Table of Contents

Chapter 4
Management Direction

A. Introduction

Management direction contained in this chapter will guide administration and use of the Modoc National Forest until the Forest Plan is amended or revised. The Plan is a full public disclosure of management practices and activities on the Forest. The document provides Forest managers with clear, consistent direction for implementing those practices and activities.

The hierarchy of management direction for the Forest emanates from laws passed by Congress, such as the National Environmental Policy Act, National Forest Management Act, Resources Planning Act, Multiple-Use Sustained-Yield Act, Threatened and Endangered Species Act, and others which provide direction for various aspects of management. More specific regulations and policies for meeting legislation is contained in the Code of Federal Regulations, the Forest Service Manual (FSM) and Handbook (FSH), and the Pacific Southwest Regional Guide. This Forest Plan supplements, but does not replace, the direction from these sources. The Plan restates FSM or policy statements only when doing so clarifies or strengthens direction.

Management direction unique to this Plan is designed to meet Modoc National Forest Goals and Objectives. **Forest Mission and Goals** (Section B) provide broad direction for the Forest regarding the types and amounts of goods and services it provides. **Forest Objectives** (Section C) are quantified land allocations, resource activities, outputs, and operating costs projected over the next 50 years. Management direction consists of:

Forest-wide Standards and Guidelines (Section D) – management actions applicable to all lands within the Forest wherever and whenever relevant situations occur. Application areas are not mapped and may change from time to time.

Management Prescriptions (Section E) – integrated sets of management activities and practices conducted on specified land areas throughout the Forest. Each prescription contains management direction and standards and guidelines which govern activities and practices.

Management Area Direction (Section F) – Area-specific standards and guidelines as well as quantified objectives for each area. Acreages committed to each of the management prescriptions are included.

At all levels, Standards and Guidelines are used repeatedly throughout the hierarchy of Forest management direction. In all cases, they describe how resources are managed.

The annual budgeting and program planning process is the fiscal backbone of management direction. Whether objectives in this Plan are met depends on funds appropriated by Congress and subsequent allocation to the Forest through the budget process. In addition, management direction may vary due to unforeseen site conditions. In any case, the Forest Plan will not vary from direction based on laws or Forest goals. Changes in management direction will be accommodated through amendments and revisions as explained in Chapter 1.

Environmental analyses will precede projects requiring additional detail for project-level decisions. These EAs will be tiered to the Environmental Impact Statement for the Forest Plan.

B. Forest Mission and Goals

Overall management of the Forest results in:

- improved rangeland condition, with permitted grazing and forage capacity in balance,
- generally even-aged timberlands with a diversity of age classes,
- a full range of recreation opportunities, ranging from primitive to modern recreation settings,
- improved water quality and riparian areas, and
- higher populations of threatened and endangered species, snag-dependent species, and early successional wildlife, and improved fisheries production;

while:

- protecting significant cultural resources,
- providing mineral and energy resource development,
- continuing to offer firewood commensurate with public demand,
- maintaining soil productivity,
- ensuring scenic attractiveness from major public use areas,
- continuing wetland development, and
- maintaining viable populations of all native and non-native desired vertebrate species.

The desired future condition of the Forest is embodied in the following Forest Mission and Goals, which

respond to the Issues in Chapter 2. The desired future condition is further embodied in the Forest Standards and Guidelines, Management Prescriptions, and Management Area Direction, which translate the Forest Mission and Goals into more specific direction and practices.

Modoc National Forest Mission: 1990-1999

The Forest mission, considering efficiency, cost effectiveness, public needs, and congressional discretion, is to: (not by priority)

- Contribute to the community *economy.*
- Provide for public awareness and enjoyment of *cultural resources.*
- Provide for sustained outputs of *forage and timber* products.
- Provide opportunities for *human resource programs* and individual development through employment and volunteer programs.
- Provide for *mineral* and energy resource development.
- Maintain a level of resource *protection* commensurate with values.
- Provide a variety of *recreational opportunities* from primitive to modern recreation settings.
- Maintain and enhance *scenic opportunities.*
- Maintain and enhance *soil productivity.*
- Enhance overall *water quality.*
- Provide diverse and productive habitat for a variety of *wildlife and fish* species.
- Involve and *cooperate* with federal, State and local agencies, industry, private landowners, and the general public in planning resource use, protection and management of government and other land. Solicit viewpoints in developing the Forest Plan and programs. Provide assistance and research information and, implement useful results.
- Provide *equal employment and career opportunities.*

Modoc National Forest Program Goals: 1990-1999

Air Quality

- Maintain air quality consistent with legal requirements.

Cultural Resources

- Protect and manage cultural resources as a non-renewable resource.
- Complete an inventory and evaluation of the Forest's cultural resources by 2050.
- Provide information for public education and enjoyment of the Forest's cultural resources.
- Protect access and use of sites and locations important to traditional Native American religious and cultural practices.

Diversity

- Provide vegetative diversity to maintain viable populations and other resource objectives, including scenic quality, wildlife , and reduced wildfire loss.

Energy

- Provide energy-efficient facilities through state-of-the-art design, construction and retrofit.
- Encourage the use of surplus biomass.
- Provide for energy resource development, including hydroelectric, geothermal, oil, and gas.

Facilities

- Provide and manage a Forest Transportation System (roads and trails) to accomplish resource management objectives while protecting resource values.
- Provide cost-effective administrative facilities.
- Provide a cost-effective communications system designed to meet resource objectives.

Fire and Fuels

- Protect national forest resources commensurate with values, hazards, risks, and management objectives.
- Treat fuels commensurate with hazards, risks, economics, values, and losses which could be sustained in the project area.
- Use crews trained to suppress fire through a variety of techniques.
- Maintain or increase inter-forest and inter-agency protection management.
- Use fire as a management tool.
- Cooperate in developing management and protection plans for intermingled State and private forest lands in northeast California.
- Use treatments, such as prescribed fire and fuel utilization, on natural fuels of high risk to reduce wildfire hazard.

Firewood

- Sustain the firewood supply, with emphasis on personal use.

Geology and Minerals

- Provide for mineral exploration and development while protecting surface resources.
- Provide for reclamation of disturbed lands as a result of mineral development.

Human Resources

- Provide opportunities for human resource program enrollees and volunteers to acquire knowledge, skills, and attitudes that will enhance their professional and personal goals.

Lands

- Achieve a land ownership pattern that facilitates Forest management and reduces administrative costs.
- Survey and mark property boundaries.
- Acquire rights-of-way needed to efficiently manage Forest resources.
- Pursue land withdrawals to protect Forest improvements and areas of special significance.
- Administer special use permits in conformance with Management Area Direction.
- Avoid separate utility rights-of-way.
- Resolve unauthorized occupancies of national forest land.

Law Enforcement

- Protect life, property, and Forest resources.

Pests

- Reduce impacts of Forest pests to tolerable levels through integrated pest management.

Range

- Maintain the wild horse herd population between 275 and 335 animals.
- Balance permitted grazing and forage capacity by 2000 with grazing systems that complement other resource needs.
- Coordinate range resource planning opportunities with BLM, SCS and individuals to achieve goals.
- Support the Experimental Stewardship Program to increase cooperation and gain understanding of resource plans.
- Complete the ecosystem classification program.

Recreation

- Operate and manage Medicine Lake and Blue Lake as featured campgrounds. Operate other developed sites at standard levels.
- Manage a full spectrum of trail opportunities and ensure proper signing of National Recreation Trails.
- Provide a broad spectrum of recreation opportunities that offer an experience level commensurate with the ROS zone in which the activity takes place.
- Inform and assist the public to make their visits enjoyable. Facilitate an understanding of the various resources and uses of the national forests, and solicit feedback to improve the management of Forest resources.
- Where resource damage is occurring from concentrated use, correct the situation with management techniques that disperse recreationists, or provide facilities to protect sites.

Research Natural Areas

- Manage research natural areas to protect the values for which they were established.

Riparian Areas

- Manage lakes, perennial reservoirs, meadows, seeps, wetlands, springs, and streamside management zones (including ephemerals and intermittents) to maintain or improve riparian-dependent resources.

Sensitive Plants

- Protect habitat for sensitive species sufficient for eventual delisting.

Soil

- Maintain natural nutrient balance to ensure long-term soil productivity.
- Restore areas of soil degradation.
- Enhance soil productivity on selected sites.

- Accurately assess the capabilities, suitabilities and limitations of soils for better management decisions and recommendations.

Special Interest Areas

- Manage special interest areas to protect the values for which they were established.

Timber

- Prepare and offer the Allowable Sale Quantity of sawtimber specified in the Forest Plan.
- Encourage increased utilization of wood products.
- Inform the public to foster an understanding of silvicultural practices.
- Implement post-sale treatments commensurate with resource needs and economics.
- Implement Tree Measurement Sales for low defect timber as opportunities occur.
- Reforest suitable land planned for regeneration within 5 years of harvest.
- Achieve and maintain, through the interdisciplinary process, quality timber sale layout and associated transportation system planning.

Visual Resource

- Maintain or improve the scenic attractiveness of the Forest as seen from major public use areas. Manage visual resources to meet or exceed adopted visual quality objectives (VQOs).
- Rehabilitate areas not meeting VQOs.

Watershed

- Use Best Management Practices (BMPs) to meet water quality objectives.
- In second- or third-order watersheds, limit cumulative impacts to protect stream channel conditions and water quality.
- Rehabilitate degraded watershed areas impairing water quality.
- Acquire and maintain water rights for the Forest.
- Ensure Forest activities will not adversely affect groundwater quality.

Wilderness

- Manage the South Warner Wilderness to maintain or enhance wilderness qualities.

Wildlife and Fish

- Maintain or improve instream habitat for desired fish.
- Manage riparian areas to optimize fish habitat or populations.
- Attain recovery goals for state and federal threatened and endangered species.
- Maintain or exceed habitat quality and quantity necessary for viable populations of sensitive species.
- Provide habitat quality and quantity, on a seasonal and year-round basis, necessary to meet the Forest's share of population objectives in State management plans for deer, pronghorn and other species.
- Fully develop and maintain suitable Forest wetlands.
- Improve and maintain habitat for species dependent on snags, nest cavities, and dead/down wood.
- Cooperate with State, federal and other agencies in wildlife habitat planning and improvement.
- Meet habitat or population objectives for Management Indicator Species.

Forest Planning

- Complete, implement, and monitor a Forest Land and Resource Management Plan as outlined in the National Forest Management Act and the Secretary of Agriculture's regulations.
- Revise, maintain, and create data bases for monitoring and Plan revision.
- Coordinate land management planning with local and private planning and assist with related projects.

General Administration

- Work toward an effectively staffed organization.
- Practice "Toward Excellence" concepts for a more favorable work environment.
- Maintain effective communications and relations within the organization and support a positive and bilateral program of labor-management relations.

- Develop an organizational climate that encourages open communication, understanding and dedication to Forest Goals.

- Develop a workforce that is representative of the population, and has a high level of professionalism with opportunities for development.

- Conduct an informational and educational program to inform and involve the public, other agencies, and Forest employees in activities and issues.

Table 4-2. Average Annual Outputs and Activities.

Output/Activity	Base Year	1980 RPA Goals		Decade[1]	
	1982	1990	2030	1	2
Economics					
Total Budget (MM$)	9.6	13.2	14.2	12.1	12.9
Total Cost (MM$)	11.5			14.4	15.2
Facilities					
Trail Construction/Reconstruction (Miles)	0.0	3.0	3.0	9.7	5.5
Road Construction (Miles)	9.3			11.5	10.0
Road Reconstruction (Miles)	21.7			25.0	25.0
F.S. Road Maintenance (Miles)	3,178.4			3,167.3	3,189.1
Dams and Reservoirs					
Forest Service (Number)	120.0			120.0	120.0
Other Federal (Number)	0.0			0.0	0.0
Other State/Local (Number)	29.0			29.0	29.0
Private (Number)	0.0			0.0	0.0
Administrative Sites					
Forest Service Owned (Number)	12.0			14.0	16.0
Leased (Number)	4.0			2.0	0.0
Fire and Fuels					
Total Fuel Treatment (Acres)	5,100.0	1,800.0	1,600.0	4,246.0	3910.0
Fire-related Fuel Treatment (acre)	0.0			350.0	350.0
Timber-related Fuel Treatment (acres)	4,800.0			3,846.0	3,510.0
Other Fuel Treatment (Acres)	50.0			50.0	50.0
Expected Acres Burned by Wildfire	8,604.8			6,236.0	6,245.0
Intensity Class 1	2.0			1.0	7.0
Intensity Class 2	139.8			133.0	133.0
Intensity Class 3	838.0			577.0	577.0
Intensity Class 4	7,625.0			5,527.0	5,527.0
Intensity Class 5	0.0			0.0	0.0
Intensity Class 6	0.0			0.0	0.0
Firewood					
Firewood (M Cords)	23.0			25.0	27.8
Human Resources					
Programs (Enrollees)	11.0	0.0	0.0	3.0	3.0
Lands and Minerals					
Minerals (Operating Plans)	43.0	45.0	57.0	45.0	49.0
Land Acquisition (Acres)	3,823.0	0.0	0.0	160.0	160.0
Range					
Grazing (M AUM)	122.5	117.4	123.7	118.8	132.0

Table 4-2. Average Annual Outputs and Activities. (continued)

Output/Activity	Base Year	1980 RPA Goals		Decade[1]	
	1982	1990	2030	1	2
Recreation					
Developed Public (M RVD)	81.2	82.8	110.4	92.9	106.7
Developed Private (M RVD)	4.6	7.2	9.6	8.1	9.3
Dispersed (M RVD)	102.8	120.0	158.8	122.4	142.9
Hunting-related Dispersed* (M RVD)	98.4	114.8	152.0	92.9	103.3
Open, Usable OHV Areas – Summer (M Acres)	1,077.4			1,010.8	1,010.8
Open, Usable OHV Acres – Winter (M Acres)	1,092.1			1,034.6	1,034.6
Roads and Trails Open to OHV Use – Summer (Miles)	2,964.4			3,021.1	3,025.3
Roads and Trails Open to OHV Use – Winter (Miles)	2,776.4			2,833.4	2,832.0
Roads and Trails Closed to OHV Use – Summer (Miles)	332.0			332.0	342.0
Roads and Trails Closed to OHV Use – Winter (Miles)	520.0			520.0	535.0
***Hunting-related RVDs are separate from dispersed recreation RVDs**					
Timber					
Allowable Sale Quantity (MMCF)	8.3	12.3	13.2	7.6	7.6
(MMBF)	50.4	75.3	80.3	45.5	45.5
Long Term Sustained Yield (MMCF)	9.7		13.2	9.2	
(MMBF)	58.9		80.3	56.3	
Big Valley Federal Sustained-Yield Unit (MMBF)	13.7			9.0	9.0
Reforestation (M Acres)	3.7	2.9	3.1	3.4	3.9
Timber Stand Improvement (M Acres)	3.9	3.8	3.8	5.4	7.3
Visual Resources					
Visual Quality Index	62.6			64.1	65.9
Water					
Quality (M acre-feet meeting objectives)	357.1	792.0*	801.0*	357.3	458.0
Quantity (M acre-feet)	565.8			567.0	568.3
Watershed Improvement (Acres)	0.0	180.0	200.0	260.0	230.0
***RPA goals are erroneous because they exceed the Forest's cumulative annual water yield of 565.8 M acre-feet. Correct goals are 357.1 and 565.8 M acre-feet for 1990 and 2030, respectively.**					
Wilderness					
Wilderness (M RVD)	7.1	8.3	11.0	9.4	12.4
Wildlife and Fish					
Bald Eagle (Active Territories)	7.0	8.0	21.0	10.0	21.0

Table 4-2. Average Annual Outputs and Activities. (continued)

Output/Activity	Base Year	1980 RPA Goals		Decade[1]	
	1982	1990	2030	1	2
Bald Eagle (Potential Territories)	14.0	13.0		11.0	0.0
Peregrine Falcon (Active Territories)	0.0	2.0	3.0	3.0	3.0
Modoc Sucker (Suitable Stream Miles)	13.4			19.4	19.4
Bighorn Sheep (Individuals)	20.0			20.0	50.0
Deer (M Individuals)	24.1	27.4	27.4	34.2	37.8
Interstate Deer Herd	8.2			10.4	10.4
Glass Mountain Deer Herd	5.5			10.0	10.0
Warner Mountain Deer Herd	7.2			9.4	11.0
Adin Deer Herd	3.2*			4.2	6.4
Resident Fish (M Pounds) – All	116.0	120	170.0	118.8	121.5
Resident Trout (M Pounds)	43.0	47.0	47.0	45.1	46.9
Warmwater Fish (M Pounds)	73.0	73.0	123.0	73.7	74.7
Goshawk (Pairs)	71.0[2]			100.0	100.0
Total Wildlife and Fish User Days – (M WFUDs) (Is not double-counted with dispersed recreation)	83.1	97.0	128.3	106.6	121.6
Big Game (M WFUD)	32.8			47.9	53.0
Direct Habitat Improve.				0.5	0.5
Induced Habitat Improve.				16.7	17.0
Upland Game, Waterfowl, & Nongame (M WFUD)	24.6			28.3	32.1
Direct Habitat Improve.	0.0			2.5	3.0
Resident Fish (M WFUD)	25.7			29.8	36.5
Direct Habitat Improve.				0.3	0.6
Induced Habitat Improve.				0.2	0.4
Acres/Structures of Direct Habitat Improvement					
Deer (Acres)	165.0			330.2	0.0
Wetlands (Acres)	1,000.0			362.5	284.1
Upland Game (Acres)	0.0			100.0	100.0
Nongame (Acres)	0.0			75.0	75.0
Snags (Numbers Created)	0.0			2,605.0	1,935.0
Resident Fish (Stream Miles)	0.0			1.5	1.5

***Equal to 72% of deer herd population estimate of 4,300 deer.**

1 Decade 1 is the period 1990-1999.
Decade 2 outputs are shown for long-range comparisons. The Forest Plan will be revised on a 10- to 15-year schedule.

2 Known pairs in 1982.

Table 4-3. Timber Management Outputs and Activities for the 1st Decade.

Management Practice	Acres/Year	Allowable Sale Quantity MMCF/Year	Allowable Sale Quantity MMBF/Year
Regeneration Harvest			
By Forest Type:			
Eastside Pine	2,490	2.7	16.4
Mixed Conifer	985	3.3	20.4
Red Fir	95	0.4	2.4
Lodgepole Pine	170	0.2	1.5
Total	3,740	6.6	40.7
By Cutting Method:			
Clearcut	3,120	5.2	32.0
Shelterwood	280	0.5	3.2
Selection	340	0.9	5.5
Total	3,740	6.6	40.7
Intermediate Harvest			
Commercial Thinning	200	<0.1	0.1
Sanitation Salvage	1,900	<0.1	.2
Non-Interchangeable Component (NIC) **(Includes harvest from the Visual Retention, Riparian, and <20 Prescriptions)**	2,200	0.7	4.5
Total Harvest	8,040	7.6	45.5
Other Practices			
Release	3,400		
Precommercial Thinning	2,000		
Total Timber Stand Improvement	5,400		
Reforestation	3,400		

C. Forest Objectives

The following tables show Forest land use allocations, commodity outputs, resource management activities, and operating costs that accomplish, or are compatible, with the Forest Mission and Goals.

Table 4-1 shows the Forest-wide acreages allocated to each Management Prescription. (Appendix P provides the breakdown by management area.)

Table 4-2 displays objectives for the first two decades of the Forest Plan. Objectives are planned, measurable outputs that will bring us, step by step, to the Forest mission and goals described in the previous section. The objectives are average annual outputs and activities for the first two decades – 1990-1999 and 2000-2010. These outputs provide long-term direction and help in developing annual work plans and budget requests. They are based on the computer-modeled outputs displayed for the Preferred Alternative in the EIS.

Actual outputs may differ substantially from those displayed in Table 4-2 for the following reasons:

- Actual budgets may be less than required to achieve all outputs;
- Outputs are based on assumptions used in modeling – actual outputs from treatments may vary from those projected;
- Activities will comply with the management direction, i.e., standards and guidelines, displayed in Sections D, E and F of this chapter. Compliance with this direction may preclude full realization of projected outputs.
- Conditions on the Forest can change rapidly due to catastrophic damage by fires, insects or disease. These conditions influence the Forest's ability to provide projected levels of outputs.

Chapter 5 displays the monitoring and evaluation process that we can use to amend the Forest Plan if major differences occur between projected and actual accomplishments.

Table 4-3 provides additional objectives for timber management on an annual basis. Following Table 4-3, other resource objectives are highlighted for the 1st decade.

Table 4-1. Land Allocation to Management Prescriptions.

Prescription		Acres	% of Forest
1	Minimum Level	70,153	4.2
2	Wilderness Standard	70,385	4.2
3	Wilderness Low Standard	0	0.0
4	Semi-Primitive Non-Motorized	23,013	1.4
5	Developed Recreation Standard	198	<0.1
6	Developed Recreation Low Standard	0	0.0
7	Visual Retention	31,127	1.9
8	Special Areas	14,588	0.9
9	Raptor Management	52,111	3.1
10	Rangeland	619,212	37.2
11	Range-Forage	291,365	17.5
12	Even-Aged Timber	145,859	8.8
13	Timber-Visuals	66,835	4.0
14	Timber-Forage	110,291	6.6
15	Uneven-Aged Timber	17,114	1.0
16	<20 Cu Ft Timber	142,117	8.5
17	Riparian Area	9,274	0.6

Other Resource Program Objectives

Air Quality

Maintain air quality in Class I Wilderness areas within the requirements of the Clean Air Act.

Cultural Resources

Continue Native American consultation, inventory and evaluation on a project need basis; sign one site per year for two decades; nominate 2 sites to the NRHP per year; and evaluate 50 backlog sites for NRHP significance per year. Complete cultural resources inventory of the Forest by the year 2050. Significant and unevaluated cultural resource sites are protected primarily by project redesign and avoidance. Interpret significant cultural resources through signing, brochures and self-guided tours. Continue cooperative efforts with local groups such as the Modoc County Historical Society.

Facilities

In addition to timber sale-related roads, construct or reconstruct about 5 miles per year of access roads for recreation, range, and wildlife uses.

Fire and Fuels

Use the current fire management program which emphasizes suppression. Apportion the budget to the following programs: suppression 74%, prevention 9%, fuels 14%, and detection 3%.

Minerals

Make all Forest lands available for mineral leasing, except within the South Warner Wilderness or those lands which have been temporarily withdrawn from mineral leasing as a result of proposed land exchange.

Pests

Manage pests at a level commensurate with moderate levels of vegetation management and resource outputs.

Range

Revise allotment management plans every 10 years. Adjust permitted livestock grazing to meet Forest Standards and Guidelines, including to improve water quality, fisheries, and riparian areas, and meet State deer herd goals. Increase forage production in designated allotments through 6,800 acres of nonstructural range improvements, such as prescribed burning; and maintain 22,000 acres of seedings. Improve ecologic condition by managing livestock distribution through structural improvements such as fences and watering areas. Continue managing wild horses.

Recreation

Developed Recreation: Where use is high, expand existing facilities or construct new sites. Reconstruct existing facilities in need of rehabilitation. Manage existing sites at the standard level. Emphasize the interpretive services program. Construct interpretive facilities.

Dispersed Recreation: Provide a full range of dispersed recreation opportunities. Construct 57 miles of new trails and reconstruct 40 miles of trails in the next 10 years. Maintain these trails at their designed standard. Keep over 87% of the Forest open to OHVs. Provide special management of popular dispersed recreation sites to protect or enhance their values.

Research Natural Areas

Recommend Raider Basin for a Research Natural Area. Recommend other target elements as needs and opportunities arise.

Riparian Areas

Enhance habitat for riparian-dependent resources in allotments where resource conflicts are occurring. Build structural range improvements to resolve these conflicts. Implement Riparian Area prescription on four allotments per year.

Soil and Water

Restore 2,600 acres in decade 1 of primarily actively degrading areas. Maintain and update the Watershed Improvement Needs inventory. Enhance water yield where vegetation manipulation opportunities exist.

Combine an SRI Order 2 and interdisciplinary team effort to more accurately determine timber capability, suitability and management options on non-interchangeable component areas primarily aggregated in SRI 3 map units 174, 222 and 223.

Visual Resources

Manage visual quality by using the "medium" visual quality program (See EIS Appendix Q). Maintain all distinctive scenery, and all areas adjacent to major roads. Maintain some areas seen at background distances. Rehabilitate 1,500 acres of existing visual resource problems.

Wilderness

Manage the South Warner Wilderness at the standard level. Manage for a primitive recreation experience, to the extent possible. Improve the Wilderness trail system through reconstruction over the next 20 years. Provide special visual quality protection for lands adjacent to the Wilderness.

Wildlife and Fish:

Sensitive Species: Provide and maintain habitat for 100 pairs (nest territories) of goshawks.

Manage 13 territories for pine marten.

RPA Species: Implement the Riparian Area Prescription on all identified trout streams and, improve 1.5 miles of trout streams annually by direct habitat improvement.

In the 1st decade, provide for deer forage by using the Timber Forage Prescription on 14,800 acres. Adjust livestock grazing by allotment to provide forage for 34,200 deer, and perform direct habitat improvement on 3,300 acres.

Harvest Species: Develop all suitable wetlands (4,426 acres) for waterfowl production by the 2nd decade; maintain these and currently developed wetlands to original design standards.

Annually improve 100 acres of habitat for upland game species with emphasis on sage grouse, quail and blue grouse.

Improve 100 acres of reservoir annually for largemouth bass.

Other Species: Improve 75 acres per year of habitat for nongame species.

D. Forest Standards and Guidelines

Forest Standards and Guidelines apply to the entire Forest. They expand the Forest Mission and Goals into general management direction for each resource.

Two additional levels of direction below the Forest Standards and Guidelines are Management Prescriptions and Management Area Direction. They provide more specific direction, but are consistent with the Forest Standards and Guidelines.

1. Air Quality

1. (S) Maintain air quality to meet legal requirements of all levels of government. Comply with applicable Air Pollution Control Districts (APCD) agricultural burn implementation plans.

2. (G) Manage the amounts, timing, and extent of Forest-produced air pollutants on the airshed by the following methods:

   A. Below 6,000 feet, conduct burning activities on designated burn days when atmospheric conditions provide for rapid dispersion and minimizing pollution.

   B. Design the prescription in each burn plan to meet management objectives while minimizing the amount of smoke generated.

   C. Work closely with local and neighboring Oregon APCDs during burning activities to minimize cumulative smoke impacts.

   D. Avoid prescribed ignitions which could adversely affect visibility and total suspended particulate matter in the South Warner Wilderness and the Lava Beds National Monument Class 1 airshed areas during high use periods (July 4 through Labor Day; and holiday weekends, such as Memorial Day).

   E. Schedule prescribed ignitions when weather conditions are favorable for rapidly dispersing smoke from populated and other sensitive areas, and Class I airsheds. Develop guidelines for prescribed fires to protect visibility in Class I areas if necessary.

   F. Follow dust abatement procedures prior to and during any construction activity.

   G. Monitor air quality sensitivity indicators (such as visibility and lichen) to establish baseline conditions.

3. (G) Determine locations for high concentrations of air pollutants and areas of probable adverse effects.

A. Use existing emission data, air quality monitoring, personal observation, modeling or professional consultation.

B. Determine current conditions.

4. Establish monitoring sites for air quality resource values where appropriate to characterize the South Warner Wilderness.

5. Perform Prevention of Significant Deterioration (PSDs) permit application reviews to determine what effect increased emissions from major stationary sources will have on Air Quality Related Values (AQRVs) of Class I areas.

2. Cultural Resources

1. (S) Inventory to identify cultural resource properties prior to any project, activity or license which may affect significant cultural resources consistent with the National Historic Preservation Act of 1966 (as amended) and other pertinent laws and regulations. Adjustments will be made to projects to comply with cultural resource laws.

2. (S) Evaluate cultural resources to determine National Register of Historic Places eligibility.

3. (S) Conserve properties that have been designated on, or are eligible for designation to, the National Register of Historic Places. (Eligibility is assumed if evaluation is incomplete.)

4. (G) Provide for the use and enhancement of cultural resources for educational, scientific, recreational, and other public purposes to the extent consistent with management requirements.

   A. Interpret significant cultural resources through signing, brochures, displays, self-guided tours, and programs. Treat and interpret significant cultural resources appropriate to their assessed value and associated level of public interest.

   B. Continue cooperative efforts with local groups such as the Modoc County Historical Society.

5. (S) Protect access and use of sites and locations important to traditional Native American religious and cultural practices consistent with the American Indian Religious Freedom Act of 1978.

6. (G) Protect cultural resources largely by directing activities or use away from sensitive areas, by maintaining confidentiality, and by informing Forest users of cultural resource protection requirements.

3. Energy

1. (G) Provide new energy sources by allowing wind, geothermal, solar, hydroelectric, and biomass development. Accommodate development of geothermal, gas, and oil resources.

2. (G) Encourage firewood for home heating by providing free timber sale slash to domestic users.

3. (G) Conserve energy through Forest management activities when using facilities, vehicles, and equipment. Encourage Forest users to conserve energy through stipulations in contracts and special use permits. Monitor and evaluate energy consumption; change policies regarding energy use commensurate with findings.

4. Facilities

1. (S) Provide and manage a Forest transportation system to achieve resource management objectives while protecting resource values.

   A. Plan, design, and construct local roads to the lowest standard commensurate with intended use.

   B. Plan and construct arterial and collector roads to the standard appropriate for safe and economical use, and commensurate with the road development guidelines in Appendix G, and multiple resource management.

   C. Maintain all Forest roads to their objective maintenance levels (defined in Appendix G) .

   D. Provide for signing in accordance with road management objectives and MUTCD (Manual on Uniform Traffic Control Devices) standards.

2. (G) Cooperate with federal, State, and county agencies, and private companies to construct, reconstruct, and maintain roads under their jurisdictions, if needed. Review location and design specifications for roads built under permit or license, and require protection of all resources. Coordinate road management and closures with local agencies.

3. (G) Manage and maintain the transportation system to protect soil, water, and all other resource values. Close local roads as needed to meet these objectives. Develop road closure and OHV plans (Appendix A).

4. (G) Plan for and provide a stable and cost-efficient trail system through construction, reconstruction, and maintenance, as outlined in the trail program pre-

sented in Appendix L. Reference trail standards and guidelines under Recreation.

5. (G) Develop and manage Forest facilities to promote energy conservation, to be economically efficient, and to meet other resource objectives.

   A. Limit allocations of single-purpose transmission and transportation corridors. Place new transportation and utility facilities within or contiguous to existing corridors. Encourage the use of private lands, where appropriate, for new corridors. Appropriateness is determined at the site-specific project level.

   B. Potable water sources and designated swimming areas will be monitored according to the Safe Drinking Water Act and other health regulatory requirements. At prescribed intervals, inspect for potable water.

   C. Inspect dams and bridges at prescribed intervals, and ensure maintenance for safety.

   D. Manage, construct, and maintain buildings and administrative sites for economical resource management, and to meet applicable codes.

6. (G) Develop and manage the Forest communications systems to achieve resource management objectives.

   A. Sites necessary to internal communications systems will be administratively withdrawn.

   B. Limit new electronic uses to existing, approved sites, to the extent possible. Approve new sites only if they are in the public interest. Non-compatible uses will not be authorized at the same electronic site.

5. Fire and Fuels

1. (G) Protect national forest resources commensurate with values, hazards, risks, and management objectives.

   A. (G) **Suppression:** Use appropriate suppression strategies of confine, contain and control as specified in the Fire Management Action Plan. All responses will be for the purpose of control unless another response is authorized in the Fire Management Action. Use the strategy of control for wildfire on private lands protected under agreement with the California Department of Forestry. Fire Management is a suppression emphasis; the Fire Management Effectiveness Index (FMEI) is 3.72 (Appendix H).

   - Take presuppression and suppression actions which protect life and property, and minimize resource degradation.
   - Maintain or increase inter-forest and inter-agency protection management.
   - Insure that other agencies follow Forest-wide Standards and Guidelines when suppressing fires on national forest land.
   - Use crews trained to suppress fires through a variety of techniques.
   - Within the first decade, identify project areas where fires from naturally occurring unplanned ignition may be allowed to burn within the prescription.
   - Cooperate in developing management and protection plans for intermingled State and private forest lands in northeast California.

   B. (G) **Prevention:** Prevent fires commensurate with resource values at risk.

   - Emphasize fire prevention in high use areas.
   - Emphasize periods of heavy use, such as opening of deer season and 3-day weekends from Memorial Day through Labor Day.
   - Analyze and reduce human-caused fires in areas where costly fires occur.
   - On a regular basis, inspect burning permits, industrial operations, powerlines, and residences.

   C. (G) **Detection:** Maintain 1985 level of detection.

   - Maintain all lookouts in operable condition.
   - If lookouts which are operated by other agencies and which provide detection for the Forest are abandoned, the Forest will occupy those lookouts or provide alternate sites.
   - Occupy lookouts during and after lightning storms.
   - Continue air detection to find fires after lightning storms.

2. (G) Treat fuels commensurate with hazards, risks, economics, values, and losses which could be sustained in the project area. Manage fuels to prevent fire and to complement other resource management direction.

A. (S) Treat fuels within parameters set by the Suppression Difficulty Index (Appendix H) not to exceed the following:

Timber harvest fuels:	
Regeneration and Precommercial Entries	5
All Other Entries	10
Other fuels:	
As specified in Prescriptions and Management Area Direction	

6. Firewood

1. (G) Administer the Forest firewood program to provide opportunities for the orderly removal of firewood, increasing slash utilization, protecting resources, and encouraging local energy conservation.

   A. (G) Provide for personal use first; provide for commercial uses as supplies allow.

   B. (G) Limit firewood removal as needed to assure viability of cavity-, down log-, and snag-dependent wildlife populations.

   C. (G) As opportunities arise, use timber sale contract provisions to provide material for firewood.

   D. (G) Where firewood is available, and resource and road management objectives allow, keep roads open after logging is complete for a sufficient period of time to allow firewood utilization.

   E. (G) Designate free-use areas.

   F. (G) Use the firewood program to improve range and wildlife habitat.

7. Geology

1. (G) Protect resources and investments from geologic hazards.

2. (S) Conduct an Order 3 or 4 Geologic Resources Inventory to support project level assessment (GRI). If needed, perform an Order 1 GRI.

3. (G) Protect the quantity and quality of groundwater.

8. Lands

1. **Land Ownership**

   A. (G) Initiate land adjustments to achieve a land ownership pattern that facilitates management and reduces administrative costs.

   – Utilize land purchase and exchange authorities to acquire lands or interests in lands in specially designated areas, such as wilderness, or where special features exist, such as habitat critical to threatened and endangered species. Conversely, exclude areas of the Forest that possess special values from land exchange consideration.

   – Recommend transfers of other federal lands to the national forest system where resource protection and conservation will clearly benefit, and more economical and effective protection and management of forest and watershed lands will result. Conversely, recommend transfer of national forest lands to federal agencies where public interest will materially benefit, and the intended use of the land by the receiving agency cannot be met under national forest laws and regulations.

   – Consolidate national forest lands through acquisitions, with emphasis on areas where national forest lands constitute appreciable proportions of the area and where additional land most valuable for national forest purposes is available.

   – Continue coordination efforts with the National Park Service, Bureau of Reclamation, Bureau of Land Management, US Fish and Wildlife Service, and the State of California.

2. **Special-Use and Rights-of-Way Permits**

   A. (G) Issue special use permits in conformance with Management Area direction.

   – Do not approve special use applications if use can reasonably be made of private land.

   – Inventory and set aside within the first decade those electronic sites appropriate for Forest Service and private permittee use.

   – Bury new telephone lines up to and including 35 KV, except where environmental analysis indicates that aerial construction provides better protection for national forest resource and environmental values.

   – To evaluate special use applications for an infrastructure (facility) serving a proposed interior subdivision: 1) consider impacts generated by the

long-term needs of the private development, including utilities, fire stations, solid waste disposal sites, etc.; 2) generally confine to private land those facilities that are essential to the development; 3) allow only one access route per subdivision or private parcel, unless public safety warrants alternate escape routes in cases of fire or other natural disaster.

- For a proposed hydroelectric project requiring a Federal Energy Regulatory Commission (FERC) license, evaluate likely environmental impacts and prepare a 4(e) letter to FERC listing mitigation requirements. When appropriate, prepare a special use permit including such requirements for facilities on Forest land; issue when the FERC license is issued.

- For an existing hydroelectric facility licensed by FERC, regulate in cooperation with other agencies.

- Limit new electronic uses to existing, approved sites, to the extent possible. Approve new sites only if they are in the public interest. Non-compatible uses will not be authorized at the same electronic site.

3. **Utility Corridor**

A. (G) Minimize proliferation of separate utility corridors by confining future needs to existing corridors, if possible. However, consider construction of new corridors outside existing utility rights-of-way if technology, safety, national and state practices, engineering, or environmental quality precludes coexisting uses.

- (S) When establishing utility corridors, avoid the following areas:

  - critical habitat for threatened and endangered species
  - designated Wilderness
  - Research Natural Areas
  - semi-primitive recreation areas
  - Special Interest Areas
  - areas used in the practice of Native American religions

B. Cooperate with utilities representatives to develop strategies which will minimize the potential for a single- or multiple-line power outages which could result from catastrophic events such as wildfire.

C. (S) In managing Forest activities near the utility corridor, coordinate with respective federal or private utility managers to ensure that Forest activities will not conflict with the intended permitted use and management of the utility corridor.

4. **Property Line Surveys**

A. (G) Survey, mark, and post all property lines and corners to Forest Service standards prior to implementing national forest programs adjacent to these property lines.

B. (G) Trespass

- Resolve unauthorized occupancies on national forest lands through removal occupancy, issuance of special use permits, or approved plans of operation, or land adjustments (including Small Tracts Act) .

