorized use is prohibited. The area will be managed to provide opportunities for hiking, horseback riding, dispersed camping, and hunting.

Desired Future Condition

The desired future condition is a diversity of natural-appearing vegetative communities, meadows, and rock outcroppings. The area provides the visitor with a high probability of experiencing solitude, and interaction between users is low. A trail to the top of Yamsay Mountain and a series of loop trails provide nonmotorized access. The Desert to the Crest (Intertie) Trail may pass through the area, providing a long distance trail opportunity.

Intensity-Specific Standards and Guidelines

Recreation

1. The area shall be managed to provide a semiprimitive nonmotorized recreation setting.
2. A trail shall be constructed from Jackson Creek Campground to the top of Yamsay Mountain where it will tie into the Fremont National Recreation Trail (NRT). Additional trails should be added to provide a system of loops. These trails will provide a riding opportunity in a semiprimitive setting without the restrictions on group size required in wilderness. A trailhead and horse camping facilities should be added near Jackson Creek Campground to facilitate this use.
3. Motorized vehicle use will be excluded except for emergencies and administrative purposes when approved by the Forest Supervisor.

Minerals and Energy

1. Surface occupancy should not be allowed.

Management Area 1B Brown Mountain Semiprimitive Recreation Area

Goal

This management intensity provides semiprimitive recreation opportunities in a predominantly natural-appearing environment on Brown Mountain.

Description

The Brown Mountain Semiprimitive Recreation Area is located on the Cascade Crest just south of State Highway 140. Nearly 70 percent of the area is covered by rugged lava flows, making summer access difficult. In the winter, the area provides challenging terrain for snowmobilers and advanced cross-country and telemark skiers. The area is shared between the Winema and Rogue River National Forests with the Winema portion consisting of 2,500 acres. The Pacific Crest National Scenic Trail passes through the area on the Rogue River side and the Brown Mountain trail skirts the eastern side of the Mountain.

Desired Future Condition

The desired future condition is a diversity of natural-appearing vegetative communities dominated by rock outcroppings. A paved bike trail may be constructed on the northern edge of the area along the highway, and a hiking route may be developed to the top of Brown Mountain. Most of the recreation use of the area occurs during the winter or on developed trails.

Intensity-Specific Standards and Guidelines

Recreation

1. The area shall be managed to provide a semiprimitive motorized recreation setting in the winter and a semiprimitive nonmotorized setting in the summer.
2. The only motorized vehicles allowed are snowmobiles.
3. Snowmobile use shall be managed considering other resources, promoting safety of users, and minimizing conflicts with other users.
4. A paved bike trail and winter snowmobile route are planned along Highway 140 to provide access between recreation areas at Fish Lake and Lake of the Woods. This facility may be developed to a higher level than what normally would be found in a semiprimitive area.

Minerals and Energy

1. Reasonable access for exploration and/or development of locatable minerals shall be highly controlled to protect management area values.

Management Area 1

Management Area 1C Pelican Butte Semiprimitive Recreation Area

Goal

This management intensity provides semiprimitive recreation opportunities in a predominantly natural-appearing environment on Pelican Butte. The option is preserved to develop a portion of the area to provide winter sports, interpretative, and other recreation opportunities.

Description

The Pelican Butte Semiprimitive Recreation Area encompasses 10,900 acres on or adjacent to Pelican Butte, including the Sky Lakes B roadless area, the road corridor to the top of the butte, and a portion of Sky Lakes A roadless area near Cold Springs. The area includes a portion of Forest Road 3651 (which accesses the Cold Springs Trailhead), a section of the Cold Springs Trail, and a high-clearance vehicle road (which leads to an electronic site on top of the butte). Pelican Butte is also the only potentially viable downhill ski area outside of wilderness inventoried on the Forest.

Desired Future Condition

The desired future condition is a diversity of natural-appearing vegetative communities and rock outcroppings. Current uses of the area will continue, including use of the summit as an electronic site and viewpoint. Additional trails may be built within the area to relieve pressure on existing wilderness trails. The option to develop a portion of the area for recreation use, including a downhill ski area, will be maintained. The type and scope of development will be determined in a site-specific environmental impact statement (EIS). This plan will be amended to incorporate the results of this EIS. Any areas developed will be managed under a Management Area 2 intensity.

Intensity-Specific Interim Standards and Guidelines

Recreation

1. The area shall be managed to provide a semiprimitive motorized recreation setting.
2. Except for snowmobiles, off-road vehicle use shall be limited to designated travelways and areas, unless authorized by special permit.
3. No motorized or bicycle use shall be permitted on the Cold Springs Trail which directly accesses Sky Lakes Wilderness.
4. Snowmobile use shall be managed considering other resources, promoting safety of users, and minimizing conflicts with other users.
5. Additional winter and summer trails shall be developed in the area with comment from user groups.

Minerals and Energy

1. Reasonable access for exploration and/or development of locatable minerals shall be highly controlled to protect management area values.

Facilities

1. Road 3651 shall continue to be maintained for passenger car traffic to the Cold Springs Trailhead. The road to the top of Pelican Butte (Road 3651-980) shall remain open, but passenger car use will be discouraged.

Management Area 2 - Developed Recreation

Goal

Management Area 2 provides a variety of recreation opportunities and development levels at developed recreation sites. *Emphasis is to meet the demand for developed camping, except on holiday weekends.*

Description

This management area is applied to lands that currently have developed recreation facilities or are identified as potential development sites. These facilities include Forest Service operated sites--such as campgrounds, picnic areas, boating sites, trailheads, and sno-parks--and privately operated sites like resorts, organization sites, and recreation residences.

Desired Future Condition

The desired future condition is developed recreation occurring in a natural-appearing forest environment. A variety of recreation activities are supported by the appropriate facilities. These include picnicking, camping, boating, swimming, hiking, riding, cross-country skiing, and snowmobiling. Developed recreation areas are generally accessible by passenger car.

Standards and Guidelines

Specific standards and guidelines that apply to all management intensities of this management area are stated in this subsection.

Recreation

1. Areas shall generally be managed to provide roaded natural or rural Recreation Opportunity Spectrum (ROS) settings
2. Motorized vehicles shall be restricted to designated routes and areas. Some trails or areas may be designated for nonmotorized activities only, such as hiking, biking, or cross-country skiing.
3. A site plan for any recreation development shall be prepared before construction. The plan shall be prepared or reviewed by a journey-level landscape architect and approved by the Forest Supervisor. "As built" site plans for existing sites shall be prepared or updated to show current and proposed facilities.
4. Developed recreation sites shall be designed, administered, and maintained to provide a quality experience for the visitor, to provide for public health and safety, to protect the site resources and facilities, and to minimize operation and maintenance costs (FSM 2330).
5. Existing sites should be upgraded and/or expanded to accommodate user needs before new sites are constructed. Compatible facilities and sites should be concentrated in recreation complexes to provide a variety of opportunities in one area and to minimize operating costs.

6. New or additional facilities to add capacity shall be planned when the average weekend use exceeds 90 percent of the designed persons-at-one-time (PAOT) of the site or when use for the managed peak use season exceeds 90 percent of the Practical Maximum Capacity.

Scenic

1. Management activities in the environment surrounding recreation sites shall achieve the retention visual quality level, except in lodgepole pine salvage areas.

Timber

1. Timber harvest shall not be programmed.
2. Timber management activities shall be utilized to maintain overall, healthy stand conditions *and to maintain or to enhance recreational values in accordance with an approved vegetation management plan*. Such activities within existing sites normally shall occur during non-use or low-use periods
3. Hazardous trees or limbs will be removed before opening sites to public use.

Water, Soil, and Air

1. Comply with State requirements in accordance with the Clean Water Act for protection of waters of the State of Oregon, *including the antidegradation policy for high quality waters*, through implementation of General Water Quality Best Management Practices.
2. In areas with concentrated recreation use, the percent of area impacted by detrimental soil conditions (compaction) may exceed forestwide standards. Facilities should be designed and arranged to concentrate and to direct traffic flow to reduce impacts. Site-hardening measures used should be appropriate for the designed development level.

Minerals and Energy

1. Salable mineral material sources should not be developed.
2. Dead and down logs for firewood may be gathered within a recreation area or site for use in that area.

Lands

1. Landownership classification group 2 applies to this management area.
2. This management area is an avoidance area for new transportation and utility corridors.

Facilities

1. With full consideration to public safety, roads and trails shall be constructed and maintained to standards that are consistent with recreation opportunities and the level of service needed.

Management Area 2

2. New facilities shall be designed to blend with the natural setting and to visually compliment existing structures.

Protection

1. All wildfires shall be aggressively suppressed by using low-impact methods as much as practical. During high fire danger periods, rapid attack may be appropriate, using all available tactics to ensure public safety and to protect improvements.
2. Fuel treatment methods that minimize adverse effects like removal and chipping shall be used within developments. Treatment normally would occur during non-use or low-use periods.

Management Intensities

The following management intensities may be applied.

Management Area 2A Developed Recreation, Low Level Development

Goal

This management intensity is designed to provide recreation opportunities in minimally developed, forested areas.

Description

This management intensity is applied to lands with predominantly development level 2 recreation facilities. Some level 3 facilities may be present. Little site modification is evident. Improvements are rustic and designed primarily for protection of the site rather than convenience of the user. Examples of sites in this intensity are Corral Springs, Scott Creek, Odessa, Jackson Creek and Head of the River campgrounds, Wood River Picnic Area, Sevenmile Marsh and Cold Springs Trailheads, and Pelican Cut Boat Launch. Access to these areas may not always be maintained for passenger car use. These sites receive relatively low recreation use, but may have peak use periods during hunting season, for example.

Desired Future Condition

The desired future condition is meeting customer needs by providing minimally developed recreation sites in a natural-appearing forest environment. To meet increases in demand, some of the more popular sites may be upgraded to higher development levels and managed at a higher intensity. However, a variety of minimally developed sites will be retained at locations desired by users.

Intensity-Specific Standards and Guidelines

Recreation

1. Areas managed at this management intensity shall provide a roaded natural recreation setting, except those sites in lodgepole pine impacted by the pine beetle. These sites may be managed in the short term to provide a roaded modified setting

2. Potable water is generally not provided at this intensity.
3. These sites may be operated at a reduced service level under the "Pack-It-Out" program for all or part of the managed peak use season.
4. Recreation user fees are not charged.

Range

1. Domestic livestock grazing may be a compatible use in this management intensity. Conflicts will be resolved on a case-by-case basis

Minerals and Energy

1. Exploration, development, and surface occupancy of locatable and leasable minerals shall be evaluated in the environmental analysis process.

Management Area 2B

Developed Recreation, Moderate Level Development

Goal

This management intensity is designed to provide a variety of recreation opportunities in moderately developed, forested areas.

Description

This management intensity is applied to lands with predominantly development level 3 recreation facilities. Site modification is moderate. Facilities are both for protection of the site and convenience of the user and are of contemporary/rustic design. Inconspicuous traffic controls are usually provided, and roads may be surfaced. Examples of sites in this intensity are Fourmile Lake and Williamson River campgrounds, Crystal Picnic Area, Oux Kanee Overlook, Great Meadow Sno-park, and Rocky Point Boating Site. *These sites receive moderate to heavy use during the managed peak use season.*

Desired Future Condition

The desired future condition is meeting customer needs by providing moderately developed recreation areas in a natural-appearing forest environment. To meet increases in demand, some of the more popular sites may be upgraded to higher development levels and managed at a higher intensity. However, a variety of moderately developed sites will be retained at locations desired by users.

Intensity-Specific Standards and Guidelines

Recreation

1. *Areas managed at this management intensity shall provide a roaded natural recreation setting.*
2. Potable water shall generally be provided in campgrounds at a central location using hand pumps or similar systems.

Management Area 2

3. Sites are usually operated at full service level during the managed peak use season.
4. Campgrounds are normally operated as fee sites where cost effective.

Range

1. Domestic livestock grazing is not a compatible use in this management intensity, and livestock will be excluded.

Minerals and Energy

1. Except where located on acquired lands with acquired land status, these areas shall be recommended for withdrawal from mineral entry under the General Mining Law of 1872, as amended.
2. Surface occupancy shall not be allowed.

Facilities

1. Access roads to these sites shall be maintained for passenger cars use.

Management Area 2C Developed Recreation, High Level Development

Goal

This management intensity is designed to provide a variety of recreation opportunities in highly developed, forested areas.

Description

This management intensity is applied to lands with predominantly development level 4 or 5 recreation facilities. These sites may be heavily modified. Some facilities are designed strictly for the comfort and convenience of the user. Traffic controls are obvious, and artificial surfacing is used extensively. Facilities generally include campgrounds, picnic areas, boat launches, swimming sites, and interpretative displays within recreation complexes. Examples of areas in this intensity are Aspen Point, Sunset and Rainbow Bay at Lake of the Woods, and Digit Point at Miller Lake. Access is by paved or high standard road. These sites receive moderate to heavy use during the managed peak use season.

Desired Future Condition

The desired future condition is meeting customer needs by providing highly developed recreation areas in a natural-appearing forest environment. The demand for developed camping is being met, except on holiday weekends. A wide range of recreation opportunities--including day-use hiking and bike trails and interpretative facilities--are provided in close proximity to the developed site complexes. All facilities have barrier-free access.

Intensity-Specific Standards and Guidelines

Recreation

1. Areas are managed to provide a rural recreation setting at Lake of the Woods and a roaded natural setting at Miller Lake.
2. Potable water generally shall be provided through the recreation complex through piped distribution systems. Barrier-free flush or composting toilets will be provided.
3. Sites shall be operated at full service level during the managed peak use season.
4. Campgrounds shall be operated as fee sites during the peak use season, and fees may be charged for services provided such as trailer dump stations and showers.
5. All new facilities will be designed to have barrier-free access, and architectural barriers will be removed from existing facilities.

Range

1. Domestic livestock grazing is not a compatible use in this management intensity and livestock will be excluded.

Minerals and Energy

1. These areas have been withdrawn from mineral entry under the General Mining Law of 1872, as amended, and the withdrawals shall be continued
2. Surface occupancy shall not be allowed

Facilities

1. Access shall be maintained for passenger car and recreational vehicle use.

Management Area 2D Developed Recreation, Special-Use Permit Areas

Goal

This management intensity is designed to provide a variety of recreation facilities authorized by special-use permit.