C. (G) Rights-of-Way Acquisitions

- Acquire rights-of-ways needed to efficiently manage Forest resources. When analyzing a proposed right-of-way, evaluate the need for full public access vs. limited use (administrative and commercial hauling only) , considering: 1) proportion of public ownership; 2) road maintenance responsiblities; 3) alternate public access; and 4) closures for resource management. Participate in cost-sharing agreements with adjacent landowners.

D. (G) Withdrawals

- (G) Pursue land withdrawals when needed to protect Forest improvements and areas of special significance. Confine withdrawal applications to critical lands vulnerable to mineral or hydropower development that are: 1) occupied by permanent improvements (e.g. developed recreation sites, administrative facilities) , or 2) without improvements but with values that may be threatened (e.g. Research Natural Areas, Special Interest Areas).

9. Law Enforcement

1. (G) Enforce laws and regulations on the Forest by ensuring an adequate internal law enforcement program and staff; and through coordination and cooperation with federal, state, and local law enforcement agencies.

2. (G) Ensure that the Forest is available to all persons for legitimate uses with a minimum of restrictions. Protect Forest resources and facilities as well as employee safety. Priority is given to situations threatening personal injury.

3. (G) Inform visitors of rules and regulations governing national forest system lands.

10. Minerals

1. (G) Encourage exploration and development of mineral resources, subject to valid existing rights or withdrawals. Deny mineral leases within the South Warner Wilderness and for lands which have been temporarily withdrawn from mineral leasing as a result of proposed land exchanges.

2. (G) Permits, leases and operating plans will contain provisions that prohibit unnecessary disturbance of the surface and provide for reasonable surface restoration. Special lease stipulations, permit clauses, or conditions related to operating plans will be applied as needed on a case-by-case basis (Appendix I) . Require reclamation plans for rehabilitation of the surface and vegetation.

3. (G) Process geothermal and oil and gas lease applications in a timely manner with appropriate coordination with other agencies.

4. (G) Maintain an inventory of mineral materials sites, specifying which are available for public use and for Forest Service use.

5. (G) Prepare a site development and rehabilitation plan before development and use of a mineral materials site.

11. Pests

1. Reduce impacts of forest pests on all resources to acceptable levels through integrated pest management.

   A. (G) Use an integrated pest management (IPM) approach to manage pests when planning and implementing all appropriate activities, particularly those that influence vegetation. Under IPM, consider a full range of pest management alternatives and analyze on a site-specific, project-level basis. Select treatment method(s) through the environmental analysis process after considering environmental effects, treatment efficiency, and cost-effectiveness of each alternative. Determine monitoring and enforcement plans to implement specific actions during this site-specific process. Pest detection, surveillance, evaluation, prevention, suppression, and post-action evaluation are integral components of the IPM approach.

   B. (G) Coordinate significant animal damage control actions with the California Department of Fish and Game; U.S. Fish and Wildlife Service; Animal, Plant, Health Inspection Service; and other agencies and cooperators.

   C. (G) Cooperate with State and Counties in control of noxious weeds and predation.

   D. (G) Perform direct rodent control (i.e. trapping or fumigation) within or adjacent to developed recreation sites to prevent human-related diseases.

   E. (G) Coordinate control of public health problems with the California Department of Health Services and appropriate local health agencies.

12. Range

1. Through allotment management planning, manage rangeland vegetation to provide for healthy ecosystems; and to make forage available for livestock, wild horse herds, and wildlife species.

   A. (G) Implement cost-efficient range improvements.

   B. (S) Maintain or enhance satisfactory ecological condition.

   C. (G) Develop and implement allotment management plans first of all for allotments with rangeland in unsatisfactory ecological condition, or where potential or existing resource conflicts are identified. These plans will outline grazing strategies, and structural and nonstructural range improvements designed to correct the existing condition. Reference Appendix J for guidelines in selecting sites for range vegetative manipulation.

   D. (G) Measure forage utilization using key forage plants. As a general rule, allow up to 50% utilization by weight on permanent rangelands in satisfactory ecological condition. On permanent rangelands in unsatisfactory ecological condition, allow no more than 30% utlilization by weight.

   E. (G) Monitor total production and/or condition and trend, as needed, to ensure good plant vigor, adequate plant reproduction, favorable range trend, and good watershed conditions. Monitor

water quality and fish habitat to determine baseline conditions and the effects of range management.

F. (G) Manage allotments to protect soil, water, and streamside-dependent resources.

G. (G) Within each allotment management plan, identify lands in unsatisfactory ecological condition where current technology does not exist to improve conditions.

H. (S) Follow fence standards described in the Modoc Supplement to the FSM.

2. (G) Manage livestock and wild horses to maintain range resource productivity.

3. (G) Determine the suitability of Forest lands for livestock grazing.

A. Suitability criteria are:

- Slopes >40% are not suitable for grazing cattle.
- Slopes >60% are not suitable for grazing sheep.
- Lands incapable of producing at least 50 pounds of useable forage per acre, including barren lands and permanent bodies of water, are not suitable.

B. Areas that are inaccessible, including areas with physical barriers, may be designated unsuitable.

4. (G) Make lands allocated to livestock grazing available for use by qualified livestock operators. Prepare allotment management plans and revise every 10 years. Prepare annual operating plans for each allotment.

5. (S) Manage the wild free-roaming horse herds to achieve a Forest population between 275 and 335 (on the average, 305 animals).

A. (G) Every ten years revise the herd management plan for each wild horse territory, including forage allocation for horses within the carrying capacity of the territory. Cooperate with the Bureau of Land Management in capture and placement of animals.

B. (G) Monitor the impacts of wild horses on rangelands in allotments where horses are present. Determine if wild horse numbers should be adjusted on high impact areas.

6. (G) Where opportunities exist, coordinate resource planning with BLM, SCS, and individuals to achieve Forest goals, standards and guidelines, and objectives.

7. (G) Use the Experimental Stewardship Program (1) to gain understanding of and support for resource management plans; and (2) to experiment with innovative approaches and incentives for improved rangeland management.

8. (G) Coordinate resource management with County, State, and other federal agencies especially in noxious weed control efforts. Control noxious weeds where the need is identified.

9. (G) Continue the ecosystem classification program.

13. Recreation

1. (G) Establish and maintain appropriate recreation facilities and services to:

A. Service present and future outdoor recreation needs, and ensure customer satisfaction.

B. Prevent unsanitary conditions, water and air pollution, fires, or other impairment of resources.

2. (G) Provide a variety of developed recreation sites from remote locations to modern facilities.

A. Manage developed recreation sites according to the Developed Recreation Site Management Prescription.

B. Operate and manage Medicine Lake and Blue Lake as featured campgrounds. Operate other developed sites at standard level.

3. (G) Manage a full spectrum of trail opportunities.

A. Manage the High Grade and Blue Lake National Recreation Trails in keeping with their National Recreation Trail designation. Ensure proper signing.

B. Provide a range of trails varying between easy (suitable for handicapped) and difficult (physically challenging).

C. Use the Recreation Opportunity Spectrum (Appendix K) system to guide decisions. Locate challenging trails within the most primitive environments and easy trails within the more roaded natural areas.

D. Provide loop trails whenever appropriate, allowing return to the point of departure without covering the same ground twice.

E. Consider providing for diverse types of uses such as hikers, cross-country skiers, horses, mountain

bikes, motorcycles, snowmobiles, all terrain vehicles, and 4-wheel drives.

F. Improve or relocate trails where foot traffic currently is causing water quality, fish habitat, or other resource degradation.

G. Provide for interpretation of unique geological, historical, or other features of interest.

H. Encourage participation by volunteers and specialized user groups to maintain trails. Participate in programs such as the State of California Green Sticker Program to improve funding for trails.

I. Develop a signing program appropriate to the ROS class.

4. (G) Design resource management activities to complement the Recreation Opportunity Spectrum (ROS) classes delineated on the ROS map and referred to in each prescription. (Refer to Appendix K and the ROS User's Guide for a full listing of activity opportunities, recreational settings, and experience opportunities by ROS class.)

A. (G) **Roaded Natural:**

- Provide opportunities for such recreation activities as pleasure driving, water-skiing, hunting, and camping in areas characterized by predominantly natural-appearing environments with moderate evidence of human activities.

- Provide developments, including interpretive or vista sites and developed recreation sites.

B. (G) **Semi-Primitive Motorized:**

- Provide opportunities for such recreation activities as off-highway vehicle touring, hunting, and camping in areas characterized by predominantly natural or natural-appearing environments with low concentrations of users.

- Limit site development to resource protection.

- Minimize construction or reconstruction of system roads.

C. (G) **Semi-Primitive Non-Motorized:**

- Provide opportunities for such recreation activities as hiking, fishing, and tent camping in predominantly natural environments with low incidence of interactions between users.

- Prohibit motorized recreation; eliminate and prevent OHV use.

- Limit site development to resource protection.

- Apply the Semi-Primitive Non-Motorized Dispersed Recreation Prescription to specified areas (generally at least 2,500 acre units) .

D. (G) **Primitive:**

- Provide opportunities for such recreation activities as hiking, mountain climbing, fishing, and tent camping in essentially unmodified natural environments with minimal interaction with or evidence of others.

- Prohibit motorized recreation or access; eliminate and prevent OHV use.

- Maintain trails and provide minimum information signs. Provide no other developments.

- Eliminate accumulated evidence of human impact.

- Emphasize low on-site regimentation and primarily off-site controls.

5. (G) Allow dispersed recreation activities in undeveloped areas of the Forest unless otherwise prohibited for resource protection. Adjust land management activities at popular locations to maintain or enhance the natural setting and functional use of the site.

6. (G) Provide off-highway vehicle (OHV) recreation where OHV activities will not cause resource damage nor conflict with other uses. Reference the OHV map for use areas.

7. (G) The following concerns will be addressed and may require corrective action to OHV opportunities identified in the Plan:

A. excessive soil erosion or compaction resulting in reduced productivity;

B. degradation of water quality;

C. unnecessary disturbance to deer and pronghorn on fall and winter range, and during fawning and kidding periods;

D. adverse impacts to threatened, endangered, and sensitive species not fully accommodated in the Plan; and

E. new technological changes in OHVs and their uses.

Corrective actions may include, but are not limited to, improved trail maintenance, adjusting seasons of use, reducing OHV use, signing barriers to redistribute use, partially closing areas, rotating use, prohibiting specific vehicle types causing damage, or totally closing an area.

8. (G) Provide interpretive services which explain the Forest environment and management programs, inform visitors of the availability and locations of recreation opportunities, and encourage public use of the Forest. Solicit feedback from the public to improve the management of Forest resources.

9. (G) Provide for the needs of physically handicapped persons in facility designs.

10. (G) Minimize Forest competition with private-sector recreation-oriented services.

11. (G) Evaluate existing and planned exclusive use recreation developments, and provide for removing those on lands needed for higher public purposes.

12. (G) Monitor water quality and fish habitat to determine baseline conditions and the effects of recreation activities on them.

14. Research Natural Areas

1. (S) Manage the Devil's Garden Research Natural Area to protect the values for which it was established through application of the Special Areas Prescription.

2. (S) Protect Raider Basin, a candidate RNA, to preserve its research values.

3. (G) Consider additional areas for RNA status as need and opportunity arise.

15. Riparian Areas

1. (G) Manage lakes, perennial reservoirs, meadows, seeps, springs, and streamside management zones (including ephemerals and intermittents) according to the Riparian Area Management Prescription and Appendices M, N, and T.

2. (G) Where uses conflict, favor protection of riparian-dependent resources (water, fish, vegetation, wildlife, and aesthetics) over other resources.

3. (G) Restore degraded riparian areas through structural and nonstructural improvements. Structural improvements include gully control, stream-bank stabilization, and fencing. Nonstructural improvements include modification of timber harvesting within streamside management zones (Appendix M) or changes in grazing management (Appendix S) .

16. Sensitive Plants

1. (G) Manage and conserve sensitive plant species and their habitats to ensure that viable populations are maintained.

   A. (G) Develop and implement a consistent, systematic, biologically sound program for sensitive plant species and their habitat so that federal listing as threatened or endangered is unnecessary.

   B. (G) Prior to project implementation, conduct inventories if potential habitat or known population locations are identified. The reporting procedures for this process are outlined in the Forest Service Sensitive Plant Handbook.

   C. (G) Complete interim management recommendations for all sensitive plant species.

   D. (G) Allow no new disturbance of identified sensitive plant habitat without an environmental analysis.

   E. (G) Allow scientific studies if no detrimental effects on sensitive species will occur.

   F. (G) Within the planning period, develop Species Management Guides for all species on the Forest sensitive plant list. These documents will provide information on background and present status of the species; new population locations; potential enhancement opportunities; key areas necessary for long-term protection; and maximum impact levels. Use information from the California Natural Diversity Database, and State federal, and private organization.

2. (G) Use partnerships and cooperative programs whenever possible to conserve and enhance sensitive plants and their habitats.

17. Soils

1. (G) Maintain soil productivity by applying guidelines to areas where management prescriptions are applied: land for timber production, range allotments, and other areas where healthy or productive vegetation is desired (e.g., riparian areas and campgrounds). The following guidelines do not apply to administrative sites, system roads or special use areas.

2. Monitor for implementation and effectiveness. Areas not meeting guidelines will be rehabilitated. As a minimum, 85% of areas affected by soil-disturbing activities will not exceed soil property thresholds (Guidelines A-G).

A. *Forest floor (litter) and large woody debris.* Both guidelines below should be met for those forested soils in at least a minimally stocked vegetative condition.

- Forest soils are in acceptable condition when: (1) with mechanical site preparation, a minimum of 30% of the soil surface is covered by forest duff which is at least two inches thick (or the existing thickness, if less than two inches) in an intact or nearly intact condition; or (2) for prescribed burns, at least the lower half of the original duff layer which covers 25-50% of the area, should be retained and will be dependent on the erosion hazard potential of the unit (i.e., a higher percentage of duff will be needed where the erosion hazard potential is higher). The intent is to evenly distribute the duff.

- For large woody debris management, leave at least 5 logs per acre in an activity area. Up to 20 logs per acre may be left when there are no other resource conflicts. The amount specified for retention will depend on the amount of logs available and the number needed to provide nutrient cycling and site productivity while also meeting minimum fuels treatment requirements in the Fire Suppression Difficulty Index (SDI).

  Preference is for large cull logs at least 16 inches in diameter and about 40 cubic feet in volume. Most logs should be in decomposition classes 3, 4, and 5 (defined in USDA Handbook 553, page 80), except at least two logs per acre should be in class 1 or 2. The class 1 or 2 logs may be the same logs required by the Forest-wide standard for snags and down logs. Smaller logs, stumps and root wads can be substituted when sufficiently large cull logs are not available. Determine the number and size of logs per acre retained through the interdisciplinary process during project level planning. This guideline may be waived in strategic fuelbreak areas and for safety reasons.

B. *Soil porosity* is at least 90% of its natural condition. To help meet this guideline, both items below should be followed:

- During wet soil conditions (as determined on a project level), cease heavy equipment operations or confine equipment and other soil disturbing activities to designated routes. Heavy equipment may be operated (as in dry soil conditions) when (1) sufficient frost exists in the soil (3+ inches); or (2) sufficient snow pack is present (18+ inches); or (3) sufficient surface or subsurface rockiness (more than 60% rocks by volume), or combinations of the above as determined through the interdisciplinary process, is sufficient to support equipment without causing unnecessary soil resource damage.

- A soil restoration project will be planned and implemented when: proposed management activities will likely result in less than 90% of the natural porosity being maintained on that portion of land dedicated to vegetative production; current activities are resulting in the above; or past management activities, or the cumulative effect from all these have resulted in the above; and when the most favorable opportunity arises. The most favorable opportunity will be determined through the interdisciplinary process.

C. The mineral organic matter in the upper 12 inches of soil should be at least 85% of its natural condition.

D. Design management activities not to exceed an average allowable soil loss of one ton per acre per year. This is mainly accomplished by leaving an effective ground cover. The intent is for the effective ground cover to be evenly distributed over the soil surface. The amount of effective ground cover needed and the means to meet this will vary by soil type, slope, and planned and applied soil conservation managment practices (determined by the erosion hazard rating method 2509.22, chapter 50). The minimum effective ground cover will be determined through the interdisciplinary process during project planning.

E. Treat all degraded watersheds causing active soil degradation in a cost-effective manner and on a priority basis according to beneficial uses. Design improvement activities to meet management objectives. Completion target is two decades. Treat degraded watersheds affecting soil productivity, but not currently in an active state of degradation, within five decades.

F. During project planning, verify areas where soil productivity has been degraded. These areas will either be included in the project plan for restoration and improvement, or added to the Watershed Improvement Needs (WIN) program for future treatment.

G. Complete an SRI Order 2 or field-verified SRI Order 3 during the planning phase of each site-disturbing or vegetative manipulation project. Assess impacts of proposed management activities on the

soil resource. Develop specific soil mitigation measures and soil conservation management practices for each project site as needed.

18. Special Interest Areas (SIAs) and National Natural Landmarks (NNLs)

1. (G) Manage special interest areas to protect the values for which they were established. Manage according to the Special Areas Prescription.
   A. Recommend Burnt Lava Flow and Medicine Lake Glass Flow geologic SIAs for nomination as National Natural Landmarks.
   B. Evaluate Dismal Swamp for nomination as a botanical Special Interest Area.
   C. Recommend other areas as needs and opportunities arise.

19. Timber

1. (G) Prepare and offer the allowable sale quantity of sawtimber specified in the Forest Plan.
   A. Schedule timber harvest only on lands suitable for timber production. Unsuitable lands may not be harvested except for salvage sales, sales to benefit other multiple-use values, or activities to meet other resource objectives as prescribed in the Forest Plan.
   B. Review lands designated as not suited for timber production at least every 10 years to determine if they have become suited. If determined suited, return these lands to timber production.
   C. Implement the Timber Sale Planning Process, incorporating interdisciplinary analysis into all timber projects.
2. When stands are managed to achieve timber production objectives:
   A. (S) Reforest suitable land planned for regeneration within 5 years.
   B. (S) Allow up to 15% of a clearcut perimeter to open into other clearcuts. Regeneration openings will be considered openings until the minimum number of properly spaced trees (as specified in the FSHS) are 4.5 feet tall. Another regeneration unit may not be cut immediately adjacent to a regeneration opening until this restocking has occurred.
   C. (G) Distances between regeneration units will be sufficient to provide wildlife cover, meet resource management objectives, and provide for economical future harvest units.
   D. (G) Regeneration openings will be shaped to visually blend with the natural terrain while providing edge for wildlife.
   E. (G) Practices will not necessarily be chosen because they give the greatest dollar return or the greatest wood outputs, but treatments will be practical in terms of costs of preparation and administration, transportation systems, cutting methods, and logging requirements.
   F. (G) Reforestation will consist of planting tree species that reflect the natural forest diversity, where possible, on properly prepared sites.
   G. (G) Where vegetation competition will substantially inhibit tree survival and growth, analyze a full range of available vegetation management techniques. Select the best method at the project level through site-specific environmental analysis that considers the relative effectiveness of these techniques and implements the applicable prescription and management area direction. Develop monitoring and enforcement provisions through the environmental analysis and include in the project plans.
   H. (S) Plantations will receive release treatments before competition from such vegetation as grass, forbs, and shrubs significantly inhibits tree growth or threatens plantation success. Two major standards are used to evaluate the need for release:

      Current or potential shrub cover.

      – Shrub cover occupies or has the potential to occupy 30% of the area.

      – Has a crown volume of 5,000 cubic feet per acre.

      Rate of conifer height growth.

      - The following information from growth studies on ponderosa pine plantation sets standards for height growth in young stands:

TREE HEIGHT (FT.) BY AGE AND SITE INDEX					
	Site Index				
Age	40	60	80	100	
10	5	7	9	11	Dominant Ht.
10	5	6	8	10	Avg. Tree Ht.
15	8	12	16	19	Avg. Tree Ht.
Source: Oliver and Powers (1978)					

I. (G) The health and vigor of trees will be maintained through integrated pest management and appropriate silvicultural techniques. The objective is to ensure plantation success and maintain timber stands in good condition.

J. (G) Stands will be precommercially thinned to maintain growth and produce the desired stocking rates by the time of the first commercial entry. Precommercial thinning in regenerated stands is generally scheduled to occur when the stands are 15 years old and ≤4.5 inches in diameter.

K. (G) Stands will be commercially thinned to remove trees that would die before the final harvest if the stand were not thinned, or to attain a desired stocking level. Stands will not be thinned below the basal areas from which they can return to acceptable stocking by the next entry (generally 20 years).

L. (G) Retain small groups in regeneration units of adequately stocked advanced regeneration when such groups will at least equal the new stand's planned growth potential and are relatively disease-free. The groups may contain marginally merchantable timber (i.e., 12 inch dbh) if they are young healthy dominant trees which will blend with the regenerated stand.

3. (G) Generally prohibit tractor logging on slopes exceeding 40%. Cable and helicopter logging will generally be used on slopes over 40%.

4. (G) Encourage increased utilization of wood products. Include the following utilization standards in commercial sales unless otherwise specified by the Regional Forester.

A. (S) For sawlogs, designated trees must contain at least a 10-foot log with not less than a 6-inch top diameter inside bark, 25% sound.

B. (G) Establish specifications for products other than sawlogs and pulpwood (such as firewood) as an integral part of the timber sale planning process for each timber sale that includes such products.

5. (G) Coordinate slash disposal and fuel treatment to ensure regeneration and reduce the risk of wildfires while providing for wildlife needs and soil and water quality protection.

6. (G) Implement post-sale treatments commensurate with resource needs and economics.

7. (G) Implement tree measurement sales where appropriate and as opportunities occur.

8. (G) Achieve and maintain, through the interdisciplinary process, quality timber sale layout and associated transportation system planning.

9. (G) Permit personal-use Christmas tree cutting where timber productivity will be maintained or enhanced. Provide commercial Christmas tree sales to utilize trees that would otherwise be destroyed in sawtimber harvests and in areas where timber productivity will be maintained or enhanced.

20. Visual Resources

1. (G) Manage visual resources to prevent unacceptable alteration of landscapes by designing and implementing management activities to meet or exceed adopted Visual Quality Objectives (VQOs).

2. (G) Allow temporary departures of less than ten years and one VQO class to protect long-term visual values, such as in timbered areas highly susceptible to insect or disease epidemics.

3. (G) Capitalize on opportunities to achieve rehabilitation of unacceptable modification conditions during management activities with other resources.

4. (G) Meet assigned VQOs when activities are planned within the foreground zone of State Highways 139 and 299. Specific objectives are to:

A. Minimize the visual impact of all existing human-made structures. Locate new structures out of view, or mitigate the impact of them.

B. Blend treated vegetation with adjacent untreated areas for a natural appearance. No distinct edge

between treated and untreated areas should be evident.

21. Water

1. (S) Implement Best Management Practices (BMPs) to meet water quality objectives and maintain and improve the quality of surface water on the Forest.
2. (G) Identify methods and techniques for applying BMPs during project level environmental analysis and incorporate into the associated project plan and implementation documents (Appendix N) . Monitor for compliance and effectiveness.
3. (G) Evaluate the effectiveness of BMPs in attaining standards and protecting beneficial uses through on-site inspection, field observation, and water data collection on a case-by-case basis.
4. (G) To minimize the risk of off-site cumulative impacts from management activities on stream channel conditions and water quality, conduct a cumulative watershed effects analysis of each land-disturbing activity on the appropriate second- or third-order watershed prior to undertaking. (See Water AMS for detailed discussion of cumulative watershed impacts).
5. (G) Identify and evaluate watershed conditions causing site deterioration, water pollution, or unsatisfactory water yield. Make plans for correcting these conditions on a complete watershed basis, and enter data in the WIN inventory.
6. (G) Treat all degraded watersheds affecting water quality in a cost-effective manner and on a priority basis according to the Watershed Improvement Needs Inventory (WIN) (Water AMS).. The highest priority beneficial uses are domestic use and fisheries. Design improvement activities to meet management objectives. Treat watersheds with the highest priority in the first two decades (Water Quality AMS, Appendix E). Treat the remaining degraded watersheds in the third and fourth decades. Monitor for effectiveness.
7. (G) Where potential loss or diversion of flow exists, quantify and maintain necessary in-stream flows to protect such beneficial uses as fisheries, recreation, and aesthetics.
8. (G) Acquire and administer water rights for national forest uses permitted through reservation principles, riparian rights, or appropriation processes; or as required by State laws and regulations. If non-Forest water use is proposed, the Forest will exercise its rights according to State law (including the use of protest) if necessary to protect beneficial uses of water on National Forest System lands.
9. (G) Annually update the WIN inventory before the next planning period.
10. (G) Protect established snow courses and related hydrometeorological data sites including a 400-foot buffer zone in all directions from sampling points, or buffer zones mutually accepted by the Soil Conservation Service, the California Department of Water Resources, and the Forest, from any disturbing influence such as road building, timber harvest, or vegetative disturbance which will affect snow accumulation or measurement. Snow course sites are: Medicine Lake, Adin Mountain, Dismal Swamp, Mt. Bidwell, Cedar Pass, Blue Lake, Barber Creek, and Emerson Creek.
11. (G) Evaluate each vegetative manipulation protect for its opportunities to increase water yields. Design and conduct projects to optimize flow increases where they will have beneficial uses and will not be detrimental to drainage systems.

22. Wilderness

1. (S) Maintain wilderness values in the South Warner Wilderness through the application of the Wilderness Prescription (Standard) .

23. Wildlife and Fish

The following standards and guidelines apply to Management Indicator Species (MIS) . They are designed to maintain viable populations of all existing native and desired non-native vertebrate species within the planning area. Threatened and endangered species populations are considered to be non-viable; therefore, standards and guidelines provide for enhancement of present population levels. Exceptions will be made for threatened and endangered species on a case-by-case basis, using the consultation process described in the Forest Service Manual and the Endangered Species Act. For all other MIS, exceptions can be made, where appropriate, using the fish and wildlife coordination process described in the FSM.

Management requirements for the indicator species listed in these standards and guidelines and in prescriptions, while providing for most habitat special component and diversity concerns, do not automatically provide for

the minimum needs of all other species on the Forest. Therefore, it will sometimes be necessary to manage for special habitat needs for non-indicator Forest species at the project level.

Currently, there are deficits in some types of habitat. For these cases, the standards and guidelines are goals and objectives for future attainment.

The term "designated" used below refers to lands which are presently identified, or which may be identified as displaying the proper habitat attributes for supporting viable populations of given species. Field investigation, manual map overlays, and computer searches of the Forest data base are means of designating these areas. Key designated areas include important winter range, fawning areas, denning areas, transition range, and roost sites.

1. *Threatened and Endangered Species*

   A. Within designated **bald eagle** habitat:

      – (S) Implement the Pacific States Bald Eagle Recovery Plan as applicable to the Modoc National Forest.

      – (S) Manage all current suitable nesting habitat (both existing and potential) and all winter roosting areas according to the Raptor Management Prescription.

      – (G) The Forest will assist in recovery of the species. To accomplish this goal, the Forest will survey and manage potential sites in addition to those currently occupied.

   B. (G) Within designated **peregrine falcon** habitat begin peregrine falcon reintroduction planning and program implementation in the next decade for a minimum of three suitable reintroduction sites. The environmental assessment for reintroduction provides necessary direction, standards, and guidelines.

      – (S) Implement the Pacific Coast American Peregrine Falcon Recovery Plan as applicable to the Modoc National Forest.

      – (G) Develop a recovery plan for peregrine falcons specific to the Modoc National Forest.

   C. (S) Within designated **Modoc sucker** habitat, manage all streams containing Modoc suckers as directed in the Riparian Area Management Prescription and the Modoc Sucker Recovery Action Plan.

   D. (S) Within designated **Lost River and shortnose sucker** habitat, manage all streams containing these species as directed in the Riparian Area Management Prescription and, when completed and approved, the recovery plans for these species.

   E. Within potential **northern spotted owl** habitat:

      – (G) Continue spotted owl surveys of habitats in and adjacent to the Medicine Lake Highlands and other habitats that are considered suitable for this species. Survey habitats where owls responded in previous years; and expand surveys into areas that are planned for timber harvest, where these include suitable habitat.

      – (G) Manage for spotted owls using the interagency scientific committee (ISC) report as applicable to the Modoc National Forest.

      – (G) If owls are located, consult with the U.S. Fish and Wildlife Service to determine the biological significance of the locations.

      – (G) If a nest territory is located, establish a spotted owl habitat conservation area (HCA) using ISC standards. Coordinate sites with sites on adjacent forests (Shasta-Trinity, Klamath, and Lassen).

2. *Sensitive Species*

   A. Within designated **goshawk** nest stands:

      – (S) Manage 100 suitable goshawk nest stands (of at least medium habitat capability), according to the Raptor Management Prescription.

   B. (G) Within **willow flycatcher** habitat (primarily riparian areas) , maintain viable populations through application of the Riparian Area Management Prescription. The objective in this habitat will be to maintain and improve the quality and quantity of the woody vegetation component within riparian areas.

   C. Within designated **bighorn sheep** habitat:

      – (G) Expand the range of California bighorn sheep to suitable unoccupied habitats according to criteria set in *California Mountain Sheep Recovery Guidelines for Northeastern California* (when completed).

      – (G) Unless analysis reveals that such conversion is not detrimental to bighorn sheep, prohibit the conversion of livestock type from cattle to sheep on or adjacent to existing or approved reintroduction sites.

      – (G) Evaluate potential reintroduction sites in the Warner Mountains and Lava Beds area on a case-by-case basis, using a Coordinated Resource

Management Plan (CRMP) or Technical Review Team (TRT) approach.

- (G) Provide for long-term viability of California mountain sheep populations by reestablishing this species in suitable habitat within historic ranges, giving preference to areas with no current livestock use.

- (G) Permit no increase in existing livestock use if the increase would be harmful to mountain sheep management.

D. Within **pine marten habitat**, maintain a viable population by applying the following standards and guidelines for this species.

- (G) Develop a distribution of pine marten territories that are about 2,000 acres. Develop a minimum of 13 territories on the Forest with at least 4 territories on the Doublehead Ranger District, and 9 on the Warner Mountain Ranger District.

- (G) Distribute these territories so that the distance between territories is 3 miles or less within suitable marten habitat.

- (S) Within each territory, manage seral stages to achieve 60% of the total territory in 4 b/c seral stages, and 20% in 3 b/c seral stages. No more than 20% will be in early seral stage conditions.

- (G) Manage corridors so that adjacent territories are connected by stands that are in 3 b/c or 4 b/c seral stages.

- (S) Manage snag densities in marten territories at no less than 2 snags per acre.

- (S) Manage down logs for no less than ten down logs per acre.

- (G) Manage other habitat characteristics of pine marten stands so that they comply with the regional habitat capability model for this species, at the moderate habitat level.

- (G) Validate assumptions in the pine marten habitat capability model for this Forest.

3. *Other Management Indicator Species*

A. (S) Within **Canada goose and mallard** habitat, maintain viable populations through application of other Forest-wide Standards and Guidelines. Maintain wetlands to construction standards as required in agreements with the State.

B. (G) Develop suitable wetlands to full waterfowl nesting potential through island construction, livestock management and water management.

C. Within designated **golden eagle, Swainson's hawk, osprey, and prairie falcon** habitat manage all currently active nest territories as directed in the following:

Golden Eagle

- (S) Nests located in forested vegetation types will be managed so that at least 25 acres surrounding the nest are designated as a golden eagle nest area.

- (S) Disturbance from timber management activities and firewood cutting will be restricted within 1/4- to 1/2-mile of the nest during the reproductive period, February to August, when they would be detrimental to nesting and fledging.

- (S) Such activities as OHV use and maintenance or construction of facilities, trails, and roads will be restricted within 1/4- to 1/2-mile of the nest during the reproductive period, February to August, because they may be detrimental to nesting and fledging.

Swainson's Hawk

- (S) Manage 25 acres around each nest site and designate that stand as a Swainson's hawk nest area.

- (S) Prohibit disturbing management activities with 1/4-mile of nest sites from March 1 through July 31. Disturbance from management activities include firewood cutting; range habitat improvements; and construction or maintenance of facilities, trails or roads.

- (G) Manage juniper stands within designated nest areas to maintain or enhance nest site conditions for Swainson's hawks.

- (G) Inventory suitable habitats to determine distribution of Swainson's hawks on the Forest.

Osprey

- (S) Maintain all active nesting and feeding habitat so that at least 30 acres surrounding each nest are designated as an osprey nest area.

- (S) Forested acres within the area will be managed to maintain an average of five trees per acre that are at least 24 to 30 inches in DBH, and preferably ponderosa or sugar pine. Two to three snags or spike-topped trees per acre, 16 to 24 inches DBH or larger, will be maintained within 1/4-mile of the nest.

- (S) Preferred nest trees are 24 to 40 inches DBH or larger and 75 to 125 feet high. Two platforms per 30-acre territory may be substituted in areas deficient of suitable nest trees or where green tree replacements are not adequate. Maintain 10 to 15 trees (snags and broken-top live trees) >24" DBH, within 1/8-mile of the nest (30 acres), and maintain an additional 10 to 15 trees, >24" DBH, within 100 feet of the water edge and within foraging range for the birds.

- (S) Disturbance from timber management activities and firewood cutting within 1/8- to 1/2-mile of the nest may be detrimental to nesting and fledging during the reproductive period, March to August. Disturbing activities will be restricted.

- (S) Disturbance from human activities, including foot traffic and OHV use within 1/8- to 1/2-mile of the nest, may be detrimental to nesting and fledging during the reproductive period, March to August. Disturbing activities will be restricted.

Prairie Falcon

- (S) Disturbance from timber management activities within 1/4- to 1/2-mile of the nest may be detrimental to nesting and fledging during the reproductive period, March 1 to August 31. Disturbing activities will be restricted.

- (S) Disturbance from human activities, including foot traffic and OHV use within 1/4- to 1/2-mile of the nest, could be detrimental to nesting and fledging during the reproductive period, March 1 to August 31. Disturbing activities will be restricted.

D. (S) Within **blue grouse** habitat, maintain viable populations through application of other Forest-wide Standards and Guidelines, particularly for vegetative diversity, dead and down materials, and aspen, and through implementation of the Riparian Area Management Prescription.

E. Within **sandhill crane** nesting and brood-rearing habitat:

- (G) Identify suitable wetlands and meadow complexes that could be used by nesting and brood-rearing sandhill cranes. Manage 15% of these wetlands to facilitate the successful nesting and fledging of sandhill cranes (approximately 20 pairs).

- (G) Address management objectives for sandhill cranes on a site-specific basis in allotment management plans.

- (G) Manage vegetation in sandhill crane habitat following the Riparian Management Prescription.

F. (G) Within designated **sage grouse** habitat, manage big sagebrush and low sagebrush within an eight-mile radius of all identified leks (strutting grounds), in accordance with the habitat capability model for sage grouse, at the moderate level. Manage meadows, seeps, springs, and riparian areas within a two-mile radius of leks according to the Riparian Area Management Prescription to provide forbs desirable for sage grouse, such as dandelion *(Taraxacum)*, yarrow *(Achillea)*, and aster *(Aster)*.

G. Within **pileated woodpecker** habitat, insure a viable population by developing a network of habitats for these species.

- (S) Manage for pileated woodpecker territories that are at least 600 acres. Manage for at least five pileated woodpecker territories on the Big Valley and Devil's Garden Ranger Districts. On the Doublehead and Warner Mountain Ranger Districts, overlap pileated woodpecker territories with pine marten territories.

- (S) Within suitable habitat, manage for a territory distribution of one every 13,000 acres .

- (S) Reproductive areas should be maintained in a contiguous 300-acre block where possible. Manage seral stages within reproductive habitat for old-growth/mature (4 b/c) seral stages. If not possible, habitat may be arranged in blocks no less than 50 acres, no more than 1/4-mile apart, totalling 300 acres. Within pileated woodpecker reproductive territories, manage for two snags per acre; 1.7 snags/acre 15-24" dbh (diameter at breast height), and .3 snags/acre >24".

- (S) Foraging areas will be maintained in 300-acre contiguous blocks adjacent to reproductive areas. Feeding areas will not be more than 1/2-mile from reproductive areas. Manage foraging areas so that they meet standards and guidelines for seral stage diversity.

- (G) Validate assumptions in the pileated woodpecker model for this Forest.

- (G) Where possible, overlay pileated woodpecker territories with other old-growth management indicator species (i.e., pine marten and goshawk).

H. (S) Within **hairy woodpecker** habitat, maintain viable populations through application of other Forest-wide Standards and Guidelines, particularly for snags and diversity. Refer to *4. Special Habitats—Snags* below for direction in habitat management to achieve the MMR of 1.5 snags per acre. Provide for long-term snag habitat during rehabilitation of wildfires by utilizing large diameter burned and unburned trees for future snag management.

I. (S) Within **red-breasted and red-naped sapsucker** and **yellow warbler** habitat (primarily riparian areas), maintain viable populations through application of the Riparian Area Management Prescription. The objective in this habitat will be to maintain and improve the quality and quantity of the woody vegetation component.

J. (S) Within **western gray squirrel** habitat, maintain viable populations through application of other Forest-wide Standards and Guidelines, particularly for oaks.

K. Within **mule deer** habitat:

- (S) Manage the winter range of each deer herd to provide a 30/70 to 50/50 ratio of thermal cover to forage. Thermal cover is defined as naturally occuring tree crown closure of at least 60%, or at least 75% crown closure of shrubs.

- (S) Manage the summer and transition ranges for each herd to provide a 20/80 to 40/60 ratio of thermal cover to forage on each management area.

- (G) Seasonal forage requirements for deer are calculated as follows:

Spring/Summer Range	**Young, abundant browse ranges - four pounds of forage per deer per day or eight deer per Animal Unit Month (AUM); decadent or low frequency browse ranges** **Five pounds of forage per deer per day or six and one-half deer per AUM.**
Fall Range	**Four pounds of forage per deer per day or eight deer per AUM.**
Winter Range	**Three pounds of forage per deer per day or eleven deer per AUM.**

- (G) Analyze the effects of livestock grazing on seasonal forage requirements in assessing capacity and stocking levels for all allotments, and in developing AMPs. Refer to EIS Appendix L for information on deer forage requirements.

- (G) Where water deficiency limits summer range, develop water sources when feasible.

- (G) On deer winter ranges where OHV use is demonstrated to adversely affect deer, institute OHV closures from December 1 through March 31.

L. Within **pronghorn** habitat:

- (G) Manage for suitable proportions of forb, grass, and shrub cover, referencing (a) BLM Technical Note 347, (b) Interstate Antelope Conference Guidelines, and (c) the Pronghorn Habitat Capability Model.

- (G) For planning purposes, use the forage requirement for pronghorn of one pound of herbaceous forage per pronghorn per day, which is equivalent to 30 pronghorn per Animal Unit Month (AUM).

- (S) Follow fence standards described in the Modoc supplement to the FSM.

- (G) Analyze the effects of livestock grazing on pronghorn habitat and forage availability in AMPs.

M. Within **Goose Lake redband trout** habitat:

- (S) Manage all streams containing migratory or resident populations as directed in the Riparian Area Management Prescription.

– (S) Do not implement habitat improvements with the potential of favoring non-native trout species over the Goose Lake redband trout.

– (G) Cooperate with county, state, and other federal agencies, private conservations groups or interested parties to acquire lands or develop coordinated resource management plans with downstream owners for protecting or enhancing the migration route, spawning, and rearing habitats of the migratory Goose Lake redband trout population.

N. (S) Within **rainbow, brook,** and **brown trout** habitat, manage all streams identified as directed in the Riparian Area Management Prescription. Initiate instream habitat improvements only in those streams with potential for at least medium habitat capability.

O. (S) Within **largemouth bass** habitat, manage all reservoirs identified as habitat for largemouth bass according to the Riparian Area Management Prescription. Initiate habitat improvements only in reservoirs with potential for at least medium habitat capability.

4. **Special Habitats**

A. Snags

– (S) Provide habitat conditions for viable populations of snag-dependent species by meeting the snag requirement targets listed below as specific areas are treated.

– (G) As dictated by natural diversity, snag requirements cannot be met on every acre. To the extent possible, the area of accountability will be the timber compartment; all forested lands within each compartment will be used to assess average snag densities. Clumped dispersion of snags is desired, but no more than five snags per acre may be counted for determining average snag densities. Twenty feet is the minimum height for snags. See EIS Appendix G for information on snag modeling procedures.

– (S) On well-stocked stands in eastside pine, manage snags on treated acres. Retain both existing snags and replacement trees in harvest units to meet snag requirements throughout the rotation. In well-stocked stands where sufficient snag densities are not present, select live trees and manage as snags.

– (S) On poorly stocked stands with too few trees to meet snag requirements, reserve green, dead, and dying trees (e.g., spike-tops) to meet the large snag component throughout the rotation.

– **Suitable timber lands** (>20 cu.ft./acre)

- (S) *Montane Conifer, Riparian and Aspen* (includes ponderosa pine, white fir, mixed conifer, lodgepole pine, red fir, subalpine forest, and black oak vegetation types):

Average Density:	
15-24" DBH	1.2 snags/acre
>24" DBH	0.3 snags/acre
Total	1.5 snags/acre
Location	Preference is around meadows, seeps, and springs and within habitat edges, but it is also important to maintain snags throughout areas.
Acceptable species for snags	Ponderosa pine, Jeffrey pine,western white pine, sugar pine red fir, white fir, lodgepole pine, black oak, mountain hemlock

– **Low Productivity Timberlands** (<20 cu.ft./acre)

- (S)These lands produce <20 cubic feet per acre per year and include vegetation types described under Montane Conifer. Juniper and other non-commercial species may be present.

Average Density:	
>24" DBH	0.5 snags/acre
Total	0.5 snags/acre
Location	No preference due to the dispersed nature of trees on these lands.
Acceptable Species	Those species listed under Montane Conifer.

– (S) Naturally occurring densities of snags will not be manipulated in the Wilderness, RNA, or Special Interest Areas.

– **Snag Recruitment**

- (G) Timber sales will be regulated to achieve snag densities. Green and salvage sales will provide for snag recruitment by designation, leaving an adequate number of living and dead trees for future snags and, when necessary, treating living trees to produce snags.
- (G) Recruitment snags will generally be selected from the following prioritized list:
  - broken-topped, spike-topped, or other damaged trees;
  - living culls (generally true fir) with evidence of heart rot;
  - high-risk trees which may die in the near future;
  - sound trees.
- (G) Snag recruitment trees will be signed or otherwise designated, as on appraisal maps and stand record cards.
- (G) Living trees will be topped to meet and manage for minimum snag numbers if analysis indicates other methods cannot ensure meeting the standard.

B. **Dead and Down Materials**

– (S) In all coniferous vegetation types (outside marten habitat) , leave a minimum average of one down log per acre, at least 20 inches in diameter at the large end and 10 or more feet long. In areas of known or suspected marten habitat, leave a minimum average of 10 cull logs per acre, at least 15 inches in diameter and 15 feet long. Because of the low cull factor in ponderosa pine, it will be difficult to achieve the one-log-per-acre average. Leave all dead and down pine logs up to the one-log average.

– (G) Where possible, leave an average of one slash pile that is ≤15 feet wide and ≤12 feet high per acre.

– (G) Slash piles and logs are preferred within 100 yards of meadows, standing water, streamsides, and the perimeter of regeneration units. Whenever possible, yard logs to achieve a density of two to three logs per acre in these areas.

– (G) Protect designated logs when burning regeneration units.

– (G) Control firewood cutting where necessary to maintain minimum densities of down logs.

C. **Oak**

– (S) On deer intermediate and winter ranges, maintain at least 36 square feet of basal area of oak stands per acre. If oaks do not naturally occur to at least this density, maintain that which exists.

– (S) On all other areas where oaks occur, maintain at least 10 square feet of basal area per acre. If oaks do not naturally occur to at least this density, maintain existing stands.

D. **Aspen**

– (S) Manage aspen stands (including aspen/conifer stands) larger than 1/2-acre as distinct plant communities and special wildlife habitats.

– (G) Manage aspen stands to achieve a mixture of different-aged stands.

E. **Vegetative Diversity**

– (G) If naturally present, maintain representative seral stages within the following vegetation types within each management area:

Vegetation Types		
Perennial Grassland	Montane Shrub	Eastside Pine
Wet Meadow/Wetlands	Alpine Shrub	Mixed Conifer
Low Sagebrush	Subalpine Forest	White Fir
Big Sagebrush	Riparian	Red Fir
Bitterbrush	Black Oak	Lodgepole Pine
Mountain Mahogany	Juniper	

– (S) Maintain a minimum of 5% of each seral stage for castside pine, mixed conifer, white fir, red fir, and lodgepole pine on lands capable of growing >20 cubic feet per acre per year.

– (S) Maintain a minimum of 5% in seral stages 1, 2, 3a, 4a and 4a-older (as defined below) for each conifer and hardwood vegetation type on lands growing <20 cubic feet per acre per year. Requirements for high and low productivity lands will not be interchangeable.

Wildlife Habitat Relationship (WHR) Seral Stages

Minimum Proportion	Seral Stage	WHR Seral Stage Code	Age Group (Years)	General Description
5%	Grass/forb/seedlings	1 (PL)	<10	Plantations with seedlings tree seedlings and highly variable amounts of grasses, forbs and shrubs.
5%	Shrub/sapling/pole	2	20-50	Mixed or pure stands sapling/pole of shrubs, tree saplings 1 to 11 inches DBH.
5%	Small tree	3a	60-130	Trees in the 11-24" DBH size range; <40% tree canopy, typically with a shrub understory.
5%	Small tree	3b/c	60-130	Trees in the 11-24" DBH size range; >40% tree canopy, typically with varying amounts of shrub understory, lessening as canopy coverage increases.
5%	Medium to large tree	4a	140-180	Mature stand of large trees >24" DBH; <40% tree canopy, typically with a shrub understory. Does not apply to >20 lands.
5%	Medium to large tree	4b/c	140-180	Mature stand of large trees >24" DBH; >40% tree canopy, typically with varying amounts of shrub understory, lessening as canopy coverage increases. Does not apply to <20 lands.
2-1/2%	Medium to large tree	4b	190-270+ ("old growth")	Same as above, canopy cover is 40-70%, and the stand is older to provide old growth decadence. Does not apply to <20 lands.
2-1/2%	Medium to large tree	4c	190-270+ ("old growth")	Same as above, except canopy is>70%, and the stand is older to provide old growth decadence. Does not apply to <20 lands.
5%	Medium to large tree	4a	190-270+ ("old growth")	Old growth stand of trees >24" DBH; <40% tree canopy, typically with a shrub understory. Does not apply to >20 lands.

- (S) Apply these standards to both >20 cu. ft. and <20 cu. ft. lands at the project level, with the management area serving as the control unit.

- (G) Land not managed for timber production will be allowed to cycle naturally, unless management is determined to be necessary for other resources. Deficits in amounts of seral stages within management areas may be corrected by vegetative manipulation. Current deficits will be corrected over time, in some cases by selecting individual stands and documenting in project EAs and on stand record cards that these stands are to be grown to old growth conditions.

- (S) Provide at least the following amounts of old growth forest habitat (see table on 4-32) for viable populations of dependent species.

Species	>20 cu.ft.	<20 cu.ft.
Ponderosa Pine	**13,083 acres**	**7,499 ac.**
Mixed Conifer	**7,679acres**	**2,322 ac.**
Red Fir	**666 acres**	**1.6 ac.**
Lodgepole	**804 acres**	**224 ac.**

(G) Old growth stands maintained for habitat will be at least 40 acres. In areas where a contiguous 40-acre stand does not naturally occur, 25-acre stands within one mile of each other may be sufficient.

- (G) In management areas with insufficient old growth, select stands which nearly meet old-growth standards and so manage them.

- (G) In the development of vegetation manipulation projects, assess acreages of vegetation types and seral stages within the management area prior to activities and predict resultant changes for each alternative.

5. **General**

A. (G) Coordinate with the state Fish and Game departments, other federal and state agencies, Modoc and Lassen counties, private conservation groups, and interested publics to fulfill comprehensive fish and wildlife programs.

B. (G) Coordinate with the U. S. Fish and Wildlife Service and state Fish and Game departments in the control of specific animal populations when populations compete with or further endanger a recovery species, or threaten excessive damage to other resources.

24. General

1. (G) Provide an efficient public service program with the viewpoint of the user, visitor, or client as priority.

2. (G) Consider all resources in projects, regardless of size or potential impact on the environment. The environmental analysis required by FSM will determine whether a project may proceed under a categorical exclusion, or requires documentation in an Environmental Assessment or Environmental Impact Statement.

E. Management Prescriptions

Management prescriptions direct resource management for producing goods and services and meeting management goals and objectives. They outline management practices, time schedules, and standards and guidelines for specific areas. Forest-wide Standards and Guidelines (S&Gs) always apply. Although they may not be reiterated, they are incorporated by reference. The reader is invited to seek not only a particular management prescription for direction, but also higher levels of direction in the S&Gs or General Program Direction.

A management prescription consists of four parts:

Description – includes the purpose of the prescription, and the blend of management activities and practices permitted. Acres allocated to the prescription and the distribution are given.

Management Direction – provides direction for each resource under the prescription.

Standards and Guidelines – give specific guidance for implementing the prescription. A *standard* is a performance criterion indicating acceptable norms, specifications, or quality that actions must meet; a rule to measure against; a principle requiring a specific level of attainment. A *guideline* is an indication of policy or conduct; an issuance that directs the course of action to accomplish a specific objective. The intent is to adhere to standards and guidelines regardless of their title as "standards" or "guidelines".

The Forest Interdisciplinary Team developed 17 management prescriptions. They range from full timber and range management to minimum management level. Each acre of national forest land is assigned only one prescription.

Distribution of prescriptions is shown on the map of the Preferred Alternative accompanying the EIS. Because many prescriptions apply to relatively small and noncontiguous areas, this map is approximate and simplified. Detailed maps (1 inch = 1 mile) of the areas allocated to each prescription are part of the Planning Records and are on file at the District Ranger Offices. These will be used by the Districts for Forest management activities, and occasionally corrected by the Forest Supervisor where boundaries are illogical.

Wildlife Habitat Capability Models

Because the Forest Service has legal authority to manage wildlife habitat, but not populations directly, wildlife habitats are described in the management prescription Standards and Guidelines below, according to their potential or capability to support animal populations. Standards and Guidelines list the relative capabilities of habitats provided for various management indicator species that are emphasized under the prescription. Conditions necessary to achieve relative habitat capabilities are defined in Wildlife Habitat Capability Models (Shimamoto and Airola 1980).

Minimum Level Management Prescription - 1

This prescription maintains existing physical characteristics of the land through custodial management. Minimum management and protection and maintenance of environmental values are the objectives.

Off-highway vehicle use is permitted.

Lands under this prescription are not suitable for capital investments. They include areas with steep slopes, water, or no vegetation. Other lands suitable for this prescription include: rangelands uneconomical to manage; non-productive forest lands; productive forest lands uneconomical to manage; tentatively suitable timberlands reserved for late seral stage and furbearer habitat; and lands scheduled for exchange. Firewood cutting is not permitted.

The Forest maintains existing roads and trails that are necessary for access. Others will be obliterated or allowed to revegetate naturally. Utility corridors and other special uses may exist. Activities such as mineral exploration, hunting, fishing, other dispersed types of recreation use, and previous timber harvesting are evident.

Current conditions are maintained and influenced primarily by natural forces.

This prescription applies to 70,153 acres distributed within 21 management areas. The size and configuration of the areas vary. Some are large, contiguous areas, while others are isolated, small inclusions.

Management Direction

Air Quality

Cooperate with State and other agencies to support air quality regulations on the Forest.

Facilities

Management includes signing, gating or otherwise closing roads, basic custodial care, and correcting or preventing damage to adjacent lands and resources. Only those facilities necessary to fulfill Forest functions at minimum level are maintained. Dams are inspected and maintained. Administrative sites and recreation facilities are maintained to protect investments.

Lands

Special uses and corridor rights-of-way are compatible with this prescription. Boundaries are located and posted to the extent necessary to resolve encroachment situations.

Minerals

Management activity includes protecting surface resources, and administering existing leases and all surface activity associated with unpatented mining claims.

Standards and Guidelines

Management Direction

Standards and Guidelines

Protection

Apply Forest-wide Standards and Guidelines.

Integrated Pest Management

Forest insect and disease outbreaks are allowed to run their course unless there is clear and imminent danger to resources adjacent to the Forest.

Range

Range

Incidental livestock grazing occurs although no grazing capacity is assigned to the area. No capital investments are made to develop or enhance forage production.

Wild Horses and Burros

Management meets the legal requirements of protecting free-roaming wild horses and burros.

Recreation

Recreation opportunities may be semi-primitive non-motorized, semi-primitive motorized, or roaded natural as defined in the Forest-wide Standards and Guidelines. Refer to ROS map for specific ROS class.

OHV use is generally open, but may be subject to restrictions identified on the OHV map.

Cultural Resources

Apply Forest-wide Standards and Guidelines.

Visual Resource

Visual quality objective may be retention, partial retention, modification, or maximum modification. Refer to VQO map for specific VQO.

Timber

No timber activities occur under this prescription. Commercial firewood sales and personal use firewood cutting are not permitted.

Management Direction

Water and Soils

Limit watershed improvement projects to those necessary to maintain water quality, instream uses and natural soil productivity. Cooperate with water users and other agencies to ensure quality and quantity of water running off the Forest. Monitor soil to prevent soil damage on the Forest or adjacent lands. Maintain basic productivity of the land.

Wildlife and Fish

Cooperate with State and federal agencies to the extent necessary to support regulations of incidental hunting and fishing use.

Standards and Guidelines

This page intentionally left blank.

Manage existing units of the National Wilderness Preservation System in accordance with wilderness values and character. Primitive recreation opportunities are provided. Trails are maintained for hiking and packstock and equestrian use. Mechanized travel and motorized equipment are not permitted. Fish and wildlife species are affected by natural vegetative succession. Livestock grazing is permitted. Timber is not harvested or managed. Firewood cutting is not permitted. Mining is no longer permitted, subject to valid existing rights. Fire protection activities minimize suppression impacts while seeking to maintain or enhance long-term Wilderness values.

This prescription applies to the South Warner Wilderness.

Management Direction

Air Quality

Maintain air quality in Class I wilderness areas within the requirements of the Clean Air Act.

Identify and monitor air quality resource values (AQRVs)for Class I wilderness areas.

Facilities

Provide trails, bridges, signing, and trailheads to protect and enhance the Wilderness resource.

Lands

Apply Forest-wide Standards and Guidelines.

Standards and Guidelines

Facilities

1. (G)Trails and trail bridges will be located, designed, constructed, and maintained to be suitable for foot and packstock travel, where appropriate.

2. (G)Provide bridges or turnpike sections only where impassable by foot or packstock, and to protect soil and water resources.

3. (G)Trail maintenance will include:

   a. maintaining primary system trails;

   b. signing entrances and trailheads;

   c. all measures necessary to ensure resource protection.

4. (G)Obliterate unauthorized shortcuts and undesired trails. Reroute trails where resource damage occurs or is likely to occur.

Management Direction	Standards and Guidelines
Minerals	Minerals
Allow prospecting, mining, and leasing activities that are provided for by law. Administer activities to mitigate impacts on the Wilderness.	1. (S)Wilderness lands are withdrawn from mineral entry and mineral leasing, subject to valid existing rights.
	2. (G) Examine unpatented mining claims for validity when a notice of intent to operate or an operating plan is received that involves surface-disturbing activities.
	3. (G)Where surface-disturbing activities are involved, regularly inspect each prospecting or operating site during the periods of operation to assure compliance with laws, regulations, and operating plans.
	4. (G)The reclamation portion of the operating plan will provide for complete site rehabilitation, and an appropriate bond will be collected to ensure completion.
Protection	Protection
Fire	Fire
Maintain an aggressive fire prevention program, using the most effective and economical means to eliminate human-caused fires.	1. (G)Provide fire prevention information through public contacts, and at Wilderness portals.
	2. (G)Promote the use of portable gas and fuel stoves to minimize risks of human-caused fires and impacts on the Wilderness resource from campfires.
	3. (G)Provide public education concerning fire management strategies for the Wilderness.
Suppress wildfires in a manner which is compatible with wilderness management objectives, protects life and property at risk, and is consistent with the capability of suppression forces.	1. (G)Implement suppression techniques which are compatible with the protection of wilderness values.
	a. Tractors will be used only when there is imminent threat to life, property, or significant resources outside the Wilderness. Use tractors only with Regional Forester approval. Use of such mechanized equipment as power saws and portable pumps may be authorized by the Forest Supervisor when their use would be less devastating to wilderness values than fire damage or other suppression action.

Management Direction

Standards and Guidelines

b. Drop chemical fire retardant only after approval from the Forest Supervisor. Use fugitive (clear) retardants when available. Water drops from aerial tankers or from external helibuckets may be used without restriction.

c. Do not drop retardant within 300 feet of lakes or flowing streams except under extreme conditions where human lives or property are at risk.

d. Allow aerial transportation of crews only when life is threatened or the potential for unacceptable resource damage is severe.

2. (G)Develop a plan to permit prescription fires from unplanned ignitions to perpetuate the natural diversity of plant and animal communities.

3. (G)Allow no incident bases in the Wilderness. Temporary spike camps may be allowed with Forest Supervisor approval.

4. (G)Reseed damaged areas only with native species.

5. (G)Use existing natural barriers, when available, to confine fire. Natural barriers, including streams, rock outcroppings, vegetation type changes, and existing trails will be used in lieu of line construction, even at the expense of additional acres burned.

6. (G)Use minimum-impact line construction techniques when constructing hand line.

   a. Construct the narrowest and shallowest lines that will contain fire.

   b. Limb trees rather than felling them, unless this is a safety or holding factor. Leave the bole intact rather than bucking it into shorter lengths.

   c. When possible, cold-trail the fire perimeter instead of constructing line. If available, use water to cool or extinguish the fire perimeter.

   d. Generally, use hand tools (shovel, McLeod, Pulaski, crosscut saw) for line construction.

7. (G) Fire-out from the narrowest line that conditions will allow, and use natural barriers or existing trails where practical.

Management Direction

Standards and Guidelines

8. (G) If appropriate, fire-out from strategic locations such as natural barriers, trails, or openings to reduce the impact and the time required to establish control lines through these areas.

9. (G) Use minimum-impact methods of mop-up.

   a. Allow snags to burn down if well inside the fire perimeter. Snags along the perimeter that threaten to throw sparks or cross the line will be felled. Snags within the fire perimeter that threaten firefighter safety along trails or other identified locations will also be felled.

   b. Where feasible, allow logs on the ground to burn instead of bucking them into shorter lengths.

   c. Avoid extensive spading of duff layers; allow the duff to burn, or saturate it with water if available.

   d. Take necessary action on potential reburns if they threaten to cross the line and escape containment.

   e. Place less emphasis on actual mop-up and more emphasis on patrolling and monitoring the fire; allow the fire to burn out naturally if conditions allow.

   f. Increase mop-up if weather changes threaten containment.

10. (G) Rehabilitate to restore natural conditions or obscure the impacts of suppression activities.

   a. Naturalize the environment around spike camps.

   b. Firelines will be naturalized by scattering duff and blocking them with limbs, logs, and rocks, where possible.

   c. All garbage, flagging, discarded tools, and other debris will be packed out.

   d. Use native species when revegetating.

Management Direction

- Use prescribed fire to:
  - reduce the risk of natural fires by reducing accumulated fuels;
  - restore and maintain natural plant communities;
  - enhance threatened or endangered wildlife species habitat.

Law Enforcement

Apply Forest-wide Standards and Guidelines.

Integrated Pest Management

Control insects and plant diseases only when necessary to prevent unacceptable damage to resources on adjacent lands or an unnatural loss to the Wilderness from exotic pests.

Range

Allow grazing of domestic livestock where that use was established prior to wilderness classification. Planning and administration of grazing systems, stocking levels, utilization standards, and all range improvements will conform to the objectives of wilderness management.

Standards and Guidelines

1. (G) Develop a prescribed fire program.

Range

1. (G) Forage utilization will be consistent with the maintenance or improvement of the Wilderness resource.

2. (G) Manage livestock grazing to minimize competition with wildlife. Native wildlife have priority for use of Wilderness forage.

3. (G) Livestock may be excluded from areas identified as critical for wildlife and fish, where deterioration of the soil, water, or vegetative resource is occurring, and where resource conflicts are identified at specified lakes, streams, and trails.

4. (G) Maintain natural vegetative composition.

5. (S) Structural range improvements may be constructed only when necessary to protect the Wilderness resource, and not to accommodate increased numbers of livestock. Existing improvements will generally be maintained.

6. (G) Emphasize range structures of rustic- or natural-appearing material where their use will not impose unreasonable additional cost to grazing permittees.

Management Direction

Standards and Guidelines

7. Minimize concentrations of livestock in riparian areas.

   a. (G) Develop utilization standards in allotments management plans using the following guidelines:

      - Under season-long grazing, use 30% or less of the total annual grass/forb production.

      - Under deferred early- or late-season grazing, or rest-rotation grazing, graze up to 50% of the grass/forb production (60% utilization, if in good condition). All classes of animals are included in these use figures. Wildlife use may need to be estimated at a given rate and livestock use adjusted accordingly.

      - Under any grazing system, manage grazing to enable riparian-associated shrubs to reach at least 50% of the natural site potential.

      - Shrub utilization (including willows and aspen) may not exceed 20% under season-long grazing, or 30% under deferred or rest-rotation grazing.

   b. (G) Control livestock distribution within allotments to protect water quality by such methods as riding and temporarily placing salt at least 1/4-mile away from water.

   c. (G) Maintain streambanks in stable condition as specifically defined in allotment management plans.

   d. (G) Avoid livestock driveways within SMZs, where possible, and locate driveways away from recreation trails.

8. (G) Prevent livestock from drifting into the bighorn sheep reintroduction area.

9. (S) The following restrictions will apply to recreational livestock:

   a. A maximum of 25 head of recreational livestock are permitted per party, including pack and saddle stock. The Forest Supervisor may permit more stock animals per party by approval of a written justification statement.

Management Direction

Standards and Guidelines

b. No pack or saddle livestock are permitted within 50 yards of the shoreline of any lake except for the purpose of loading, unloading, watering, or traveling on established trails.

c. Users will provide supplemental, pelletized feed where adequate forage is not available. Public contacts will encourage the use of pelletized feeds. Signs may be posted at trailheads and in areas where forage is insufficient and pelletized feed is required.

d. To prevent the introduction of noxious or non-native plant species, hay will not be brought into the Wilderness.

e. Hobble, picket, or confine pack and saddle animals overnight in temporary corrals (rope or electric fence). They may not be tied directly to the boles of live trees at any time.

10.(S) Monitor water quality as necessary to determine baseline conditions and the effects of range management in the Wilderness.

11.(S)Take corrective action where livestock grazing has caused stream channel degradation.

Recreation and Wilderness

Recreation and Wilderness

Wilderness Recreation

Wilderness Recreation

Provide primitive recreation opportunities that emphasize solitude, self-reliance, physical and mental challenge, inspiration, and the unique experiences dependent on a wilderness setting. The Forest regulates use emphasizing voluntary compliance by visitors to and users of the Wilderness.

1. (G) All management activities will adhere to the direction for the Primitive Recreation Opportunity Spectrum described in the Recreation section of Forestwide Standards and Guidelines.

2. (S) Limit group size to 25 persons or less, unless excepted by the Forest Supervisor on a case-by-case basis.

3. (S) Limit groups to a maximum of 25 stock animals. All recreation stock will be held or grazed at least 50 yards from lakes or streams and 50 yards from primary trails.

Management Direction

Standards and Guidelines

4. (G) Enforce all laws and regulations using permits, restrictions, and citations along with educational programs to assure compliance and to reduce the impacts of visitor use on the Wilderness resource.

5. (S) Off-highway vehicle use is prohibited within the Wilderness. Generally, the use of mechanized equipment is prohibited. Exceptions that may be authorized by the Forest Supervisor include:

   a. motorized medical rescue equipment for evacuation of dead or severely injured persons;

   b. aerial stocking of fish where that use has been previously established. The Forest will cooperate with the State on finding less disturbing stocking methods, e.g., use of pack animals.

6. (G) Discourage concentrated recreation use in the bighorn sheep reintroduction area.

7. (G) Reduce the use of areas approaching capacity through dispersal techniques.

8. (S) Restore or rehabilitate overused campsites in condition classes 4 or 5.

9. (G) Rehabilitate sites damaged by trail use to natural conditions to maintain or restore site productivity and water quality.

10. Limit special uses to those activities compatible with wilderness management.

    a. (G) Issue outfitter-guide special use permits when such use provides a needed public service and assists in the administration and utilization of resources. Restrictions will be imposed on specific areas of heavy use to prevent degradation of natural resources.

    b. (G) Outfitter-guides must develop operating plans which will be inspected periodically to ensure compliance. An environmental analysis will be required for new outfitter-guide permits.

    c. (S) Commercial group size will be limited to 25 persons and 25 head of recreational livestock unless otherwise approved on a case-by-case basis.

Management Direction	Standards and Guidelines
Implement planning and inventory projects to provide information and direction for management of the Wilderness.	1. (G) Complete a physical and social carrying capacity study of the Wilderness and selected areas within it. 2. (G) Revise and implement the trail system maintenance and development plan that provides access in the Wilderness for recreational users while assuring the protection of the Wilderness resource and ensuring a low frequency of visitor contacts by trail users. Identify trails to be obliterated that are not planned as part of the system. 3. (S) Inventory recreation use annually through the Recreation Information Management (RIM) system using special-use permit counts, field counts, and compliance checks of legal Wilderness uses. 4. (G) Monitor recreation use impacts on the Wilderness using classification system outlined in FSM and provide for amendment to this plan as required for protection of the Wilderness resource.
Maintain an interpretive service program to complement management of the Wilderness and to provide the public with Wilderness-related information.	1. (G) Use brochures, maps, and signs at primary Wilderness portals to provide information on minimum-impact methods, alternative dispersed recreation areas, proper stock use, etc. Use interior signs for resource protection. 2. (G) Maintain Wilderness ranger coverage at primary portals to contact at least 25% of the visitors between July 1 and September 1. This coverage will require at least one Wilderness ranger working half-time at portals and half-time in the field.
Cultural Resources Apply Forest-wide Standards and Guidelines.	
Visual Resource Meet the visual quality objectives of preservation. Manage adjacent lands, as seen from the Wilderness at middleground distances, to meet or exceed partial retention. Apply Forest-wide Standards and Guidelines for visual rehabilitation opportunities.	Visual Resources 1. (G) Activities that alter the landscape are generally prohibited, with the following exceptions: a. low visual-impact facilities, such as trails and small-scale rustic-appearing bridges;

Management Direction	Standards and Guidelines
	b. existing range improvement structures, although reconstruction or rehabilitation of such structures will be designed to meet retention objectives.
Timber Protect and maintain natural conditions and processes of plant communities. Prohibit firewood cutting.	
Water and Soils Manage watershed and soil resources commensurate with wilderness objectives.	Water and Soils 1. (S) Except for existing special use permits, watersheds will not be altered or managed to increase water quantity or to change the timing of the spring runoff. 2. (G) The Bowman Ditch may be maintained by appropriate mechanical means.
Wildlife and Fish Wildlife and fish coordination and habitat improvement actions will be compatible with Wilderness management objectives. Allow the natural distribution and population of indigenous wildlife and fish species to maintain a natural balance with their habitat, each other, and people.	Wildlife and Fish 1. (G) Permit scientific studies which are not readily evident and do not detract from wilderness character. 2. (G) Hunting, trapping, and fishing are permitted, subject to State laws and regulations. 3. (G) Reintroductions or supplemental transplants of wildlife species in the Wilderness are permitted if native species have been eliminated or reduced to levels where elimination is likely, and the action would enhance or restore the species without impairing other Wilderness values. 4. (G) Cooperate with the California Department of Fish and Game and the Experimental Stewardship Committee to develop and implement a bighorn sheep recovery plan. 5. (S) Manage streams containing redband, rainbow, brook, and brown trout to at least maintain viable populations, as specified in the Riparian Area Management Prescription.

Management Direction

Standards and Guidelines

6. (G) Develop fish stocking programs consistent with wilderness management activities in cooperation with the California Department of Fish and Game.

This page intentionally left blank.

Manage at low standard maintenance level all existing units of the National Wilderness Preservation System in accordance with wilderness values and character. Primitive recreation opportunities are provided. Trails are maintained for hiking or equestrian use. Mechanized travel and motorized equipment are not permitted. Fish and wildlife species are affected by natural vegetative succession. Livestock grazing is permitted. Timber is not harvested or managed. Firewood cutting is not permitted. Mining is no longer permitted subject to valid existing rights. Fire protection activities minimize suppression impacts while seeking to maintain or enhance long-term wilderness values.

This prescription applies to the RBU Alternative displayed in the EIS.

Management Direction

Air Quality

Maintain air quality in Class I wilderness areas within the requirements of the Clean Air Act.

Identify and monitor air quality resource values (AQRVs) for Class I wilderness areas.

Facilities

Provide trails, bridges, signing, and trailheads to protect and enhance the Wilderness resource.

Lands

Apply Forest-wide Standards and Guidelines.

Standards and Guidelines

Facilities

1. (G) Trails and trail bridges will be located, designed, constructed, and maintained to be suitable for foot and horseback travel, where appropriate.

2. (G) Provide bridges or turnpike sections only where impassable by foot or horseback, and to protect soil and water resources.

3. (G) Trail maintenance will include:

   a. maintaining primary system trails;

   b. signing entrances and trailheads;

   c. all necessary measures to ensure resource protection.

4. (G) Obliterate unauthorized shortcuts and undesired trails using wilderness volunteers. Reroute trails where resource damage occurs or is likely to occur.

Management Direction	Standards and Guidelines
Minerals	Minerals
Allow prospecting, mining, and leasing activities that are provided for by law. Administer activities to mitigate impacts on the Wilderness.	1. (S) Wilderness lands are withdrawn from mineral entry and mineral leasing, subject to valid existing rights. 2. (G) Examine unpatented mining claims for validity when a notice of intent to operate or an operating plan is received that involves surface-disturbing activities. 3. (G) Where surface-disturbing activities are involved, regularly inspect each prospecting or operating site during the periods of operation to assure compliance with laws, regulations, and operating plans. 4. (G) The reclamation portion of the operating plan will provide for complete site rehabilitation, and an appropriate bond will be collected to ensure completion.
Protection	Protection
Fire	Fire
Maintain an aggressive fire prevention program, utilizing the most effective and economical means to eliminate preventable human-caused fires.	1. (G) Provide fire prevention information through public contacts, and at Wilderness portals. 2. (G) Promote the use of portable gas stoves to minimize risks of wildfires and impacts on the Wilderness resource from campfires. 3. (G) Provide public education concerning fire management strategies for the Wilderness.
Suppress wildfires in a manner which is compatible with wilderness management objectives, protects life and property at risk, and is consistent with the capability of suppression forces.	1. (G) Implement suppression techniques which are compatible with the protection of wilderness values. a. Tractors will be used only when there is imminent threat to life, property, or significant resources outside the Wilderness. Use tractors only with Regional Forester approval. Use of such mechanized equipment as power saws and portable pumps may be authorized by the Forest Supervisor when their use would be less devastating to wilderness values than the resultant fire damage or other suppression action.

Management Direction

Standards and Guidelines

b. Drop chemical fire retardant only after approval from the Forest Supervisor. Use fugitive retardants (initially colored but which quickly dissipate and become colorless) when available. Water drops from aerial tankers or from external helibuckets may be used without restriction.

c. Do not drop retardant within 300 feet of lakes or flowing streams except under extreme conditions where human lives or property are at risk.

d. Allow aerial transportation of crews only when life is threatened or the potential for unacceptable resource damage is severe.

2. (G) Develop a plan to permit prescription fires from unplanned ignitions to perpetuate the natural diversity of plant and animal communities.

3. (G) Allow no incident bases in the Wilderness. Temporary spike camps may be allowed with Forest Supervisor approval.

4. (G) Reseed damaged areas with native species.

5. (G) Use existing natural barriers when available to confine fire. Natural barriers, including streams, rock outcroppings, and vegetation type changes, and existing trails will be used in lieu of line construction, even at the expense of additional acres burned.

6. (G) Use minimum-impact line construction techniques when constructing hand line.

   a. Construct the narrowest and shallowest lines that will contain fire.

   b. Limb trees rather than felling them, unless this is a safety or holding factor. Leave the bole intact rather than bucking it into shorter lengths.

   c. When possible, cold-trail the fire perimeter instead of constructing line. If available, use water to cool or extinguish the fire perimeter.

   d. Generally, use hand tools (shovel, McLeod, Pulaski, crosscut saw) for line construction.

Management Direction

Standards and Guidelines

7. (G) Fire-out from the narrowest line that conditions will allow, and use natural barriers or existing trails where practical.

8. (G) If appropriate, fire-out from strategic locations such as natural barriers, trails, or openings to reduce the impact and the time required to establish control lines through these areas.

9. (G) Use minimum-impact methods of mop-up.

   a. Allow snags to burn down if well inside the fire perimeter. Fell snags along the perimeter that threaten to throw sparks or cross the line. Snags within the fire perimeter that threaten firefighter safety along trails or other identified locations will also be felled.

   b. Where feasible, allow logs on the ground to burn instead of bucking them into shorter lengths.

   c. Avoid extensive spading of duff layers; allow the duff to burn, or saturate it with water if available.

   d. Take necessary action on potential reburns if they threaten to cross the line and escape containment.

   e. Place less emphasis on actual mop-up and more emphasis on patrolling and monitoring the fire; allow the fire to burn out naturally if conditions allow.

   f. Increase mop-up if weather changes threaten containment.

10. (G) Rehabilitate to restore natural conditions or obscure the impacts of suppression activities.

    a. Naturalize the environment around spike camps.

    b. Firelines will be naturalized by scattering duff and blocking them with limbs, logs, and rocks, where possible.

    c. All garbage, flagging, discarded tools, and other debris will be packed out.

    d. Use only native species when revegetating.

Management Direction

Use prescribed fire to:

- reduce the risk of natural fires by reducing accumulated fuels;
- restore and maintain natural plant communities;
- enhance threatened or endangered wildlife and fish species habitat.

Law Enforcement

Apply Forest-wide Standards and Guidelines.

Integrated Pest Management

Control insects and plant diseases only when necessary to prevent unacceptable damage to resources on adjacent lands or an unnatural loss to the wilderness from exotic pests.

Standards and Guidelines

11.(G)Develop a prescribed fire program.

Range

Allow grazing of domestic livestock where that use was established prior to wilderness classification. Planning and administration of grazing systems, stocking levels, utilization standards, and all range improvements will conform to the objectives of wilderness management.

Range

1. (G) Forage utilization will be consistent with the maintenance or improvement of the Wilderness resource.

2. (G) Manage livestock grazing to minimize competition with wildlife. Native wildlife have priority for use of Wilderness forage.

3. (G) Livestock may be excluded from areas identified as critical for wildlife, where deterioration of the soil, water, or vegetative resource is occurring, and where conflicts are identified at specified lakes, streams, and trails.

4. (G) Maintain natural vegetative composition.