Description

This management intensity is applied to lands under special-use permit. The permit authorizes the development of recreation facilities. Existing facilities under permit include: concession sites-Rocky Point Resort and Lake of the Woods Resort; group use sites-Camp McLoughlin Organization Site, Camp Esther Applegate Organization Site, Camp LOW-Echo Organization Site, and Mountain Lakes Organization Site; and family use sites-Lake of the Woods Recreation Residence Tracts and Recreation Creek Recreation Residence Tracts.

Management Area 2

These facilities are generally moderately to highly developed, and may be used by or may be open to the public year-round.

Desired Future Condition

The desired future condition is to continue providing group and family use opportunities at sites currently under permit and to continue providing needed public services at concession sites. New concessions may be developed.

Intensity-Specific Standards and Guidelines

Recreation

1. Recreation special-uses shall be administered in accordance with FSM 2340 and FSM 2700
2. No new special-use permits for recreation residences shall be issued for sites outside existing tracts.
3. New concession sites may be developed if a needs assessment indicates that the development will provide needed public services and will be environmentally and economically viable, and a qualified proponent exists. Complex development may require a site-specific EIS.

Minerals and Energy

1. Except for Mountain Lakes Organization Site, all existing sites are located in areas that have been withdrawn from mineral entry under the General Mining Law of 1872, as amended, and the withdrawals shall be continued.

Management Area 3 - Scenic Management

Goal

Management Area 3 is designed to maintain and create visually appealing scenery that represents the landscape character of the Forest. Emphasis is on areas viewed from selected travelways, use areas, and bodies of water

Description

This management area may be applied to lands visible for a distance up to 5 miles from selected travelways, bodies of water, or public use areas. These areas are classified as retention or partial retention based on the Visual Management System, as explained in "National Forest Landscape Management," Vol. 2, Agriculture Handbook Number 462. Retention and partial retention are further subdivided into distance zones. Standards and guidelines differ for each distance zone and focus more intensively on activities that are viewed at close range.

Desired Future Condition

The desired future condition is a forested environment. This environment includes a mix of native coniferous trees and shrubs, periodically interspersed with natural meadows and flats, talus slopes, rock outcrops, and rimrock. Size classes range from seedlings to large diameter trees; a multicanopied, vegetative appearance occurs in appropriate scale with the viewing distance. Where they naturally exist, deciduous trees such as aspen and cottonwood are perpetuated for autumn color. Management activities repeat form, line, color, and texture that are common within the characteristic landscape.

Standards and Guidelines

Specific standards and guidelines that apply to all management intensities of this management area are stated in this subsection.

Recreation

1. The area shall be managed to provide a semiprimitive or roaded natural recreation opportunity setting.
2. Recreation facilities may be placed in this management area, provided they are designed to achieve the visual quality objectives.
3. Viewshed guides shall be prepared to provide project-level direction for Forest Plan implementation. These guides shall provide guidance regarding the following elements: large trees, distinctive bark, spring and fall color, variety of tree species, shrubs and ground covers, emphasis on special landscape features, vista creation, rotation of view openings, and rehabilitation needs.
4. Because of existing negative visual elements like skid roads, activity residues, or cable corridors, landscapes or portions of landscapes not meeting visual quality objectives should be rehabilitated with consideration for the resource values present.

Management Area 3

5. Enhancement of selected areas or views may be conducted through vegetative manipulation, landform alteration, or inclusion of structural elements when needed to achieve objectives of the management area.

Range

1. Structural and nonstructural range improvements shall be constructed of native materials or designed to blend with the landscape.

Timber

1. Timber harvest shall be programmed.
2. A mix of naturally occurring species should be maintained in regenerated harvest units in pine associated and mixed conifer working groups with emphasis on ponderosa pine, Douglas-fir, and sugar pine.
3. Aspen, ponderosa pine, and white fir should be emphasized where they occur in predominantly lodgepole stands. Presence of ponderosa pine in ecotones should be maintained.
4. Screening vegetation should be perpetuated for areas such as rock quarries, road cut and fill slopes, utility ways, structures, or unhealed harvest areas.
5. Created openings shall be shaped to appear natural in the landscape.
6. Size of timber harvest units should be in scale with the surrounding landscape character, considering distance from viewer and dispersion needs to achieve desired variety.
7. Clumps or islands of vegetation/leave trees within natural-shaped clearcut units may be retained to reduce contrast of visual elements.
8. Individual tree selection, group selection, or combinations of both shall be used to achieve the desired future condition in ponderosa pine and pine associated species.
9. In ponderosa pine and pine associated species where uneven-aged management is applied, from 30 percent to 35 percent of an area shall be considered for treatment at any one time, and treatments shall be dispersed over the total area. All lands should be entered, as needed, on a 20- to 30-year cutting cycle.
10. Management of armillaria root rot in mixed conifer and mountain pine beetle in lodgepole pine should focus on long-term diversity and visual quality achievement. Consideration should be given to short-term mitigation such as design of harvest units (which includes maintenance of vegetated clumps). Some natural mortality also should be accepted until stand conversion can be implemented over time.

Minerals and Energy

1. New salable mineral material sources should not be developed.
2. Existing mineral material sources should not be expanded into scenic areas.
3. Existing mineral material sources shall be analyzed for short-term mitigations to achieve scenic objectives and long-term rehabilitation measures. Partial rehabilitation of a material source should be considered when that part no longer is of use for development.
4. Reasonable access for the exploration and/or development of locatable and leasable minerals shall be allowed but shall be highly controlled to protect scenic values.
5. Except for road access, surface occupancy should not be allowed.

Lands

1. Landownership classification group 3 applies to this management area. Disposal of lands should occur only if lands of equal or higher scenic quality shall be acquired.
2. Special-use permits shall be permitted for structures that existed before designation of lands to scenic emphasis. Rehabilitation should be emphasized for any structures that do not blend with the landscape.
3. New special uses may be permitted when they are consistent with the management objectives and are justified through an environmental analysis.
4. This management area is an avoidance area for new transportation and utility corridors.

Facilities

1. Roads, parking lots, and other necessary facilities shall be designed to flow with the typical lines and slopes in the landscape and/or shall be screened by natural vegetation
2. Closed roads should appear natural with large logs and boulders partially buried to blend with the area and should be tilled and revegetated with trees, shrubs and grasses, as appropriate to the location.

Management Intensities

The following management intensities may be applied.

Management Area 3A Scenic Management, Foreground Retention

Goal

The primary emphasis for this intensity is to retain the natural-appearing condition of the foreground areas. *The retention visual quality objective means that activities may only repeat whatever form, line, color, and texture are frequently found in the characteristic landscape. Changes in their qualities--such as size, amount, intensity, direction, and pattern--may not be evident.*

Description

This management intensity is applied to lands visible for distances up to .25 mile from selected travelways, bodies of water, or public use areas. This area focuses on the detail in the landscape; the detail includes individual tree shape, color, size, species mix, and related vegetation like shrubs and grasses. Vegetation may be manipulated to achieve desired character through enhancing large diameter trees, opening a vista to provide an attractive view, or creating a small space to encourage new growth of desired vegetation.

Desired Future Condition

The desired future condition is the same as the areawide condition. In addition, large tree character is emphasized and maintained perpetually in the foreground area through retaining groupings of large-diameter trees and by having large trees sometimes scattered individually among other tree size classes. To achieve diversity, small openings with natural-appearing edges may be created. Overall, trees with distinctive bark and tree form characteristics, including occasional character snags, are very evident. Natural-appearing forms, colors, and textures dominate to create a high quality scenic condition.

Intensity-Specific Standards and Guidelines

The following standards and guidelines apply to the foreground retention intensity of the scenic management area.

Scenic

1. Evidence of management activities from projects that produce slash (tree harvest) or charred bark (underburning) will not be noticeable one year after the work has been completed.

Timber

1. Large tree character will be perpetually retained in the foreground retention area in all species, except lodgepole pine, through maintaining three to five large diameter trees (between 30 inches and 36 inches DBH) on the average per acre. These should be distributed in groupings for greatest visual effect. Some areas may have high numbers of large diameter trees, and other areas may have fewer small clumps. Openings may or may not have mature large-diameter trees, if not, more trees will be retained on other acres to maintain the three-to-five-trees-per-acre average in the foreground overall.
2. In ponderosa pine and pine associated areas where uneven-aged management will prevail, the objective is to achieve a healthy, multaged forest with timber stands that contain a variety of tree sizes up to 36 inches DBH following harvest. At least three canopy levels or size classes are present within each stand.
3. For even-aged and group selection management, the long-term objective is to achieve the mix of tree size classes shown in table 4-22
4. Stumps, if visible, shall be cut to approximately 6 inches or less in height on the uphill side of the stump.
5. Thinning units should be irregularly marked (vary the density of leave trees) in the immediate foreground to break up the viewing distance and to provide diversity.

6. Landings, decks, major skid roads, temporary roads, and slash piles shall be located to utilize vegetative or landform screening opportunities. These should be located away from critical line-of-sight viewing areas.

Protection

1. Fire suppression efforts in the immediate foreground should use low-impact methods. If heavy equipment is needed on high-intensity fires, rehabilitation may be needed to mitigate the effect on the visual resource.
2. Harvest residues resulting from management activities should not be evident after residues treatment

**TABLE 4-22
Scenic Foreground Retention Tree Size Class Objectives
Even-Aged and Group Selection Management Strategies**

Working Group	DBH (Inches)	Percent of Area In DBH Class
<i>Ponderosa Pine, or Pine Associated, or and Mixed Conifer</i>	30-36	20
	22-30	20
	16-22	20
	9-16	20
	0-9	20
Lodgepole Pine	9+	50
	5-9	25
	0-5	25

Management Area 3

Table 4-23 summarizes the critical elements necessary to achieve the retention visual quality level in foreground.

**TABLE 4-23
Scenic Foreground Retention Standards by Working Group**

Critical Element	Ponderosa Pine (Uneven)	Pine Associated (Uneven)	Mixed Conifer (Even-aged)	Lodgepole(1) Pine (Even-aged)
Target diameter for mature portion of the stand (inches)	36	36	34	-(2)
Maximum created openings size (acres)(3)	2	2	3	8
Maximum area in created openings in any one decade (percent)	4	4	4	-
Maximum area in created openings at one time (percent)	8	8	8	-
Linear feet of created opening along road frontage/decade/mile of road	300	300	200	-
Target stand appearance	Open, park-like, mature groups of trees with deeply furrowed, yellow-colored bark within a mix of varying age classes.	Mature trees in tight, dense groups of various species and ages.	Mature trees in tight, dense groups of various species and ages.	Even-aged, mature groups of trees within a mosaic of varying ages.

(1)The mountain pine beetle infestation has resulted in relaxed operating standards to achieve the visual quality objective in the long term.

(2)In lodgepole pine, rotation age (80 years), not diameter, is the controlling factor.

(3)For visual management purposes, a created opening is no longer considered to be an opening when the vegetation within it reaches an average of 20 feet in height and (for foreground retention purposes) may include from three to five large-diameter trees per acre.

Management Area 3B

Scenic Management, Foreground Partial Retention

Goal

The goal is to provide attractive scenery that is slightly altered from a natural condition as viewed in the foreground. Activities may repeat or introduce form, line, color, or texture common or uncommon to the characteristic landscape, but changes in their qualities of size, amount, intensity, direction, and pattern must remain visually subordinate to the visual strength of the characteristic landscape.

Description

This management intensity may be applied to lands visible for distances up to .25 mile from selected travelways, bodies of water, or public use areas. This area focuses on the detail in the landscape: individual tree shape, color, size, species mix, and related vegetation like shrubs and grasses. Vegetation may be manipulated to achieve desired character through enhancing large diameter trees, opening a vista to provide an attractive view, or creating a small space to encourage new growth of desired vegetation.

Desired Future Condition

The desired future condition is the same as the areawide condition. In addition, large tree character is emphasized and maintained perpetually in the foreground in all species, except lodgepole pine, through retaining large-diameter trees in groupings and by having large trees sometimes scattered individually among other tree size classes. To achieve diversity, small openings with natural-appearing edges may be created. Overall, trees with distinctive bark and tree form characteristics, including occasional character snags, are very evident. Management activities may be noticeable, but they remain subordinate to the natural landscape character.

Intensity-Specific Standards and Guidelines

The following standards and guidelines apply to the foreground partial retention intensity of the scenic management area.

Scenic

1. Evidence of management activities from projects that produce slash (tree harvest) or charred bark (underburning) should not be noticeable from two to three years after the work has been completed.

Timber

1. Large tree character will be retained in the foreground area in all species, except lodgepole pine, through maintaining three to five large diameter trees (between 24 inches and 30 inches DBH) on the average per acre. These should be distributed in groupings for greatest visual effect. Some areas may have high numbers of large diameter trees, and other areas may have fewer small clumps. Openings may or may not have mature large diameter trees; if not, more trees will be retained on other acres to maintain the three-to-five-trees-per-acre average in the foreground overall.

Management Area 3

2. In ponderosa pine and pine associated areas where uneven-aged management will prevail, the objective is to achieve a healthy, multiaged forest with timber stands that contain a variety of size classes up to 30 inches DBH following harvest. At least three canopy levels or size classes are present within each stand.
3. For even-aged and group selection management, the long-term objective is to achieve the mix of tree size classes shown in table 4-24
4. Stumps, if visible, shall be cut to approximately 6 inches or less in height on the uphill side of the tree.
5. Thinning units should be irregularly marked (vary the density of leave trees) in the immediate foreground to break up the viewing distance and to provide diversity.
6. Landings, decks, major skid roads, temporary roads, and slash piles should be located to the rear of the stands to use vegetative or landform screening opportunities. These should be located away from critical line-of-sight viewing areas.

Protection

1. Harvest residues resulting from stand management activities may be evident but should blend, where possible, with the surrounding landscape characteristics.
2. Hand tools are the preferred method for fire suppression in the immediate foreground. Mitigation or rehabilitation measures may be necessary for high-intensity fires.