5. (S) Structural range improvements may be constructed only when necessary to protect the Wilderness resource, and not to accommodate increased numbers of livestock. Existing improvements will generally be maintained.

6. (G) Emphasize range structures of primitive or natural appearing material where their use will not impose unreasonable additional cost to grazing permittees.

Management Direction

Standards and Guidelines

7. Minimize concentrations of livestock in riparian areas.

   a. (G) Develop utilization standards in allotment management plans using the following guidelines:

      - Under season-long grazing, < 30% of the total annual grass/forb production.

      - Under deferred early- or late-season grazing, or rest-rotation grazing, graze up to 50% of the grass/forb production (60% utilization, if in good condition). All classes of animals are included in these use figures. Wildlife use may need to be estimated at a given rate and livestock use adjusted accordingly.

      - Under any grazing system, manage grazing to enable riparian-associated shrubs to reach at least 50% of the natural site potential.

      - Shrub utilization (including willows and aspen) may not exceed 20% under season-long grazing, or 30% under deferred or rest-rotation grazing.

   b. (G) Control livestock distribution within allotments to protect water quality by such methods as riding and temporarily placing salt at least 1/4-mile away from water.

   c. (G) Maintain streambanks in stable condition as specifically defined in allotment management plans.

   d. (G) Avoid livestock driveways within SMZs, where possible, and locate driveways away from recreation trails.

8. (G) Prevent unauthorized livestock from drifting into the bighorn sheep reintroduction area.

9. (S) The following restrictions will apply to recreational livestock:

   a. A maximum of 25 head of recreational livestock are permitted per party, including pack and saddle stock. The Forest Supervisor may permit more stock animals per party by approval of a written justification statement.

Management Direction

Standards and Guidelines

b. No pack or saddle livestock are permitted within 50 yards of the shoreline of any lake or stream except for the purpose of loading, unloading, watering, or traveling on established trails.

c. Users will provide supplemental, pelletized feed where adequate forage is not available. Public contracts will encourage the use of pelletized feeds. Signs may be posted at trailheads and in areas where forage is insufficient and pelletized feed is required.

d. To prevent the introduction of noxious or non-native plant species, hay may not be brought into the Wilderness.

e. Hobble, picket, or confine pack and saddle animals overnight in temporary corrals (rope or electric fence). They may not be tied directly to the boles of live trees at any time.

10.(S) Monitor water quality as necessary to determine baseline conditions and the effects of range management in the Wilderness.

11.(S) Take corrective action where livestock grazing has caused stream channel degradation.

Recreation and Wilderness

Recreation and Wilderness

Wilderness Recreation

Wilderness Recreation

Provide primitive recreation opportunities that emphasize solitude, self-reliance, physical and mental challenge, inspiration, and the unique experiences dependent on a wilderness setting. Management involves regulation of use emphasizing voluntary compliance.

1. (G) All management activities will adhere to direction for Primitive Recreation Opportunity Spectrum described in the Forest-wide Standards and Guidelines.

2. (S) Limit group size to 25 persons or less, unless excepted by the Forest Supervisor on a case-by-case basis.

3. (S) Limit groups to a maximum of 25 stock animals. All recreation stock will be held or grazed at least 50 yards from lakes or streams and 50 yards from primary trails.

4. (G) Enforce laws and regulations, restrictions, and citations.

Management Direction	Standards and Guidelines
	5. (S) Off-highway vehicle use is prohibited within the Wilderness. Generally, the use of mechanized equipment is prohibited. Exceptions that may be authorized by the Forest Supervisor include: a. motorized medical rescue equipment for evacuation of dead or severely injured persons; b. aerial stocking of fish where that use has been previously established.
	6. (G) Discourage concentrated recreation use in the bighorn sheep reintroduction area.
	7. (G) Reduce the use of areas approaching capacity through dispersal techniques.
	8. (G) Rehabilitate sites damaged by trail use to as near natural conditions as possible to maintain or restore site productivity and water quality.
	9. Limit special uses to those activities compatible with wilderness management. a. (G) Issue outfitter-guide special use permits when such use provides a needed public service and assists in the administration and utilization of resources. Restrictions will be imposed on specific areas of heavy use to prevent degradation of the resources. b. (G) Outfitter-guides must develop operating plans which will be inspected periodically to ensure compliance. An environmental analysis will be required for new outfitter-guide permits. c. (S) Commercial group size will be limited to 25 persons and 25 head of recreational livestock unless otherwise approved on a case-by-case basis.
Maintain an interpretive service program to complement management of the Wilderness and to provide the public with Wilderness-related information.	1. (G) Use brochures, maps, and signs to provide information on minimum-impact methods, alternative dispersed recreation areas, proper stock use, safety, etc. Use interior signs for resource protection.
	2. (G) Between July 1 and September 1, maintain coverage at primary portals to contact at least 25% of the visitors.

Management Direction	Standards and Guidelines
Cultural Resources Apply Forest-wide Standards and Guidelines.	
Visuals Meet the visual quality objective of preservation. Apply Forest-wide Standards and Guidelines for visual rehabilitation opportunities.	Visuals 1. (G) Activities that alter the landscape are prohibited, with the following exceptions: a. low visual-impact facilities, such as trails and small-scale bridges; b. existing range improvement structures, although reconstruction or rehabilitation of such structures will be designed to meet the preservation VQO.
Timber Protect and maintain natural conditions and processes of plant communities. Prohibit firewood cutting.	
Water and Soils Manage watershed and soil resources commensurate with wilderness objectives.	Water and Soils 1. (S) Except for existing special use permits, watersheds will not be altered nor managed to increase water quantity or to change the timing of the spring runoff. 2. (G) The Bowman Ditch may be maintained by appropriate mechanical means.
Wildlife and Fish Wildlife coordination and habitat improvement actions will be compatible with wilderness management objectives. Allow the natural distribution and population of indigenous wildlife and fish species to maintain a natural balance with their habitat, each other, and people.	Wildlife and Fish 1. (G) Permit scientific studies as long as they are not readily evident nor detracting from wilderness character. 2. (G) Hunting, trapping, and fishing are permitted, subject to State laws and regulations. 3. (G) Reintroductions and supplemental transplants of wildlife and fish species in the Wilderness are permitted if native species have been eliminated or reduced to levels where elimination is likely, and the action would enhance or restore the species without impairing other wilderness values.

Management Direction

Standards and Guidelines

4. (G) Cooperate with the California Department of Fish and Game to develop and implement a bighorn sheep herd and habitat management plan.

5. (G) Inform visitors of appropriate, non-disturbing behavior when near bighorn sheep.

6. (G) Define specific areas that are critical to bighorn sheep (e.g., lambing grounds). Encourage recreationists to stay on the trails at specific times of the year in these areas.

7. (S) Manage streams containing redband, rainbow, brook, and brown trout to at least maintain viable populations, as specified in the Riparian Area Management Prescription.

8. (G) Develop fish stocking programs consistent with wilderness management activities in cooperation with the California Department of Fish and Game.

Semi-primitive Non-motorized Dispersed Recreation (SPNM) Management Prescription - 4

Emphasize high-quality semi-primitive non-motorized dispersed recreation in a natural-appearing environment. Permanent roads are not constructed and public access by vehicle is not permitted; off-highway vehicles are not allowed. Generally, fish and wildlife are affected by natural vegetative succession, although habitat improvements are permitted. Livestock grazing is permitted as are range improvement projects. Timber harvest is not scheduled, but may occur to enhance recreational values. Firewood cutting is not permitted. Vegetation treatments maintain a predominantly natural-appearing environment. Mineral exploration and development is permitted with restrictions.

This prescription applies to 23,013 acres distributed within 15 management areas. The size and configuration of the areas vary. Some are large, contiguous areas, while others are isolated, small inclusions.

Management Direction

Air Quality

Apply Forest-wide Standards and Guidelines

Facilities

Maintain semi-primitive recreation opportunities by restricting road development and maintenance.

Lands

Apply Forest-wide Standards and Guidelines.

Standards and Guidelines

Facilities

1. (S) Roads required for administrative purposes or for access to adjacent areas will be controlled by locked gates. All other roads will be closed or obliterated. Roads may be converted to trails for access to sites or to provide linkage with other trails.

2. (G) Return obliterated roads to resource production, and barricade them where necessary.

3. (G) Temporary roads may be permitted for one-time resource management purposes, but they will be obliterated immediately following completion of projects.

4. (G) Prohibit motorized travel on or off Forest roads except for administrative and resource management entry or for access to private land.

5. (G) Construct and maintain trails and trailheads for resource protection and distribution of recreation users.

Management Direction

Minerals

Manage mineral, geothermal, and oil and gas activity in a manner compatible with semi-primitive non-motorized recreation direction. Apply a conditional no-surface occupancy stipulation to leasable minerals.

Protection

Apply Forest-wide Standards and Guidelines.

Range

Range allotment planning and administration of grazing systems, stocking levels, utilization standards, and all range improvement projects are designed to achieve the recreation objectives of this prescription.

Recreation

Recreation

Manage suitable areas to provide high quality semi-primitive non-motorized dispersed recreation opportunities.

Standards and Guidelines

Minerals

1. (G) Encourage preliminary exploration by cross-country travel, where terrain permits, or by placement of drills by helicopter.

2. (G) Following activities, reclamation measures are required to restore the recreation values to the extent practical.

3. (G) Obliterate access roads when activities are completed.

Range

1. (G) New structural improvements for livestock management are developed with the following stipulations:

   a. Do not locate improvements near trail corridors and foreground areas visible for trails.

   b. Design improvements with a natural appearance.

2. (G) Manipulate vegetation to improve forage production so that the natural appearance of the landscape is not disturbed for more than a year.

3. (G) Prevent conflicts between livestock use and recreation, where possible.

Recreation

Recreation

1. (G) Adhere to Forest-wide Standards and Guidelines for the Semi-Primitive Non-Motorized Recreation Opportunity Spectrum class.

2. (G) Limit site development to rustic facilities for resource protection and visitor safety. Keep site modification to a minimum.

Management Direction

Standards and Guidelines

3. (G) Implement programs to inform visitors of recreational opportunities in these areas.

4. (G) Alleviate use pressures on the Wilderness by making the public aware of the recreation opportunities available in these areas.

5. (G) Promote sanitation and the "pack it in, pack it out" trash program through trailhead signing, information pamphlets, and on-site encounters with Forest personnel.

6. (G) Identify the semi-primitive non-motorized areas as dispersed areas in RIM, and record use separately.

7. (G) Motorized travel off Forest system roads is prohibited except for administrative and resource management entry.

Cultural Resources

Apply Forest-wide Standards and Guidelines.

Visual Resource

Meet the visual quality objective of retention. Apply Forest-wide Standards and Guidelines for visual enhancement and rehabilitation opportunities.

Timber

Timber

Manage timber stands to maintain visual quality and wildlife habitat diversity. Reduce insect and disease hazards, as needed. No scheduled harvest is planned. Firewood cutting is not permitted.

1. (G) Trees destroyed by fire, insects, or disease may be harvested if they are in stands 5 acres or larger, and if 75% of the standing trees have been killed.

Water and Soils

Apply Forest-wide Standards and Guidelines.

Wildlife and Fish

Wildlife and Fish

Wildlife and fish management and habitat improvement projects are compatible with the recreation objectives of this prescription.

2. (G) Fish stocking programs consistent with SPNM activities may be developed in cooperation with CDFG.

This page intentionally left blank

Developed Recreation Site Management Prescription (Standard) - 5

Manage developed recreation sites to maintain or enhance developed recreation values and opportunities on a cost-effective basis, while simultaneously managing riparian area resources. Manage other resources to be compatible with developed recreation management objectives. The character of the landscape appears natural or nearly natural. Off-highway vehicle use is confined to designated roads. Livestock grazing is permitted outside the recreation season on a site-by-site basis. Wildlife and fish habitat improvements are permitted. Timber harvesting may be used to improve sites for recreation or visual purposes, but no scheduled harvest is planned. Firewood cutting is permitted. Most sites are closed to mineral entry. Special roads and trails are provided into sites.

This prescription applies to all existing public- and private-sector developed recreation sites administered on the Forest, including riparian areas within developed sites; but it does not apply to lakes and reservoirs associated with developed sites. This prescription may also be applied to popular dispersed recreation sites that have the potential to become developed sites (198 acres).

Management Direction	Standards and Guidelines
Air Quality	
Apply Forest-wide Standards and Guidelines	
Facilities	
Apply Forest-wide Standards and Guidelines.	
Lands	
Apply Forest-wide Standards and Guidelines.	
Minerals	
Withdraw developed recreation sites from mineral entry for locatable minerals. Apply no-surface-occupancy stipulations for leaseable minerals.	
Protection	
Apply Forest-wide Standards and Guidelines.	
Range	Range
Range allotment planning and administration of grazing systems, stocking levels, utilization standards, and all range improvement projects are compatible with developed recreation objectives.	1. (S) Prohibit livestock grazing in existing sites during the recreation season (Memorial Day to Labor Day). 2. (G) Do not include developed recreation sites in the calculation of range carrying capacity. Make use of

Management Direction	Standards and Guidelines
	these areas on an opportunistic basis when not in conflict with recreation use.
	3. (G) Use rustic fencing (such as posts, poles, and rails) to exclude livestock from developed sites when fencing is needed.
Recreation	
Recreation	Recreation Recreation
– Operate and maintain public recreation sites commensurate with their development scale and management level, emphasizing those activities associated with the Roaded Natural Recreation Opportunity Class.	1. (G) Maintain facilities and sites at Maintenance Class 1 standards based on their development scale.
	2. (G) Manage fee sites at full-service level.
	3. (G) Where sites are compartmentalized and demand is less than capacity, develop a rest-rotation or deferred-use system which minimizes resource maintenance and maximizes cost-effective management.
	4. (G) Manage sites receiving use < 10% of theoretical capacity at the reduced-service level. Phase out sites that receive use < 5% of the theoretical capacity.
	5. (S) Monitor water quality as necessary to determine baseline conditions and the effects of resource management.
	6. (S) Construct and maintain water developments to meet EPA, State of California, and Forest Service drinking water quality standards.
– Administer public developed sites to provide for quality recreation experiences.	1. (G) Comply with *Regulations for Occupancy and Use of Developed Sites* (36 CFR 261.14 and 261.15).
	2. (G) Prevent violations through facility design, visitor contacts, signing, and clear communication of regulations.
	3. (G) Negotiate cooperative law enforcement agreements that provide for Development Level 3 campgrounds to be patrolled at least once during high-use periods (e.g., Memorial Day, Labor Day, and Independence Day weekends) and on a random basis during other periods of the recreation season.

Management Direction	Standards and Guidelines
	4. (G) Charge fees at all Development Level 3 campgrounds which qualify as fee sites where it is administratively and economically feasible to use the fee system.
	5. G) Establish fees that are comparable to those charged at similar facilities operated by the private sector within the area of influence to minimize competition with the private sector.
	6. (G) Inventory site use at Reliability Level 2 for all developed sites using occupancy rate sampling procedures.
	7. (G) Maintain annual RIM facility condition updates.
	8. (G) Limit motorized vehicle use to Forest roads.
	9. (G) Limit camping at developed recreation campgrounds to a maximum of 14 days.
	10.(G) Regulate opening and closing dates for recreation facilities to achieve the most efficient and cost-effective use and administration.
	11.(G) Developed facilities receiving heaviest use will receive first priority for maintenance.
	12.(G) Maintain updated site plans for all existing developed recreation sites.
– At public developed sites inform recreationists of regulations and available opportunities.	1. (G) Develop and make available the Recreation Opportunity Guide System at all administrative sites.
	2. (G) Provide campground hosts at fee sites, when feasible. Emphasize the use of volunteers as campground hosts.
– Restrict OHV use within one-half mile radius of recreation sites.	1. (G) Generally, vehicles shall be confined to roads, parking areas, or camp spurs.
– Administer special use permits for recreation residences to comply with FSM standard management.	1. (G) Continue all recreation residence special use permits unless a future use determination (FUD) identifies a higher public need.
	2. (G) FUDs should be scheduled in advance of termination date of the permit in order to allow sufficient time for public input.

Management Direction	Standards and Guidelines
	3. (S) If a higher public need is identified, permittees are given a minimum of 10 years notice.
	4. (S) Approve no new recreation residence tracts.
– Administer the Cedar Pass Ski Hill special use permit to provide a quality skiing experience.	1. (G) Allow for expansion of the ski hill permit area and development of new facilities when supported by recreational demand, and economic and resource evaluation.
	2. (G) Provide additional parking area capacity in response to increased use of expansion of the ski hill.
	3. (G) Allow tree and brush removal for the maintenance of existing ski runs.
	4. (G) Allow silvicultural treatment of tree stands to perpetuate existing stands.
	5. (G) Maintain fees commensurate with the facilities and opportunities provided to the public.
	6. (G) Prohibit motorized vehicle use on the ski hill except as authorized for the maintenance of the ski hill or facilities.
– Rehabilitate sites to original construction standards, where appropriate. When considering rehabilitation, determine if the site will best be managed by: • Retaining the site and upgrading the facilities to serve the user; • Retaining the site but redesigning it to meet present standards; • changing the site to meet land management planning and ROS objectives; or • Removing the facilities and restoring the site.	1. (G) Rehabilitate facilities in maintenance classes 2 through 5 (in the RIM system).
	2. (S) In developed recreation sites where water quality or soil stability have been degraded, implement watershed restoration measures. Rehabilitate deteriorating vegetation, and compacted and eroded soil, as needed. Rehabilitation measures may include seeding, fertilization, irrigation, planting, and mulching.

Management Direction

Standards and Guidelines

3. (G) Prioritize site rehabilitation in anticipation of available funding. Priorities for rehabilitation are based on site and resource protection; maintenance of capital investment; increased cost-effectiveness of operation, maintenance, and administration; improvement of users' recreation experience; and opportunity for partnerships and cost-sharing.

4. (G) Rehabilitate existing campgrounds with the potential for inclusion in the fee system when economically and administratively feasible.

5. (G) Provide for the physically handicapped when upgrading existing facilities.

6. (G) Use only Service-wide or Regionally approved designs for development or replacement of facilities. Where standard designs are not appropriate or satisfactory, submit special plans to the Regional Office for approval.

– Expand site capacity when supported by recreational demand, and economic and resource evaluation.

Cultural Resources

Apply Forest-wide Standards and Guidelines. Place cultural resource awareness signs (standard Forest Service signs) at camp bulletin boards.

Visual Resource

Meet the visual quality objective of retention or partial retention. Apply Forest-wide Standards and Guidelines for visual enhancement or rehabilitation opportunities.

Timber

Timber

Manage tree stands to enhance scenic and recreation values. Firewood cutting is permitted only to maintain or enhance other resource values.

1. (G) Manage vegetation in all developed sites to ensure perpetuation of desired stand characteristics.

Water and Soils

Apply Forest-wide Standards and Guidelines.

Management Direction	Standards and Guidelines
Wildlife and Fish	wildlife and Fish
Apply Forest-wide Standards and Guidelines.	2. (G) Coordinate with CDFG to improve fishing access to benefit fish; e.g., improve road access or boat launching facilities in waters with underutilized fish populations.

Developed Recreation Site Management Prescription (Low Standard) - 6

Manage developed recreation sites to maintain or enhance developed recreation values and opportunities on a cost-effective basis, while simultaneously managing riparian area resources. Manage other resources to be compatible with or complementary to developed recreation management objectives. The character of the landscape appears natural or nearly natural. Off-highway vehicle use is confined to designated roads. Livestock grazing is permitted outside the recreation season on a site-by-site basis. Timber harvesting may be used to improve sites for recreation or visual purposes, but no scheduled harvest is planned. Firewood cutting is permitted. Most sites are closed to mineral entry. Special roads and trails are provided into sites.

This prescription applies to the RBU Alternative displayed in the EIS.

Management Direction

Air Quality

Apply Forest-wide Standards and Guidelines

Facilities

Apply Forest-wide Standards and Guidelines.

Lands

Apply Forest-wide Standards and Guidelines.

Minerals

Withdraw developed recreation sites from mineral entry for locatable minerals. Apply no-surface-occupancy stipulations for leaseable minerals.

Protection

Apply Forest-wide Standards and Guidelines.

Range

Range allotment planning and administration of grazing systems, stocking levels, utilization standards, and all range improvement projects are compatible with developed recreation objectives.

Standards and Guidelines

Range

1. (S) Prohibit livestock grazing in existing sites during the recreation season (Memorial Day to Labor Day).

2. (G) Do not include developed recreation sites in the calculation of range carrying capacity. Make use of these areas on an opportunistic basis when not in conflict with recreation use.

Management Direction	Standards and Guidelines
	3. (G) Use rustic fencing (such as posts, poles, and rails) to exclude livestock from developed sites when fencing is needed.
Recreation	Recreation
Recreation	Recreation
– Operate and maintain public recreation sites commensurate with their development scale and management level, emphasizing those activities associated with the roaded natural recreation opportunity class.	1. (G) Maintain facilities and sites at standard maintenance levels commensurate with their development scale.
	2. (G) Where sites are compartmentalized and demand is less than capacity, develop a rest-rotation or deferred-use system which minimizes resource maintenance and maximizes cost-effective management.
	3. (G) Manage sites receiving use < 10% of theoretical capacity at the reduced-service level. Phase out sites that receive use < 5% of the theoretical capacity.
	4. (S) Monitor water quality as necessary to determine baseline conditions and the effects of resource management.
	5. (S) Construct and maintain water developments to meet EPA, State of California, and Forest Service drinking water quality standards.
– Administer public developed sites to provide for quality recreation experiences.	1. (G) Comply with *Regulations For Occupancy And Use Of Developed Sites* (36 CFR 261.14 and 261.15).
	2. (G) Prevent violations through facility design, visitor contacts, signing, and clear communications of regulations.
	3. (G) Negotiate cooperative law enforcement agreements that provide for Development Level 3 campgrounds to be patrolled at least once during high-use periods (e.g., Memorial Day, Labor Day, and Independence Day weekends).
	4. (G) Charge fees at all Development Level 3 campgrounds which qualify as fee sites where it is administratively and economically feasible to use the fee system.

Management Direction	Standards and Guidelines
	5. (G) Establish fees that are comparable to those charged at similar facilities operated by the private sector within the area of influence to minimize competition with the private sector.
	6. (G) Inventory site use at Reliability Level 4 for all developed sites using occupancy rate sampling procedures.
	7. (G) Maintain biannual RIM facility condition updates.
	8. (G) Limit motorized vehicle use to Forest roads.
	9. (G)Limit camping at developed recreation campgrounds to a maximum of 14 days.
	10.(G) Opening and closing dates for recreation facilities are regulated to achieve the most efficient and cost-effective use and administration.
	11.(G) Developed facilities receiving heaviest use will receive first priority for maintenance.
	12.(G) Maintain updated site plans for all existing developed recreation sites.
– Provide for information and education at public developed sites to inform recreationists of regulations and available opportunities.	1. (G) Develop and make available the Recreation Opportunity Guide System at all administrative sites.
	2. (G) Provide campground hosts at fee sites, when feasible. Emphasize the use of volunteers as campground hosts.
– Restrict OHV use within a one-half mile radius of recreation sites.	1. (G) Generally, vehicles shall be confined to roads, parking areas, or camp spurs.
– Administer special use permits for recreation residences to comply with FSM standard management.	1. (G) Continue all recreation residence special use permits unless a future use determination (FUD) identifies a higher public need.
	2. (G) FUDs should be scheduled in advance of termination date of the permit in order to allow sufficient time for public input.
	3. (S) If a higher public need is identified, permittees are given a minimum of 10 years notice.

Management Direction	Standards and Guidelines
	4. (S) Approve no new recreation residence tracts.
– Administer the Cedar Pass Ski Hill special use permit to provide for a quality skiing recreational experience.	1. (G) Allow for expansion of the ski hill permit area and the development of new facilities when supported by recreational demand, and economic and resource evaluation. 2. (G) Provide additional parking area capacity in response to increased use or expansion of the ski hill. 3. (G) Allow tree and brush removal for the maintenance of existing ski runs. 4. (G) Allow silvicultural treatment of tree stands to perpetuate existing stands. 5. (G) Maintain fees commensurate with the facilities and opportunities provided to the public. 6. (G) Prohibit motorized vehicle use on the ski hill except as authorized for the maintenance of the ski hill or facilities.
– Rehabilitate sites to original construction standards , where appropriate. When considering rehabilitation, determine if the site will best be managed by: • Retaining the site and upgrading the facilities to serve the user; • Retaining the site but redesigning it to meet present standards; • changing the site to meet land management planning and ROS objectives; or – Removing the facilities and restoring the site.	1. (G) Rehabilitate facilities in standard maintenance levels 2 through 5. 2. (S) In developed recreation sites where water quality or soil stability have been degraded, implement watershed restoration measures. Rehabilitate deteriorating vegetation, and compacted and eroded soil, as needed. Rehabilitation measures may include seeding, fertilization, irrigation, planting, and mulching. 3. (G) Prioritize site rehabilitation in anticipation of available funding. Priorities for rehabilitation are based on site and resource protection; maintenance of capital investment; increased cost-effectiveness of op-

Management Direction

Standards and Guidelines

eration, maintenance, and administration; improvement of users' recreation experience; and opportunity for partnerships and cost-sharing.

4. (G) Provide for the physically handicapped when upgrading existing facilities.

5. (G) Use only Service-wide or Regionally approved designs for development or replacement of facilities. Where standard designs are not appropriate or satisfactory, submit special plans to the Regional Office for approval.

Cultural Resources

Apply Forest-wide Standards and Guidelines. Place cultural resources awareness signs (standard Forest Service signs) at camp bulletin boards.

Visual Resource

Meet the visual quality objective of retention or partial retention. Apply Forest-wide Standards and Guidelines for visual enhancement or rehabilitation opportunities.

Timber

Manage tree stands to enhance scenic and recreation values. Firewood cutting is permitted only to maintain or enhance other resource values.

Timber

1. (G) Manage vegetation in all developed sites to ensure perpetuation of desired stand characteristics.

Water and Soils

Apply Forest-wide Standards and Guidelines.

Wildlife and Fish

Apply Forest-wide Standards and Guidelines.

This page intentionally left blank.

Description: Manage the foreground zone of the visual corridor so that management activities are not appaent to the casual Forest visitor. Recreation opportunities are provided in a natural-appearing environment. Off-highway vehicle use is permitted, but with restrictions. Fire management, wildlife, and range improvements are permitted. A scheduled harvest of timber occurs, but with reduced yields. Roads and trails are allowed, but limited. The area is open to mineral entry, but with restrictions.

This prescription applies to the foreground zone of sensitivity level one travel routes or other designated areas where managing the visual resource is a high priority.

This prescription applies to 31,127 acres distributed within 16 management areas. The size and configuration of the areas vary. Some are large, contiguous areas, while others are isolated, small inclusions.

Management Direction	Standards and Guidelines
Air Quality	
Apply Forest-wide Standards and Guidelines	
Facilities	
In addition to the Forest-wide Standards and Guidelines, develop and maintain the road system to provide for roaded natural recreation opportunities and the safety of recreation users.	1. (G) New material sources will not be established within the foreground visual distance zone. 2. (G) Projects involving soil disturbance will require preventing environmental damage and restoring soil stability and natural vegetative cover within one year.
Lands	Lands
Apply Forest-wide Standards and Guidelines.	1. (G) No new utility corridors/developments will be permitted within foreground retention where alternative locations exist. Utilities which must be located here will be designed to achieve the retention VQO.
Minerals	
Apply Forest-wide Standards and Guidelines.	
Protection	
Apply Forest-wide Standards and Guidelines.	

Management Direction	Standards and Guidelines
Range	Range
Range planning and administration of grazing systems, stocking levels, utilization standards, and all range improvement projects will be designed to achieve the objectives of this prescription.	1. (G) Limit the number and visibility of structural improvements within the foreground zone so that they are not apparent to the casual observer. 2. (G) Limit the impact of fence lines by selecting locations and designs that blend with the form, line, color, and texture of the natural landscape. Avoid silhouetting fence lines against the sky.
Recreation	Recreation
Recreation Manage for roaded natural dispersed recreation opportunities as defined in the Forest-wide Standards and Guidelines. Areas within this prescription are open to OHV use if impacts cannot be seen from the primary roads.	Recreation 1. (G) Random entry from main roads is discouraged by maintenance of ditches, natural barriers, vegetation, signing, etc. Use is subject to restrictions identified on the OHV map.
Cultural Resources Apply Forest-wide Standards and Guidelines.	
Visual Resource Meet or exceed the visual quality objective of retention for the visual corridor.	1. (G) Complete Visual Corridor Plans for Level 1 travel routes, as needed. 2. (G) When a management activity is planned within or adjacent to a location in need of visual rehabilitation, emphasize accomplishing this work with the project. 3. (G) Temporary departure from assigned VQOs may be necessary in areas highly susceptible to insect or disease epidemics in order to protect long-term values. 4. (G) Identify and prioritize potential visual enhancement opportunities and rehabilitation needs. Develop as funds become available.

Management Direction

Timber

Manage the timber resource to retain or create the desired Forest character.

Firewood cutting is permitted only to maintain or enhance other resource values. The visual impacts of timber harvest activities in the foreground will be reduced by implementing special treatments as needed.

Water and Soils

Apply Forest-wide Standards and Guidelines.

Wildlife and Fish

Wildlife coordination efforts and habitat improvement projects will be compatible with the management objectives of this prescription.

Apply Forest-wide Standards and Guidelines.

Standards and Guidelines

Timber

1. (G) All silvicultural practices and logging systems are permissible, provided they are compatible with achieving the VQO of retention or other objectives in the Visual Corridor Plan.
2. (G) Shape timber harvest units to resemble the natural characteristic landscape; i.e., naturally established landscape within a scene or scenes being viewed.
3. (G) Timber harvest units will be in scale with the characteristics of the surrounding landscape.
4. (G) Maintain large-tree character by retaining an average of five 30"-diameter trees per acre in the immediate foreground (up to 200 feet from the road's edge); or retain trees as large as the site is capable of growing in 250 years.
5. (G) Regeneration cuts at road edges will be located at non-focal points.
6. (G) Slash in the immediate foreground will be treated to resemble a natural forest floor.
7. (G) Logging roads are located to the rear of retention zone parallel to primary road. Direct access off primary road is minimized, and log deck locations are not apparent.

This page intentionally left blank.

Special Areas Management Prescription - 8

Description: Manage selected areas to maintain their special features, generally in an unmodified condition. These areas include Research Natural Areas (RNAs), Special Interest Areas (SIAs) and National Natural Landmarks (NNLs). SIAs and NNLs are of special interest because of unusual scenic, historic, prehistoric, cultural, scientific, natural, or other values, excluding wilderness values. RNAs are designated for research, study, observation, monitoring, and non-destructive, non-manipulative educational activities. They provide for genetic diversity of flora and fauna, and protection of threatened and endangered species and their habitat. They may also include areas of Native American Indian traditional religious or cultural value. They are managed to meet the Visual Quality Objective of Preservation or Retention. Off-highway vehicle use is not permitted. Firewood cutting is not permitted. Most sites are closed to mineral entry.

This prescription is applied to 14,588 acres distributed within 3 management areas. Acreage for the Raider Basin Research Natural Area is included in the Wilderness. Management direction is contained in this prescription. The size and configuration of the areas will vary. Some will be large, contiguous areas, while others may be isolated, small inclusions.

Management Direction

Air Quality

Apply Forest-wide Standards and Guidelines.

Facilities

Maintain roads, trails and other facilities to serve administrative, scientific, and recreation purposes.

Lands

Apply Forest-wide Standards and Guidelines.

Minerals

Where practical, withdraw Special Areas from entry for locatable minerals. Apply no-surface-occupancy stipulations for mineral leasing.

Protection

Apply Forest-wide Standards and Guidelines.

Standards and Guidelines

Facilities

1. (S) Roads required for administrative or scientific purposes will be controlled by locked gates. Other roads will be closed or obliterated.

2. (S) Return obliterated roads to resource production and barricade them where necessary.

3. (G) Maintain trails and trailheads for resource protection.

Management Direction

Range

Design range allotment planning and administration of grazing systems, stocking levels, utilization standards, and all range improvements which are compatible with specific special area objectives.

Recreation

Recreation

Provide recreation and public education opportunities which are compatible with the management objectives of the specific type of Special Area. Manage for semi-primitive non-motorized recreation opportunity class, as defined in Forest-wide Standards and Guidelines.

Develop a management plan with specific objectives and direction for each RNA and SIA. The current designated areas are:

- Devil's Garden Research Natural Area
- Burnt Lava Flow Geologic Area
- Glass Mountain Lava Flow Geologic Area
- Medicine Lake Lava Flow Geologic Area

Standards and Guidelines

Range

1. (S) Exclude livestock grazing from RNAs unless needed to preserve the vegetative communities for which the RNA was established. Fence RNAs if necessary to prohibit grazing.

Recreation

1. **Research Natural Areas**

   a. (G) Sign or fence RNAs as necessary to discourage general recreational use and especially restrict off-highway vehicle use.

2. **Special Interest Areas and National Natural Landmarks**

   a. (S) Encourage public use and enjoyment of SIAs where resource damage is unlikely.

   b. (G) Provide interpretive signs and brochures to create learning experiences for users. Where public use is invited or permitted, take steps to protect any remaining scientific or research values.

Management Direction

Proposed designated area is:

- Raider Basin Research Natural Area

Cultural Resources

Apply Forest-wide Standards and Guidelines.

Visual Resource

Meet the visual quality objective of preservation or retention. Apply Forest-wide Standards and Guidelines for enhancement and rehabilitation opportunities.

Timber

Prohibit timber management activities, including firewood cutting, where they would conflict with special area objectives.

Water and Soils

Apply Forest-wide Standards and Guidelines.

Wildlife and Fish

Develop wildlife management and habitat improvement projects which are compatible with RNA and SIA objectives.

Apply Forest-wide Standards and Guidelines.

Standards and Guidelines

1. (G) Protect the Raider Basin Research Natural Area as if it were an approved RNA until completion of establishment reports and final decision by the Chief of the Forest Service.

Definitions

Natural History Resources: Areas composed of natural phenomena which reference the development of the earth's surface and the evolution of life. Two interrelated categories of natural features are recognized. One, the geological category, results from forces and processes acting on the earth's surface to produce land forms and other non-living entities. The other, the ecological category, involves processes between biological forms and their environments. Five kinds of areas may be classified under 36 CFR 294 (FSM 2362). They are generally suitable for limited development for public interpretation, education, and enjoyment.

Scenic Areas: Places of outstanding or matchless beauty which require special management to preserve these qualities.

Geological Areas: Units of land with outstanding formations of unique geologic features of the earth's development.

Botanical Areas: Areas that contain specimens or group exhibits of plants, plant groups, and plant communities which are significant because of form, color, occurrence, habitat, location, life history, arrangement, ecology, environment, rarity, or other features.

Zoological Areas: Areas that contain authentic, significant, and interesting animals, animal groups, or animal communities which are natural and important because of occurrence, habitat, location, life history, ecology, environment, rarity, or other features.

Paleontological Areas: Areas containing fossil specimens of flora and fauna that span geologic time between the period when life first appeared on earth and the age of man.

Raptor Management Prescription - 9

Description: Manage habitat to promote the recovery of the bald eagle and to maintain the viability of goshawks. Dispersed recreation opportunities are in a natural or nearly natural-appearing environment. Off-highway vehicle use has seasonal restrictions. Wildlife management indicator species are favored in general, particularly the bald eagle and goshawk. Wildlife habitat improvements are permitted. Livestock grazing occurs if forage is available and improvements are allowed. Timber harvesting is recognized as a tool in habitat management, but is unregulated. Personal use firewood cutting is not permitted. Bald eagle areas are open for mineral leasing with special stipulations. Roads and trails are allowed, but limited.

This prescription applies to 52,111 acres distributed within 18 management areas. The size and configuration of the areas vary. Some are large, contiguous areas, while others are isolated, small inclusions.

Management Direction

Air Quality

Apply Forest-wide Standards and Guidelines.

Facilities

Facilities management within or near wildlife habitats emphasized in this prescription will be compatible with the wildlife direction.

Standards and Guidelines

Facilities

1. Within bald eagle nesting and wintering habitat:

   a. (G) Whenever possible, existing roads will be relocated outside of primary zones of active nest territories. When roads cannot be relocated outside of nesting and wintering areas, the roads may be reconstructed and maintained only when the birds are not wintering or nesting.

   b. (S) New roads will not be constructed in winter roosts. Existing roads in winter roosts will be closed during the wintering period. New roads will not be constructed within primary zones of active nest territories. Construction within secondary zones will be determined on a case-by-case basis.

   c. (G) Seasonal or permanent road closures may be necessary to limit human disturbance during the reproductive or wintering period, depending on the area.

Management Direction

Standards and Guidelines

Lands

Lands activities within or near wildlife habitats emphasized in this prescription will be guided by the following standards and guidelines.

Lands

1. Within bald eagle nesting and wintering habitat:

   a. (G) Cadastral surveys and associated activities will be permitted August 15 to November 1.

   b. (G) Acquire lands or interest in lands identified as critical or essential bald eagle habitat.

   c. (G) Where possible, phase out special use permits which conflict with desired habitat characteristics and species objectives.

   d. (G) Within the limits of Forest Service authority, mitigate impacts associated with utilities construction, operations, and maintenance in nesting territories, foraging areas, and wintering areas.

2. Within goshawk habitat:

   a. (G) Cadastral surveys and associated activities may be conducted from August through February.

   b. (G) Within the limits of Forest Service authority, mitigate impacts associated with utilities construction, operations, and maintenance in and within 1/4-mile of nest stands.

2. Within goshawk habitat:

   a. (S) Commercial access on roads within nest stands is allowed August 1 through December 31.

   b. (G) New roads should not be constructed within nest stands.

   c. (G) Roads may be maintained, constructed and reconstructed within 1/4-mile of nest stands from August through February.