TABLE 4-24
Scenic Foreground Partial Retention Tree Size Class Objectives
Even-Aged and Group Selection Management Strategies

Working Group	DBH (Inches)	Percent of Area in DBH Class
Ponderosa Pine, or Pine Associated, or Mixed Conifer	24-30	20
	18-24	20
	12-18	20
	6-12	20
	0-6	20
Lodgepole Pine	9+	50
	5-9	25
	0-5	25

Table 4-25 summarizes the critical elements necessary to achieve partial retention in the foreground

**TABLE 4-25
Scenic Foreground Partial Retention Standards by Working Group**

Critical Element	Ponderosa Pine (Uneven)	Pine Associated (Uneven)	Mixed Conifer (Even-aged)	Lodgepole(1) Pine (Even-aged)
Target diameter (inches)	30	30	30	-(2)
Maximum created openings size (acres)(3)	2	2	5	10
Maximum area in created openings in any one decade (percent)	6	6	6	-
Maximum area in created openings at one time (percent)	12	12	12	-
Linear feet of created opening along road frontage/decade/mile of road	500	500	250	1,000
Target stand appearance	Open, park-like, mature groups of trees with deeply furrowed, yellow-colored bark within a mix of varying age classes.	Mature trees in tight, dense groups of various species and ages.	Mature trees in tight, dense groups of various species and ages.	Even-aged, mature groups of trees within a mosaic of varying age classes.

(1)The mountain pine beetle infestation has resulted in relaxed operating standards to achieve the visual quality objective in the long term

(2)In lodgepole pine, rotation age (80 years) is the controlling factor.

(3)For visual management purposes, a created opening is no longer considered to be an opening when the vegetation within it reaches an average of 20 feet in height and (for foreground retention purposes) may include from three to five large-diameter trees per acre.

Management Area 3

Management Area 3C Scenic Management, Middleground Partial Retention

Goal

This management intensity provides attractive scenery that is slightly altered from a natural condition as viewed in the middleground. Activities may repeat or introduce form, line, color, or texture common or uncommon to the characteristic landscape. Changes in their qualities of size, amount, intensity, direction, and pattern must remain visually subordinate to the visual strength of the characteristic landscape.

Description

This management intensity may be applied to lands visible for distances of .25 mile to 5 miles from selected travelways, bodies of water, or public use areas. This area focuses on the texture and form in the landscape where groups or stands of trees are similar as a unit compared with others that differ in size, degree of texture (fine, medium, or coarse), or pattern. A continuous forest canopy is usual; variety is provided by the addition of natural openings, rimrock, or rock outcrops that are typical in the landscape.

Desired Future Condition

The desired future condition is similar to the areawide condition. In addition, masses of vegetation rather than individual trees are evident. Varying canopy levels with natural-appearing edges and careful perpetuation of forested ridgelines create a mosaic. Created openings imitate natural occurrences in the landscape, while the characteristic landscape is retained. Activities repeat form, line, color, or texture common to the characteristic landscape. Activities may introduce changes in form, line, color, or texture that are found infrequently or not at all in the characteristic landscape, but they must remain subordinate to the visual strength of the characteristic landscape.

Intensity-Specific Standards and Guidelines

The following standards and guidelines apply to the middleground partial retention intensity of the scenic management area.

Timber

1. For individual tree selection (uneven-aged management), the long-term objective is to achieve a healthy, multiaged forest with timber stands that contain a variety of size classes up to 24 inches DBH following harvest. At least three canopy levels or size classes are present within each stand.
2. For even-aged and group selection management, the long-term objective is to achieve the mix of tree size classes shown in table 4-26.
3. Even-aged management may be applied to achieve diversity where stands of different ages are located adjacent to each other. Uneven-aged management also may be applied when appropriate.
4. Landings, decks, and slash piles should use vegetative or landform screening opportunities. These should be located away from critical line-of-sight viewing areas.

TABLE 4-26
Scenic Middleground Partial Retention Tree Size Class Objectives
Even-Aged and Group Selection Management Strategies

Working Group	DBH (Inches)	Percent of Middleground Area in DBH Class
Mixed Conifer or Pine Associated	16-18	20
	12-16	20
	8-12	20
	4-8	20
	0-4	20
Lodgepole Pine	9+	25
	6-9	25
	2-6	25
	0-3	25

Table 4-27 summarizes the critical elements necessary to achieve the partial retention visual quality objective in the middleground.

TABLE 4-27
Scenic Middleground Partial Retention Standards by Working Group

Critical Element	Ponderosa Pine (Uneven)	Pine Associated (Uneven)	Mixed Conifer (Even-aged)	Lodgepole(1) Pine (Even-aged)
Target diameter for mature stand component (inches)	24	24	18	-(2)
Average created openings size (acres)(3)	2	2	15	20
Maximum area in created openings in any one decade (percent)	8	8	8	-
Maximum area in created openings at one time (percent)	16	16	16	-

(1)The mountain pine beetle epidemic has resulted in relaxed operating standards to achieve the visual quality objective in the long term.

(2)In lodgepole pine, rotation age (80 years), not diameter, is the controlling factor.

(3)For visual management purposes, a created opening is no longer considered to be an opening when the vegetation within it reaches an average of 20 feet in height.

Management Area 4 - Unique Management Areas

Goal

Management Area 4 provides for the management of places that have unusual scenic, historic, prehistoric, scientific, natural, or other special interest and that merit special attention and management.

Protected and managed for recreation use substantially in their natural state (where appropriate), these areas may be managed to foster public use and enjoyment.

This management area consists of the following places:

The Pinnacles Geologic Area	663 acres
Devils Garden Geologic Area	447 acres
Mare's Egg Spring Botanical Area	21 acres
Williamson River Gorge Scenic Area	1,982 acres
Saddle Mountain Cultural Resource Area	14,369 acres
Total Management Area 4	17,482 acres

Description

This management area may be applied to lands that have significant scenic, historical, geological, botanical, zoological, cultural, paleontological, or other special characteristics.

Desired Future Condition

The desired future condition is a substantially natural condition representative of the kind of place with unique values for which it was identified. Protection and enhancement of values provide for public study or use and enjoyment.

Standards and Guidelines

General standards and guidelines that apply to this management area are stated in this subsection.

Recreation

1. The area shall be managed to provide a roaded natural recreation opportunity setting.
2. Visitor use and activities shall be managed to prevent degradation of the unique resource.
3. Site-specific management plans shall be developed for each unique management area.
4. Vehicles, including off-road vehicles, shall be allowed only in designated areas.

Scenic

1. The visual quality level will be retention.

Wildlife and Fish

1. If necessary to protect the area, structural and nonstructural improvements of wildlife and fish habitat may be constructed as long as they are designed to blend with the landscape.

Range

1. No new permits shall be issued for these areas.
2. Structural and nonstructural range improvements shall be designed to blend with the landscape.

Timber

1. Timber cutting will only be allowed when necessary to maintain or enhance the area's objectives.

Minerals and Energy

1. Salable mineral material sources shall not be developed.
2. Except for road access, surface occupancy should not be allowed.
3. Reasonable access to other forest lands for the exploration and/or development of locatable and leasable minerals shall be allowed but shall be highly controlled to protect management area values.
4. Personal use or commercial firewood-cutting permits shall not be issued for these areas except to meet management area objectives.

Soil and Water

1. Riparian area improvement projects shall be permitted.

Lands

1. Landownership classification group 2 applies to this management strategy.
2. This management area shall be an avoidance area for transportation and utility corridors.

Facilities

1. Facilities may be provided for protection of resource values, visitor use, environmental interpretation, or safety of visitors.
2. Existing buildings and roads may be maintained, and trails could be provided if they are compatible with the objectives for the area. Unneeded roads and skid trails shall be closed and returned to natural conditions.
3. All facilities shall be designed to blend with the natural setting and to preserve the uniqueness of the area.

Management Area 4

Protection

1. Insect and disease outbreaks shall be managed with a minimum of resource disturbance. Biological and silvicultural treatments should be emphasized
2. Fire suppression techniques shall emphasize minimum impact methods.
3. Herbicide treatment for noxious weeds is normally not appropriate for this management area. Justification for use must be documented in an environmental assessment.

Management Intensity 4A The Pinnacles and Devils Garden Geologic Areas

Goal

The goal is to maintain the current, relatively undisturbed condition with low-key recreational development in the form of hiking trails and interpretative sites

Description

The Pinnacles is located in Sand Creek canyon below Crater Lake National Park. Deep inside the canyon are pinnacles and unique habitat. The steep walled canyon was formed through geologic erosion after the eruption of Mount Mazama. The rapid erosion in soft materials left pinnacles of harder materials. Depth of the canyon is from 200 feet to 500 feet. Sand Creek has some fish, but access is very difficult.

Formed from erosion of maar-type craters, the Badlands and Devils Garden Geologic Areas are characterized by unusual rock formations, cliffs, and talus slopes. The volcanic eruptive centers occurred either under water or in very wet conditions, and appear as a splatter-type volcano.

The Badlands is at the base of Saddle Mountain and overlooks the historical interest area of Trout Creek Ranch.

Desired Future Condition

Same as for management area.

Intensity-Specific Standards and Guidelines

Minerals and Energy

1. The Pinnacles shall be recommended for withdrawal from mineral entry under the General Mining Law of 1872, as amended.

Management Intensity 4B Mare's Egg Spring Botanical Area

Goal

The goal is to maintain or enhance the characteristics of the spring that support the unique Mare's Egg algae and to encourage visitor use to a level that would not adversely affect the botanical values.

Description

Mare's Egg Spring is a very cold, clear spring about 1/2 acre in size that supports Mare's egg algae, *Nostoc pruniforme*, highly unusual blue-green algae that form very large round- to oblong-shaped colonies. Mare's Eggs can survive only in waters with a constant and very narrow range of characteristics. Its survival also depends on the presence of a small snail, *Parapholyx sp.* The algae are known to occur only in a few springs in the local area and in China. The spring is surrounded by an open, park-like stand of conifer.

Desired Future Condition

The desired future condition is water quality in terms of temperature (5 degrees Celsius +1 degree Celsius), turbidity, sediment, and chemistry equal to the current condition that supports populations of Mare's Egg algae. The surrounding vegetation is riparian vegetation and conifer that provide ample shading and protection from off-site effects.

Intensity-Specific Standards and Guidelines

Soil and Water

1. Any management activity at Mare's Egg Spring shall be designed to maintain status quo water quality; no degradation of water quality shall be permitted
2. No herbicides, pesticides, fertilizers, or other chemicals shall be applied within 200 feet of the water line.
3. No activities that would cause erosion or sedimentation shall be allowed.
4. Vegetation shall be managed to provide adequate shading to maintain current water temperatures. Generally, it should be managed for more than 80 percent water surface shading. If that is not possible, it will be managed for 100 percent of potential for shade.
5. The current water depth shall be maintained.
6. The area around the spring shall be fenced. No livestock or horses shall be allowed access at any time.
7. Water quality shall be monitored annually, as a minimum.

Minerals and Energy

1. Mare's Egg Spring shall be recommended for withdrawal from mineral entry under the General Mining Law of 1872, as amended.

Management Area 4

Lands

1. Lands downstream from the spring should be acquired, if possible, so that the spring can be protected from unwanted changes in water flow and course.

Management Intensity 4C Williamson River Gorge Scenic Area

Goal

The goal is to maintain or improve the quality scenic and dispersed recreational values of the canyon.

Description

The Williamson River Canyon area extends from near the Kirk Bridge to near the Williamson River Campground. The canyon walls are made up of basalt flows and breccia-type rock materials. Several springs are located in the canyon along the river. Recreationists use the canyon for rock climbing, hiking, and fishing.

Desired Future Condition

Same as for the management area.

Management Intensity 4D Saddle Mountain Cultural Resource Area

Goal

The goal is to maintain and protect current cultural and historic values and at the same time to allow scenic, wildlife, and dispersed recreation uses.

Description

This area includes Saddle Mountain and its accompanying cultural resource features. The area is bordered roughly by the Sprague River on the north and northeast, South Fork Trout Creek on the southeast and south, and 22 Road on the west. It encompasses the Badlands Geologic Area.

Desired Future Condition

The desired future condition is a substantially natural condition representative of the kind of place with unique values for which it was identified.

Intensity-Specific Standards and Guidelines

Recreation

1. Vehicle use will be confined to designated roads.
2. Interpretive facilities will be limited to the Trout Creek Ranch and the Badlands areas.

3. Recreation facilities will be limited to trails and dispersed camping facilities
4. The Trout Creek Ranch will be allowed to deteriorate naturally or be removed for public safety. The ranch will only be removed after mapping and recording information using the Historic American Buildings process and after SHPO consultation.

Minerals

1. The National Forest System lands in this management area have acquired land status and are not open to locatable mineral entry. Any future lands added to the National Forest System within this management area, other than lands with acquired land status, shall be recommended for withdrawal from mineral entry under the General Mining Laws of 1872, as amended.
2. Surface occupancy shall not be allowed.

Range

1. No new permits will be issued within the area.

Soil and Water

1. Soil and water projects will be implemented to protect the area's resource values.

Protection

1. Fire suppression activities will use minimum impact methods.
2. Insect or disease outbreaks shall not be artificially controlled unless it is necessary to prevent unacceptable resource damage to resources on adjacent lands or an unnatural loss to the management area's resources. If control becomes necessary, it shall be carried out by measures that have the least adverse impact on the management area's resources and that are compatible with the management area's objectives.

Wildlife and Fish

1. Vegetative management for enhancement of fish and wildlife habitat will not be permitted.

Facilities

1. Arch culverts, bridges, or similar open bottom structures should be required on permanent road crossings on all Class I and II perennial streams to provide for fish passage.
2. A road management plan will be developed in cooperation with other interested parties.

Management Area 5 - Sycan National Wild and Scenic River

Goal

Management Area 5 emphasizes protection of the Sycan River, along with its immediate environment that possesses outstandingly remarkable scenic values, in a free-flowing condition for the benefit and enjoyment of present and future generations.

Description

This management area applies to the portion of the Sycan River that forms the boundary between the Fremont and Winema National Forests

Desired Future Condition

The desired future condition is that the river remains free-flowing, and the values that qualified the river for inclusion in the National Wild and Scenic River System are protected. Scenic quality was the outstandingly remarkable value found for the Sycan River. The area is to be managed to place only a minimal amount of restrictions on the user and to provide a feeling of solitude.

Standards and Guidelines

Specific standards and guidelines that apply to this management area are stated in this subsection.

Wildlife and Fish

1. Habitat improvements shall use native or natural-appearing materials designed to blend into the landscape.

Range

1. Domestic livestock grazing shall be permitted as long as the resource values of the river environment are maintained.

Timber

1. Timber harvest shall not be programmed below the canyon rim.
2. Timber harvest may be programmed above the canyon rim.
3. Salvage harvest may be conducted in stands that have been severely damaged by fire, windthrow, insect attack, or other catastrophes to meet the desired future condition. Timber salvage will not occur below the rim.

Minerals and Energy

1. Salable mineral material sources shall not be developed.
2. Surface occupancy shall not be allowed.
3. Exploration and development for energy sources, such as geothermal or oil, may be allowed with restrictions as determined by the environmental assessment process.
4. The National Forest System lands in this management area have acquired land status and are not open to locatable mineral entry.
5. Personal-use or commercial firewood-cutting permits shall not be issued for these areas.

Lands

1. Landownership classification group I applies to this management area.
2. Transportation and utility corridor location and associated facilities should be avoided in this management area.

Facilities

1. Facilities such as fire rings and toilets may be provided where necessary to manage the effects of recreation use on the river resource
2. New facilities shall be designed to blend with the natural setting.
3. Development of hydroelectric power facilities shall not be allowed.
4. Flood control dams and levees shall be prohibited.
5. Roads may occasionally bridge the river area, and short stretches of conspicuous or longer stretches of inconspicuous and well-screen roads or screened railroads will be allowed. Consideration will be given to the type of use for which roads are constructed and the type of use that will occur in the river area.
6. Large-scale public use facilities--such as moderate-size campgrounds, public information centers, and administrative headquarters--are allowed if such structures are screened from the river or blend into the landscape when viewed from the river.

Protection

1. Insect and disease outbreaks shall be suppressed with a minimum of resource disturbance.
2. Fire suppression tactics such as confinement and containment will be used during periods of low to moderate fire danger. During high or extreme fire danger, aggressive attack using all appropriate methods to minimize resource damage will be appropriate if the methods maintain the desired future condition described above.

Management Area 5

3. Prescribed fire may be used to reduce hazardous fuel accumulations or to meet other resource objectives. Burning prescriptions shall be consistent with management area objectives.
4. Fuel treatment methods that minimize the use of heavy equipment shall be favored.

Recreation

1. The area shall be managed to provide a roaded natural ROS class setting.
2. A Wild and Scenic River Management Guide for the Sycan River shall be prepared and upon approval shall be incorporated as part of the Winema Forest Plan.
3. The visual quality objective is retention

Motorized travel

1. Motorized travel on land or water may be permitted, prohibited, or restricted to protect the river values.

Management Area 6 - Wilderness

Goal

The goal is to manage areas designated by Congress as part of the National Wilderness Preservation System in order to preserve natural conditions as required by the Wilderness Act of 1964.

Description

This management area shall be applied to these existing wildernesses: Mount Thielsen, Sky Lakes, and Mountain Lakes.

Desired Future Condition

The desired future condition is an area that has retained its primeval character without permanent alterations or human habitation. The area appears to have been affected primarily by the forces of nature; evidence of human intrusion is substantially unnoticeable. Vegetation is the result of natural succession. The area provides outstanding opportunities for solitude and a primitive type of recreation experience. Isolation from the sights and sounds of others is likely, as is the experience of independence, closeness to nature, tranquility, and self-reliance.

Standards and Guidelines

Specific standards and guidelines that apply to this management area are stated in this subsection.

Scenic

1. Management activities shall achieve the preservation visual quality level.

Wilderness

1. Areas shall be managed to meet the objectives for each wilderness resource spectrum (WRS) class in accordance with FSM 2320, R-6 Supplement 81. Maps showing area allocations by WRS class are included in the wilderness implementation schedule (WIS) for each wilderness.
2. The *limits of acceptable change (LAC) system* shall be used to establish measurable resource and social factors to define the maximum limit of negative change allowed by WRS class for each wilderness. These factors will be monitored and management action will be initiated when LAC factors are exceeded.
3. Resource limits on damage due to human activity and social limits on visitor use by WRS class common to all three wildernesses are shown in table 4-28.
4. Recreational facilities may be provided within areas with a semiprimitive WRS setting if it is necessary to protect the wilderness resource. These may include primitive fireplaces, toilets, hitching posts, and small bridges designed to blend into the natural environment.
5. Signs shall be put up only where necessary to protect the wilderness resource and for basic visitor orientation. Signs shall be in accordance with established standards for wilderness trail and entry signs in the sign handbook (FSM 7109.11).

Management Area 6

TABLE 4-28
LAC Monitoring Factors Common to All Wildernesses

WRS Class	Pristine	Primitive	Semiprimitive
Resource Factors			
Maximum vegetation loss			
Square feet per site	225	400	625
Percent of any acre	0.5	1.0	1.5
Damaged trees per site	< 2	< 4	< 6
Social Factors(1)			
Encounters between groups			
per day while traveling	< 1	< 7	< 10
In portal areas			< 12
Other camps visible or audible (less than 500 feet)	0	< 1	< 2

(1) Measurements for social factors are based on an 80-percent probability of occurrence.

6. Regulatory and informational signing shall generally be placed at trailheads. When necessary within the wilderness such as at rehabilitation sites, they should be the minimum size practical.
7. The use of pack stock by wilderness users shall be permitted, subject to restrictions listed in each individual WIS. Users shall be encouraged to carry certified pelletized feed or hay for their stock.
8. Refer to the appropriate management intensity and each individual WIS for wilderness specific standards and guidelines.

Wildlife and Fish

1. Stocking may continue at lakes and streams in which fishing is a traditional and current activity. Stocking shall not be expanded to barren waters unless to achieve wilderness management goals.
2. Native species shall be encouraged in the stocking program.
3. Visitor use must not decrease habitat effectiveness for any species by more than 20 percent.

Range

1. New grazing allotments shall not be established.

Timber

1. Timber harvest shall not be programmed.

Minerals and Energy

1. Salable mineral material sources shall not be developed.
2. Wildernesses were withdrawn from entry January 1, 1984, subject to valid existing rights. There are no known valid existing rights in any wilderness on the Forest.
3. Firewood cutting permits shall not be issued

Lands

1. Landownership classification group 1 applies to this management area.
2. Special uses by the public and government agencies shall be in compliance with the Wilderness Act
3. This management area is an exclusion area for transportation and utility corridors.

Facilities

1. The Forest Supervisor may authorize construction and installation of simple, temporary facilities. No permanent administrative facilities or outfitter guide caches shall be permitted.

Protection

1. Insect or disease outbreaks shall not be artificially controlled unless it is necessary to prevent unacceptable resource damage to resources on adjacent lands or an unnatural loss to the wilderness resource. If control becomes necessary, it shall be carried out by measures that have the least adverse impact on the wilderness resource and that are compatible with wilderness objectives.
2. All man-caused wildfires in wilderness should be suppressed.
3. A prescribed fire plan shall be approved before using prescribed fire in the wilderness.
4. Using both planned and unplanned ignitions, a prescribed fire program may be used to meet wilderness fire management objectives of: (1) permitting fires to play (as nearly as possible) their natural ecological role within wilderness; and (2) reducing the risks and consequences of wildfire within the wilderness or of wildfire escaping from the wilderness.
5. Naturally caused ignitions may be allowed to burn if they meet conditions in an approved prescribed burn plan and if funds and necessary staffing are available.
6. Preference shall be given to those suppression methods and strategies that are cost-effective and limit the area burned and that have the least effect on wilderness values.
7. Suppression activities should minimize disturbances to the land surface.
8. Use of chainsaws, helicopters, air tankers, or pumps must be approved by the Forest Supervisor. Chainsaws shall generally not be approved for use in mop-up activities.

Management Area 6

9. Natural helispots will be used wherever possible, and no helispot construction will be allowed for initial attack. Helispots may be constructed for extended attack, but they will be temporary and will be located to have a minimal adverse effect.
10. The airsheds over wildernesses shall be managed to meet applicable air quality laws and regulations. Mountain Lakes Wilderness is Class I, and Sky Lakes and Mount Thielsen Wildernesses are currently Class II.

Management Intensities

The following management intensities may be applied.

Management Area 6A Mount Thielsen Wilderness

Goal

Refer to areawide goal.

Description

Located along the Cascade Crest to the North of Crater Lake National Park, Mount Thielsen Wilderness was created by the Oregon Wilderness Act of 1984. The wilderness is administratively divided between the Umpqua (west side), Deschutes, and Winema (east side) National Forests. The most prominent feature of the wilderness is 9,182 foot Mount Thielsen with its distinctive glacier-carved, spire-shaped peak. A 26-mile segment of the Pacific Crest National Scenic Trail (PCNST) traverses the wilderness, mostly on the Umpqua side of the crest. The Winema side has only one system trail, which accesses the PCNST from Miller Lake. The Winema side also has no lakes, and most of its portion of the wilderness is classified as pristine.

Desired Future Condition

Refer to areawide desired future condition.

Intensity-Specific Standards and Guidelines

Wilderness

1. No new trails shall be constructed within the area classified as pristine. The abandoned Howlock Mountain Trail shall be naturalized to the extent possible to discourage use and reduce erosion potential.
2. Within the pristine WRS class, maximum party size shall not exceed six people and nine head of livestock. Within primitive and semiprimitive WRS classes, the maximum party size is 12 people and 12 head of livestock with 20 as the maximum combined total of people and livestock. District Rangers may issue permits for larger parties up to 12 people and 18 livestock with a maximum combined total of 30.
3. Visitor constructed improvements shall be removed. One properly located and constructed fire ring may be left per campsite.

4. The Umpqua National Forest is designated the lead forest for land management planning involving the wilderness. Each forest shall have the responsibility for on-the-ground management of its portion of the wilderness.
5. Representatives from each forest shall meet to discuss management of the area and to revise the WIS at least annually.
6. Issuance of outfitter-guide permits and other authorizations for use of the wilderness will be coordinated with all forests.

Management Area 6B Sky Lakes Wilderness

Goal

Refer to areawide goal.

Description

Located along the Cascade Crest between Crater Lake National Park and State Highway 140, Sky Lakes Wilderness was created by the Oregon Wilderness Act of 1984. Administration of the area is split between the Rogue River (west side) and Winema (east side) National Forests. The Pacific Crest National Scenic Trail (PCNST) traverses the area in a north-to-south direction. Recreation use of the Winema portion of the wilderness is concentrated in the Sky Lakes Basin and on Mount McLoughlin. Mount McLoughlin is a popular day hike and nontechnical mountain climb. Most of the area provides a semiprimitive WRS setting.

Desired Future Condition

Refer to areawide desired future condition.

Intensity-Specific Standards and Guidelines

Wilderness

1. New trails will not be constructed unless they are needed to meet wilderness management objectives or to resolve recreation and wilderness conflicts. Abandoned in the 1970's because of resource damage from improper trail location, the Puck Lakes Trail is planned for relocation and reconstruction. When completed, this trail will provide a lower elevation alternate route around a heavy snow area for the PCNST.
2. Except for the Mount McLoughlin Trail and the PCNST, maximum party size throughout the wilderness is eight people and 12 head of livestock. District Rangers may issue permits for larger groups up to a maximum of 30 people and stock combined.
3. The effectiveness of Mount McLoughlin management measures in effect (portal information sign and ROG dispenser) shall be monitored. Small group sizes (from eight to 12 people) shall be encouraged on the Mount McLoughlin Trail.
4. Maximum party size for through travelers on the PCNST shall be 12 people and 12 head of stock with a maximum of 20 people and stock combined.

Management Area 6

5. *Camping within 100 feet of lakes or 50 feet of streams and grazing or tethering livestock within 200 feet of lakes or 50 feet of streams shall be prohibited*
6. *No grazing of livestock shall be permitted within the Sky Lakes Basin, except in designated areas after August 1.*
7. *Groups that have stock and wish to camp within the the Sky Lakes Basin shall obtain a permit from the Klamath Ranger District. Permits may specify campsite location, group size, dates of use, or other special requirements necessary to protect wilderness values.*
8. *Visitor constructed improvements shall be removed. Properly constructed fire rings in campsites located more than 100 feet from a lakeshore may be retained.*
9. *The road constructed in the Sevenmile Marsh area in the 1950's to salvage burned timber shall be examined, and the need for naturalization measures shall be evaluated.*
10. *The Sevenmile Marsh area shall be managed to protect the unique ecosystem, which includes insectivorous plants.*
11. *The establishment report for the Cherry Creek Natural Research Area shall recognize that most of the NRA lies within Sky Lakes Wilderness. Use and management of the area shall be compatible with wilderness objectives.*
12. *The Rogue River National Forest is designated the lead forest for land management planning involving the wilderness. Each forest shall be responsible for on-the-ground management of its portion of the wilderness.*
13. *Representatives from each forest shall meet as needed to coordinate management activities.*

Management Area 6C Mountain Lakes Wilderness

Goal

Refer to areawide goal.

Description

Designated a primitive area in 1930, Mountain Lakes Wilderness subsequently became a wild area, and was designated a wilderness with the passage of the Wilderness Act in 1964. The wilderness, which encompasses one township (T.37 S , R.6 E.), lies entirely within the Klamath Ranger District of the Winema National Forest. The area includes the upper slopes of a shield volcano with a collapsed caldera filled with glacial lakes. The largest and most popular lakes with visitors are Lakes Harriette and Como. The trail system within the wilderness consists of the 10 5-mile Mountain Lakes Loop Trail and access trails from the north, west, and south.

Desired Future Condition

Refer to areawide desired future condition.