Management Direction

Minerals

In addition to Forest-wide Standards and Guidelines, adhere to the following standards for threatened, endangered, and sensitive species.

Protection

Apply Forest-wide Standards and Guidelines.

Range

Range planning and administration of grazing systems, stocking levels, utilization standards, and all range improvement projects will be compatible with the objectives of this prescription.

Standards and Guidelines

Minerals

1. (S) For leasable and saleable minerals, no surface occupancy will be permitted within approximately one-half mile of known active bald eagle nests, to comply with protection required for the species under the Endangered Species Act of 1973, as amended.

2. (G) In order to protect critical seasonal and year-round habitat for bald eagles and goshawks, no leasable or saleable activities will be allowed in the following areas during the times specified.

   a. Bald eagle winter roost core areas and nesting habitat: year-round

   b. Remainder of bald eagle winter roost habitat: November 1 to April 15

   c. Goshawk nesting territories: March 1 to August 1

      Exceptions will be made if the lessee or permittee can demonstrate to the satisfaction of the Forest Service that unacceptable environmental impacts will not occur from the proposed operations. During periods when entry is allowed, limited surface disturbance including placement of some pipelines will generally be permissible. However, extensive development, such as power plants, are unlikely to be permitted.

3. (S) Activities related to locatable minerals will be mitigated by requiring the operator to take all reasonable measures to ensure that critical species and habitat are protected. Specific mitigation measures will be determined during project environmental analyses.

Range

1. (G) The management objective for all rangelands that are not type-converted will be satisfactory ecologic condition.

Management Direction

Acceptable nonstructural and structural range practices include rejuvenation, fencing, and water developments.

Standards and Guidelines

2. (G) Forage utilization will not normally exceed levels which provide sufficient herbage residue of key forage species to ensure plant vigor, adequate plant reproduction, favorable range trend, and good watershed conditions.

3. Within bald eagle nesting and wintering habitat:

   a. (G) Structural maintenance and improvements and general range administration activities involving the use of motorized vehicles are acceptable only after August 15 in nesting territories. Authorization of these activities prior to August 15 will be assessed on a case-by-case basis. Use the annual operating plan to record decisions.

   b. (S) Predator control and pesticide use are not normally planned for nesting territories, foraging areas, and winter roosts. These activities require consultation with the U.S. Fish and Wildlife Service.

4. (G) Within 1/4-mile of goshawk habitat, structural maintenance and improvements will be scheduled after August.

Recreation

Recreation

Management of recreational activities within or near wildlife habitats emphasized in this prescription will be compatible with the wildlife direction. Manage for semi-primitive non-motorized, roaded natural, or semi-primitive motorized recreation opportunities in a predominantly natural or natural-appearing environment, as defined in the Forest-wide Standards and Guidelines. Refer to ROS map for specific class. Refer to OHV map for seasonal closure areas.

Recreation

1. Within bald eagle nesting and wintering habitat:

   a. (G) Disturbance from existing recreational facilities will be assessed on a case-by-case basis. Where human activity limits reproductive success or disturbs wintering bald eagles, facilities and areas may be recommended for restrictions including closure.

   b. (G) Motorized vehicles will be permitted September through December in nesting territories and April through October in wintering areas.

Management Direction

Standards and Guidelines

Other times of the year these areas may be administratively closed.

2. Within and near goshawk habitat:

   a. (G) Disturbance from recreational facilities may limit reproductive success. New or expanding facilities should be at least 1/2-mile from nest stands. Maintenance or reconstruction of existing facilities within 1/4-mile of nest stands will be scheduled August through February.

   b. (G) Disturbance from trail users may also limit reproductive success. New trails should be constructed at least 1/4-mile from nest stands. Maintenance or reconstruction of trails within 1/4-mile of nest stands will be scheduled August through February.

   c. (G) Within 1/4-mile of nest stands, motorized vehicles will be permitted August through February. Other times of the year these areas may be administratively closed.

Cultural Resources

Apply Forest-wide Standards and Guidelines.

Visual Resources

Meet or exceed the visual quality objectives of retention or partial retention. Apply Forest-wide Standards and Guidelines for enhancement or rehabilitation opportunities. Refer to VQO map for specific VQO.

Timber

Timber management within or near wildlife habitats emphasized in this prescription will be compatible with wildlife direction. A silvicultural prescription will be prepared and scheduled to perpetuate specific habitat objectives.

Timber

1. Within bald eagle nesting and wintering habitat:

   a. (G) Timber Management activities will be scheduled within active nest territories and within 1/4-mile of foraging and loafing trees between August 15 and November 1. Timber management activities will be scheduled within wintering areas between April and October. Where nesting habitat and wintering areas coincide, management activities will be scheduled after the fledging period

Management Direction

Standards and Guidelines

and before winter concentration buildup, usually August through November.

b. (S) Permits for personal and commercial firewood cutting will be permitted if needed to achieve habitat improvement.

Reference standards and guidelines for road work in the Facilities and Recreation section of this Prescription.

c. (S) Pesticide use is not normally planned for nesting territories, foraging areas, and winter roosts. This activity requires consultation with the U.S. Fish and Wildlife Service.

2. Within and near goshawk habitat:

a. (G) Within 1/4-mile of nest stands, timber management activities will be scheduled from August through February.

b. (S) Permits for personal use and commercial firewood cutting will be permitted if needed to achieve habitat improvement.

c. (S) Pesticide use is not normally planned for nesting territories, foraging areas, and winter roosts. This activity requires consultation with the U.S. Fish and Wildlife Service.

Water and Soils

Apply Forest-wide Standards and Guidelines.

Wildlife and Fish

Wildlife and Fish

Bald Eagle (Nesting and Wintering Areas)

Bald Eagle

– For all identified nest territories, primary and secondary zones will be established in accordance with the variable identified as suitable in the Bald Eagle Habitat Capability Model. Bald eagle nesting territory plans will be developed for each identified territory. These plans will give special consideration to bald eagles during the reproductive period, January to August.

1. (G) Where opportunities arise, maintain and enhance fish, waterfowl, and other prey-base populations within the nest territory, within the closest known forage areas, and within winter foraging areas.

Management Direction

Standards and Guidelines

– Utilize the presence of bald eagles and the Habitat Capability Model to establish boundaries of wintering areas, including winter roosts, foraging areas, and daytime perches. Bald eagle wintering area plans will be developed for each wintering area. These plans will give special consideration to bald eagles from November to March.

Goshawk

Goshawk

– Within its habitat range, manage goshawk territories to maintain a density of at least one territory per 18 square miles. Distances between territories or clumps of territories should not exceed 12 miles. (The habitat range is defined as the area of land containing active or potential nesting habitat as described in the Goshawk Habitat Capability Model.)

1. (G) Each territory will contain at least 100 acres of habitat suitable for the nest stand and an alternate nest stand. If the nest stand and alternate nest stand are known, delineate at least 50 acres around each stand. If only the nest stand is known, either (a) delineate at least 100 acres around the nest stand, or (b) delineate at least 50 acres around the nest stand, and, within a 1/2-mile radius, delineate an additional 50 acres around a potential alternate nest stand.

2. (G) Active nest territories will take preference in delineation of a population network. Where possible, nest stands will not be located in areas of intensive timber management. The primary objective, however, is to designate the highest capable and currently suitable nest stands. The secondary objective is to locate them in areas that will least conflict with intensive timber management.

3. (G) As opportunities arise, enhance prey base populations within two miles of nest stands.

All Threatened, Endangered, and Sensitive Species

All Threatened, Endangered, and Sensitive Species

– Cooperate with State and federal agencies in wildlife related matters.

4. (G) A free exchange of information between the Forest and State agencies relative to status reviews, listing of species, critical habitat proposals, and threatened and endangered species programs and activities shall be maintained at all times. The Forest Service will cooperate with State agencies to inventory, protect, manage, and plan for threatened, endangered, and sensitive species.

– As part of coordination responsibilities with the U.S. Fish and Wildlife Service, cooperate in monitoring active bald eagle nest territories at least three times during the reproductive period (territory occupancy, incubation/hatching, and fledging) and participate in the California winter bald eagle survey.

5. (S) The Forest will cooperate with the U.S. Fish and Wildlife Service on critical habitat determinations, on consultation needed when management affects threatened and endangered species, and in developing and implementing recovery plans.

This page intentionally left blank.

Rangeland Management Prescription - 10

Description: The primary emphasis is to manage rangeland vegetation, providing for healthy ecosystems and making forage available for use by livestock, wildlife, and wild horse herds. The vegetation management goal is to provide desired expressions of herbaceous, shrub and forest vegetation according to site potential and resource needs. Resource uses occur to the extent that they do not adversely affect maintenance of the desired vegetation expression. Livestock grazing is permitted and recreation facilities may be located here consistent with Forest-wide Standards and Guidelines.

To achieve vegetation management objectives through livestock grazing, either a maintenance or extensive management level is applied to grazing allotments. To allotments with a maintenance management level, we minimally use structural improvements such as fences and water developments. In extensively managed allotments, we use structural improvements to improve distribution and more fully utilize allotment capacity. Nonstructural range improvement, such as brush control, generally are not used.

The landscape appears nearly natural; if changes are made, they are not distracting to the average Forest visitor. Recreation opportunities are provided in a roaded, natural-appearing environment. Off-highway vehicle use is permitted.

Wildlife management indicator species whose preferred habitat is rangeland are maintained or enhanced.

Firewood harvesting is permitted, as is geothermal and oil and gas leasing, and mineral entry and development. Road construction and reconstruction are allowed.

This prescription applies to 619,212 acres distributed within 19 management areas. The size and configuration of the areas vary. Some are large, contiguous areas, while others are isolated, small inclusions.

Management Direction

Air Quality

Apply Forest-wide Standards and Guidelines.

Facilities

Apply Forest-wide Standards and Guidelines.

Lands

Apply Forest-wide Standards and Guidelines.

Minerals

Apply Forest-wide Standards and Guidelines.

Protection

Apply Forest-wide Standards and Guidelines.

Standards and Guidelines

Protection

1. (G) Outside riparian zones use prescribed burning to improve forage for wildlife and livestock and to reduce the potential for catastrophic fires.

Management Direction

Range

Manage grazing to maintain desired vegetation expressions and satisfactory ecological condition. Where potential or existing resource conflicts are identified, correct through allotment management plans, annual operating plans, and grazing permits.

Standards and Guidelines

Range

1. (G) The management objective for all rangelands will be satisfactory ecological condition as defined below:

Range Condition	Trend	Ecological Condition
Excellent	Static	Satisfactory
Good	Static/Upward	Satisfactory
Fair	Upward/Static	Satisfactory
Fair	Downward	Unsatisfactory
Poor	-	Unsatisfactory
Very Poor	-	Unsatisfactory

2. (G) Forage utilization levels do not normally exceed levels displayed in Forest-wide Standards and Guidelines.

3. (S) Measure utilization on a percent by weight basis by Forest Service personnel in cooperation with grazing permittees and other interested public.

4. (G) Maintain existing boundary fences and other improvements; but undertake no new improvements unless necessary for protecting soil, water, or streamside-dependent resources.

5. (G) Construct structural range improvements (fences and water developments) to implement grazing systems which promote vegetation management objectives, and provide uniform livestock distribution and proper forage utilization.

6. (S) Follow structural improvement standards described in the Forest Service Manual.

7. (S) Schedule maintenance and replacement of structural improvements through allotment management plans and grazing permits.

Management Direction

Maintenance Allotments

Manage livestock with a minimal investment in range improvement construction, allotment planning, permit administration, and monitoring.

Extensive Allotments

Manage grazing with a moderate investment in structural improvement construction, allotment planning, permit administration, and monitoring.

Maintenance and Extensive Allotments

– Range allotment planning and administration of livestock grazing, stocking levels, and range improvement projects will maintain or enhance habitat for management indicator species occurring on rangelands.

Standards and Guidelines

1. (G) Within pronghorn habitat:

    a. Reference Interstate Antelope guidelines for more specific grazing standards and guidelines. Generally, graze livestock after mid-May until proper utilization is achieved. Graze wetlands to make forbs available to pronghorn.

2. (G) Within sage grouse habitat:

    a. Meadows within an eight-mile radius around each active lek will be managed to provide forbs desirable to sage grouse, such as dandelion (*Taraxacum* spp.), yarrow (*Achillea* spp.), and aster (*Aster* spp.). Manage for high water tables, forbs, and hiding cover in meadows.

    b. Delay sheep grazing until June 1.

3. (G) Within deer winter range and transition habitat:

    a. Allow an annual (July - April) average of no more than 40% utilization of bitterbrush by deer and livestock combined.

    b. Of the 40% total utilization of bitterbrush, on an allotment-by-allotment basis, allow 50% utilization by livestock and 50% utilization by wildlife.

4. (G) Manage riparian areas to achieve satisfactory ecological condition and desired vegetation expressions through improved livestock distribution and structural improvements.

Management Direction

Standards and Guidelines

Recreation

Recreation

Recreation

Manage for semi-primitive motorized or roaded natural dispersed recreation opportunities as defined in the Forest-wide Standards and Guidelines. See ROS map for specific class.

1. (G) When the presence of dispersed recreationists interferes with deer using water developments, prohibit camping by signing within 1/4-mile of water developments. Probable conflict areas are summer and fall ranges for the Glass Mountain deer herd.

Permit OHV use subject to restrictions identified on the OHV map.

Cultural Resources

Apply Forest-wide Standards and Guidelines.

Visual Resource

Meet or exceed the adopted visual quality objective of retention or partial retention. Apply Forest-wide Standards and Guidelines for potential visual enhancement and rehabilitation opportunities. Refer to VQO map to identify the specific VQO.

Timber

Timber

Firewood cutting will be administered to increase forage production or to rejuvenate aspen.

1. (G) Whenever possible, treat slash prior to the next grazing season in a manner conducive to forage production.

2. (G) In firewood cutting areas not currently accessed, construct temporary roads to and within the cutting areas to prevent resource damage.

Water and Soils

Apply Forest-wide Standards and Guidelines.

Wildlife and Fish

Wildlife and Fish

Maintain or develop water structures, springs, or seeps when needed to improve water availability, quality, or presence throughout the year.

1. (G) In general, water will be developed where lacking to provide water sources one to three miles apart.

2. (G) Provide escape routes for wildlife to and from water. Incorporate natural terrain and vegetation.

Management Direction	Standards and Guidelines
	3. (G) When necessary, fence the water source from livestock access, piping the water to drinking trough or other receptacle.
	4. (S) Install water structures designed to prevent wildlife from drowning.
	5. (S) Water sources in the Glass Mountain deer herd summer range will be designed to prevent foot rot infection.
	6. (G) Provide for livestock watering devices when water quantity is sufficient or when needed to meet allotment objectives.
	7. (S) Design water sources in the Long Bell area to prevent blue tongue disease.
Structural practices will be applied to improve habitat for consumptive wildlife species.	1. *Mule Deer*
	a. (G) Herbs and shrubs will be managed to provide a vigorous forage base with the diversity of forage species. Forage and cover areas will be developed where they are insufficient, and a mixture of forage and cover areas will be maintained in proper balance.
	2. *Pronghorn*
	a. (G) Manage herbs and shrubs to provide a vigorous forage base with a diversity of forage species. Improve forage conditions where conditions are poor or decadent to favor a variety of grasses, forbs, and shrubs suitable for pronghorn. Manage rangelands with the objective of achieving desired ecological condition which is conducive to pronghorn.
Firewood cutting is permitted to increase forage production by juniper removal; and to rejuvenate aspen stands.	Firewood 1. (G) Firewood cutting will be encouraged on those range sites which can produce an average of at least 300 pounds per acre.
	2. (S) No permits will be issued for personal use of commercial cutting of juniper on deer winter ranges with less than 30% cover.

Management Direction

Develop wetlands using structural and non-structural improvements to improve habitat for Canada geese and mallards. Improvements include dam construction or reconstruction, nest facilities such as islands and platforms, seeding, protection fencing, potholes, ditches, moats, gully plugs, dikes, and waterfowl food planting.

Standards and Guidelines

3. (S) On deer winter ranges, firewood clearcuts will be 20 acres or less. On summer and transition ranges, firewood cutting units will be 40 acres or less.

4. (G) Regenerate aspen and foster regrowth in units smaller than 20 acres.

5. (G) Ensure survival of aspen regeneration by effective livestock management.

6. (G) Reduce fuels in a manner conducive to forage production.

1. (G) Wetlands may exclude livestock grazing. The project environmental analysis will determine site-specific consequences of livestock access to wetland developments.

Rangeland Management with Forage Improvements(Range-Forage) Management Prescription - 11

Description: The primary emphasis is to manage rangeland vegetation, providing for healthy ecosystems and making forage available for use by livestock, wildlife, and wild horse herds. These emphases are achieved through structural and nonstructural wildlife and livestock improvement projects. The vegetation management goal is to provide desired expressions of herbaceous, shrub and forest vegetation according to site potential and resource needs. Resource uses occur to the extent that they do not adversely affect maintenance of the desired vegetation expression. Livestock grazing is permitted and recreation facilities may be located here consistent with Forest-wide Standards and Guidelines.

To achieve vegetation management objectives through livestock grazing, either an extensive or intensive management level is applied to grazing allotments. Under extensive management, cultural practices, such as brush control or firewood cutting, are combined with fencing and water developments to better achieve vegetation management objectives. Cultural practices are also applied to ensure proper forage utilization by livestock and wildlife. Type-conversions and seedings are permitted on allotments under intensive management to increase forage production.

Overall, management activities do not detract from the nearly natural appearance. However, in localized situations changes to the landscape are easily noticed and may attract attention. Recreation opportunities are provided in a roaded, natural-appearing to somewhat modified environment. Off-highway vehicle use is permitted.

Wildlife management indicator species whose preferred habitat is rangeland are maintained or enhanced.

Firewood harvesting is permitted and may be encouraged in some locations. Geothermal, oil and gas, and mineral exploration and development is permitted. Road construction and reconstruction are allowed.

This prescription applies to 291,365 acres distributed within 13 management areas. The size and configuration of the areas vary. Some are large, contiguous areas, while others are isolated, small inclusions.

Management Direction

Air Quality

Apply Forest-wide Standards and Guidelines.

Facilities

Apply Forest-wide Standards and Guidelines for transportation and facilities management and administration.

Lands

Apply Forest-wide Standards and Guidelines.

Minerals

Apply Forest-wide Standards and Guidelines.

Protection

Apply Forest-wide Standards and Guidelines.

Standards and Guidelines

Protection

1. (G) Outside riparian zones, use prescribed burning to improve forage for wildlife and livestock, and to reduce the potential for catastrophic fires.

Management Direction

Range

Manage grazing to maintain desired vegetation expressions and satisfactory ecological condition. Where potential or existing resource conflicts are identified, correct through allotment management plans or annual operating plans.

Range allotment planning and administration of grazing systems, stocking levels, utilization standards, and all range improvement projects will be designed to achieve the objectives stated in the prescription description.

Standards and Guidelines

Range

1. (G) The management objective for all rangelands that are not type-converted is desired vegetation expressions and satisfactory ecological condition as defined below:

Range Condition	Trend	Ecological Condition
Excellent	Static	Satisfactory
Good	Static/Upward	Satisfactory
Fair	Upward/Static	Satisfactory
Fair	Downward	Unsatisfactory
Poor	-	Unsatisfactory
Very Poor	-	Unsatisfactory

2. (G) Forage utilization will not normally exceed levels displayed in the Forest-wide Standards and Guidelines.

3. (S) Utilization is measured on a percent by weight basis by Forest Service personnel in cooperation with grazing permittees and other interested public.

4. (G) *Within pronghorn habitat,* reference Interstate Antelope guidelines for specific grazing standards and guidelines. Generally, graze livestock after mid-May until proper utilization is achieved. Graze wetlands to make forbs available to pronghorn.

5. (G) *Within sage grouse habitat:*

   - Meadows within an eight-mile radius around each active lek will be managed to provide forbs desirable to sage grouse, such as Taraxacum spp., Archillea spp., and Aster spp. Manage for high water table, forbs and hiding cover in meadows.

   - Delay sheep-grazing until June 1.

Management Direction

Standards and Guidelines

6. (G) *Within deer winter range and transition habitat,* allow an annual (July - April) average of no more than 40% utilization of bitterbrush by deer and livestock combined.

   a. (G) Of the 40% total utilization of bitterbrush, on an allotment-by-allotment basis, allow 50% utilization by livestock and 50% utilization by wildlife.

7. (G) Riparian areas will be managed to satisfactory ecological condition through improved livestock distribution and nonstructural and structural improvements.

Extensive Allotments

Extensive Allotments

- Manage grazing with a moderate investment in range improvement construction, allotment planning, permit administration, and monitoring.

1. (G) Maintain existing range improvements and utilize new range improvements as tools to improve distribution and more fully utilize allotment capacity as well as to protect soil, water, or streamside-dependent resources.

2. (G) Use cultural practices, such as brush control or firewood cutting, to achieve vegetation management objectives and to ensure proper forage utilization by livestock and wildlife.

Intensive Allotments

Intensive Allotments

- Manage grazing at a high investment in range improvement construction, allotment planning, permit administration, and monitoring.

1. (G) Combine type-conversions and seedlings as needed with cultural practices (e.g., brush control and firewood cutting) and structural improvements (e.g., fencing and water developments) (1) to better achieve vegetation management objectives, (2) to increase forage production, and (3) to ensure proper forage utilization.

Extensive and Intensive Allotments

Extensive and Intensive Allotments

<u>Nonstructural improvements</u>

Nonstructural improvements

- Vegetation rejuvenation activities, including such practices as prescribed burning, herbicide spraying, chaining, crushing, and masticating, may be used to increase forage production and rejuvenate mature to decadent brush.

1. (G) Cultural practices are restricted to range sites which can produce at least an average of 300 pounds of forage per acre. Low sagebrush sites will not be treated.

2. (G) Temporary fencing may be necessary to protect project areas from livestock and wildlife use.

Management Direction

Standards and Guidelines

3. (G) Maintain or improve forage conditions with emphasis on increasing the variety of vigorous plants available for forage and on providing a mixture of shrub age classes. Priority will be given to areas of decadent shrubs and other poor-condition rangelands. Shrub rejuvenation is the objective, not type-conversion of shrub to grass.

4. (G) All known deer and pronghorn fawning areas will be deferred from manipulation between May 1 and July 15.

5. *Within mule deer habitat:*

   a. (S) On transition and summer ranges, allow maximum manipulation on units no larger than 200 acres. Units < 100 acres are preferred.

   b. (S) On winter ranges, units will not be > 50 acres; units < 25 acres are preferred.

   c. (G) With the exception of prescribed burns, units will be irregular in shape and designed so that they are no more than 600 feet from cover from any point. For example, within a 100-acre unit, leave 5 to 10 islands of cover, ranging in size from 2 to 5 acres.

6. *Within sage grouse habitat:*

   a. (S) Within an eight-mile radius around each lek, rejuvenation projects will not reduce big sagebrush to < 20% canopy cover. When present, sagebrush will be retained up to 100 yards from the edge of riparian areas, meadows, seeps, and springs.

Firewood

Firewood cutting may be used as a nonstructural improvement to increase forage production by juniper removal, and to rejuvenate aspen stands.

1. (S) On juniper sites, if reseeding of native species does not occur during the following growing season, the area may be seeded with non-native forage species. After seeding, temporary fences may be necessary to protect the area from livestock and wildlife use.

2. (G) Firewood cutting will be encouraged on those range sites which can produce an average of at least 300 pounds per acre. Firewood cutting will not be planned for forage improvement on low sagebrush sites.

Management Direction

Standards and Guidelines

3. (G) No personal use or commercial cutting of juniper should be permitted on deer winter ranges with a cover ratio of < 30%.

4. (G) On deer winter ranges, firewood clearcuts should be no more than 20 acres. On summer and transition ranges, firewood cutting units will generally be under 40 acres.

5. (G) Regenerate aspen and foster regrowth in 20-acre units or smaller.

6. (G) Reduce fuels in a manner conducive to forage production.

Type-conversions (cultivated)

Type-conversions (cultivated) consisting of preparing the soil, seeding non-native vegetation, and normally, fertilization are permitted. Cultivation is an accepted form of nonstructural improvement, and substantially increases forage production on a depleted site. Generally, cultivation will be used only on intensive allotments.

1. (S) All cultivated acres will be rested at least one growing season after seeding.

2. (G) Cultivation will be restricted to the following range sites:

   – 12 Loamy, 10-14" ppt

   – 13 Loamy, 14-18" ppt

   – 14 Loamy, 18-25" ppt

3. (G) Cultivated acres will be treated as needed to maintain stand productivity.

4. (G) Generally, monoculture grass seedings will not be done.

5. (S) *Within sage grouse habitat:*

   a. When present, sagebrush will be retained up to 100 yards from the edge of riparian areas, meadows, seeps, and springs.

Management Direction

Structural Improvements

- Construct fences to (1) confine permitted livestock or (2) implement grazing systems which maintain desired vegetation expressions, and provide for uniform livestock distribution and proper forage utilization.
- Contruct water structures (tanks, wells, windmills, springs) to facilitate livestock management and increase forage availability.
- Provide water for wildlife using Standards and Guidelines presented under Wildlife in this prescription.

Recreation

Recreation

Manage for semi-primitive motorized or roaded natural dispersed recreation opportunities as defined in the Forest-wide Standards and Guidelines. See ROS map for specific class.

Permit OHV use subject to restrictions identified on the OHV map.

Cultural Resources

Apply Forest-wide Standards and Guidelines.

Visual Resource

Meet or exceed the adopted visual quality objective of partial retention or modification. Apply Forest-wide Standards and Guidelines for potential visual enhancement or rehabilitation opportunities. Refer to VQO map for specific VQO

Timber

Firewood cutting may be administered to increase forage production or to rejuvenate aspen.

Reference firewood cutting Standards and Guidelines under the Wildlife and Range sections in this prescription.

Standards and Guidelines

Structural Improvements

1. (S) Adhere to fence standards described in the Forest Service Handbook.

2. (G) Schedule maintenance and replacement of structural improvements through allotment management plans and grazing permits.

Recreation

1. (G) When conflicts with deer use occur, prohibit camping within 1/4-mile of water developments. Probable conflict areas are summer and fall ranges for the Glass Mountain deer herd.

Timber

1. (G) Whenever possible, treat slash prior to the next grazing season in a manner conducive to forage production.

2. (G) In firewood cutting areas not currently accessed, construct temporary roads to and within the cutting areas to prevent resource damage.

Management Direction	Standards and Guidelines
Water and Soils	
Apply Forest-wide Standards and Guidelines.	
Wildlife and Fish	Wildlife and Fish
Protect and develop water structures, springs, or seeps when needed to improve water availability, quality, or presence throughout the year.	1. (G) In general, where it is lacking, water will be developed to provide water sources one to three miles apart.
	2. (G) Provide escape routes for wildlife to and from water. Incorporate natural terrain and vegetation.
	3. (G) When necessary, fence the water source from livestock access, piping the water to drinking trough or other receptacle.
	4. (S) Install water structures designed to prevent wildlife from drowning.
	5. (S) Water sources in the Glass Mountain deer herd summer range will be designed to prevent foot rot infection.
	6. (G) Provide livestock watering devices when watering quantity is insufficient or when needed to meet allotment objectives.
	7. (S) Design water sources in the Long Bell area to prevent blue tongue disease.
Nonstructural and structural practices will be applied to improve habitat for consumptive wildlife species.	1. <u>*Mule Deer*</u>
	a. (G) Forbs and shrubs will be managed to provide a vigorous forage base with a diversity of forage species. Forage and cover areas will be developed where they are insufficient, and a mixture of forage and cover areas will be maintained in proper balance.
	b. (G) Manage fawning areas to enhance cover and improve forage where lacking. At least 40% of the vegetative component should be brushfields composed of 25% seedling, 25% young, and 50% old growth age classes. An additional 20% of each fawning area should be composed of dense tree thickets or mature timber with at least 60% can-

Management Direction

Standards and Guidelines

opy closure. Habitat manipulation will maintain high-value forage (forbs and shrubs).

2. *Pronghorn*

   a. (G) Manage forbs and shrubs to provide a vigorous forage base with a diversity of forage species. Improve forage conditions where browse is decadent to favor a variety of grasses, forbs, and shrubs suitable for pronghorn. Manage rangelands with the objective of achieving desired ecological condition which is conducive to pronghorn.

3. *Sage Grouse, Blue Grouse, Canada Goose, and Mallard*

   a. (G) Reference the respective Habitat Capability Models for suitable habitat conditions.

Vegetation rejuvenation activities, including prescribed burning, herbicide spraying, chaining, crushing, masticating, bitterbrush planting, and mahogany cutting, may be used to increase forage production and rejuvenate mature to decadent brush.

1. (G) Rejuvenation activities will be restricted to those range sites which can produce at least 300 pounds of forage per acre, on the average. Generally, low sagebrush sites will not be rejuvenated.

2. (G) Temporary fencing may be necessary to protect project areas from livestock and wildlife use.

3. (G) Maintain or improve forage conditions with emphasis on increasing the variety of vigorous plants available for forage, and on providing a mixture of shrub age classes. Priority will be given to areas of decadent shrubs and other poor-condition rangelands. Shrub rejuvenation is the objective, not type-conversion of shrub to grass. Wildlife habitat improvement projects will emphasize montane shrubs, manzanita, big sagebrush, and Ceanothus spp. vegetation types. In some cases, prescribed burns on bitterbrush may be beneficial.

4. (G) When rejuvenating mahogany stands, leave approximately 50 seed-producing trees per acre and prepare the seedbed (scarify the litter) beneath the seed trees.

5. (G) All known deer and pronghorn fawning areas will be deferred from manipulation between May 1 and July 15.

6. *Within mule deer habitat:*

Management Direction

Standards and Guidelines

a. (S) On transition and summer ranges allow maximum manipulation on units no larger than 200 acres. Units that are not more than 100 acres are preferred.

b. (S) On winter ranges, units will not be larger than 50 acres; units < 25 acres are preferred.

c. (G) With the exception of prescribed burns, units will be irregular in shape and designed so that they are no more than 600 feet from cover from any point. For example, within a 100-acre unit, leave 5 to 10 islands of cover, ranging in size from 2 to 5 acres.

7. *Within sage grouse habitat:*

a. (S) Within an eight-mile radius around each lek, rejuvenation projects will not reduce big sagebrush to <20% canopy cover. When present, sagebrush will be retained up to 100 yards from the edge of riparian areas, meadows, seeps, and springs.

Firewood

Firewood cutting is permitted to increase forage production by juniper removal, and to rejuvenate aspen and selected and marked mahogany stands.

1. (G) On juniper sites, if reseeding of native species does not occur during the following growing season, the area may be seeded with non-native forage species. After seeding, temporary fencing may be necessary to protect the area from livestock and wildlife use.

2. (G) Firewood cutting will be encouraged on those range sites which can produce at least 300 pounds of forage per acre, on the average. Firewood cutting will be planned for forage improvement on low sagebrush sites.

3. (G) No permits should be issued for personal use or commercial cutting of juniper on deer winter ranges with less than 30% cover.

4. (G) On deer winter ranges, firewood clearcuts should be 20 acres or less. On summer and transition ranges, firewood clearcuts should be 40 acres or less.

5. (G) Regenerate aspen and foster regrowth in units 20 acres or smaller.

6. (G) Fuels reduction will be done in a manner conducive to forage production.

Management Direction

Fertilization may be selectively applied on key deer winter and spring foraging areas to improve forage production. Applications will be three- to five-year intervals.

Wetlands will be developed using structural and non-structural improvements to improve habitat for Canada geese and mallards. Improvements include dam reconstruction, nest facilities such as islands and platforms, seeding, protection fencing, potholes, ditches, moats, gully plugs, dikes, and waterfowl food planting.

Apply Forest-wide Standards and Guidelines for Fish.

Standards and Guidelines

wetlands

1. (G) Selected wetlands may exclude livestock grazing. The project environmental analysis will determine site-specific consequences of livestock access to wetland developments.

Even-Age Timber Management Prescription - 12

Description: Manage timber stands to emphasize a scheduled production of sawlogs and miscellaneous wood products, utilizing state-of-the-art technology. Use even-age silvicultural systems on timberlands growing > 20 cubic feet per acre per year. The landscape appears nearly natural or modified. Dispersed recreation opportunities are in a roaded, natural-appearing, but modified environment. Off-highway vehicle use is permitted. In general, wildlife management indicator species are maintained but none are favored. Livestock grazing is permitted if forage is available and managed in a manner consistent with timber management objectives. Wildlife habitat improvement work is permitted, but subordinate to timber management objectives. Firewood harvesting is permitted. Geothermal, oil, gas, and mineral exploration and development is also permitted. Road construction and reconstruction occur in support of timber production.

This prescription applies to 145,859 acres distributed within 18 management areas. The size and configuration of the areas vary. Some are large, contiguous areas, while others are isolated, small inclusions.

Management Direction

Air Quality

Apply Forest-wide Standards and Guidelines.

Facilities

Apply Forest-wide Standards and Guidelines.

Lands

Apply Forest-wide Standards and Guidelines.

Minerals

Apply Forest-wide Standards and Guidelines.

Protection

Apply Forest-wide Standards and Guidelines.

Range

Permit and regulate livestock grazing.

Standards and Guidelines

Range

1. (G) As forage is available on suitable timberlands, utilize on a temporary basis.

2. (G) Regulated livestock grazing in plantations will be encouraged when it contributes to or accomplishes plantation cultural objectives. Salt should not be placed in plantations.

   a. Avoid grazing during tree shoot elongation.

   b. Minimize soil compaction and erosion hazards.

   c. Remove livestock before forage is dry.

Management Direction

All range improvement projects will be compatible with the timber and visual character objectives of this prescription.

Recreation

Recreation

Manage for roaded natural dispersed recreation opportunities as defined in the Forest-wide Standards and Guidelines. Refer to ROS map for specific class.

Permit OHV use subject to restrictions identified on the OHV map.

Cultural Resources

Apply Forest-wide Standards and Guidelines.

Visual Resource

– Meet or exceed the visual quality objective of partial retention or modification. Apply Forest-wide Standards and Guidelines for visual enhancement and rehabilitation. Refer to VQO map for specific VQO

Timber

Manage timber intensively, utilizing all silvicultural practices and logging systems, as listed in Forest-wide Standards and Guidelines.

Standards and Guidelines

Timber

1. (S) Size of openings will be from 5 to 40 acres, except in the case of catastrophic occurrences or on a specific timber sale after 60 days public notice and review by the Regional Forester.

2. (G) When utilizing the shelterwood system, harvest of seed trees will generally occur in the decade after the seed-step cut. (Shelterwood will generally not occur on slopes over 40%.)

3. (G) Overstory removal will occur if sufficient releasable understory will remain after harvest.

4. (G) On soils identified as low in regeneration potential, activities which will favorably modify the microclimate to help ensure plantation success will be planned. Such activities may include shelterwood-cutting and shade-cast devices for seedlings.

5. (G) On soils identified as having a potential for mass-wasting, harvesting activities and road-work will be designed to reduce the risk.

Management Direction

Standards and Guidelines

6. (S) Monitor water quality as necessary to determine baseline conditions and effects from timber management activities.

When fuels are treated, treatment will be to a preplanned condition in a manner that meets timber management objectives, providing site preparation or stand release as well as reduced fire risk.

1. (G) Priority will be given to treatments for which net value change is maximized.

2. (G) Fuel treatments may be modified to meet other resource objectives.

3. (G) Encourage use of wood residue where it does not conflict with other resource needs.

Convert non-stocked suitable timberlands to conifer plantations, using appropriate means of site preparation.

Coordinate timber sale and firewood cutting through the timber sale planning process. Commercial firewood sales and personal use cutting outside timber sale boundaries are permitted subject to Forest and district policies.

Water and Soils

Apply Forest-wide Standards and Guidelines.

Wildlife and Fish

Wildlife and Fish

Wildlife coordination efforts and all habitat improvement projects will be compatible with the timber objectives of this prescription.

1. (G) As needed, protect seedlings from animal damage.

Apply Forest-wide Standards and Guidelines.

This page intentionally left blank.

Timber Management with Partial Retention Visual Quality (Timber-Visuals) Management Prescription - 13

Description: Manage for a nearly natural-appearing landscape using even-age and uneven-age silvicultural systems on all timberlands growing >20 cubic feet per acre per year. All management activities are subordinate to maintaining the visual quality objective of partial retention. All aspects of dispersed recreation activities in a roaded, nearly natural-appearing environment are accommodated. Off-highway vehicle use is permitted. Late seral stage wildlife management indicator species are favored under this prescription. Wildlife habitat improvement may occur if compatible with visual and timber management objectives. Livestock grazing is permitted if forage is available. Firewood harvesting may occur. Geothermal, oil, gas, and mineral exploration and development is permitted, but special surface stipulations may be required to ensure that development is compatible with visual objectives. Road construction and reconstruction are permitted.

This prescription applies to 66,835 acres distributed within 15 management areas. The size and configuration of the areas vary. Some are large, contiguous areas, while others are isolated, small inclusions.

Management Direction

Air Quality

Apply Forest-wide Standards and Guidelines.

Facilities

Apply Forest-wide Standards and Guidelines.

Lands

Apply Forest-wide Standards and Guidelines.

Minerals

Apply Forest-wide Standards and Guidelines.

Protection

Apply Forest-wide Standards and Guidelines.

Range

Permit and regulate livestock grazing.

Standards and Guidelines

Range

1. (G) As forage is available on suitable timberlands utilize on a temporary basis.

2. (G) Livestock grazing in plantations will be encouraged when use is controlled and does not retard tree growth.

   a. Avoid grazing during tree shoot elongation.

   b. Minimize soil compaction and erosion hazards.

Management Direction

Standards and Guidelines

c. Remove livestock before forage is dry.

All range improvement projects will be designed to be compatible with timber and other resource objectives of this prescription.

Recreation

Recreation

Manage for semi-primitive motorized or roaded natural dispersed recreation opportunities, as defined in the Forest-wide Standards and Guidelines. Refer to ROS map for specific class.

1. (G) Apply this prescription to popular dispersed recreation sites and their immediate surroundings. Special consideration will be given to the needs and values of the site when other management activities are planned and implemented nearby.

Permit OHV use subject to restrictions identified on the OHV map.

Cultural Resources

Apply Forest-wide Standards and Guidelines.

Visual Resource

Meet or exceed the visual quality objective of partial retention. Apply Forest-wide Standards and Guidelines for visual enhancement and rehabilitation. Refer to VQO map for specific VQO

1. (G) As needed, protect seedlings from deer damage.

Timber

Timber

Manage the timber resource to provide timber outputs while maintaining the visual character and allowing for semi-primitive recreation experiences. Utilize silvicultural practices and logging systems listed in Forest-wide Standards and Guidelines.

1. (G) Rotation lengths will generally be longer than under intensive timber management to meet VQOs.

2. (S) Size of openings will generally be a maximum of 20 acres, except in the case of catastrophic occurrences.

3. (G) Shelterwood-cutting will be emphasized over clearcutting where appropriate. Harvest of seed trees will generally occur in the decade after the seed-step cut.

4. (G) Overstory removal will only occur if sufficient releasable understory will remain after harvest.

Management Direction

Standards and Guidelines

5. (G) On soils identified as low in regeneration potential, activities which will favorably modify the microclimate to help ensure plantation success will be considered. Such activities may include shelterwood-cutting and shade-casting devices for seedlings.

6. (G) On areas with a potential for mass-wasting, harvesting activities and road work will be designed to reduce the risk.

7. (S) Monitor water quality as necessary to determine baseline conditions and effects from timber management activities.

When fuels are treated, treatment will be to a preplanned condition in a manner that meets timber and other resource objectives. Encourage utilization of wood residue.

1. Activity Fuels

   a. (G) Priority will be given to treatments for which net value change is maximized.

   b. (G) Fuel treatments may be modified to meet other resource objectives.

Non-stocked lands (brush fields) may be reforested, rejuvenated, or not treated, depending on site characteristics, treatment of adjacent areas, and funding.

Coordinate timber sales and firewood cutting through the timber sale planning process. Commercial firewood sales and personal use cutting outside timber sale boundaries are permitted subject to Forest and district policies.

Water and Soils

Apply Forest-wide Standards and Guidelines.

Wildlife and Fish

Wildlife coordination efforts and habitat improvement projects will be compatible with timber and visual objectives of this prescription.

Apply Forest-wide Standards and Guidelines.

This page intentionally left blank.

Timber Management with Forage Production (Timber-Forage) Management Prescription - 14

Description: Manage timberlands to provide both sawtimber and forage outputs. Less than full yields of timber are expected under this prescription. Livestock and wildlife forage production is given equal emphasis with timber. Provide suitable habitat for mule deer, balancing forage and cover requirements with seasonal habitat needs. Management activities bring changes to the landscape ranging from nearly natural to modified. Recreation opportunities are provided in a near natural-appearing or modified environment. Off-highway vehicle use is permitted, but seasonally restricted. Wildlife management indicator species preferring early seral stage forest habitat, such as deer, are favored. Wildlife habitat improvement projects are permitted. Livestock grazing is permitted, as are range improvement projects. Even-aged timber management is applied, resulting in a scheduled harvest. Firewood cutting is allowed. Geothermal, oil, gas, and mineral exploration and development are permitted. Road construction and reconstruction occur in support of timber and forage production.

This prescription applies to 110,291 acres distributed within 9 management areas. The size and configuration of the areas vary. Some are large, contiguous areas, while others are isolated, small inclusions.

Management Direction

Air Quality

Apply Forest-wide Standards and Guidelines.

Facilities

Apply Forest-wide Standards and Guidelines.

Lands

Apply Forest-wide Standards and Guidelines.

Minerals

Apply Forest-wide Standards and Guidelines.

Protection

Apply Forest-wide Standards and Guidelines.

Range

Range allotment planning and administration of grazing systems, stocking levels, utilization standards, and all range improvement projects will be compatible with the livestock forage allocation in the allotment.

Standards and Guidelines

Range

1. (G) Outside riparian zones use controlled burning to improve forage for wildlife and livestock, and to reduce the potential for catastrophic fires.

2. (G) Forage utilization will not normally exceed levels which provide sufficient herbage residue of key forage species to ensure good plant vigor, adequate plant

Management Direction	Standards and Guidelines
	reproduction, favorable range trend, and good watershed conditions.
	3. (G) Within deer winter range and transition habitat, allow an annual (July - April) average of no more than 40% utilization of bitterbrush by livestock and deer combined.
	a. (G) Of the 40% total utilization of bitterbrush, on an allotment-by-allotment basis, allow 50% utilization by livestock and 50% utilization by wildlife.
Vegetation rejuvenation activities, including such practices as prescribed burning, herbicide spraying, chaining, crushing, and masticating, may be used to increase forage production and rejuvenate mature to decadent brush.	4. (G) Livestock grazing in plantations will be encouraged when use is controlled and does not retard tree growth. Salt should not be placed in plantations.
	a. Avoid grazing during tree shoot elongation.
	b. Minimize soil compaction and erosion hazards.
	c. Remove livestock before forage is dry.
Structural Improvements	
– Construct fences to control allotment boundaries or to develop grazing systems in order to provide uniform livestock distribution and proper utilization of forage species and to meet specific objectives in allotment management plans.	1. (S) Adhere to fence standards described in the Modoc Supplement to the Forest Service Handbook.
– Construct water structures (tanks, wells, windmills, springs) to facilitate livestock and wildlife management and increase forage availability.	2. (G) To a protect water source from degradation, fence the water source from livestock access, piping the water to a drinking trough or other suitable waterholding device.
	3. (G) Install water structures designed to prevent wildlife from drowning.
– Schedule maintenance and replacement of structural improvements.	

Management Direction

Standards and Guidelines

Recreation

Recreation

Manage for semi-primitive motorized or roaded natural dispersed recreation opportunities as defined in the Forest-wide Standards and Guidelines. Refer to ROS map for specific class. Refer to OHV map to locate areas of seasonal closure.

Cultural Resources

Apply Forest-wide Standards and Guidelines.

Visual Resource

Meet or exceed the adopted visual quality objectives of partial retention or modification. Apply Forest-wide Standards and Guidelines for visual enhancement or rehabilitations opportunities. Refer to VQO map for specific VQO

1. (G) When conflicts with deer use occur, prohibit camping by signing within 1/4-mile of water developments. Probable conflict areas are summer and fall ranges for the Glass Mountain deer herd.

Timber

In *ponderosa pine* stands on slopes that are < 40%, manage for a sustained yield of wood products and forage for livestock and wildlife. Local field experience indicates that the ponderosa pine/bitterbrush plant community is difficult to perpetuate under normal timber management practices. For the next decade, a variety of regeneration practices will be tested to meet the dual objectives of (1) maintaining an understory of bitterbrush and associated vegetation, primarily for fall range, and (2) providing a regulated but reduced yield of timber.

In *all other conifer* types on slopes < 40%, manage the stands to:

– maintain a suitable understory of shrubs, grasses, and forbs desirable to deer and livestock, and provide a sustained yield of timber, although not at full yield.

Timber

1. **Harvest**

a. (S) Final harvest openings will generally be 5 to 20 acres on the summer and transition ranges, and 5 to 10 acres on the winter range.

b. (G) Where opportunities exist in harvest units, provide hiding cover for deer along roads; adjacent to meadows; and within migration routes,

Management Direction

Standards and Guidelines

fawning areas, and holding areas. Opportunities include using advanced tree reproduction, brush, and terrain.

c. (G) Regeneration openings are considered openings until:

— tree heights average 20 feet; and useable forage produced meets or exceeds the following:

Eastside pine	150 lbs/ac/yr
Eastside pine/bitterbrush	175 lbs/ac/yr
Mixed conifer	100 lbs/ac/yr
Lodgepole pine	68 lbs/ac/yr
Red fir	250 lbs/ac/yr

All cut units will have adjacent logical leave-units.

2. (G) **Site Preparation**

a. *Option 1* - Manage areas equally but apparently for wood and forage production. Project design may include alternating strips of trees and preferred brush (see below) or blocks of trees and blocks of preferred brush. Any method of site prep may be used on the areas managed for wood production. (This option is referred to as the "50:50" option.)

b. *Option 2* - Site preparation is modified to the extent that some existing ground vegetation will remain and recover within the stand. (This option is most appropriate in stands with vigorous young to mature shrub plants.) Site preparation practices may include:

— disk (single pass is preferred to multiple passes)

— masticate

— brushrake and burn (teeth will not be sunk into ground more than six inches)

— windrow/pile and burn

— herbicide application at lowest recommended rates

Management Direction

Standards and Guidelines

(This is the "modified site prep" option.)

c. *Option 3* - Site preparation is not restricted; bitterbrush will be spring-seeded in conjunction with tree-planting. (This is the "seeding" option.)

d. *Option 4* - Any other method which provides preferred brush species and meets forage production objectives.

Preferred Brush Species - The objective is to provide as diverse a mix of browse as possible.

Serviceberry	(Amelanchier sp.)
Manzanita*	(Arctostaphylos sp.)
Curlleaf mahogany	(Cercocarpus ledifolius)
Prostrate ceanothus	(Ceanothus prostratus)
Snowbrush	(Ceanothus velutinus)
Bittercherry, Chokecherry	(Prunus sp.)
Bitterbrush	(Purshia tridentata)
Currant, Gooseberry*	(Ribes sp.)
Rose	(Rosa sp.)
Snowberry	(Symphoricarpos sp.)

***These species should not dominate the site, but may be part of the species mix.**

Forage Production Objectives (Useable)

Eastside pine	150 lbs/ac/yr
Eastside pine/bitterbrush	175 lbs/ac/yr
Mixed conifer	100 lbs/ac/yr
Lodgepole pine	68 lbs/ac/yr
Red fir	250 lbs/ac/yr

e. *Eastside Pine/Bitterbrush*

– The objective will be to achieve a density of at least 700 plants per acre (primarily bitterbrush and snowberry) within five years after site preparation. Cultural treatments will be aimed at achieving this objective by using any of the above options. All options will be attempted in the first decade of Plan implementation.

f. *All Other Conifer Types*

– As described above, apply Option 1, 2, or 4. All options will be attempted in the first decade of Plan implementation.

Management Direction

Standards and Guidelines

3. (S) **Planting**

   a. Ponderosa Pine/Bitterbrush

      When using Site Preparation Option 1:

      - Plant alternate strips at densities no greater than 680 stems per acre (8' x 8' spacing) or blocks with 435 stems per acre (10' x 10' spacing).

      When using Site Preparation Option 2:

      - Option a: Plant 225 stems per acre (14' x 14' spacing).
      - Option b: Plant at densities no greater than 680 stems per acre (8' x 8' spacing); lower densities are preferred, but uniform spacing and number of surviving trees are important to plantation certification. Weed trees to 225 stems per acre within one year of plantation certification, generally the 5th to 6th year after planting.

      When using Site Preparation Option 3:

      - Plant 225 stems per acre (14' x 14' spacing).

      When using Site Preparation Option 4:

      - Plant in accordance with site preparation, and weed if necessary, to achieve 225 stems per acre (14' x 14' spacing) within one year after plantation certification.

   b. Other Timber Stands

      – On winter range, plant 435 stems per acre (10' x 10' spacing). On summer and transition ranges, either plant 225 or plant 435 stems per acre and weed to 225 stems per acre after plantation certification.

4. (G) **Release**

   a. No release treatments are allowed on bitterbrush, except shredding bitterbrush to 18-24 inches high (which is designed to retard growth and allow for resprouting). Chemical release treatments are allowed on other broadleaf vegetation, with the ob-

Management Direction

Standards and Guidelines

jective of relieving trees of competition while maintaining moderate levels of brush.

b. Ground application of herbicides on timbered areas of the 50:50 option may be undertaken where this release treatment will not affect adjacent bitterbrush areas.

c. Apply chemicals to control grasses if needed for tree and bitterbrush survival.

5. (G) **Precommercial Thinning**

a. On suitable timberlands needed for cover acres, do not precommercial thin.

b. On suitable timberlands selected as forage areas, thinning is allowed.

c. On timbered areas receiving the 50:50 site preparation option, reduce stocking levels so that the average DBH will be 13 inches in 65 years (estimate: 100 stems per acre).

d. Thinning will generally occur when the trees are 15 years old (DBH no greater than 4.5 inches). Treat slash as directed in the Forest-wide Standards and Guidelines.

6. (G) **Commercial Thinning**

a. Thinning is designed to reduce stocking levels to a selected basal area, as described in the Timber section of the Forest-wide Standards and Guidelines, but not to capture mortality.

b. Thinning will generally occur on a 20-year cutting cycle when required.

7. **Roads**

a. (G) Where possible, locate roads and trails away from fawning and kidding areas, migration routes, and transition ranges. Otherwise:

– To reduce harassment to deer, restrict motorized access on fall and winter deer ranges, and within fawning areas; or obliterate roads after the completion of timber harvest, where feasible.

Management Direction

Standards and Guidelines

b. (G) No more than five miles of road per section will be constructed. No more than 2.5 miles per section will be left open for access after timber harvest in designated areas.

When fuels are treated, treatment will be to a preplanned condition in a manner that meets forage objectives.

1. **Activity Fuels**

a. (G) Priority will be given to treatments for which net value change is maximized.

b. (G) On summer range, treat approximately 50% of stands within one-half mile of water by lopping and scattering. Elsewhere, treat activity fuels while maintaining at least as much dead and down material as listed in Forest-wide Standards and Guidelines. Fuelbreaks will have irregular shapes to enhance edge. Non-stocked suitable timberlands (brushfields) will receive rejuvenation treatment: in most cases, prescribed burns.

Reforestation after wildfires will follow the objectives of this prescription on acres to which it is applied.

Coordinate timber sales and firewood cutting through the timber sale planning process. Commercial firewood sales and personal use cutting outside timber sale boundaries are permitted subject to Forest and district policies.

Water and Soils

Apply Forest-wide Standards and Guidelines.

Wildlife and Fish

Wildlife and Fish

Apply Forest-wide Standards and Guidelines for fish.

1. (G) Protect and develop water structures, springs, or seeps when needed to improve water availability, quality, or presence throughout the year.

2. (G) In general, water will be developed where lacking to provide water sources one to three miles apart.

3. (G) Provide escape routes for wildlife to and from water. Maintain natural terrain and vegetation.

4. (G) When necessary, fence the water source, piping the water to a drinking trough or other receptacle.

5. (G) Install water structures designed to prevent wildlife from drowning.

Management Direction

Non-structural and structural practices will be applied to improve habitat for wildlife species.

Standards and Guidelines

6. (S) Water sources in the Glass Mountain deer herd summer range will be designed to prevent foot rot infection.

7. (S) Design water sources in the Long Bell area to prevent the spread of blue tongue disease.

1. **Mule Deer**

   a. (G) Forbs and shrubs will be managed to provide a vigorous forage base with a diversity of forage species. Forage conditions will be improved where conditions are poor or decadent. Forage and cover areas will be developed where they are insufficient or lacking, and a mixture of forage and cover areas will be maintained in proper balance, as outlined in the Wildlife section of Forest-wide Standards and Guidelines.

   b. (G) Manage fawning areas to enhance cover and improve forage, where lacking. At least 40% of the vegetative component should be brushfields composed of 25% seedling, 25% young, and 50% mature or decadent age classes. An additional 20% of each fawning area should be composed of dense tree thickets or mature timber with at least 60% canopy closure. Habitat manipulation will maintain high-value forage (forbs and shrubs).

This page intentionally left blank.

Uneven-aged Timber Management Prescription - 15

Description: Manage timber stands to emphasize a scheduled production of sawlogs and miscellaneous wood products, utilizing state-of-the-art technology. Use uneven-age silvicultural systems on timberlands growing > 20 cubic feet per acre per year. The visual landscape may be modified at some locations. However, this prescription may be applied to achieve a modified, nearly natural, or natural-appearing landscape in special situations, however. Dispersed recreation opportunities are in a roaded environment. Off-highway vehicle use is permitted. In general, wildlife management indicator species are maintained, but none are favored. Livestock grazing is permitted and managed in a manner consistent with timber management objectives. Wildlife habitat improvement work is permitted, but subordinate to timber management objectives. Firewood harvesting is permitted. Geothermal, oil, gas, and mineral exploration and development are also permitted. Road construction and reconstruction occur in support of timber production.

This prescription applies to to one timber compartment on each ranger district and totals 17,114 acres distributed within four management areas. The size and configuration of the areas vary. Some are large, contiguous areas, while others are isolated, small inclusions.

Management Direction

Air Quality

Apply Forest-wide Standards and Guidelines.

Facilities

Apply Forest-wide Standards and Guidelines.

Lands

Apply Forest-wide Standards and Guidelines.

Minerals

Apply Forest-wide Standards and Guidelines.

Protection

Apply Forest-wide Standards and Guidelines.

Range

Permit and regulate livestock grazing.

Standards and Guidelines

Range

1. (G) Livestock grazing will be encouraged when use is controlled and does not retard tree growth.
   a. Avoid grazing during tree shoot elongation.
   b. Minimize soil compaction and erosion hazards.
   c. Remove livestock before forage is dry.

Management Direction

All range improvement projects will be compatible with or complementary to the timber and visual character objectives of the prescription.

Recreation

Recreation

Manage for semi-primitive motorized or roaded natural dispersed recreation opportunities as defined in the Forest-wide Standards and Guidelines. Refer to ROS map for specific class.

Permit OHV use subject to restrictions identified on the OHV map.

Cultural Resources

Apply Forest-wide Standards and Guidelines.

Visual Resource

Meet or exceed the adopted visual quality objective of modification, retention, or partial retention. Apply Forest-wide Standards and Guidelines for visual enhancement and rehabilitation. Refer to VQO map for specific VQO

Timber

Manage timber intensively, utilizing uneven-aged silvicultural practices and logging systems.

Standards and Guidelines

Recreation

1. (G) This prescription may be applied to popular dispersed recreation sites and their immediate surroundings. It may also be applied to meet partial retention visual quality objectives where other prescriptions cannot meet them.

Timber

1. (S) Size of openings will be 2 acres or less, except in the case of catastrophic occurrences.

2. (G) On areas identified as low in regeneration potential, activities which will favorably modify the microclimate to help ensure plantation success will be planned. Such activities may include shade-cast devices for seedlings, and retention of slash or organic matter.

3. (G) On soils identified as having a potential for mass-wasting, harvesting activities and road work will be designed to reduce the risk.

4. (S) Monitor water quality as necessary to determine baseline conditions and effects from timber management activities.

Management Direction

Standards and Guidelines

5. (S) The silvicultural method which will be employed to create an uneven-aged forest will be group selection or single-tree selection.

When fuels are treated, treatment will be to a preplanned condition in a manner that meets timber management objectives, providing site preparation or stand release as well as reduced fire risk.

1. Activity Fuels

   a. (G) Priority will be given to treatments for which net value change is maximized.

   b. (G) Fuel treatments may be modified to meet other resource objectives.

   c. (G) Encourage use of wood residue where it does not conflict with other resource needs..

Convert non-stocked suitable timberlands to conifer plantations, using appropriate means of site preparation.

Coordinate timber sales and firewood cutting through the timber sale planning process. Commercial firewood sales and personal use cutting outside timber sale boundaries are permitted subject to Forest and district policies.

Water and Soils

Apply Forest-wide Standards and Guidelines.

Wildlife and Fish

Wildlife and Fish

Wildlife coordination efforts and all habitat improvement projects will be compatible with the timber objectives of this prescription.

1. (G) As needed, protect seedlings from deer damage.

Apply Forest-wide Standards and Guidelines.

This page intentionally left blank.

Timber Management on Low Productivity Lands (< 20 Timber) Prescription - 16

Description: Manage timber stands on an opportunity basis, rather than for maximum timber production. Silvicultural systems rely on natural regeneration. Dispersed recreation opportunities are in a roaded and modified or nearly natural-appearing environment. Off-highway vehicle use is permitted. In general, wildlife management indicator species are maintained, but none are favored. Livestock grazing is permitted. Wildlife habitat improvement work is permitted, but subordinate to timber management objectives. Firewood harvesting is permitted. Geothermal, oil, gas, and mineral exploration and development are also permitted.

This prescription applies to 142,117 acres distributed within 20 management areas. The size and configuration of the areas vary. Some are large, contiguous areas, while others are isolated, small inclusions.

Management Direction

Air Quality

Apply Forest-wide Standards and Guidelines.

Facilities

Apply Forest-wide Standards and Guidelines.

Lands

Apply Forest-wide Standards and Guidelines.

Minerals

Apply Forest-wide Standards and Guidelines.

Protection

Apply Forest-wide Standards and Guidelines.

Range

Permit and regulate livestock grazing.

Standards and Guidelines

Range

1. (G) Livestock grazing in plantations will be encouraged when use is controlled and does not retard tree growth.

   a. Avoid grazing during tree shoot elongation.

   b. Minimize soil compaction and erosion hazards.

   c. Remove livestock before forage is dry.

Management Direction

All range improvement projects will be designed to be compatible with or complementary to the timber and visual character objectives of this prescription.

Recreation

Recreation

Manage for semi-primitive motorized or roaded natural dispersed recreation opportunities as defined in the Forest-wide Standards and Guidelines. Refer to ROS map for specific class.

Permit OHV use subject to restrictions identified on the OHV map.

Cultural Resources

Apply Forest-wide Standards and Guidelines.

Visual Resource

Meet or exceed the visual quality objective of partial retention or modification. Apply Forest-wide Standards and Guidelines for visual enhancement and rehabilitation. Refer to VQO map.

Timber

Timber will be harvested on an opportunity basis. When possible, harvesting will be scheduled as part of timber sales on more productive lands but may be conducted separately. Low productivity lands will not be managed for maximum timber production or regeneration by clearcut. Timber will be harvested only when standards for snags and diversity have been met, and when an adequately stocked understory exists or enough overstory trees are retained to provide a seed source for regeneration by the shelterwood method.

Firewood cutting areas may be designated.

When fuels are treated, treatment will be to a preplanned condition in a manner that meets timber management objectives, as well as reduced fire risk.

Standards and Guidelines

Timber

1. (S) Monitor water quality as necessary to determine baseline conditions and effects from timber management activities.

1. Activity Fuels

   a. (G) Priority will be given to treatments for which net value change is maximized.

   b. (G) Fuel treatments may be modified to meet other resource objectives.

Management Direction	Standards and Guidelines
	2. (G) Encourage use of wood residue where it does not conflict with other resource needs.
Water and Soils	
Apply Forest-wide Standards and Guidelines.	
Wildlife and Fish	Wildlife and Fish
Wildlife coordination efforts and all habitat improvement projects will be compatible with the timber objectives of this prescription.	1. (G) As needed, protect seedlings from animal damage.
Apply Forest-wide Standards and Guidelines.	

This page intentionally left blank.

Description: The primary emphasis is to protect and enhance riparian-dependent resources (water, fish, wildlife, and vegetation) while utilizing the habitat for non-dependent resources (timber, range, recreation) when possible. The vegetative management goal is to manage for desired expressions of herbaceous, shrub, and forest riparian vegetation, according to site potential and resource needs. Stream channel stabilization is essential to meeting these objectives. Resource uses and activities in riparian areas will occur to the extent that they do not adversely affect the maintenance of the riparian area-dependent resources. New developed recreation facilities are not located here when viable alternatives exist. Boat ramps, beaches, trails, etc., may be developed when appropriate. Off-highway vehicle use is restricted. All wildlife management indicator species are favored in general, but particularly those dependent on riparian areas. Wildlife and fish habitat improvement is permitted. Livestock grazing is permitted. Timber yields will be reduced under selection harvesting. Firewood cutting is permitted. The area is open to geothermal, oil, gas, and mineral exploration and development with conditional surface occupancy stipulations. Roads and trails are allowed, but limited.

This prescription applies to geographically delineable areas with distinctive resource values and characteristics that are comprised of aquatic and riparian ecosystems. The aquatic ecosystem includes the stream channel, lake bed and water, biotic communities, and habitat features that occur therein. The riparian ecosystem includes the aquatic ecosystem as well as the transition between the aquatic ecosystem and the adjacent terrestrial ecosystem, and is identified by soil characteristics or distinctive vegetation communities that require free or unbound water. These are descriptive of such areas as streamside management zones (SMZs), as well as lakes, perennial reservoirs, meadows, seeps, springs, and 100 feet adjacent to each. (These areas will be identified and managed at the project level, such as allotment management plans, timber sales, etc.)

This prescription applies to 9,274 acres distributed within 14 management areas. The size and configuration of the areas vary. Some are large, contiguous areas, while others are isolated, small inclusions.

Management Direction

Air Quality

Apply Forest-wide Standards and Guidelines.

Facilities

In addition to applying Forest-wide Standards and Guidelines for management of system roads and facilities, avoid water quality problems and riparian impacts from roads, trails, and associated stream crossings.

Standards and Guidelines

Facilities

1. (G) When possible, undertake construction and other work on facilities when probabilities of rain or runoff are low. Minimize the time that an area's soil surface is disturbed and unvegetated, surfaced or otherwise treated.

2. (S) Minimize sediment production and mass-wasting during pioneer road construction.

3. (G) When roads or stream crossings are incomplete and construction must be shut down at the end of the normal operating season, undertake the following measures as necessary to prevent erosion or water quality degradation:

Management Direction

Standards and Guidelines

a. Remove temporary culverts, diversion dams, and elevated causeways.

b. Install temporary culverts, side drains, energy dissipators, sediment basins, etc.

c. Remove debris and spoil material from channels; seed and mulch disturbed land areas.

4. (S) Prohibit equipment servicing and refueling within riparian areas.

5. (S) Prohibit road construction related activities in riparian areas, except at designated crossings.

6. (S) All excavation on perennial streams and potable water sources will meet State water quality objectives.

7. (S) Material deposited within SMZs from foundation or other excavation will not be discharged directly into or placed where it can enter live streams.

8. (S) If the channel is damaged during construction, it will be restored to its natural condition, as nearly as possible and as soon as possible.

9. (S) When projects take place within the stream channel, the site will be dewatered temporarily if State water quality objectives would not be met.

10. (S) Stream crossings on permanent and temporary roads will be constructed to avoid damage to streams which may preclude fish passage.

a. Crossings will be as near a right angle as possible.

b. In excavating fittings and abutments, care shall be taken to avoid stream damage and sedimentation.

c. Toes of fills at stream crossings will be stabilized to an elevation above the high water mark.

11. (S) During bridge and culvert installation:

a. Place excavated material away from live streams.

b. Remove materials stocked on floodplains prior to high water.

Management Direction	Standards and Guidelines
	12.(S) Streamside gravel borrow will only be removed above the water table and when resource damage will not occur.
	13.(S) Construction debris within SMZs will be removed unless site-specific environmental analysis indicates retaining debris is needed to meet resource objectives.
	14.(G) Refer to *Fish Migration and Fish Passage,* R-5, June 1980, and *Planning Forest Roads to Protect Salmon Habitat,* PNW-109, June 1980, before installing fish passage improvements.
Lands	
Apply Forest-wide Standards and Guidelines.	
Minerals	Minerals
Apply Forest-wide Standards and Guidelines. In addition, apply special stipulations as needed.	1. (S) Existing water in ponds, lakes, reservoirs, springs, creeks or streams is not available for use in leasable and saleable mineral development unless specifically permitted by the Forest Supervisor, except when the leasee has water rights or the authorized use of such water rights. Access for wildlife watering at all natural water sources appropriated for operations uses will be provided. No surface disturbance is allowed within riparian areas, ponds, springs, wet meadows or other water sources unless specifically permitted by the Forest Supervisor for leasable and saleable mineral activities. Locatable mineral development will have mitigating measures incorporated into approved operating plans to protect riparian areas and water quality.
	2. (S)Stipulations for the protection of specific water sources will be developed and imposed at the permit stage.
Protection	
Fire and Fuels	
Apply Forest-wide Standards and Guidelines.	

Management Direction

Range

Manage grazing to protect riparian-dependent resources. Where potential or existing resource conflicts are identified, correct through the allotment management plan (AMP) or annual operating plan.

Standards and Guidelines

Range

1. (S) The revised allotment management plan prescription will become the standards for the AMP based on site-specific data. AMP standards may deviate from the following guidelines to reflect site-specific conditions and objectives.

2. (G)Use the following guidelines in developing utilization standards in AMPs:

Grazing Management System Stubble Height Levels[1] /Utilization[2]

Riparian Priorities [3]	Season-Long		Deferred		Rest-Rotation		Early Season with Regrowth	
	Herbaceous[4]	Shrubs[5]	Herbaceous	Shrubs	Herbaceous	Shrubs	Herbaceous	Shrubs
[a] High Priority	4-6"/25-35%	20	4-5"/30-45%	20	4-5"/35-45%	20	3"/45-55% regrowth 4-8"	20%
[b] Medium Priority	3-5"/35-50%	20	3-4"/40-55%	20	3"/45-60%	20	3"/55-65%	20%
[c] Low Priority	n/a	20	n/a	20	n/a	20	n/a	20%

1 Stubble height remaining at end of grazing season. Early season grazing allows for regrowth.

2 Utilization = percent by weight.

3 See Appendix T for detailed information on determining stream type and priority.

4 Utilization levels primarily derived from review of Clary, W.P.; Webster, B.F. 1989, USDA, Forest Service General Technical Report Int-263.

5 Shrub utilization = percent of current year's annual growth. Includes willows and aspen.

a High priority streams = Priority 1 and 2 streams, Appendix T, pp T-4,5 (unstable streams and streams with high sediment loads).

b Medium priority streams = Priority 3 streams, Appendix T, pp T-4,5 (stable streams with potential for grazing impacts).

c Low priority streams = Priority 4 streams, Appendix T, pp T-4,5 (stable streams with little potential for grazing impacts). Riparian area is not considered a limiting factor. Utilization criteria will be established consistent with contiguous upland sites.

3. (G) Under any grazing system, manage grazing to enable riparian-associated shrubs to reach at least 50% of the natural site potential.

4. (G) Control livestock distribution within allotments to protect water quality. Methods include construction of fences, water developments, riding, and salt placement.

5. (G) Place salt at least 1/4-mile from water unless explicitly directed by the District Ranger.

Management Direction

Standards and Guidelines

6. (G) Maintain streambanks in stable condition as specifically defined in allotment management plans.

7. (G) Avoid locating livestock driveways within SMZs where possible.

8. (G) Avoid early-season grazing when non-normally saturated soils are saturated.

9. Follow additional Standards and Guidelines under the Water and Soils section of this Prescription.

Where livestock grazing has caused stream channel degradation, undertake erosion control measures.

1. (G) If riparian areas are excluded from livestock use, develop other water sources as needed to offset those sources made inaccessible.

2. (G) When appropriate, manage upland shrub/herbaceous communities to attract livestock away from riparian areas.

3. (G) The following are some acceptable practices to remedy stream channel degradation:

   —Channel revetment
   —Gully stabilization
   —Seeding
   —Bank reshaping
   —Fencing
   —Riprapping
   —Matting
   —Mulching
   —Planting shrubs

Recreation

Recreation

Lands under this prescription will be managed for the roaded natural or semi-primitive motorized ROS class. Refer to the ROS map to identify the adopted class. Limit OHV use to trails, roads and designated

Management Direction

Standards and Guidelines

crossings. Apply Forest-wide Standards and Guidelines.

Cultural Resources

Apply Forest-wide Standards and Guidelines.

Visual Resource

Manage for the adopted VQOs in which riparian areas lie, as shown on the accompanying VQO map. Apply Forest-wide Standards and Guidelines for visual rehabilitation and enhancement.

Timber

Timber may be harvested while protecting riparian-dependent resources.

Timber

1. (G) Adhere to the following practices:

   a. Individually mark trees to be harvested.

   b. Exclude heavy equipment from riparian areas except at designated crossings.

   c. Remove all slash and other logging debris from stream courses except where it contributes to riparian values.

   d. Directionally fall and end-line timber in riparian areas on slopes equal to or less than 40%. Fall trees away from stream courses, bogs and lakes, unless required for riparian enhancement.

   e. Logs will be fully airborne in suspended log harvesting (slopes >40%). Do not yard through streams.

   f. Locate landings and decking areas away from riparian areas.

   g. Prevent equipment operations which would excessively damage the soil. Exclude sensitive areas from slash treatment with mechanized equipment.

   h. Avoid placement of clearcut blocks directly across from each other on either side of a stream to minimize risks of blowdown.

   i. Use non-recurring "special C clause" provisions when necessary to prevent water quality problems.

Management Direction

Standards and Guidelines

j. Modify timber sale contracts if new circumstances indicate that irreversible damage to soil or water quality will occur.

2. (G) Maintain 50-70% of the timbered sites within SMZs in an old-growth state, where possible.

3. (G) As a goal, maintain shade on at least 80% of the stream surface between 9 a.m. and 4 p.m. from June 1 through September 30. Streamside vegetation will provide most of the water surface shade.

4. (G) Within riparian areas, provide at least 80% of the potential crown cover on sites dominated by trees, or 80% of the potential live ground cover, including all classes of vegetation, on non-timbered sites. Do not harvest timber when crown cover is less than 80% on tree-dominated sites. On areas with less than 80% crown closure potential of trees, shrubs will be allowed to contribute toward the difference. In the event that total live vegetative cover is less than 80%, dead and down material can contribute ground cover.

wet meadows, seeps & springs

Modify timber and other vegetative manipulation around wet meadows, seeps, and springs.

1. (S) Leave strips or small clumps of uncut residual timber or shrubs around meadows. Because windthrow is a hazard, care must be taken in selecting the trees to be left. (FSM 2405)

   a. If natural cover is lacking, distribute slash piles or logs along the perimeter, when possible.

   b. Tree overstory removal within 200 feet of a wet meadow's edge will be $<5\%$ per decade of the surrounding acreage. From 200 to 400 feet from the natural edge, overstory removal will be $<7\%$ of the surounding acreage per decade.

2. (G) Suppress encroaching vegetation, such as juniper, lodgepole pine and white fir, to maintain meadows, seeps, and springs on a site-specific basis.

Management Direction	Standards and Guidelines
Protect riparian areas from vegetative manipulation projects unless the project is specifically for the protection or enhancement of riparian-dependent species.	
Do not cut hardwoods from riparian areas unless the project specifically protects or enhances riparian-dependent species.	
Firewood cutting is permitted only to maintain or enhance other resource values.	
Where timber management activities have caused stream channel degradation, undertake erosion control measures.	1. (G) The following are some acceptable practices to remedy stream channel degradation: —Channel revetment —Gully stabilization —Bank reshaping —Debris removal —Woody debris placement or rearrangement —Riprapping —Matting —Mulching —Planting Shrubs
Water and Soils	Water and Soils
Perform restoration on existing eroded streams.	1. (S) In watersheds where water quality or soil stability have been degraded by resource management, implement watershed restoration measures.
Monitor water quality to detect and prevent on- and off-Forest problems.	2. (S) Monitor water quality to determine baseline conditions and the effects of resource management.
Apply the following directions and associated standards and guidelines when recreation, wildlife, range, and timber projects are implemented.	
– Conserve soil and water resources through implementation of Best Management Practices.	1. (S) Place no substance in or near riparian areas that would adversely affect water quality. 2. (G) Pesticides may not be applied in riparian areas, except where dependent resources benefit. All bodies of water will be protected with an appropriate filter strip.

Management Direction

Standards and Guidelines

3. (G) To prevent loss of soil productivity and to prevent ash, sediment, nutrients, and debris from entering water bodies, avoid intense fires, and waterbar firelines.

– Maintain water temperatures to meet State water quality objectives.

1. (S) Make no changes in water temperature that would adversely affect beneficial uses.

– For portions of streams containing or historically containing redband, rainbow, brook, or brown trout, manage to at least maintain viable populations of these species.

2. (S) For cold-water streams, both intra- and interstate shall be maintained or rehabilitated to achieve temperatures of 70°F. or less.

3. (S) For warm-water streams, in all water regions, water temperature will meet State water quality objectives.

Wildlife and Fish

Wildlife and Fish

For streams containing Modoc sucker, rehabilitate and maintain habitat as directed in the Modoc Sucker Recovery Plan. The following streams are affected:

1. (G) Inventory habitat suitability within Willow Creek (BVRD) and Ash Creek for purposes of reintroducing Modoc suckers, following the Modoc Sucker Recovery Plan.

- Johnson Creek
- Dutch Flat Creek
- Washington Creek
- Hulbert Creek
- Turner Creek
- Rush Creek

For streams containing Lost River and shortnose suckers, rehabilitate and maintain habitat as directed in their respective recovery plans when they are completed and approved. The following streams may be affected:

- Willow Creek (DHRD and DGRD)
- Boles Creek (DHRD and DGRD)
- Fletcher Creek (DGRD)
- Lost River (DHRD)
- Mowitz Creek (DHRD)

Wildlife and fish coordination efforts and habitat improvement projects will be compatible with the riparian management objectives of this prescription.

Management Direction

If T&E species habitat occurs within the riparian area, manage to maintain or enhance their habitat. Direction from species recovery plans and the Raptor Management Prescription is applicable to these areas.

Coordinate with the California Department of Fish and Game to enhance fish habitat.

Maintain or improve stream fish habitat through structural and non-structural improvement work. Fisheries improvement practices include but are not limited to ladders, spawning beds, pools, fish cover, and removing debris jams.