Intensity-Specific Standards and Guidelines

Wilderness

1. New trails shall not be constructed unless they are needed to meet wilderness management objectives or to resolve recreation and wilderness conflicts.
2. Maximum party size throughout the wilderness is 10 people and livestock in combination. District Rangers may issue permits for larger groups up to a maximum of 30 people and stock combined. Camping at Lakes Harriette and Como in groups larger than 10 people shall be prohibited.
3. Camping within 100 feet of lakes or 50 feet of streams and grazing or tethering livestock within 200 feet of lakes or 50 feet of streams shall be prohibited.
4. No grazing of livestock shall be permitted before August 1.
5. Visitor constructed improvements shall be removed. Fire rings in campsites located more than 100 feet from a lakeshore may be retained.
6. Outfitter-guide permits may be issued, but only one party per day shall be permitted.
7. The Moss Creek and South Pass Trails shall be managed as adventure trails, and general use shall be discouraged.

Management Area 7 - Old-Growth Ecosystems

Goal

Management Area 7 is designed to provide, maintain, and enhance existing mature and old-growth communities for associated wildlife species, mature successional stage diversity, preservation of natural gene pools, and aesthetic qualities

Description

This management area may be applied to coniferous or deciduous vegetative communities that have been identified as, or have the potential to become, old-growth ecosystems based on the criteria developed by Hopkins (1989 draft).

Management indicator species that use old-growth communities are: northern spotted owl, pileated woodpecker, northern goshawk, three-toed woodpecker, and marten.

Desired Future Condition

The desired future condition is old-growth environments of mature and overmature communities of lodgepole pine, ponderosa pine, mixed conifer, ponderosa pine and associated species, and mountain hemlock/subalpine fir, as well as stands of cottonwood or aspen.

Following are descriptions and criteria for old-growth conifer stands by working group.

Characterization of Existing Lodgepole Pine Old-Growth Forests

Lodgepole pine typically does not maintain itself in an old-growth state on a given acre that is generally associated with other ecosystems found in this area. The old-growth state is present but tends to be very transitory on the landscape. As one area reaches old-growth state and then deteriorates, another area reaches old-growth state. Therefore, when considering the value of a lodgepole pine old-growth area, one must consider the larger view.

The following stand criteria must be used to evaluate old-growth lodgepole pine.

1. **Overstory:** It consists of at least 120 mature trees per acre (approximately 19 foot spacing) greater than 12 inches in diameter. There should be an adjacent younger stand with well-distributed trees greater than 7 inches diameter at breast height (DBH). Species composition in both stands is almost entirely lodgepole pine, and an occasional ponderosa pine may be present.
2. **Other tree layers:** Very little layering occurs in lodgepole pine old-growth stands. Small groups of younger trees may occur from past disturbances.
3. **Snags:** There should be a minimum of three snags per acre greater than 6 inches DBH.
4. **Shrubs and herbs.** Bitterbrush and manzanita make up the majority of the shrub cover that ranges in canopy closure from zero to 50 percent. Idaho fescue and needlegrass are generally the herbs present.

5. Woody material component: Large woody material ranges from zero to 30 logs greater than 6 inches in diameter (as measured at the large end) and over 8 feet long
6. Natural openings. Natural openings generally will be less than 5 percent of the area.
7. Size: The area should be a minimum of 500 contiguous acres arranged to maximize internal integrity and should have elements of immature, mature, overmature, and decadent tree components. The immature elements should not occupy more than one half of the area. In addition, there should be an adjacent 250 acres of younger age classes that will provide future replacement to the above components.

Characterization of Existing Ponderosa Pine Old-Growth Forests

At least seven considerations regarding structure are found in old-growth ponderosa pine forests. These seven structural considerations apply to all major sites throughout the range of the ponderosa pine forests. The following conditions are for climatic climax, which differs from the historic open, park-like stands representing fire climax.

1. Overstory: The overstory consists of between 10 and 20 large ponderosa pine trees greater than 21 inches DBH per acre. Stocking of the large overstory trees may vary from five to 30 per acre. Smaller components in the stand will generally be less than 20 percent of the trees per acre of the large tree component
2. Other tree layers: In addition to the large tree component, at least two additional layers will be recognizable (seedlings or saplings or poles).
3. Snags: There should be a minimum of three snags per acre greater than 14 inches DBH.
4. Shrub and herbs: Shrub canopy cover ranges from 20 percent to 40 percent and is associated with a variety of herbaceous plants such as grasses, sedges, and forbs. Canopy closure in the shrub components can vary from zero to 60 percent.
5. Woody material component: Large wood material ranges from three to six logs greater than 12 inches (as measured at the large end) and over 8 feet long. The variance found may be from zero to 10 logs per acre.
6. Natural openings: There may be small openings (up to one half acre) created by natural causes like beetle kill, windthrow, lightning, or wildfire
7. Size: The size of the area should be no less than 200 contiguous acres arranged as to maximize internal integrity and should have elements of mature, overmature, and decadent tree components;

The following conditions are for fire climax ponderosa pine. These open park-like stands are of less value for wildlife than climatic climax ponderosa pine but have aesthetic value.

1. Overstory: The overstory consists of 4 or more large ponderosa pine trees greater than 30 inches DBH per acre. Smaller components are generally absent. This creates an open, park-like appearance in the stand.
2. Other tree layers: Other layers are generally absent. Incidental individual smaller sized trees may be present.

Management Area 7

3. Snags: Snags may or may not be present. The role of snags may be fulfilled by dead tops in live trees.
4. Shrubs and herbs: Shrubs and herbs may be absent.
5. Woody material component: May be absent.
6. Natural openings: Openings created by beetle kill, windthrow, lightning, or wildfire may occur.
7. Size. The size of the area should be no less than 10 contiguous acres and must be adjacent to or an inclusion of climatic ponderosa pine or pine associated old growth stands

Characterization of Existing Pine Associated Old-Growth Forests

The following conditions reflect climatic climax, which differs from historic stands greatly structured by regular wildfire, creating forests referred to as fire climax forests. This characterization describes those forests where ponderosa pine is a dominate life form.

1. Overstory. The overstory consists of between 30 and 40 large trees greater than 28 inches DBH. Species composition should be from 18 to 67 ponderosa pine per acre, zero to 12 white fir per acre, zero to 15 Douglas-fir per acre, and four to six other conifer species per acre.
2. Other tree layers: In addition to the large tree component, at least two additional layers will be recognizable (seedlings or saplings or poles).
3. Snags: There should be a minimum of six to 10 snags per acre greater than 14 inches DBH.
4. Shrubs and herbs: Shrub canopy cover ranges from 20 percent to 50 percent with a variety of herbaceous plants such as grasses, sedges, and forbs covering zero to 50 percent of the areas. The shrub component will be dominated by snowbrush, but manzanita, pinemat manzanita, and golden chinquapin will be present. In some stands, the brush cover may be as low as 2 percent.
5. Woody material component. Large woody material ranges from 12 to 14 logs greater than 12 inches (as measured at the small end) and over 8 feet long.
6. Natural openings: There may be small openings (up to one half acre) created by natural causes like beetle kill, windthrow, lightning, root rot, or wildfire.
7. Size: The size of the area should be no less than 350 acres and should be arranged as to maximize internal integrity and should have elements of mature, overmature, and decadent tree components

Characterization of Existing Mixed Conifer Old-Growth Forests

This characterization reflects higher-elevation forests where a combination of white fir, Douglas-fir, and Shasta red fir assume dominance over other coniferous species.

1. Overstory. The overstory consists of 11 to 38 large trees greater than 27 inches DBH. Species composition should be from zero to 33 white fir per acre, zero to 22 Douglas-fir

- per acre, zero to 38 Shasta red fir per acre, and less than nine other conifer species per acre.
- 2 Other tree layers: In addition to the large tree component, at least three additional layers will be recognizable (seedlings or saplings or poles).
 3. Snags: There should be a minimum of six to 12 snags per acre greater than 14 inches DBH
 - 4 Shrubs and herbs: Shrub canopy cover ranges from 25 percent to 40 percent with mainly long-stolon sedge and a few native grasses. The shrub component will be dominated by snowberry, manzanita, or pinemat manzanita
 5. Woody material component: Large woody material ranges from 12 to 14 logs greater than 12 inches (as measured at the small end) and over 8 feet long.
 6. Natural openings: There may be small openings (up to one half acre) created by natural causes like beetle kill, windthrow, lightning, root rot, or wildfire.
 - 7 Size. The size of the area should be no less than 250 acres. It should be arranged as to maximize internal integrity and should have elements of mature, overmature, and decadent tree components.

The following priorities shall be followed in selecting areas to be managed as old-growth ecosystems.

1. Select areas meeting all of the criteria listed
- 2 Select areas that have a total rating index of 42 or greater using the ecological significance matrices developed by Hopkins (1989 draft).
3. Select areas that do not have a rating of 42 or greater because of deficiencies in dead standing trees or dead down material but meet all other criteria for a 42 rating.

Management indicator species and their respective habitats are described below. Individual areas that could be utilized by more than one management indicator species are noted.

Northern Spotted Owl

The desired future condition is old-growth mixed conifer communities that provide the required habitats necessary for foraging and nesting of northern spotted owls. Contiguous core nesting areas are maintained within the surrounding forage areas. These areas are typified by varied species composition and stand structure diversity such as snags, umbrella crowns, down trees, natural cavities, and various height categories and crown closures. Nesting pileated woodpeckers and northern goshawks may be present.

Pileated Woodpecker

The desired future condition is multistoried mature and old-growth stands of mixed conifer, ponderosa pine, and ponderosa pine and associated species, as well as riparian areas of large cottonwood or aspen trees, that provide the preferred nesting and feeding habitats for pileated woodpeckers. Snags of appropriate species, size, and density are available, as well as dead and down woody material and heart rot. Snags for nesting and foraging are surrounded by mature or old-growth timber and are clumped in small patches throughout the nesting habitat. Nesting northern goshawks may be present.

Management Area 7

Northern Goshawk

The desired future condition is mature and old-growth ecosystems available for nesting/foraging in the ponderosa pine, mixed conifer, ponderosa pine and associated species, and lodgepole pine plant communities. The characteristics of these communities include multistoried canopies comprised of mature tree crowns with subcanopies of shade-tolerant conifer species of various ages and heights. Included within the nesting/foraging areas are north-facing talus slopes or cliffs, water sources, and all downed logs potentially used as northern goshawk plucking/feeding sites.

Three-Toed Woodpecker

The desired future condition is selected vegetative communities of mature and old-growth lodgepole pine or mountain hemlock/subalpine fir stands. Trees used for nesting are standing dead trees, live trees with dead limbs, or live trees with rotted heartwood. In most cases, the limbs or trunks of these trees have maintained a hard outer shell. Trees infested with bark and wood-boring insects are available for foraging. Effects of fire, insect epidemic, blow down, or other die off are often visible. Nesting northern goshawks may be present.

Marten

The desired future condition is mature and old-growth mountain hemlock or high-elevation lodgepole pine ecosystems. These communities consist of multicanopied stands containing a high diversity of understory plant species. Special and unique habitat components include talus slopes, rock piles and crevices, cliffs and rims, snags, stumps, and dead and down woody material. Nesting northern goshawks and three-toed woodpeckers may be present.

Standards and Guidelines

There is only one management intensity for this management area. Specific standards and guidelines that apply to this management area/intensity are stated in this subsection.

Recreation

1. Provide a range of recreation opportunity settings except for Roaded Modified, Rural or Urban.
2. Developed recreation (for example, campgrounds and resorts) is not compatible with the goals of this management area, and shall not be allowed. Dispersed recreation developments shall be discouraged.

Scenic

1. Management activities shall meet the inventoried visual quality level of the specific areas.

Wildlife and Fish

1. Provide suitable mature and old-growth nesting and foraging habitat for at least the minimum required number of pairs of management indicator species (as determined by Regional Office direction). These minimum numbers are nine pairs of northern spotted owls, 51 pairs of martens, 28 pairs of pileated woodpeckers, 87 pairs of northern goshawks, and 215 pairs of three-toed woodpeckers.

- A. Northern spotted owl nesting area requirements are as follows.
1. A minimum of 1,500 acres of old-growth mixed conifer stands shall be provided for each pair of northern spotted owls.
 2. Of the 1,500 acres, a 300-acre core area of contiguous old-growth habitat shall be designated as breeding habitat for northern spotted owl. The remaining 1,200 acres of old-growth habitat shall provide foraging habitat but does not need to be contiguous. Foraging habitat shall be located within 1.5 miles of the core area and shall consist of stands larger than 30 acres.
 3. The distance between core areas shall be no greater than 6 miles. Clusters consisting of three or more spotted owl habitat areas (SOHAs) may be up to 12 miles apart.
 4. Disturbing human activities within .5 mile of an active northern spotted owl nest site shall be discouraged or minimized from March 1 through September 30 (refer to forestwide standards and guidelines). Where the actual nest site has not been located, disturbance shall be discouraged or minimized within the 300-acre core area during the above-mentioned nesting period.
- B. Pileated woodpecker area requirements are as follows
1. A minimum of 300 acres of old-growth and/or mature mixed conifer, ponderosa pine and associated species, or ponderosa pine stands shall be provided as breeding and primary foraging habitat for one pair of pileated woodpeckers. These woodpeckers may also nest in large aspen or cottonwood trees associated with riparian areas.
 2. Pileated woodpecker habitat should be contiguous where possible; otherwise, stands shall be at least 50 acres in size and not more than .25 mile apart.
 3. Within the 300-acre primary breeding area, a minimum average of two hard snags per acre greater than 12 inches DBH shall be maintained as follows
 - a) Forty-two suitable nesting snags (hard) greater than 20 inches DBH shall be available within the 300-acre primary breeding area.
 - b) Within the 300-acre breeding area, 558 hard snags greater than 12 inches DBH will be maintained.
 4. An additional 300-acre feeding area shall be provided in adjacent management areas. Refer to forestwide standard and guideline X-X for specific direction.
 5. Pileated woodpecker areas shall be dispersed throughout suitable habitat, not more than 5 miles apart from the center of one area to the center of another area.
 6. Disturbing human activities within .25 mile of an active pileated woodpecker nest site shall be discouraged or minimized from March 1 through July 31 (refer to forestwide standards and guidelines).
- C. Northern goshawk area requirements are as follows
1. A minimum of 60 acres of contiguous old-growth and/or mature mixed conifer, ponderosa pine and associated species, ponderosa pine, and lodgepole pine

Management Area 7

- plant communities shall be provided as primary breeding and foraging habitat for one pair of northern goshawks
2. Northern goshawk areas shall be dispersed throughout suitable habitat, not more than 5 miles apart from the center of one area to the center of another area.
 3. Disturbing human activities within .25 mile of any active northern goshawk nest shall be discouraged or minimized from March 1 through August 31 (refer to forestwide standards and guidelines).
- D. Three-toed woodpecker area requirements are as follows.
1. A minimum of 75 acres of contiguous old-growth and/or mature lodgepole pine or subalpine fir shall be provided as primary breeding and foraging habitat for one pair of three-toed woodpeckers.
 2. Three-toed woodpecker areas shall be dispersed throughout suitable habitat, not more than 2.5 miles apart from the center of one area to the center of another area.
 3. Within the 75-acre primary breeding area, a minimum average of two hard snags per acre greater than 10 inches DBH shall be maintained as follows:
 - a) Forty-five suitable nesting snags (hard) greater than 12 inches DBH shall be available within the 75-acre primary breeding area.
 - b) Within the 75-acre breeding area, 105 hard snags greater than 10 inches DBH shall be maintained.
 4. Disturbing human activities within .25 mile of an active three-toed woodpecker nest site shall be discouraged or minimized from April 15 through July 15 (refer to forestwide standards and guidelines).
- E. Marten area requirements are as follows.
1. A minimum of 160 acres of contiguous mature and/or old-growth mountain hemlock or high elevation lodgepole pine shall be provided as a territory for one breeding female. This also constitutes part of a territory for a breeding male; this territory covers several female territories.
 2. Marten areas shall be dispersed throughout suitable habitat, not more than 3 miles apart measured center to center.