Standards and Guidelines

1. Within streams containing fisheries:

2. (G) To promote fish passage, remove barriers which impede fish migration, if appropriate.

   a. (G) Control beaver populations when they threaten to destroy desirable riparian vegetation or impair fish migration.

3. (G) Maintain or enhance substrate composition for the benefit of fish species, as determined by fish habitat relationship studies.

4. (G) Activities within the stream should be restricted to the following periods, adjustable by a biologist:

   a. Redband and rainbow trout: Activities within streams are allowed between August 1 and September 15.

   b. Brook trout: Activities are allowed between July 1 and September 15.

   c. Brown trout: Activities are allowed between February 1 and September 15.

   d. If a stream contains a combination of trout species, the most restrictive time period applies.

5. (G) As a goal, maintain shade on at least 80% of the stream surface between 9 a.m. and 4 p.m. from June 1 through September 30. Streamside vegetation will provide most of the water surface shade.

6. (G) Large woody debris providing habitat for fish will be maintained through:

   —maintenance of stream material, and

Management Direction	Standards and Guidelines
	—natural recruitment of trees from the adjacent SMZ.
	7. (G) Cooperate with CDFG in stocking and management programs.
Within lakes and reservoirs containing trout or largemouth bass:	within lakes and reservoirs containing trout or large mouth bass
– Improve habitat through structural and non-structural improvement work. Fisheries improvement practices for lakes and reservoirs include but are not limited to spawning bed construction, cover development, aquatic weed control, and dam reconstruction and maintenance.	1. (G) In cooperation with the California Department of Fish and Game, and through the public participation process, establish minimum pool levels for all reservoirs where fisheries occur.
	2. (G) Conduct surveys to establish fish habitat requirements for reservoirs (forage/prey ratios, habitat factors, spawning areas, etc.).
	3. (G) Modify adjacent land management activities to maintain acceptable water quality levels.
	4. (G) Cooperate with the California Department of Fish and Game in stocking and management programs.
– In selected riparian areas, willow planting and fencing may be implemented to speed recovery and enhance the habitat.	within selected riparian areas
	1. (G) To protect wildlife habitat and investments, livestock will be excluded or deferred from these areas.

F. Management Area Direction

A management area is a contiguous unit of land with similar topography, geology, and resource uses. The Forest is divided into 22 management areas to enable land managers to implement the Forest Plan (Figure 4-1). These areas are groups of pre-existing timber compartments and are, therefore, administrative rather than natural units of land.

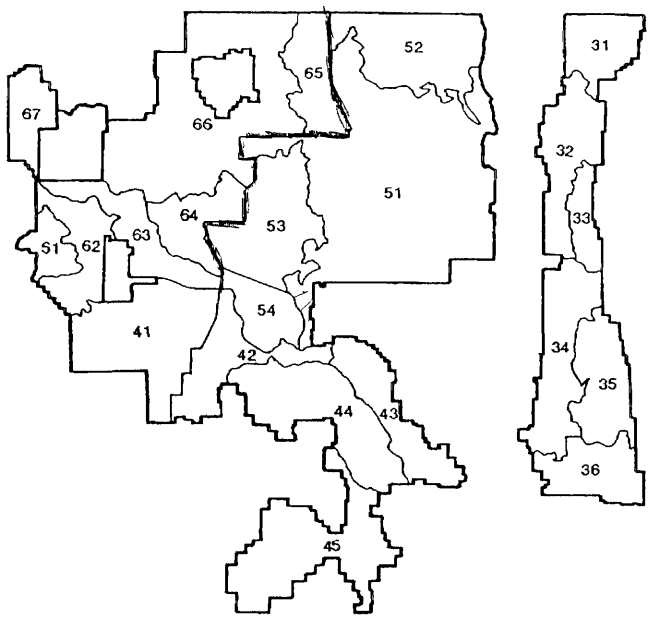
The discussion for each management area includes:

- **Management Area Map** – Shows the area boundary and spatial relation to the entire Forest, general geographic features, and developed recreation sites.
- **Description** – Describes the location, size, prominent features, terrain, watershed, vegetation, wildlife, cultural resources, recreation, mining, and other uses. Acreage is given for rangeland, timberland producing greater than 20 cubic feet per acre per year (>20 lands), and timberland producing less than 20 cubic feet per acre per year (<20 lands).
- **Standards and Guidelines** – States management direction unique to each management area.
- **Prescription Allocation** – Lists the acreage allocated to each management prescription. Acreage is broken out by >20 lands, <20 lands, and rangelands (Range).
- **Range Allotment Strategies** – Lists the target range objectives for each allotment within a management area. See Appendix O, Livestock Managment Strategies.

The Forest-wide goals, objectives, and standards and guidelines previously discussed in this chapter, and monitoring requirements outlined in Chapter 5, apply to all management areas unless specifically exempt.

Range allotment boundaries do not always coincide with managment area boundaries. The following list indicates the management area where direction will be found for each allotment.

Figure 4-1. Management Areas by Ranger District

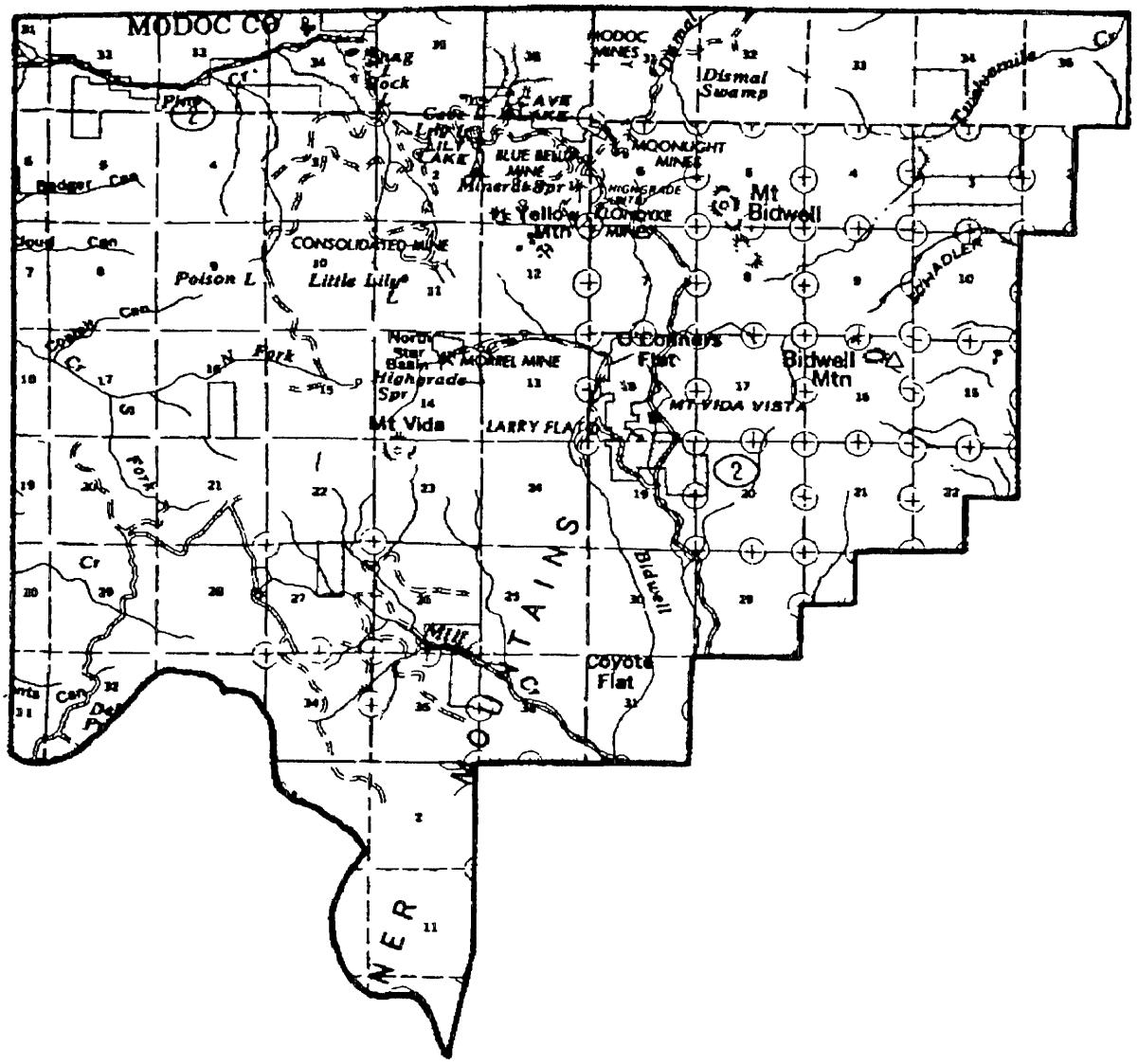


Warner Mountain		Devil's Garden	
31	Highgrade	51	Devil's Garden
32	Fandango	52	Crowder
33	Lake City	53	Hackamore
34	Fitzhugh	54	Happy Camp
35	South Warner Wilderness		
36	Patterson		
Big Valley		**Doublehead**	
41	Long Bell	61	Medicine Lake
42	Stone Coal	62	Black Mountain
43	Portuguese Ridge	63	Tionesta
44	North Adin	64	Mears
45	South Adin	65	Steele Swamp
		66	Clear Lake
		67	Mount Dome

Allotment	Management Area
Warner Mountain Ranger District	
Bearcamp	36
Bidwell	31
Blue Lake	36
Bald Mountain	33
Blue Lake (Sheep)	36
Buck Creek	32
Cedar Canyon	34
Cottonwood-Owl-Mill	35
Coyote	36
Davis Creek	32
Emerson	35
Eagle Peak-Barber	35
Granger	35
Henderson Meadow	34
Joseph Creek	32
Lassen Creek	32
Mt Bidwell	31
Myrtle Creek	31
Mill Creek-Eagle Peak	35
North Creek	36
North Parker	34
Outlet	34
Parsnip Creek	36
Selic Canyon	36
Thoms Creek	32
West Valley	36
Yankee Jim	34
Devil's Garden Ranger District	
Beaver Dam	52
Blue Mountain	52
Big Sage	51
East Grizzlie	52
Emigrant Springs	51
Happy Camp	54
Howard's Gulch-Lost Valley	53
Mowitz	53
139	51
Pit River	54
Pine Springs	51
Surveyor's Valley	51
Timbered Mountain	51
Triangle	51
West Grizzlie	52
Willow Creek Ranch	51

Allotment	Management Area
Big Valley Ranger District	
Ash Valley	44
Barber Canyon	44
Ballard Ridge	43
Administered by BLM	43
Barrows	44
Centerville	43
Crites	42
Crank Springs	42
Delta Lake	43
East Bieber	45
Egg Lake	41
Gerig	42
Happy Camp	41
Johnson Creek	44
Oxendine	45
Rush Creek	44
Refuge 1-N	41
Round Mountain	41
Rocky Prairie	43
Round Valley	44
Stone Coal	42
Spring Hill	45
Splawn Mountain	42
Shawville	42
West Bieber	45
Willow Creek	45
White Horse	41
Doublehead Ranger District	
Boles	65
Clear Lake	66
Crumes (Sheep)	67
Dalton	66
Deep Lake	67
Glass Mountain (Sheep)	63
Lavas	66
Mammoth	66
Mount Dome	67
Mud Lake (Sheep)	63
Perez	66
Potters	64
Timber Mountain	64
Tucker	66
Warm Springs	65

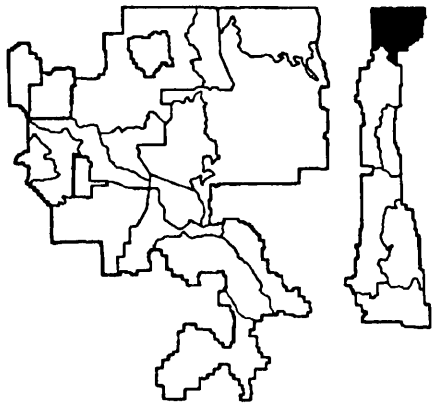
HIGHGRADE • Management Area 31



31 - Highgrade

Warner Mountain Ranger District

Acreage		
National Forest	38,450	
Rangelands	16,145	
Timberlands	22,305	
< 20 cu. ft. per acre		5,410
> 20 cu. ft. per acre		16,895
Unsuitable for Timber Management	7,017	
< 20 cu. ft. per acre		2,843
> 20 cu. ft. per acre		4,174



Highgrade Management Area is located on the extreme north end of the District with elevations ranging from 4,500 to 8,000 feet, the area is dissected by numerous drainages which have formed steep canyons. Mt. Bidwell and Mt. Vida dominate the landscape. High elevation meadows, such as Dismal Swamp, and large stands of aspen characterize the high plateaus.

Most of the unit is timbered with lodgepole pine at the highest elevations, and white fir, western white pine, and ponderosa pine on the lower slopes. Incense-cedar, an infrequent occurrence in the Warners, is also found in this MA. Because of steep terrain and a limited transportation system, timber management opportunities are few. The area embraces timber compartments 301-306.

The northeastern portion of the MA is largely rangeland within the Mt. Bidwell cattle allotment and the Bidwell sheep allotment. The south and east slopes are dry and characterized by sagebrush, juniper, and bunch grass. Montane meadows and riparian areas provide additional forage.

The distribution of wildlife is typical of the District. Mule deer and coyotes are seen most often. Other interesting species include beaver, porcupine, blue grouse, and sage grouse. Several goshawk nest sites are found within the MA.

Bidwell Creek and Mill Creek are popular, high-quality trout fisheries. Small developed campsites are located at Cave and Lily Lakes, which draw many visitors from Oregon as well as local residents. Deer hunting and associated activities are the primary forms of dispersed recreation in the summer and fall. Rockhounding, fishing, mining and horseback riding are also popular. The Highgrade National Recreation Trail traverses the old mining district.

Large volumes of water originate within the eastside watersheds of Bidwell, Mill and Twelvemile Creeks, and the westside watersheds of Cottonwood and Pine Creeks. The water is used for agricultural, fisheries, recreation and domestic purposes. Downstream in Oregon, Twelvemile Creek contains Warner suckers *Catostomus warnerensis* a federally threatened species.

The Highgrade Mining District is contained within the area. It was the scene of an early 19th century gold rush which had limited gold production. Several exploration efforts are still moderately active.

Access to this MA is provided by Modoc County Roads 1,2, and 224, and by a system of National Forest roads.

Standards and Guidelines

Cultural Resources

- Complete inventory of the High Grade Mining District and nominate to the National Register of Historic Places. Develop interpretive brochure and signing in cooperation with the Modoc County Historical Society.

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Minerals

- Other management activities should not preclude future mining in this management area. Arterial road construction should consider the needs of the mineral resource.

Range

- Use technical review teams to (1) recommend needed adjustments in permitted numbers or grazing seasons, and (2) develop grazing systems on all allotments.

Sensitive Plants

- Monitor and protect populations of *Galium serpenticum warnerense.*

Soils

- Conduct an SRI Order 2 on sensitive watersheds 010, 020, 031, 032, and 181, and sensitive soil areas identified in the Modoc SRI Order 3 (Luckow 1984) and the SCS soil survey (USDA SCS 1974) (see FEIS bibliography). Develop site specific management practices for soil disturbing activities.
- On sensitive watersheds and other sensitive areas, limit OHV to established roads and trails, as needed. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality.
- Analyze white fir timber stands for possible fertilization projects to improve the nutrient balance and tree growth rates.

Special Areas

- Evaluate Dismal Swamp as a potential Special Interest Botanical Area.

Water and Riparian

- Maintain watershed structural improvements in Dismal Swamp.
- In watersheds 010, 020, 031, 032, and 181, minimize cumulative watershed impacts on stream channel condition and water quality by assessing the effects of each land-disturbing activity prior to its undertaking.
- When an estimated cumulative watershed threshold is approached, employ mitigating measures such as increasing buffer and filter strip width, installing erosion control structures, and ripping and scarifying disturbed areas as needed to minimize impacts to water quality and beneficial uses.

Wildlife and Fish

- Provide for 785 acres of old growth in the mixed conifer type.
- Manage snag densities through natural recruitment, but use active management to achieve specific project objectives.
- Determine fish habitat needs and opportunities in Bidwell, Mill and Twelvemile creeks.
- Implement aspen management projects within timber sale areas.

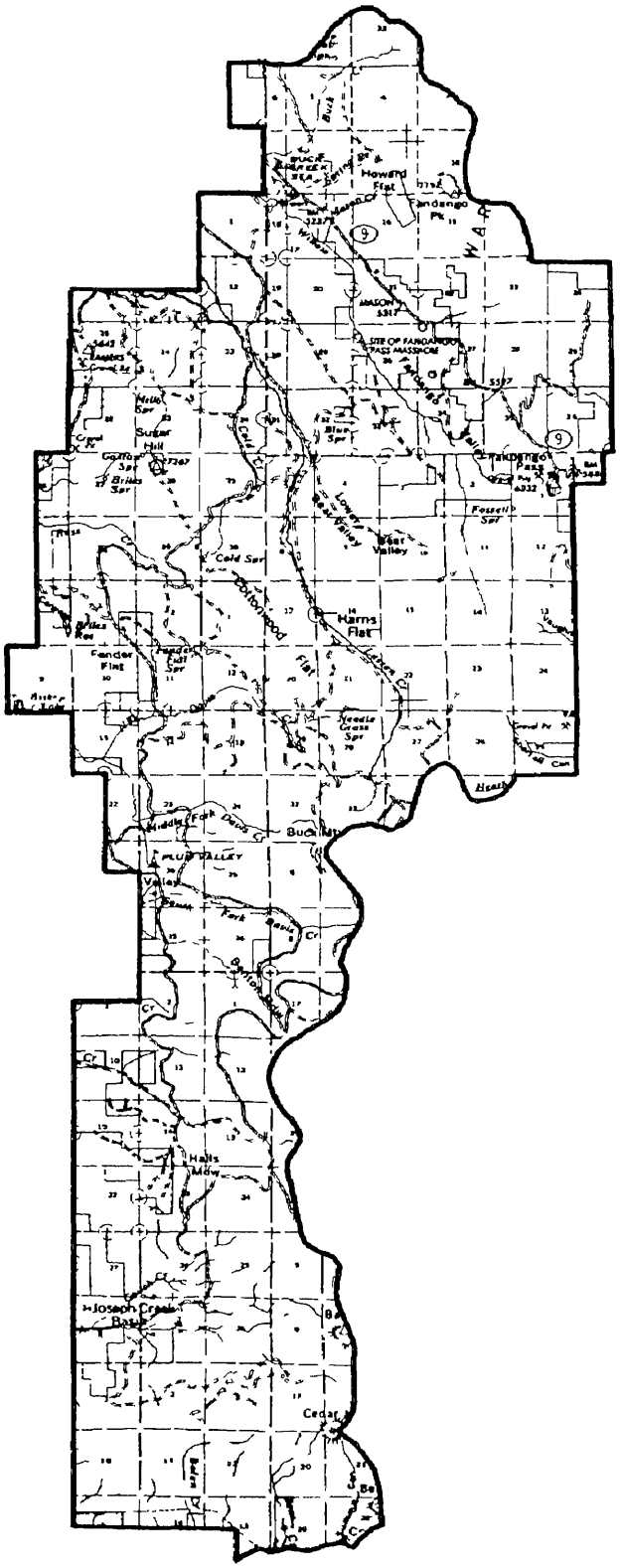
Prescription Allocation					
Prescription		**>20 Acres**	**<20 Acres**	**Range Acres**	**Total Acres**
1	Minimum Level	1,628	1,022	103	**2,753**
4	Semi-Primitive Non-Motorized	1,666	1,519		**3,185**
7	Visual Retention [1]	3,325	913		**4,238**
9	Raptor Management	196	121	103	**420**
10	Rangeland			4,369	**4,369**
11	Range-Forage			11,241	**11,241**
12	Even-Aged Timber	1,320			**1,320**
13	Timber-Visuals	2,798			**2,798**
14	Timber-Forage				**5,278**
	Partial Retention	1,489			
	Modification	3,789			
16	<20 Cu Ft Timber		1,654		**1,654**
17	Riparian Area	684	181	329	**1,194**
Total		**16,895**	**5,410**	**16,145**	**38,450**

[1] Current developed recreation sites contain nominal acreage (<10 acres per site), and will be managed under the Developed Recreation Prescription (#5).

Range Allotment Strategies (see Appendix 0)

Allotment	Strategy
Bidwell	C
Mt Bidwell	D
Myrtle Creek	B

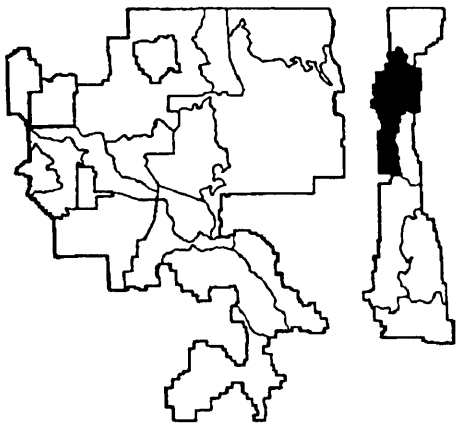
FANDANGO • Management Area 32



32 - Fandango

Warner Mountain Ranger District

Acreage		
National Forest	68,435	
Rangelands	20,406	
Timberlands	48,029	
< 20 cu. ft. per acre		11,359
> 20 cu. ft. per acre		36,670
Unsuitable for Timber Management	4,110	
< 20 cu. ft. per acre		834
> 20 cu. ft. per acre		3,276



Fandango Management Area is located north of Highway 299, and is bordered on the east by the crest of the Warner Mountains. The area extends south from the Highgrade District, along the west side of the mountains, to Cedar Pass. At 8,000 feet, Bald Mountain is the highest point in the MA. Buck Creek Guard Station, a seasonal guard station, is located in the northern portion of the area.

The most significant timber resource on the District, the 5,000-acre Sugar Hill plantation, occurs within this MA. Approximately 40 years old, this plantation is rapidly approaching commercial size. It consists of nearly pure stands of ponderosa pine. Much of the remaining area contains mature stands of readily accessible timber. The area includes timber compartments 307-320.

The Lassen Creek Allotment is the largest producer of forage, primarily forbs and grasses, on the District. Numerous meadows dissect the area.

This MA is frequented by pronghorn and is also an important source of summer forage for resident deer populations. Several goshawk nest sites occur in this area.

The major watersheds include Lassen, Davis, Willow, and Joseph Creeks which all drain to the west. Lassen and Willow Creeks drain into Goose Lake, while Joseph Creek feeds the Pit River to the Central Valley. Water originating in this unit is important for downstream irrigation and for maintaining fisheries habitat.

Lassen, Willow, and Davis Creeks are the major fisheries. Lassen, Cold, Willow and Buck Creeks are spawning habitat for the Goose Lake redband trout.

In addition to a small developed campground at Plum Valley, the MA offers dispersed recreation experiences including camping, hunting and rockhounding.

A variety of obsidian is found in the MA. In colors of golden sheen, mahogany, rainbow and black, its forms range from boulders to delicate needles. Prehistoric Indians used obsidian for stone tools.

Access to the MA is provided by State Highway 299, Modoc County Roads 9, 11, 12, 52, and 118, and a developed system of National Forest roads.

Standards and Guidelines

Cultural Resources

- Complete inventory of the Lassen/Applegate Emigrant Trail and nominate to the National Register of Historic Places (NRHP). Develop an interpretive brochure.
- Research the extensive prehistoric obsidian sites and evaluate for nomination to the NRHP.

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Range

- Use technical review teams to (1) recommend needed adjustments in permitted numbers or grazing seasons, and (2) develop grazing systems on all allotments.

Soil

- Conduct an SRI Order 2 on sensitive watersheds 033, 034, 035, 041, 042, and 043, and sensitive soil areas identified in the Modoc SRI Order 3 (Luckow 1984) and the SCS soil survey (USDA SCS 1974) (see FEIS bibliography). Develop site specific management practices for soil disturbing activities.
- On sensitive watersheds and other sensitive areas, limit OHV to established roads and trails, as needed. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality.
- Restore soil productivity and stop watershed degradation through outsloping of terraces and topsoil redistribution at Cottonwood Flat, Lassen Creek, and Bear Valley.
- Maintain fertilization plots and analyze timber stands for possible fertilization projects to improve the nutrient balance and tree growth rates.

Water and Riparian

- Restore degraded stream channel conditions along Willow, Lassen, Cold, and Joseph Creeks using watershed improvement funds.
- Maintain structural improvements along Lassen and Cold Creeks.
- In watersheds 033, 034, 035, 041, 042, and 043, minimize cumulative watershed impacts on stream channel condition and water quality by assessing the effects of each land-disturbing activity to its undertaking.
- When an estimated cumulative watershed threshold is approached, increase buffer and filter strip width, install erosion control structures, and rip and scarify disturbed areas as needed to minimize impacts to water quality and beneficial uses.
- Use range structural improvement funds to restore degraded riparian areas in the Lassen Creek and Davis Creek Allotments.
- Maintain watershed improvement structures in Couch Creek.

Wildlife and Fish

- Provide for 1065 acres of old growth in the mixed conifer type and 735 acres in the eastside pine type.
- Use a variety of active snag management techniques to achieve 1.5 snags per acre in each timber compartment.
- Continue fish habitat enhancement work in Lassen and Cold creeks and complement, where possible, watershed improvement acitivities. Evaluate fish habitat improvement needs and opportunities in Couch and Joseph Creeks, and North, Middle, and South forks of Davis Creek.
- Improve deer habitat through brushfield rejuvenation under prescribed fire and aspen stand management.

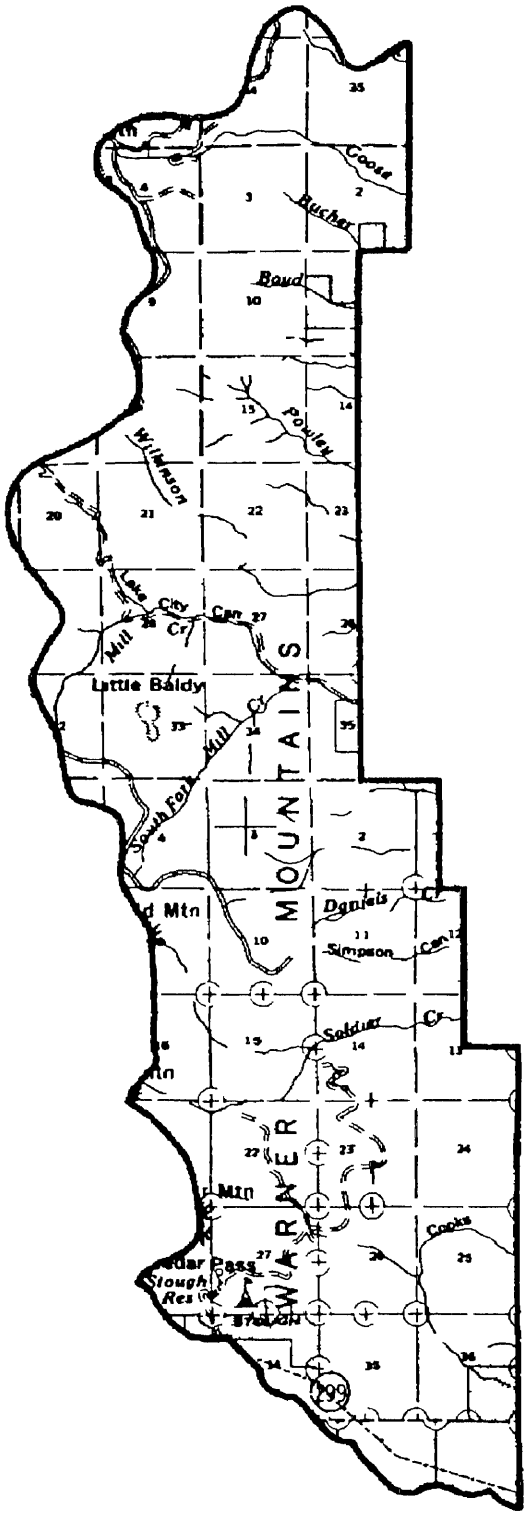
Prescription Allocation					
Prescription		**>20 Acres**	**<20 Acres**	**Range Acres**	**Total Acres**
1	Minimum Level	1,762	81	332	**2,175**
4	Semi-Primitive Non-Motorized	1,041	589		**1,630**
7	Visual Retention	1,908	1,516		**3,424**
10	Rangeland			17,382	**17,382**
11	Range-Forage			2,464	**2,464**
12	Even-Aged Timber	8,120			**8,120**
13	Timber-Visuals	6,783			**6,783**
14	Timber-Forage				**16,583**
	Partial Retention	7,153			
	Modification	9,430			
16	<20 Cu Ft Timber[1]		9,009		**9,009**
17	Riparian Area	473	164	228	**865**
Total		**36,670**	**11,359**	**20,406**	**68,435**

[1] Current developed recreation sites contain nominal acreage (<10 acres per site), and will be managed under the Developed Recreation Prescription (#5).

Range Allotment Strategies

Allotment	Strategy
Buck Creek	B
Davis Creek	C
Joseph Creek	B
Lassen Creek	D
Thoms Creek	C

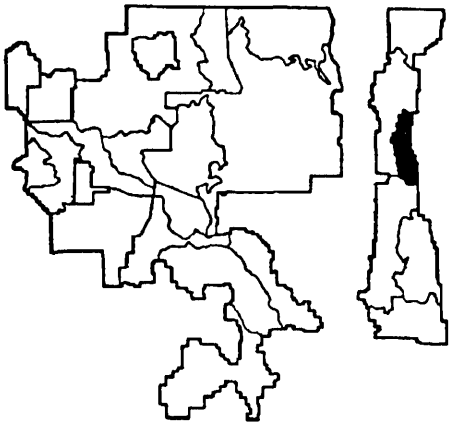
LAKE CITY • Management Area 33



33 - Lake City

Warner Mountain Ranger District

Acreage		
National Forest	22,879	
Rangelands	11,553	
Timberlands	11,326	
< 20 cu. ft. per acre		4,711
> 20 cu. ft. per acre		6,615
Unsuitable for Timber Management	6,148	
< 20 cu. ft. per acre		2,183
> 20 cu. ft. per acre		3,965



Lake City Management Area primarily consists of steep slopes and ravines along the east side of the Warner Mountains from the Goose Creek watershed south to Cedar Pass. The rugged area is largely inaccessible and ranges in elevation from approximately 4,600 feet to more than 8,000 feet at Bald Mountain.

Vegetation consists of a mosaic of mixed conifer stands, brush fields, range, and steep, rocky barren areas. A small part of the crest area is operable by tractor. However, the majority of the MA cannot be economically managed for timber production because of specialized harvesting equipment, high transportation and logging costs, and scattered timber stands. The area includes timber compartments 313, 316, 318, and 320.

Grazing is limited because of shallow soils and steep, dry slopes. The area provides nesting habitat for raptors, and winter range for mule deer.

Mill Creek and Soldier Creek are the dominant watersheds. Nearly all the water which drains from the area is used for irrigation. Unused volume from the creeks empties into Upper and Middle Alkali Lakes in Surprise Valley.

A small developed campground at Stough Reservoir is used primarily by local residents. Popular dispersed recreation activities include deer hunting, stream fishing, firewood gathering, nordic skiing and snowmobiling.

The national forest portion of the Lake City Known Geothermal Resource Area (KGRA) lies within this MA, and was leased in 1982.

Access to the MA is provided by State Highway 299, Modoc County Roads 11, 12, and 118, and by a developed system of National Forest roads.

Standards and Guidelines

Cultural Resources

- Research the extensive prehistoric obsidian sites and evaluate for nomination to the National Register of Historic Places.

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Range

- Use technical review teams to (1) recommend needed adjustments in permitted numbers or grazing seasons, and (2) develop grazing systems on all allotments.

Sensitive Plants

- Monitor and protect populations of *Galium glabrescens modocense.*

Soil

- Conduct an SRI Order 2 on sensitive watersheds 182, 183, 184, and 191, and sensitive soil areas identified in the SCS soil survey (USDA SCS 1974) (see FEIS bibliography). Develop site specific management practices for soil disturbing activities.
- On sensitive watersheds and other sensitive areas, limit OHV to established roads and trails, as

needed. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality.

Water and Riparian

- In watersheds 182, 183, 184, 191, and other second or third order watersheds, minimize the cumulative watershed impacts on stream channel condition and water quality by assessing the effects of each land-disturbing activity prior to its undertaking.
- When an estimated cumulative watershed threshold is approached, increase buffer and filter strip width, install erosion control structures, and rip and scarify disturbed areas as needed to minimize impacts to water quality and beneficial uses.
- Restore degraded stream channel conditions along Mill Creek using watershed improvements, range structural improvements, and grazing strategies.

Wildlife and Fish

- Provide for 315 acres of old growth in the mixed conifer type.
- Manage for snags through natural recruitment.

Prescription Allocation

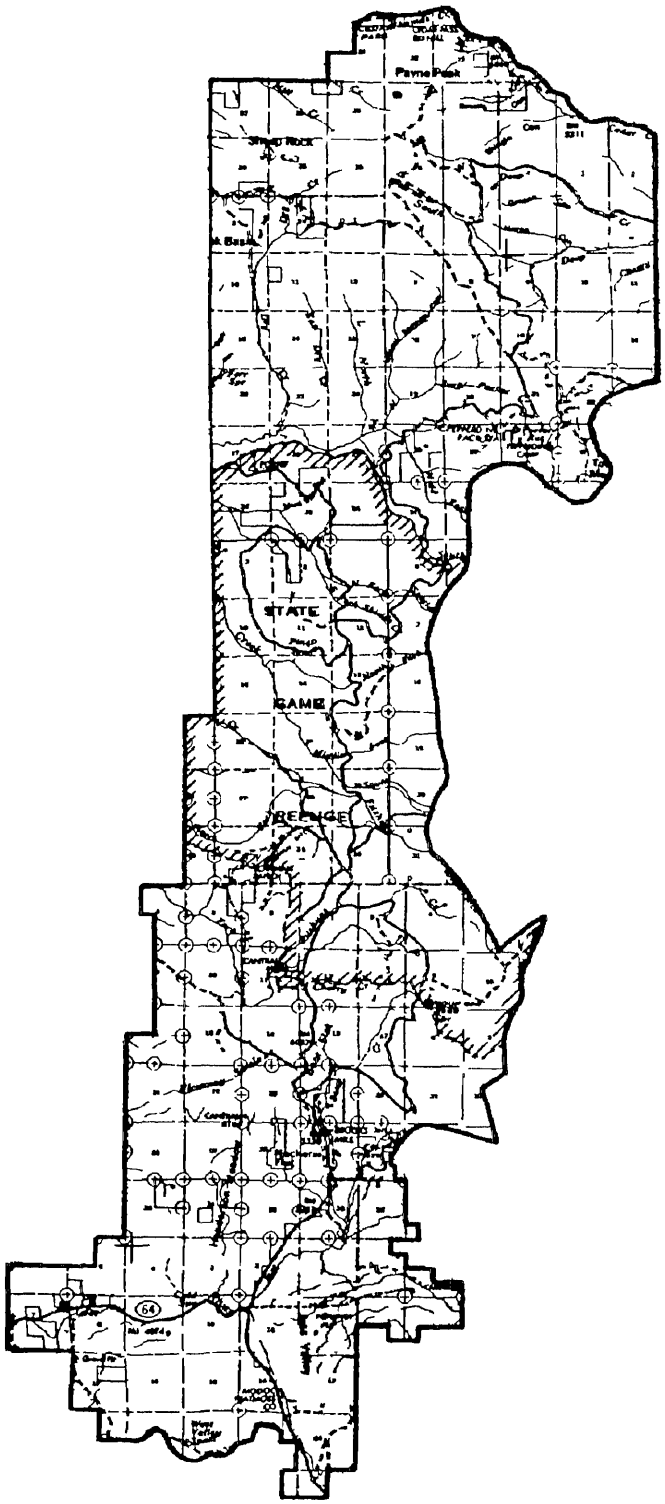
Prescription		>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	2,078		50	**2,128**
4	Semi-Primitive Non-Motorized	1,577	2,123		**3,700**
7	Visual Retention	1,216	619		**1,835**
10	Rangeland			4,053	**4,053**
11	Range-Forage			7,336	**7,336**
12	Even-Aged Timber[1]	125			**125**
13	Timber-Visuals	108			**108**
14	Timber-Forage[1]				**1,201**
	Partial Retention	277			
	Modification	924			
16	<20 Cu Ft Timber		1,909		**1,909**
17	Riparian Area	310	60	114	**484**
Total		**6,615**	**4,711**	**11,553**	**22,879**

[1] Current developed recreation sites contain nominal acreage (< 10 acres per site), and will be managed under the Developed Recreation Prescription (#5).

Range Allotment Strategies

Allotment	Strategy
Bald Mountain	D

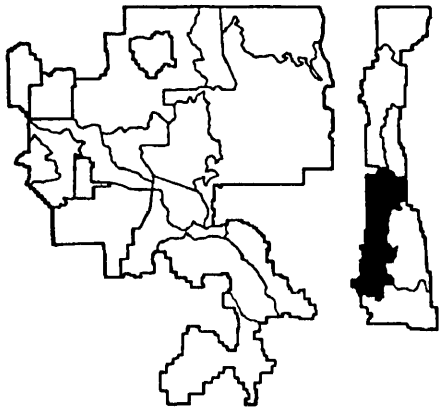
FITZHUGH • Management Area 34



34 - Fitzhugh

Warner Mountain Ranger District

Acreage		
National Forest	77,356	
Rangelands	29,460	
Timberlands	48,896	
< 20 cu. ft. per acre		18,337
> 20 cu. ft. per acre		29,559
Unsuitable for Timber Management	12,113	
< 20 cu. ft. per acre		7,011
> 20 cu. ft. per acre		5,102



Fitzhugh Management Area extends from Cedar Pass south to the Pit River watershed at Jess Valley, excluding the South Warner Wilderness. While the north end of the MA has steep slopes and ravines, elsewhere the terrain is gentle. Elevation ranges from 5,000 to 7,600 feet. Scattered parcels of private land are intermingled with Forest land; and Jess Valley is the largest private land block within the District.