Timber

1. Timber harvest shall not be programmed.
2. Timber management techniques may be used to enhance low quality stands to greater potential

Range

1. Old-growth ecosystems selected for management shall be protected from adverse impacts of livestock

Minerals and Energy

1. New salable mineral material sources shall not be developed, and existing developments shall not be expanded into areas managed for old-growth values
2. Reasonable access for the exploration and/or development of locatable and leasable minerals shall be allowed but shall be highly controlled to protect old-growth values.
3. Except for road access, surface occupancy should not be allowed
4. Personal use or commercial firewood cutting permits shall not be issued for these areas.

Lands

1. Landownership classification group II applies to this management area. However, opportunities may become available where disposing of an existing old-growth stand may allow land acquisition in another area that would enhance the overall old-growth distribution.
2. This management area is an avoidance area for transportation and utility corridors.

Facilities

1. Road closures in specific areas and during specific periods shall be used to protect the resource.
2. New road and other facilities construction shall be avoided in this area.

Protection

1. Fire shall be suppressed in a manner which best retains old-growth ecosystem character.

Management Area 8 - Riparian Areas

Goal

Riparian area management is designed to protect soil, water, wetland, floodplain, wildlife, and fish resource values associated with riparian vegetative communities and adjacent drier ecosystems. Management emphasis is on water quality, deer fawning, wildlife habitat, and aquatic ecosystems. Existing conditions will be maintained or enhanced

Description

This management area may be applied to lands that are characterized by streams, lakes, ponds, springs, and wetlands—including seeps, bogs, wet and moist meadows, and wet and moist conifer plant associations. It includes riparian ecosystems and transitional ecosystems as defined by "Riparian Zone Associations" (R6 Ecol TP-279-87, Kovalchik). Also included are nonriparian areas adjacent to streams, lakes, and wet meadows that must be carefully managed to protect riparian values.

Specific boundaries of this management area are identified during project level planning.

Desired Future Condition

The desired future condition is riparian vegetative communities containing openings and meadows interspersed with stands in various successional stages. These stands differ in age, species composition, density, and size. Riparian vegetation provides wildlife habitat and adequately protects floodplains, bank stability, and water quality. Few roads and other facilities are present within the riparian area.

Standards and Guidelines

Specific standards and guidelines that apply to all management intensities of this management area are stated in this subsection.

Throughout this set of standards and guidelines, the term "riparian area" is synonymous with the term "riparian zone" as used in the "Riparian Zone Association Guide for Area IV."

Recreation

1. The area shall be managed for a full range of recreation opportunity settings.
2. Primary recreation emphasis shall be placed in dispersed recreation.
3. The visual quality level shall be consistent with adjacent area objectives, and typically will be partial retention or better as a result of other riparian area standards and guidelines.
4. Recreation facilities placed in riparian areas shall be designed to protect riparian values

Wildlife and Fish

1. Dead woody material and cavity-nester habitat shall be provided by managing dead trees at the 80 percent potential population level for cavity nesters (Thomas 1979) in forested areas. Green trees shall be managed for future replacements for dead trees.

2. New roads within 0.25 mile of a riparian area shall be located in a manner as to provide for greatest topographic and vegetative screening of the riparian area.
3. Wildlife habitat improvements may be permitted.

Range

1. Where a combination of high soil moisture and fine soil texture results in stream banks susceptible to early season trampling damage, grazing shall be delayed to a late season period (Clary and Webster 1989).
2. Where stream banks or channels are highly erodible, the stubble height at the end of the grazing period shall exceed 4 inches. Under extreme conditions, the area may need permanent protection or removal of grazing for long periods (Clary and Webster 1989).
3. Water developments for livestock or wildlife in riparian areas shall be designed to protect riparian values.
4. Salting areas shall be located on uplands outside of riparian areas.
5. Sheep bedding areas shall be located on uplands outside of riparian areas.

Soil and Water

1. Riparian area management objectives shall be described for a specific zone along a stream or wetland within the proposed project area. As a minimum, the following areas shall be evaluated during the preparation of the objectives:
 - a) an area within 100 feet of the normal high water line of Class I, II, or III streams (for protection of water quality and wildlife habitat);
 - b) an area within 25 feet on each side of Class IV streams;
 - c) any timbered area within 200 feet of wet meadows (to provide wildlife hiding cover),
 - d) the entire area of a wetland, including the farthest reaches of the riparian vegetative influence, and
 - e) any seeps and springs
2. The cumulative total area of detrimental soil conditions in riparian areas shall not exceed 10 percent of the total riparian acreage within an activity area. Detrimental soil conditions include compaction, displacement, puddling, and moderately or severely burned soil.
3. Fish habitat and riparian area improvement projects shall be permitted.

Timber

1. Timber harvest shall not be programmed within 100 feet of Class I and II streams and within 50 feet of Class III streams. In other riparian areas, timber harvest shall be programmed.
2. Stocking level control may be delayed if necessary to provide big game cover or habitat diversity.
3. Directional fell and yard away from all stream channels (classes I-IV) and wet areas. Logs yarded over streams shall be fully suspended where practicable.

Management Area 8

4. Landings should not be located within riparian associations as defined by "Riparian Zone Associations" (R6 Ecol TP-279-87, Kovalchik).
5. Uneven-aged management in the ponderosa pine, pine associated, and mixed conifer working groups shall be designed to maintain healthy, multistoried stands that contain various size classes up to 36 inches DBH following harvest. The lodgepole pine working group shall receive a variety of silvicultural treatments to meet the management area objectives.
6. Existing stands of hardwood species should be protected or enhanced.

Minerals and Energy

1. New salable mineral material sources should not be developed, and existing developments should not be expanded into riparian areas.
2. Reasonable access for the exploration and/or development of locatable and leasable minerals shall be allowed but shall be highly controlled to protect riparian values.
3. Except for road access, surface occupancy should not be allowed.

Lands

1. Landownership classification group III applies to this management area. Disposal of lands shall occur only if riparian lands of equal or higher quality shall be acquired.

Facilities

1. New road construction in riparian areas should be avoided. Where road construction is unavoidable, roads should cross riparian areas perpendicular to the landform. System and temporary roads should not be constructed through the length of a riparian area. System and temporary roads crossing a riparian area shall not alter stream or ground water flow characteristics to a degree that will adversely affect the riparian characteristics.
2. Existing roads within riparian areas should be evaluated for opportunities to reduce impacts on riparian values.
3. New water developments and reconstruction of developments for road dust abatement and fire control, for example, in riparian areas shall be designed to protect riparian values.

Protection

1. Wildfire suppression methods that minimize effects on the soil and on riparian ecosystems shall be used. High-impact methods shall be used only on fires that threaten human life and property and riparian resources.

Management Intensities

The following management intensities may be applied.

Management Area 8A Riparian Areas Adjacent to Class I, II, and III Streams

Goal

This management intensity is designed to maintain or improve riparian areas associated with Class I, II, and III streams and with lakes. Management practices shall meet (as a minimum) the substantive State Best Management Practices (BMP) requirements and other considerations required by the National Forest Management Act (NFMA) and other authorities for the protection of the soil and water resources.

Description

This management intensity is applied to areas associated with Class I, II, and III streams and includes meadows and forested areas exhibiting riparian vegetation along these streams. At a minimum, it includes an area within 100 feet of either side of the normal high water level of the stream. Actual on-the-ground streamside riparian areas may be much greater than 100 feet, extending to the farthest reaches of the riparian vegetation influence. This management intensity also applies to land adjacent to lakes containing resident trout.

Desired Future Condition

The desired future condition includes:

1. A diversity of vegetative types ranging from open meadowlands to forested land to provide instream cover for fish, bank, and floodplain stability, and habitat for big game and nongame wildlife.
2. High standards of water quality in terms of temperature, turbidity, and bank stability for fisheries and recreational uses and to meet State water quality standards.

Intensity-Specific Standards and Guidelines

Recreation

1. Vehicles, including off-road vehicles, shall not be allowed in stream channels or on sensitive stream banks.

Wildlife and Fish

1. Water use during low water periods shall be limited to emergency fire suppression situations only.
2. Fish habitat improvements may be permitted but must be coordinated with range, watershed, and recreation resources, and the Oregon Department of Fish and Wildlife.
3. Shrubs and trees shall be managed to maintain at least 50 percent of the riparian area in hiding cover for big game.

Management Area 8

4. Wildlife improvements encouraging streamside cover may be permitted.
5. Reservoirs may be planned for fisheries and other compatible uses where feasible.

Range

1. Livestock shall be managed so that no more than 5 percent of the stream banks in a stream reach (see glossary) exhibit degradation caused or perpetuated by livestock.

Timber

1. All logging slash/residue shall be removed from within the high water level. Large logs may be left or introduced as large woody debris.
2. Created openings, which may be necessary to treat lodgepole pine, shall not occur directly across a stream from an existing opening. Openings shall not encompass more than 600 feet of a stream length.
3. Selected hardwoods or conifer trees adjacent to the stream channel shall be retained.

Facilities

1. To provide for fish passage, arch culverts, bridges, or similar open bottom structures should be required on permanent road crossings on all Class I and II perennial streams.

Protection

1. Heavy equipment generally shall not be allowed in stream channels. Based on resource analysis, exceptions such as dry crossings or fords may be allowed upon approval of appropriate line officer or designated resource adviser.
2. Fuels shall be disposed of so that they will not reach stream courses. Slash piles shall not be located within the normal high-water flow area of either natural or created drainages.
3. Only low intensity fire should be prescribed within 100 feet horizontal distance on either side of Class I, II, or III stream channels.

Management Area 8B Riparian Areas Adjacent to Class IV Streams

Goal

This management area is designed to minimize adverse downstream impacts on Class I, II, and III streams, to protect bank and channel stability of Class IV streams, to meet or exceed BMPs, and to provide quality habitat for nongame and big game wildlife species.

Description

This management intensity may be applied to Class IV streams. These are intermittent streams or segments not meeting criteria for Class I, II, or III streams and include streamside meadows and forested

areas exhibiting riparian vegetation. At a minimum, it shall include an area within 25 feet of the normal high-water level on either side of the stream

Desired Future Condition

Provide a vegetative condition that shall protect stream banks from erosion and protect downstream values

Provide cover and forage for big game and nongame wildlife.

Intensity-Specific Standards and Guidelines

Wildlife and Fish

1. Shrubs and trees shall be managed to maintain at least 50 percent of the riparian area in hiding cover for big game.
2. Provide cavity-nester habitat at the 80 percent potential population level with sufficient live replacement trees to meet future needs.

Range

1. Livestock shall be managed so that no more than 10 percent of stream bank exhibits degradation caused or perpetuated by livestock
2. Livestock water developments shall be designed so that streamside degradation does not occur.

Timber

1. Activity-created debris shall be cleared from stream channels except for large woody material keyed into stream banks that contribute to water quality, and stream channel and bank stability.
2. Skid trails shall cross Class IV streams only at approved locations, shall cross perpendicular to the stream, and shall be designed to avoid altering the drainage characteristics of the stream.

Management Area 8C Moist and Wet Meadows

Goal

This management intensity is designed to protect, maintain, or enhance moist and wet meadows and associated wildlife habitat. Maintain or improve meadow condition, and prevent gulying or dropped water tables. Reduce encroachment of conifers on existing meadows.

Description

This management intensity may be applied to moist and wet meadows, which are areas dominated by grasses, sedges or other grass-like vegetation and forbs associated with seasonal or continuous high

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water tables. These areas are often flooded in the spring. These areas provide forage for big game and habitat for abundant nongame wildlife. These areas are an important component of forest diversity. This management intensity also includes a 200 feet wide perimeter of timber surrounding wet meadow areas, which is important hiding cover for wildlife.

Desired Future Condition

The desired future condition of moist and wet meadows is the maintenance of quality meadow condition and no encroachment by conifers and providing adequate forage for big game and livestock. Also desired is a lack of gulying or lowered water tables which drain the meadows.

Intensity-Specific Standards and Guidelines

Recreation

1. Vehicles, including off-road vehicles, should not be allowed in meadows during wet soil conditions.

Wildlife and Fish

1. At least 50 percent of the meadow edge should be managed to maintain hiding cover condition to provide high levels of use of the meadows.
2. Cover areas will be 10 acres in size and no less than 600 feet in width.

Range

1. Livestock will be controlled to maintain or improve vegetative condition of moist and wet meadows.

Protection

1. Prescribed fire may be used as a tool to limit conifer encroachment on moist and wet meadows but shall be done under conditions such that reduction of organic peaty deposits does not occur.

Management Area 8D Moist and Wet Forested Riparian Areas (Hardwood, Lodgepole, or Other Conifer)

Goal

Maintain or improve these riparian ecosystems to encourage wildlife habitat, fawning cover, forage, and hydrologic values.

Description

This management intensity applies to all moist or wet forested plant associations that exhibit riparian vegetative characteristics in the understory. These areas may be associated with springs, seeps, or

bogs; in areas where spring snow melt or seasonal rainfall is trapped in low gradient depressions with poor drainage; and in floodplains greater than 100 feet from stream channels.

These areas are especially important habitat for big game because of their proximity to water, succulent forage, cover value, and moist microclimate. They are particularly important for mule deer fawning and elk calving.

Desired Future Condition

The desired future condition is an area with structural vegetative diversity in which small openings (less than 20 acres) are interspersed with hardwood species and open-canopied stands and patches of conifer reproduction that provide big game hiding cover.

Intensity-Specific Standards and Guidelines:

Wildlife and Fish

1. Small openings may be created to provide grass and grass-like vegetative components for diversity and forage for big game.
2. Except in created openings, shrubs and trees shall be managed to maintain at least 50 percent of the riparian area in hiding cover for big game.

Timber

1. Intensity of harvest treatments and spatial distribution of cutting units shall ensure that hydrologic conditions are maintained or improved.
2. No more than 25 percent of the riparian area described shall be in created openings.
3. In environmental analysis before harvest activities, evaluate the potential of logging to temporarily convert wet lodgepole sites to wet meadows.
4. Heavy machinery shall not be permitted on wet or organic soils when there is a hazard of compaction.

Management Area 9 - Bald Eagle Habitat

Goal

Management Area 9 is designed to maintain, enhance, and provide nesting, foraging, and winter roosting habitat for bald eagles consistent with the Pacific States Bald Eagle Recovery Plan (1983) and Working Implementation Plan for the Bald Eagle Recovery in Oregon and Washington (January 1989).

Description

This management strategy may be applied to lands where there are nesting bald eagle pairs or winter roosting eagles or where potential habitat exists for additional nesting pairs or for winter roosting eagles. Nesting habitat generally occurs in overmature stands with large diameter, large-limbed, open-canopied trees within 1 mile of water. Major foraging areas are large bodies of water within 1 mile of nest trees. Bald eagles also forage in areas within nest sites and between nest sites and major foraging areas. Winter roosts occur in stands similar to those described for nesting, but may be located farther from major foraging areas.

Desired Future Condition

The desired future condition is an increase in the number of nesting bald eagles and maintenance of wintering populations of bald eagles on the Forest. The habitat will consist of a preponderance of multistoried stands of large diameter mixed conifer, ponderosa pine and associated species, and ponderosa pine. These stands provide bald eagle nesting habitat and communal winter roosting habitat. Ponderosa pine, Douglas-fir, and sugar pine are the major preferred tree species. The upper canopy level is comprised of large diameter trees with open upper crowns and large horizontal branches. Overstory trees and large snags provide perching habitat. Winter roosting areas are available in a relatively undisturbed condition. Major foraging areas are providing waterfowl habitat at high levels.

Standards and Guidelines

Specific standards and guidelines that apply to all management intensities of this management strategy are stated in this subsection.

Recreation

1. The area shall provide a range of recreation opportunity settings.
2. Developed recreation like campgrounds, summer homes, and resorts is not compatible with the goals of this management strategy. Existing developed sites will not be expanded, and increased use will be discouraged when monitoring identifies a potential conflict with bald eagle use. New sites will not be developed.
3. The forested environment created by bald eagle habitat management shall typically achieve no less than the partial retention visual quality level.

Wildlife and Fish

1. Except where dead trees are identified as safety hazards to humans, dead tree habitat will be maintained at above the 80 percent level of the 20-inch or greater DBH trees to

provide adequate bald eagle perch trees and to meet needs of cavity-dependent wildlife. For optimum bald eagle use, one large snag per acre should be left for perch trees.

2. *Marshes and lakes within 2 miles of nest sites, perches, and roosts will be managed to provide waterfowl and fish prey for bald eagles. Fish and waterfowl numbers may be increased through habitat enhancement projects and cooperative efforts with Oregon Department of Fish and Wildlife and U S. Fish and Wildlife Service.*

Timber

1. *Competing vegetation should be controlled or eliminated (at least within the crown drip line) to maintain nesting and winter roosting habitats and to lessen their susceptibility to insect attacks.*
2. *Vegetation management activities shall emphasize the development of large diameter trees of the preferred species into suitable bald eagle nest, perch, and roost trees.*

Minerals and Energy

1. *New salable mineral material sources should not be developed, and existing developments should not be expanded.*
2. *Reasonable access for the exploration and/or development of locatable and leasable minerals shall be allowed but shall be highly controlled to protect habitat values.*
3. *Except for road access, surface occupancy should not be allowed.*

Lands

1. *Landownership classification group II applies to this management strategy. Disposal of lands shall occur only if bald eagle habitat of equal or higher quality shall be acquired.*
2. *Electric distribution lines are acceptable to the extent that they will not preclude bald eagle access to and utilization of the management area and will prevent electrocution of bald eagles.*
3. *Most special uses are not compatible with the goals of this management strategy. Existing special uses shall not be expanded and additional special use permits shall be discouraged when monitoring identifies a potential conflict with bald eagle use.*

Protection

1. *Insect and disease outbreaks will be managed with a minimum of resource disturbance. Biological and silvicultural treatments will be emphasized.*

The use of toxic chemicals that adversely affect bald eagles will not be allowed. Such chemicals include DDT and other persistent organochlorine pesticides, PCB, mercury, and lead. Selected suppression methods should feature integrated pest management.

2. *Protection of bald eagle nesting and winter roosting habitat from wildfire will have high priority for fire suppression.*

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3. If suppression efforts are within .5 mile of an active bald eagle nest during the nesting season, they shall be based on minimizing the disturbance time to bald eagles. Fire camps should be located at least 1 mile from active nests.
4. Prescribed fire may be used to reduce hazardous fuel accumulations. Burning prescriptions will be consistent with management strategy objectives.

Management Intensities

The following management intensities may be applied.

Management Area 9A Bald Eagle Nest Sites and Recovery Sites

Goal

This management intensity is designed to maintain, enhance, and provide bald eagle nest sites. Some of these nest sites may also provide winter roosting habitat.

Description

This management intensity may be applied to lands where there are nesting bald eagle pairs or areas identified as bald eagle recovery nest sites.

Desired Future Condition

The desired future condition is multistoried stands of mixed conifer, ponderosa pine and associated species, and ponderosa pine that may provide bald eagle nesting habitat and communal winter roosting habitat. Ponderosa pine, Douglas-fir, and sugar pine are the major preferred tree species. The upper canopy level is comprised of large diameter trees with open upper crowns and large horizontal branches. A component of large trees also is not yet suitable as nest trees but along with large dead trees provides perching habitat. There may be an intermediate canopy level present that consists of immature trees of the desired species. An understory canopy level of seedlings, saplings, and pole-sized trees provides a visual barrier around nest trees, except within the crown drip line of nest and roost trees.

Nesting habitat will be provided for 32 pairs of bald eagles; this was determined to be the Winema National Forest share of habitat (Draft Pacific States Bald Eagle Recovery Plan 1983).

Intensity-Specific Standards and Guidelines

Wildlife and Fish

1. Nest site implementation guides shall be developed for each of the 32 nest sites by the end of the decade.
2. When a pair of bald eagles establishes a nest in a recovery nest site or any other site, that site will become an existing nest site.
3. Disturbing human activities within .5 mile of an active bald eagle nest site will be discouraged or minimized from January 1 through August 31.

4. If a pair of bald eagles chooses to establish a new nest in an area already receiving human use, the human activities occurring at that time should be evaluated for continuance.
5. Nest sites will be at least 125 acres. Nest site areas may vary from 125 acres to 620 acres; the size depends on such factors as topography, eagle use patterns, and proximity of existing land uses near the nest site.
6. There will be 20 percent to 40 percent crown closure of the upper canopy level.

Timber

1. Timber harvest shall not be programmed.
2. Multistoried stands within .25 mile of established nest trees shall be considered for uneven-aged management to maintain or to enhance bald eagle nesting habitat.

Facilities

1. Existing Forest Service roads within .5 mile of active nests should be closed during the January 1 to August 31 nesting season.
2. New road networks shall be designed to facilitate easy control of access during the bald eagle nesting/roosting seasons.

Minerals and Energy

1. New salable mineral material sources shall not be developed, and existing developments shall not be expanded.
2. Except for road access, surface occupancy shall not be allowed.

Management Area 9B Bald Eagle Replacement Habitat

Goal

This management intensity is designed to develop and enhance replacement habitat for bald eagle nesting, roosting, and perching needs in the event of catastrophic loss of existing nesting, roosting, and perching habitat.

Description

This management intensity may be applied to lands adjacent to existing and recovery nest sites or to other potentially suitable nesting and roosting habitat.

Desired Future Condition

The desired future condition is multistoried stands of mixed conifer, ponderosa pine and associated species, and ponderosa pine that may provide bald eagle nesting habitat and communal winter roosting habitat. Ponderosa pine, Douglas-fir, and sugar pine are the major preferred tree species. The upper canopy level is comprised of large diameter trees with open upper crowns and large horizontal branches.

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A component of large trees also is not yet suitable as nest trees. An intermediate canopy level of immature trees of the desired species may exist. An understory canopy level of seedlings, saplings, and pole-sized trees provides a visual barrier around potential nest trees

Intensity-Specific Standards and Guidelines

Wildlife and Fish

1. When a pair of bald eagles establishes a nest in a replacement stand, that stand shall become an additional nest site and shall be managed according to the standards and guidelines for Management Area 9A.
2. Replacement stands shall be developed and managed to occur on at least 50 percent of each contiguous 40-acre tract to ensure uniform distribution of habitat throughout the management area.
3. The upper canopy level of a replacement stand shall contain five to 10 trees per acre that exhibit the following characteristics:
 - a) Have large open upper crowns and large horizontal branches;
 - b) Are in the group of preferred tree species, and
 - c) Are a minimum of 36 inches DBH and an average of 42 inches DBH or larger.

The upper canopy levels of a nest site also will have five to 15 trees per acre that have the following characteristics: have the potential to develop open upper crowns and large horizontal branches, are in the group of preferred tree species, and are a minimum of 24 inches DBH and an average of 28 inches DBH.

4. There will be 20 percent to 40 percent overstory crown closure in nest sites.

Timber

1. Timber harvest will be programmed.

Management Area 9C Bald Eagle Winter Roosting Habitat

Goal

This management intensity is designed to maintain and enhance communal winter roosting habitat for bald eagles

Description

This management intensity shall be applied to lands where communal roosting by bald eagles occurs.

Desired Future Condition

The desired future condition is stands of Douglas-fir and ponderosa pine with two or more canopy levels. The upper canopy level is comprised of large diameter trees with open upper crowns and large horizontal branches. The understory canopy level is comprised of seedlings and saplings.

Intensity-Specific Standards and Guidelines

Wildlife and Fish

1. Bald eagle winter roosting habitat shall be identified and managed to maintain or enhance the existing characteristics. A minimum buffer of .25 mile around identified roost trees will be established. This buffer delineates the exterior boundary of the roosting habitat.
2. Disturbing human activities (including snowmobile use) within 5 mile of an active bald eagle winter roost shall be discouraged or minimized from November 1 through March 31.
3. Provide eight to 16 open-crowned, large limbed Douglas-fir and ponderosa pine trees per acre that are a minimum of 20 inches DBH
4. Maintain or provide at least one dead tree greater than 30 inches DBH with a height greater than 75 feet per acre for diurnal perching.

Timber

1. Timber harvest shall not be programmed.

Minerals and Energy

1. New salable mineral material sources shall not be developed, and existing developments shall not be expanded.
2. Except for road access, surface occupancy shall not be allowed.

Management Area 10 - Big Game Winter Range

Goal

Management Area 10 is designed to protect or enhance habitat for wintering mule deer.

Description

This management strategy may be applied to lands that presently or historically have been used by wintering mule deer. These areas may include lodgepole pine, ponderosa pine, and ponderosa pine and associated species forest types, and juniper/mountain mahogany scab flats with generally southerly exposures.

Desired Future Condition

The desired future condition is interspersed, diverse vegetative communities that provide the necessary habitat for thermal and hiding cover and foraging areas. Natural or created openings of grasses, forbs, and shrub land, as well as open timber stands not meeting cover density requirements, are utilized as foraging areas. Half of the winter range vegetation provides forage, and the remaining habitat provides thermal or hiding cover. The amount, shape, and arrangement of cover and foraging areas are designed to provide for the greatest deer use possible over the maximum area possible.

Standards and Guidelines

There is only one management intensity for the mule deer winter range management strategy. Specific standards and guidelines that apply to this management strategy/intensity are stated in this subsection.

Recreation

1. The area shall typically be managed to the standard of the Roaded Natural Recreation Opportunity Spectrum (ROS) class along the Sprague River Highway, Williamson River Road, Squaw Flats Road, Highway 97, Highway 62, and the Williamson River Gorge. Other winter range areas may be managed to the Roaded Modified ROS class.
2. The deer winter range shall be managed to typically achieve the partial retention visual quality level.

Wildlife and Fish

1. Habitat condition shall be improved so that an index of current condition (including all factors like roads density and forage competition that are appropriate for winter range) shall increase by a minimum of 5 percent of the difference between the best managed potential index and the current index over the next decade. (The best managed potential assumes the area has the best vegetative potential with State, county, and forest passenger car routes open.)
2. No less than 20 percent of the winter range shall be in a thermal cover condition with a minimum of 30 percent of the area as cover (thermal and/or hiding). Fifty percent total cover, of which 2/3 is thermal cover, is the desired condition for which to strive. Thermal cover shall have 50 percent or greater canopy closure to provide snow intercept and temperature moderation. Thermal cover may be provided by any of the following or any

combination of the following: conifers, junipers, tall shrubs, or mountain mahogany as long as the plants are six feet or greater in height.

3. The minimum size of thermal cover stands shall range from 2 acres to 5 acres with a minimum width of 300 feet.
4. Hiding cover shall be retained or developed where site potential allows, so that natural or created openings greater than 600 feet in width are minimized.
5. Over the long term, the quantity of forage available to deer and the quality of forage available (ratio of forage preferred by deer to the total forage available for deer) shall not be less than the current conditions. Short-term decreases in forage quantity and/or quality may be necessary to meet long-term objectives.
6. Human activities shall be discouraged or minimized on deer winter ranges from November 15 through July 15 to reduce disturbance of mule deer during the winter and fawning season. Vegetative screening may be used as a tool to improve habitat conditions along open roads.
7. Areas managed as deer winter range shall be managed for reduced vehicular access from November 15 through July 15 to prevent disturbance of wintering and fawning mule deer. During the specified closure season, traffic shall be limited to designated open roads. County and Forest Service passenger car routes shall remain open. Use of closed roads may be authorized by permit or waiver if such use does not conflict with mule deer wintering or fawning. Off-road vehicle use is prohibited during the specified closure season. Non-motorized use is acceptable to provide access for subsistence hunters and for winter surveys.
8. Road access shall be managed so that open roads density shall not be greater than the current condition.
9. **Areas that cannot meet cover criteria because of prior harvest or silvicultural activities shall not be entered until cover criteria are met or long-term (greater than 10 years) benefits for mule deer are realized.**

Range

1. Domestic livestock grazing shall be allowed if it is compatible with winter range goals.
2. Domestic livestock may be periodically used to keep browse plants in vigorous forage production and in a growth form making the forage available for wintering deer.

Timber

1. Timber harvest shall be programmed.
2. Even-aged and uneven-aged forest management may be used

Minerals and Energy

1. The seasonal restrictions for mule deer winter range shall apply to the exploration for and development of salable materials and leasable minerals.

Management Area 10

Lands

1. Landownership classification group III applies to this management strategy. Disposal of lands shall occur only if mule deer winter rangelands of equal or higher quality shall be acquired.

Protection

1. Prescribed fire may be used to reduce hazardous fuel accumulations and to stimulate forage production. It also may be used as a tool to regenerate forage and coniferous vegetation. Burning prescriptions shall be consistent with management strategy objectives.

Management Area 12 - Timber Production

Goal

Management Area 12 is designed to produce a high level of growth and timber production with considerations for economic efficiency and resource protection.

Description

This management area is applied to lands that are predominately forested and capable of high levels of timber production.

This management area has a primary focus on the production of wood products, but also provides a variety of dispersed recreation opportunities, wildlife habitat, and forage for domestic livestock.

Desired Future Condition

The desired future condition is a mosaic of healthy stands capable of sustaining high levels of timber production. Such stands typically are comprised of trees that are growing rapidly and have well-developed crown ratios and low levels of mortality.

Standards and Guidelines

Specific standards and guidelines that apply to all management intensities of this management area are stated in this subsection.

Recreation

1. The area shall be managed to provide roaded natural or roaded modified Recreation Opportunity Spectrum settings.
2. A variety of dispersed recreation activities shall be permitted.

Scenic

1. Management activities shall meet or exceed the maximum modification visual quality level.

Timber

1. Timber harvest shall be programmed.
2. A variety of diameter classes up to 24 inches DBH will remain after harvest in all stands treated with uneven-aged silvicultural systems. Uneven-aged management is not planned for use in the lodgepole pine or mixed conifer working groups in this management area.
3. Stocking levels may be varied to meet other resource requirements as long as 90 percent of the cubic foot timber growth potential is maintained.

Management Area 12

Lands

1. Landownership classification group 3 applies to this management area.

Wildlife and Fish

The following guidelines provide direction associated with the salvage of the dead and dying lodgepole pine. The guidelines only apply to the treatment of lodgepole pine stands in Management Area 12; the stands either are affected, or are expected to be affected, by the mountain pine beetle epidemic. The guidelines only apply during the life of the epidemic and during the accelerated salvage of the lodgepole pine.

1. At least 30 percent of implementation areas in lodgepole stands will be managed to provide deer hiding areas. Generally, at least 70 percent of an implementation unit will be within 600 feet of cover. Hiding cover must meet the definition for hiding cover or either of the following set of conditions:
 - a) Five acres or larger, fully stocked stands that average at least 6 feet tall and that have not been thinned for 15 years; or
 - b) Residual clumps of one-half acre or larger, fully stocked stands within units with advanced regeneration (trees including "whips" up to 7-inch DBH) and at least 12 greater than 7-inch DBH trees per acre remaining after harvest. Residual dead and down material will be left in the units to achieve fuel loadings of Photo Series identifiers 2-LP-3-PC and 2-PP-4-PC (Maxwell and Ward 1976). Photo Series identifiers 1-LP-3-CC and 3-PP-4-PC are at the upper limit of acceptability and would require treatment. Clumps should be located away from roads.

Hiding areas may not meet the definition of hiding cover developed for the Blue Mountains (Thomas 1979). Similarly, although some thermal cover will be provided, the crown closure of the hiding areas will not meet the requirements in Thomas (1979).

2. Hiding area guidelines will be applied over entire implementation units and will consider only those areas capable of providing hiding areas.
3. Units meeting the requirements of Wildlife and Fish Guideline 1b will be retained in harvest units, where needed, to connect deer travel corridors, to break up large openings, or to mitigate for cover deficiencies in other portions of implementation units.
4. Spot treatment of fuels may be needed to break continuity and treat pockets of heavy accumulation.
5. Advanced regeneration and green trees should be left to reduce view distances from roads.
6. In planning projects, the following areas or treatments could contribute to achieving the desired cover conditions:
 - a) Management requirement areas, riparian areas, and management areas not associated with timber management;

- b) Timber types other than mature lodgepole pine where treatment can be delayed;
 - c) General forest areas that are unsuited for harvest but meet the hiding needs in Wildlife and Fish Guidelines 1a or 1b;
 - d) Existing harvest units or portions of the units that meet or will meet the hiding requirements in Wildlife and Fish Guidelines 1a and 1b within the contract period (in these areas, precommercial thinning may need to be delayed); and
 - e) Partially treated stands in a proposed timber sale that will still provide hiding conditions meeting the requirements of Wildlife and Fish Guidelines 1a and 1b.
7. To achieve greater age-class diversity in the future, residual stands should be retained where the option exists; foregoing "whip" cutting is necessary.
8. Reductions in open-road density may be used to offset reductions in hiding cover to achieve habitat effectiveness objectives for implementation units.
9. Arrangement of cover areas into corridors is a preferred condition that will be achieved where possible, but will not prohibit accomplishment of timber management objectives. If necessary, the integrity of corridors will be maintained by connecting cover areas with units meeting the requirements in Wildlife and Fish Guideline 1b.

Management Area 13 - Research Natural Areas

Goal

Management Area 13 provides for the preservation of undisturbed forest and rangeland ecosystems for scientific and educational purposes

Description

Research natural areas (RNA) are part of the network of field ecological research areas for nonmanipulative and nondestructive research, observation and study. Three RNAs will be expanded or established on the Forest. Blue Jay, Cannon Well, and Cherry Creek. These RNAs include the following cells:

Blue Jay	(Existing) ponderosa pine/bitterbrush/needlegrass and lodgepole pine/bitterbrush/needlegrass plant communities on pumice soils. (Addition) Bluegrass-wheatgrass meadow and lodgepole pine/bitterbrush-bearberry/needlegrass plant communities.
Cannon Well	(Establish) Lodgepole pine/bitterbrush/needlegrass and lodgepole pine/needlegrass basin
Cherry Creek	(Establish) Mixed conifer forest with snowberry and green manzanita, mixed shasta red fir and mountain hemlock, lodgepole pine/grouse huckleberry, high-elevation lake, permanent subalpine ponds, vernal ponds at high elevation, sedge fen, and a first to third order stream system.

Desired Future Condition

The desired future condition is an essentially unmodified area.

Standards and Guidelines

There is only one management intensity for this management area. Specific standards and guidelines that apply to this management area are stated in this subsection.

A research natural area establishment report shall be developed for each potential area. A management plan and monitoring plan will be developed for each area once it is established as a research natural area.

Recreation

1. The area shall provide a roaded natural or semiprimitive recreation opportunity.
2. Physical improvements for recreation purposes like buildings or campgrounds shall not be constructed in these areas.
3. Dispersed recreation is a compatible use to the extent that it does not reduce the research or educational values for which the area was established.

Scenic

1. The visual quality level will be preservation.

Wilderness

1. Wildernesses shall take precedence where they overlap with RNAs, because land use regulations are generally more restrictive in wilderness. Management plans for wildernesses shall address overlaps with RNAs.

Wildlife and Fish

1. New wildlife habitat improvements shall not be allowed.

Range

1. Domestic livestock grazing shall be excluded from established research natural areas unless grazing is needed to preserve the existing plant communities.

Timber

1. Timber harvest shall not be allowed.

Minerals and Energy

1. Salable mineral material sources shall not be developed.
2. All established research natural areas on public domain lands shall be recommended for withdrawal from mineral entry under the General Mining Law of 1872, as amended.
3. Surface occupancy shall not be allowed.
4. Personal use or commercial firewood cutting permits shall not be issued for these areas.

Native American Rights and Claims

1. Under the Treaty of 1864, the Klamath Tribe's rights to traditional food gathering activities shall apply to established research natural areas within the jurisdiction of the treaty, but shall not be encouraged.

Lands

1. Landownership classification group 2 applies to this management area.
2. Special-use permits shall be limited to research and related activities.

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3. Easements or rights-of-way shall not be granted.
4. Utility and transportation corridors shall not be allowed.

Facilities

1. Any transportation facilities, such as roads and trails provided for this management area, shall have minimum impacts on the area ecosystems, and must be located and managed in the best way to fulfill the area's management objectives.
2. Helispots needed for fire control shall be located adjacent to, and not within, research natural areas.

Protection

1. Insect and disease outbreaks shall not be suppressed.
2. Using means that will cause minimal damage to the area, wildfires that endanger the RNA will be extinguished as quickly as possible.
3. Prescribed fire and fuels treatment shall be carried out only in conjunction with approved research projects or when needed to meet the RNA management plan objectives.

Management Area 14 - Minimum Management

Goal

Manage for site protection primarily and for any wildlife, recreation, and other resources that may be inherent.

Description

These are lands that are not allocated to any other management area. Examples of lands typical of this management area include: forestland (greater than 10 percent tree cover) that is unable to produce more than 20 cubic feet of timber per acre per year, or nonforestland with soils too poor, erodible, or rocky to support significant amounts of forage.

Desired Future Condition

The desired future condition is for all lands in this management area to remain in their present condition. Generally, changes in the current condition are natural, or they are for safety of the incidental forest user, protection of adjacent lands, or maintenance of basic productivity of the land.

Standards and Guidelines

There is only one management intensity for this management area. Specific standards and guidelines that apply to this management area/intensity are stated in this subsection

Recreation

1. The area shall provide a recreation opportunity setting compatible with adjacent management areas.

Scenic

1. Management activities will generally achieve partial retention visual quality level.

Timber

1. Timber harvest shall not be programmed.

Lands

1. Landownership classification group 3 applies to this management area.

Facilities

1. Roads may be permitted across this management area to access other management areas.

Soil and Water

1. Ensure soil and water stability and water quality by minimizing any surface disturbance on sensitive soils.

Management Area 15 - Upper Williamson

Goal

Management Area 15 provides a natural-appearing forest setting for dispersed recreation activities and special wildlife habitats.

Description

This management area applies to the historical Klamath Tribe use areas along the Upper Williamson River and along the Klamath Forest Marsh.

Desired Future Condition

The desired future condition is a slightly altered forest environment, including a mix of native coniferous and deciduous trees and shrubs. There is a generally uniform appearing forested environment with a variety of age classes throughout the ponderosa pine working group. Cutting units will dominate in the lodgepole pine working group.

Standards and Guidelines

Recreation

1. The area shall be managed to provide a roaded natural to roaded modified recreation opportunity setting.
2. Special use permits may be permitted for traditional tribal camping over extended periods.
3. Low-key interpretative facilities may be provided in special wildlife and historic areas, particularly around the Klamath Forest Marsh.

Scenic

1. Scenic management activities shall generally achieve the foreground partial retention visual quality level. However, the foreground of the Williamson River will generally achieve the retention visual quality level.
2. Evidence of management activities (such as tree removal and slash disposal) along roads will not be visible three years after the work is completed.

Wildlife and Fish

1. The portions of this management area along the edge of the Klamath Marsh shall be managed to produce larger diameter (36 inches DBH or greater), open-canopied, long-limbed ponderosa pine and Douglas-fir for replacement bald eagle nesting habitat.
2. Fish and waterfowl habitat improvement will be emphasized in riparian areas adjacent to this management area.

Timber

1. Timber harvest shall be programmed.
2. Uneven-aged management systems shall be used in the ponderosa pine and pine associated working groups. A variety of sizes up to 30 inches DBH will remain after harvest, except in areas of foreground retention and eagle replacement where a 36-inch DBH size class shall remain after harvest.
3. Uneven-aged management silvicultural systems may be used to manage the lodgepole pine working group if it is deemed optimal during project-level planning. A variety of size classes up to 12 inches DBH will be retained after an uneven-aged harvest entry.
4. Stocking levels may be varied to meet other resource needs.

Lands

1. Landownership classification group 2 applies to this management area. Acquisition of private lands should be directed at obtaining fish and wildlife habitat and access for the recreating public. The Forest shall also consider acquisition of less than fee title to meet landownership objectives.
2. This is an avoidance area for new transportation and utility corridors.

Protection

1. In areas along roads, wood residues from stand management activities may be present in low levels, such as an occasional large down log and scattered branches that appear natural. Slash should be piled and burned in areas of low visibility, and low impact methods should be used. Uprooted stumps are not desirable, and should be removed unless they are blended to appear natural in the landscape.