Ponderosa pine, white fir and aspen stands pattern the MA which is well-suited for timber production. The transportation system is essentially complete for long-term management needs. This area includes timber compartments 321-337.

Large areas of rangelands are scattered through timber stands. An intensive management grazing strategy is used on portions of the Henderson Meadow Allotment. Juniper encroachment is a serious problem on several allotments.

Part of the State Game Refuge C-10 is included within this area. Deer and pronghorn are the primary management indicator species. Portions of the MA have been deferred from management to provide for goshawk habitat needs. This MA also has a peregrine falcon reintroduction site.

Numerous streams and associated riparian areas are located in this MA, principally Parker, Shields, Fitzhugh, Deep and Pine Creeks. All of the major streams support fisheries.

Popular Wilderness trailheads are located at Pepperdine, Soup Springs, and Mill Creek Campgrounds. An undeveloped site at Pine Creek provides another trailhead. The MA receives heavy dispersed camping use, especially along streamside areas. Cedar Pass Campground on Highway 299 is primarily an overnight stop for travelers. A small ski area (under special use permit) at Cedar Pass provides recreation for alpine skiers. On the west side of the MA, the West Warner Road parallels the Wilderness boundary. The road provides a paved surface for pleasure driving, and accesses most trailheads.

Mining claims have been filed near the Jess Valley area. Applications have been filed for oil and gas leasing; one area north of the Wilderness is currently leased. All other applications have been withdrawn or leases terminated.

Access to the MA is provided by State Highway 299, Modoc County Roads 25, 56, 58, 64, and 258, and by a developed system of National Forest roads.

Standards and Guidelines

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Range

- Use technical review teams to (1) recommend needed adjustments in permitted numbers or grazing seasons, and (2) develop grazing systems on all allotments.

Soil

- Conduct an SRI Order 2 on sensitive watersheds 043, 044, 045, 051, 052, 053, 191, 192, 193, and 194, and sensitive soil areas identified in the Modoc SRI Order 3 (Luckow 1984) and the SCS soil survey (USDA SCS 1974) (see FEIS bibliography). Develop site specific management practices for soil disturbing activities.
- On sensitive watersheds and other sensitive areas, limit OHV to established roads and trails, as needed. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality.
- Maintain fertilization plots and analyze white fir timber stands for possible fertilization projects to improve the nutrient balance and tree growth rates.

Water and Riparian

- Use watershed improvement funding to control gullying in the Granger Canyon and Smalls Canyon Watersheds. Repair streambank erosion along the South Fork of Fitzhugh Creek.
- Maintain watershed improvement structures in Cedar Creek.
- In watersheds 043, 044, 045, 051, 052, 053, 191, 192, 193, and 194, minimize the cumulative watershed impacts on stream channel condition and water quality by assessing the effects of each land-disturbing activity prior to its undertaking.
- When an estimated cumulative watershed threshold is approached, increase buffer and filter strip width, install erosion control structures, and rip and scarify disturbed areas as needed to minimize impacts to water quality and beneficial uses.
- Use range structural improvements and grazing strategies to restore degraded riparian areas in the West Valley, North Parker, and Yankee Jim Allotments.

Wildlife and Fish

- Provide for 1075 acres of old growth in the mixed conifer type and 405 acres in the eastside pine type.
- Manage snag densities through natural recruitment in the mixed conifer type and by active management techniques in the eastside pine type.
- Implement fish habitat improvements in the Shields, Pine, Fitzhugh Creek drainages, and in the South Fork of the Pit River. Complement watershed improvement projects in Cedar Creek and other areas, where possible.
- Seek opportunities for aspen management within timber sale areas.

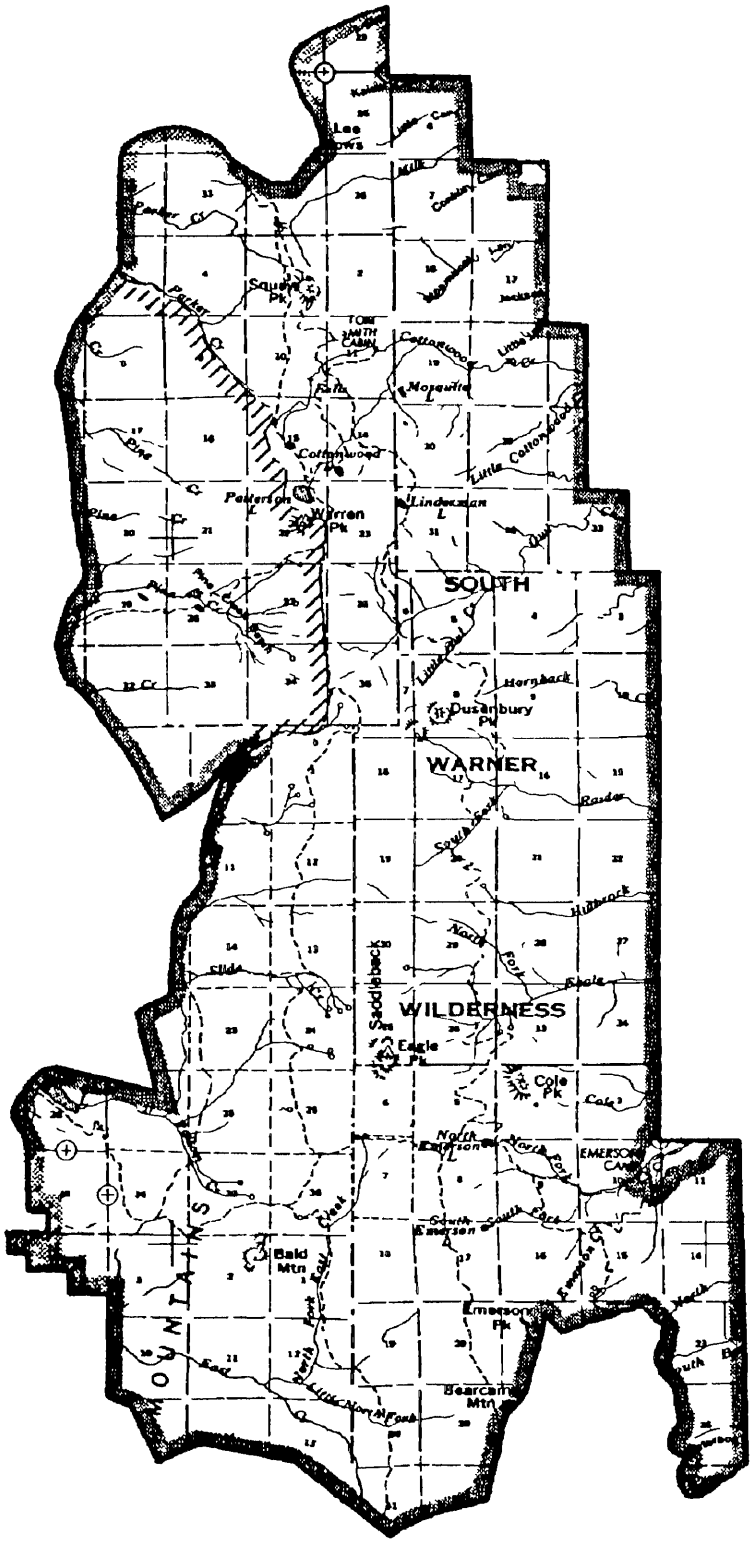
Prescription Allocation					
Prescription		**>20 Acres**	**<20 Acres**	**Range Acres**	**Total Acres**
1	Minimum Level	1,621	1,905		**3,526**
4	Semi-Primitive Non-Motorized	1,826	4,201		**6,097**
7	Visual Retention[1]	5,769	1,777		**7,546**
9	Raptor Management[1]	245	349	1,081	**1,675**
10	Rangeland			28,108	**28,108**
12	Even-Aged Timber	1,872			**1,872**
13	Timber-Visuals[1]	7,924			**7,924**
14	Timber-Forage[1]				**8,842**
	Partial Retention	1,848			
	Modification	7,044			
16	<20 Cu Ft Timber		9,549		**9,549**
17	Riparian Area	1,340	556	271	**2,167**
Total		**29,559**	**18,337**	**29,460**	**77,356**

[1] Current developed recreation sites within these prescription areas contain nominal acreage (<10 acres per site), and will be managed under the Developed Recreation Prescription (#5).

Range Allotment Strategies

Allotment	Strategy
Cedar Canyon	C
Henderson Meadow	C
North Parker	C
Outlet	C
Yankee Jim	C

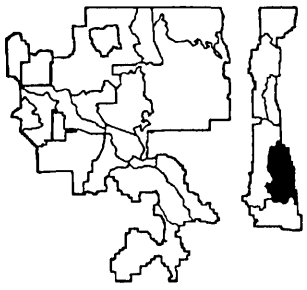
SOUTH WARNER WILDERNESS • Management Area 35



35 - South Warner Wilderness

Warner Mountain Ranger District

Acreage		
National Forest	70,385	
Rangelands		42,226
Timberlands		28,159
	< 20 cu. ft. per acre (no timber mgt.)	
	> 20 cu. ft. per acre (no timber mgt.)	



Encompassing more than 70,000 acres of primitive land on the Warner Mountain Ranger District, the South Warner Wilderness contains rugged topography, expansive vistas, rolling forest, mountain meadows, clear streams, and the highest peaks in northeastern California. Eagle Peak at 9,892 feet, Warren Peak at 9,710 feet, and Squaw Peak at 8,646 feet are the conspicuous landmarks within the Wilderness. The summit of the Warner Mountain range marks the upper edge of a huge fault plane, with an elevation differential of 5,500 feet.

The South Warner Wilderness is designated as Class I area under the Clean Air Act. The area lies geographically within the Northeast Plateau Air Basin. The air quality at present is excellent.

Vegetation on the precipitous eastern slope is generally sparse. The western slope is characterized by more gentle, rolling topography. Vegetation includes ponderosa, Jeffrey, western white, whitebark, and lodgepole pines, white fir, western juniper, aspen, bitterbrush, mountain mahogany, sagebrush, grasses, and riparian species.

Currently six cattle and three sheep allotments are located wholly or partially within the Wilderness. The general grazing season lasts from July 1 to September 30.

Wildlife abounds in the Wilderness, affording recreationists opportunities to observe many interesting species in their natural surroundings, including mule deer, California bighorn sheep, goshawks, and pronghorn. In addition to fish and mammals, the Wilderness provides splendid bird-watching for the casual or most seasoned observer.

In 1980, fourteen bighorn sheep were transferred from the Lava Beds National Monument and Inyo National Forest to the Raider Canyon area. By 1985, herd numbers had increased to approximately 60 animals. In 1987/88, the entire bighorn sheep population died. The suspected cause was bacterial pneumonia

Far from major population centers, the South Warner Wilderness has a low level of visitor use. Visitor activities include backpacking, day hiking, bird-watching, nature study, photography, trout fishing, cross-country skiing, snowshoeing, horseback riding, hunting and camping. Two main areas of concentrated use are the Clear Lake and Patterson Lake areas. While Clear Lake is used almost exclusively by day, Patterson Lake is used for both day and overnight.

The Wilderness trail system consists of 79 miles of maintained trails with an additional 23 miles which are neither maintained nor considered system trails. Any part of the interior served by the trail network can be accessed in one long day's hike. Cross-country travel is not difficult in most areas, except on the precipitous east slopes.

Water from this MA flows to Surprise Valley and the north and south forks of the Pit River, and is used for agriculture and fisheries.

Access to the Wilderness is provided by State Highway 299, Modoc County Road 40 and a developed system of National Forest roads.

Standards and Guidelines

Air Quality

- Maintain air quality according to the Clean Air Act.
- Identify and monitor Air Quality Resource Values (AQRVs).

Cultural Resources

- Conduct non-project related cultural resource inventories to collect information on high-elevation prehistoric populations, as opportunities arise.

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.
- Use prescribed fire from naturally occurring unplanned ignitions, according to an approved plan, to perpetuate natural ecosystems.
- Use prescribed fire from planned ignitions if needed to maintain natural ecosystems, to return them to a natural condition, or to protect adjacent resources.

Range

- Use technical review teams to (1) recommend needed adjustments in permitted numbers or grazing seasons, and (2) develop grazing systems on all allotments.

Sensitive Plants

- Monitor and protect populations of *Galium glabrescens warnerense.*

Soils

- Monitor trails and campgrounds for watershed degradation, and when necessary, rehabilitate those areas.

Water and Riparian

- Use range structural improvement funds to restore degraded riparian areas in the Granger Allotment. Improve riparian area condition in Pine Creek Basin, adjacent to the middle fork of Pine Creek, and in Mill Creek Meadow.

Wildlife and Fish

- Monitor potential conflicts between recreational use, and livestock grazing. Identify opportunities and execute management strategies which will eliminate or reduce these conflicts.
- Manage livestock distribution and utilization to achieve riparian and fish habitat objectives.

Prescription Allocation

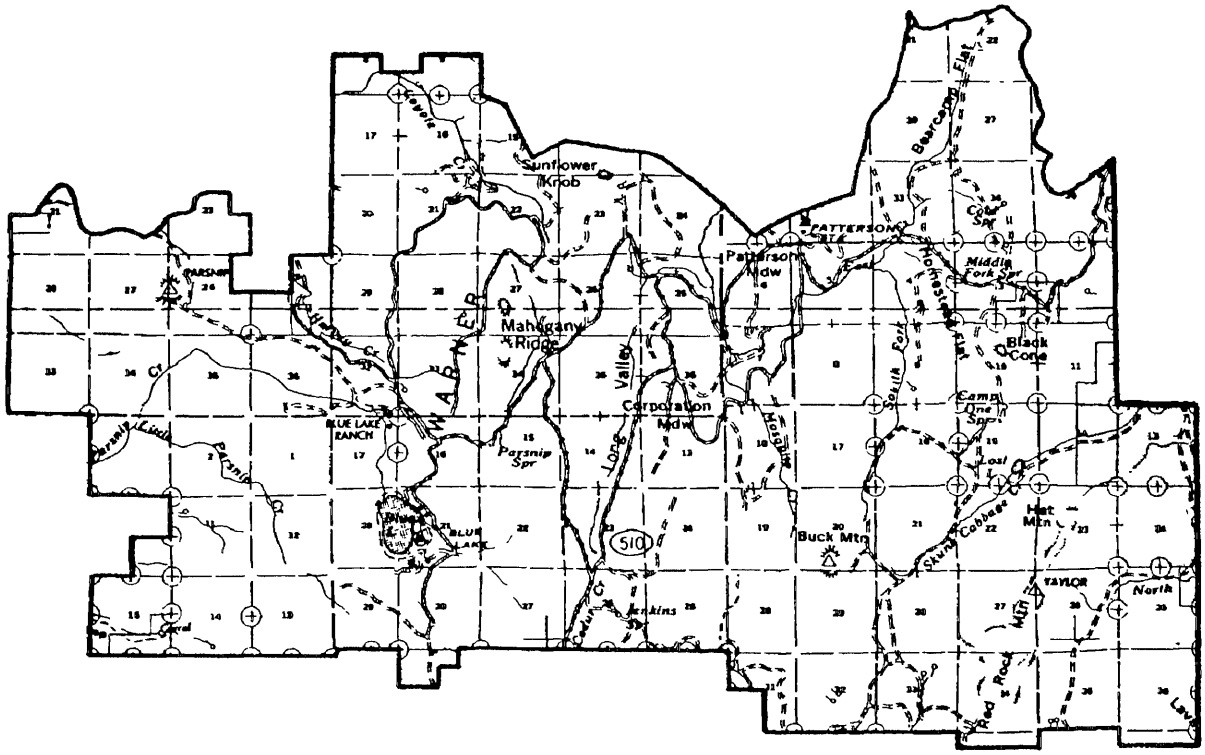
Prescription		>20 Acres	<20 Acres	Range Acres	Total Acres
2	Wilderness Standard				70,385
Total					70,385

Range Allotment Strategies

Allotment	Strategy
Cottonwood-Owl-Mill	C
Eagle Peak-Barber	C
Emerson	C
Granger	C
Mill Creek-Eagle Peak	C

This page intentionally left blank.

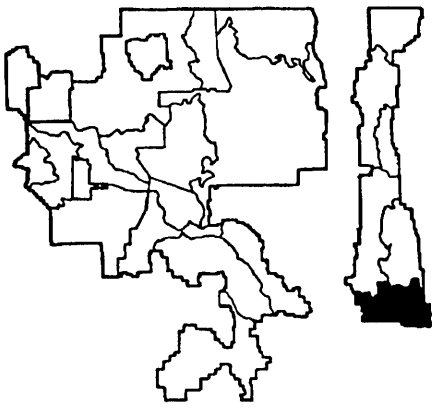
PATTERSON • Management Area 36



36 - Patterson

Warner Mountain Ranger District

Acreage		
National Forest	56,270	
Rangelands	25,452	
Timberlands	30,818	
< 20 cu. ft. per acre		8,957
> 20 cu. ft. per acre		21,861
Unsuitable for Timber Management	8,284	
< 20 cu. ft. per acre		3,865
> 20 cu. ft. per acre		4,419



Patterson Management Area is located south of Jess Valley and the Wilderness. With typically gentle topography, the elevation ranges from 5,000 to 8,000 feet.

The largest stands of lodgepole pine on the District grows near Hat Mountain. The stands have a history of mortality from mountain pine beetle infestations. Ponderosa pine, white fir, and aspen stands are also dispersed throughout the area. Primary timber producing areas have been cut or are currently under contract. This area includes timber compartments 336 and 338-348.

Range vegetation occupies more total acres than timber. Juniper and mountain mahogany are common invaders on rangelands at lower elevations. Encroachment by these species continue to reduce the forage potential. Bear Camp and Blue Lake Allotments are intensively managed, and demonstrate fair to good riparian conditions. Most of the rangelands are on the south and west facing slopes, while the shaded sites are timbered.

Blue Lake is the largest lake on the District; the associated campground receives the heaviest use. The site is managed for camping, boating, picnicking, fishing, hiking, summer homes, and a summer youth camp. This MA contains part of the Blue Lake National Recreation Trail. This area is, perhaps, the most popular deer hunting area on the Warner Mountains. Dispersed area camping is another popular recreation activity. The trailhead from Patterson Campground offers a popular entry to the Wilderness.

The Forest has identified goshawk habitat throughout the timbered portions of this MA. Higher elevations provide excellent summer range for mule deer. Pronghorn also frequent the area. Blue Lake supports one nesting pair of bald eagles. Anglers enjoy East Creek, Parsnip Creek, and Blue Lake for their high quality fishing.

Applications for oil and gas leases cover most of this MA; Bear Camp Flat is almost totally leased. All other applications have been withdrawn, or leases terminated. A low-head hydroelectric plant proposal is being studied on Parsnip Creek. Parsnip and East Creeks are the primary watersheds, both of which provide water for fisheries and downstream irrigation.

Access to the MA is provided by Modoc County Roads 42, 64, and 258, and a developed system of National Forest roads.

Standards and Guidelines

Cultural Resources

- Research the extensive prehistoric obsidian sites and evaluate for nomination to the National Register of Historic Places.

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Range

- Use technical review teams to (1) recommend needed adjustments in permitted numbers or grazing seasons, and (2) develop grazing systems on all allotments.

Soil

- Conduct an SRI Order 2 on sensitive watersheds 052, 054, and 201, and sensitive soil areas identified in the Modoc SRI Order 3 (Luckow 1984) and the SCS soil survey (USDA SCS 1974) (see FEIS bibliography). Develop site specific management practices for soil disturbing activities.

- On sensitive watersheds and other sensitive areas, limit OHV to established roads and trails, as needed. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality.

- Maintain fertilization plots and analyze white fir timber stands for possible fertilization projects to improve the nutrient balance and tree growth rates.

Timber

- One compartment (336) within this management area has been set aside for evaluating uneven-aged management.

Water and Riparian

- Use watershed improvement funding to control gullying in Corporation Meadow, Bearcamp Flat, Homestead Flat, Skunk Cabbage Meadow, and in Alaska Canyon. Control streambank erosion along Parsnip Creek.

- Maintain the water quality of Blue Lake. Evaluate the potential of each project in the watershed to degrade the lake's water quality. Periodically monitor water quality to establish background data and detect changes.

- In watersheds 052, 054, and 201, minimize the cumulative watershed impacts on stream channel condition and water quality by assessing the effects of each land-disturbing activity prior to its undertaking.

- When an estimated cumulative watershed threshold is approached, increase buffer and filter strip width, install erosion control structures, and rip and scarify disturbed areas as needed to minimize impacts to water quality and beneficial uses.

Wildlife and Fish

- Manage for 840 acres of old growth in the mixed conifer type and 165 acres in the eastside pine type.

- Manage for snags through natural recruitment except when project activities dictate otherwise.

- Implement fish habitat improvements in East, Parsnip and Skunk Cabbage Creeks and combine with watershed improvements where possible.

- Manage aspen habitat within timber sale areas.

Prescription Allocation

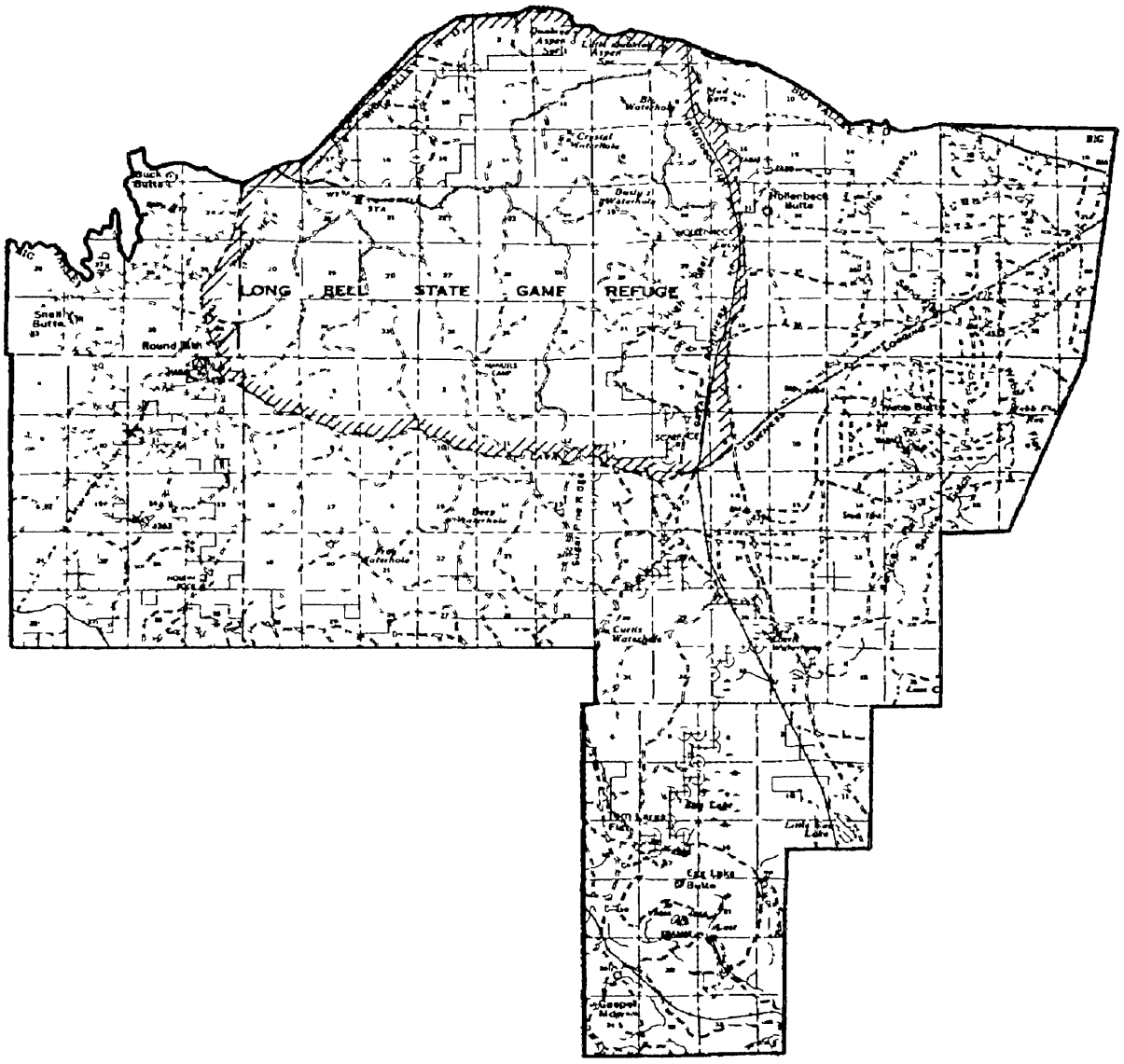
	Prescription	>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	3,646	3,459	61	**7,166**
4	Semi-Primitive Non-Motorized	422			**422**
7	Visual Retention[1]	5,356	2,187		**7,543**
9	Raptor Management	278	65	646	**989**
10	Rangeland			21,572	**21,572**
11	Range-Forage			2,782	**2,782**
12	Even-Aged Timber	855			**855**
13	Timber-Visuals	1,752			**1,752**
14	Timber-Forage				**6,328**
	Partial Retention	789			
	Modification	5,539			
15	Uneven-Aged Timber	3,151			**3,151**
16	<20 Cu Ft Timber		2,905		**2,905**
17	Riparian Area	73	341	391	**805**
Total		**21,861**	**8,957**	**25,452**	**56,270**

[1] Current developed recreation sites within these prescription areas contain nominal acreage (<10 acres per site), and will be managed under the Developed Recreation Prescription (#5).

Range Allotment Strategies

Allotment	Strategy
Bearcamp	C
Blue Lake (cattle)	D
Blue Lake (sheep)	D
Coyote	C
North Creek	C
Parsnip Creek	C
Selic Canyon	C
West Valley	B

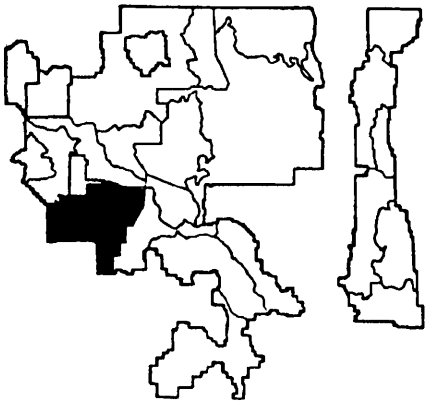
LONG BELL • Management Area 41



41 - Long Bell

Big Valley Ranger District

Acreage		
National Forest	64,270	
Rangelands	18,180	
Timberlands	46,090	
< 20 cu. ft. per acre		30,292
> 20 cu. ft. per acre		15,798
Unsuitable for Timber Management	6,620	
< 20 cu. ft. per acre		2,269
> 20 cu. ft. per acre		4,351



Long Bell Management Area is located in the northwest corner of the District, and borders the Shasta-Trinity National Forest. The area encompasses the Long Bell State Game Refuge and much private property. The terrain is primarily lava reefs.

Vegetation includes sagebrush, mountain mahogany, juniper, and pockets of commercial timber species. The predominant commercial species is ponderosa pine, with nominal amounts of incense-cedar, sugar pine, and white fir. Aspen grow at the base of lava reefs. Land near Round Mountain and within the Scarface Burn have productive manageable soils, which is uncharacteristic of this MA. Timber compartments 403 through 416 are located in the area.

Because water is scarce, range opportunities are limited. Most of the area provides suitable sheep range. Although forage is abundant, much of it grows beyond the reach of deer. While the area has a low potential for producing deer, it provides spring and summer mule deer range. Bald eagle and osprey occur in the Egg Lake area.

Deer hunting is the most popular recreation activity. Lava Camp Campground receives concentrated use only during the hunting season.

This area is partially leased for geothermal and oil and gas exploration. Applications for both commodities also cover portions of the area. Burlington-Northern railroad, the California-Oregon transmission powerline (COTP), a 500kv Pacific Power and Western Area Power Administration utility line, and Pacific Gas and Electric natural gas line cross the MA. Fire crews occupy the Long Bell Guard Station during fire season.

Access to the MA is provided by Modoc County Roads 91 and 95, and a developed system of National Forest roads.

Standards and Guidelines

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Sensitive Plants

- Monitor and protect populations of *Calochortus longebarbatus longebarbatus* and *Mimulus pygmaeus.*

Soil

- Conduct an SRI Order 2 on < 20 timberlands with SRI Order 3 soil units 174, 222, and 223. Reassess capability, suitability, and limitations for management.
- Maintain fertilization monitoring plots and analyze timber stands for possible fertilization projects to improve the nutrient balance and tree growth rates.
- Restore soil productivity through fertilization or topsoil redistribution on problem acres near the Round Mountain-Snell Butte area.

Special Uses

- Ensure that Forest activities do not significantly interfere with the use, operation, and maintenance of 500kv lines and natural gas lines in the area.

Wildlife and Fish

- Manage for 140 acres of old growth in the mixed conifer type and 660 acres in eastside pine type.
- Maintain browse production areas within the Scarface Burn, as identified in the Scarface Burn Rehabilitation EA.
- Apply the Timber/Forage Prescription in silvicultural treatments in current plantations on acres allocated to this prescription.
- Improve water distribution for deer and other wildlife through guzzler installation in timber sale areas and installation of big game guzzlers southwest of Round Mountain.
- Develop a current bald eagle nest territory management plan and begin management of potential habitat.
- Identify and plan browse rejuvenation projects in Porcupine and Scarface Burns. Conduct 600 to 1200 acres of habitat improvement through prescribed burning.
- Inventory and protect goshawk nest territories necessary to meet target population levels.

Prescription Allocation

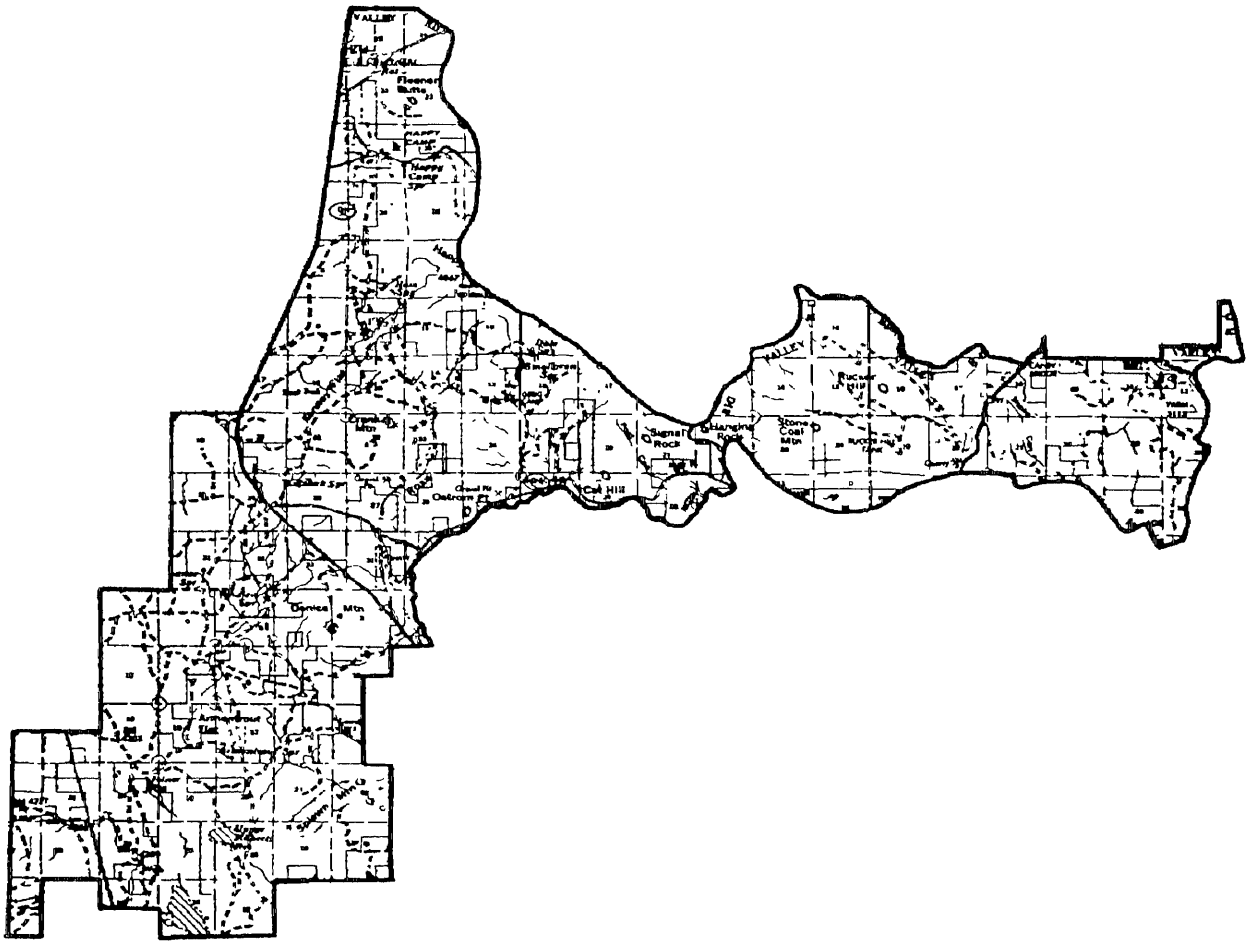
Prescription		>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	4,239		560	**4,799**
4	Semi-Primitive Non-Motorized		1,839		**1,839**
9	Raptor Management	112	430	289	**831**
10	Rangeland			14,113	**14,113**
11	Range-Forage			3,218	**3,218**
12	Even-Aged Timber[1]	9,447			**9,447**
13	Timber-Visuals	2,000			**2,000**
16	<20 Cu Ft Timber		28,023		**28,023**
Total		**15,798**	**30,292**	**18,180**	**64,270**

[1] Current developed recreation sites contain nominal acreage (< 10 acres per site), and will be managed under the Developed Recreation Prescription (#5).

Range Allotment Strategies

Allotment	Strategy
Egg Lake	D
Happy Camp	C
Refuge 1-N	C
Round Mountain	C
White Horse	B

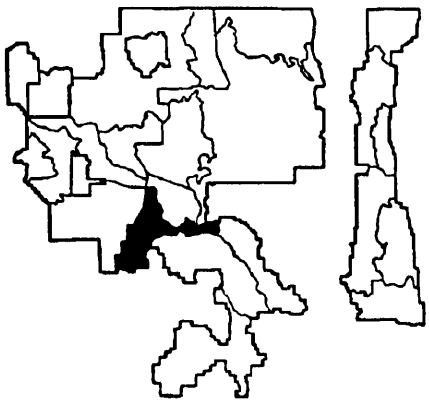
STONE COAL • Management Area 42



42 - Stone Coal

Big Valley Ranger District

Acreage		
National Forest	35,986	
Rangelands	19,241	
Timberlands	16,745	
<20 cu. ft. per acre		4,4860
>20 cu. ft. per acre		11,885
Unsuitable for Timber Management	4,361	
<20 cu. ft. per acre		1,334
>20 cu. ft. per acre		3,027



Stone Coal Management Area lies north of the Big Valley Federal Sustained-Yield Unit. It is bordered by the Devil's Garden Ranger District to the north, and the Pit River on the south. Rucker Hill and Armentrout Flat are prominant geographical features. Highway 299 traverses the eastern side of the MA.

Much of the MA is characterized by foothills and moderate slopes. Juniper and grass dominate the lower elevations, grading into ponderosa pine and incense-cedar, and culminating in higher elevation fir. Timber compartments 401, 402, 417, 418, 419, 424, and 425 are included in the area. Most suitable timber sites have been reforested.

Open timbered stands intermingled with grass and brush provide primarily transitory cattle range. Forage production for deer and sheep has increased dramatically since the 1979 2500-acre Happy Fire.

Dispersed recreation opportunities are available in this MA, the most popular being hunting. While the Pit River provides limited fishing opportunities, access is restricted by private ownership. There are no developed recreation sites.

The MA provides moderate summer range and important winter range for mule deer. Bald eagle, golden eagle, and osprey nesting sites are found adjacent to the Pit River and other native wetlands.

Although most of the MA is under lease for oil and gas, potential for development is low. Most of the water originating in this area drains directly into the Pit River, the most significant local water source.

Access to the MA is provided by State Highway 299, Modoc County Roads 85 and 91, and a developed system of National Forest roads.

Standards and Guidelines

Cultural Resources

- Complete inventory of the Lassen Emigrant Trail and nominate to the National Register of Historic Places.

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Range

Use an interdisciplinary team or coordinated resource management planning approach (1) to recommend needed changes in permitted numbers or grazing seasons, and (2) to develop grazing systems in the Management Area.

Sensitive Plants

- Monitor and protect populations of *Calochortus longebarbatus longebarbatus* at Crank Springs and in other suitable habitats.

Soils

- Conduct an SRI Order 2 on sensitive soil areas identified in the Modoc SRI Order 3 (Luckow 1984) (see FEIS bibliography). Develop site-specific management practices for soil-disturbing activities during the project planning phase.

– On sensitive soil areas, allow OHV use only on established roads and trails. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails when necessary to protect the soil resource and maintain water quality.

Wildlife and Fish

– Provide for 590 acres of old growth in the eastside pine type.

– Increase snag densities through use of snag management techniques. Base actual recruitment needs on snag surveys.

– Develop a current bald eagle nest territory management plan and begin management of potential habitat.

– Design browse manipulation projects in the Happy Burn for implementation during the 2nd decade.

– Inventory and protect active goshawk nest territories necessary to meet target population levels.

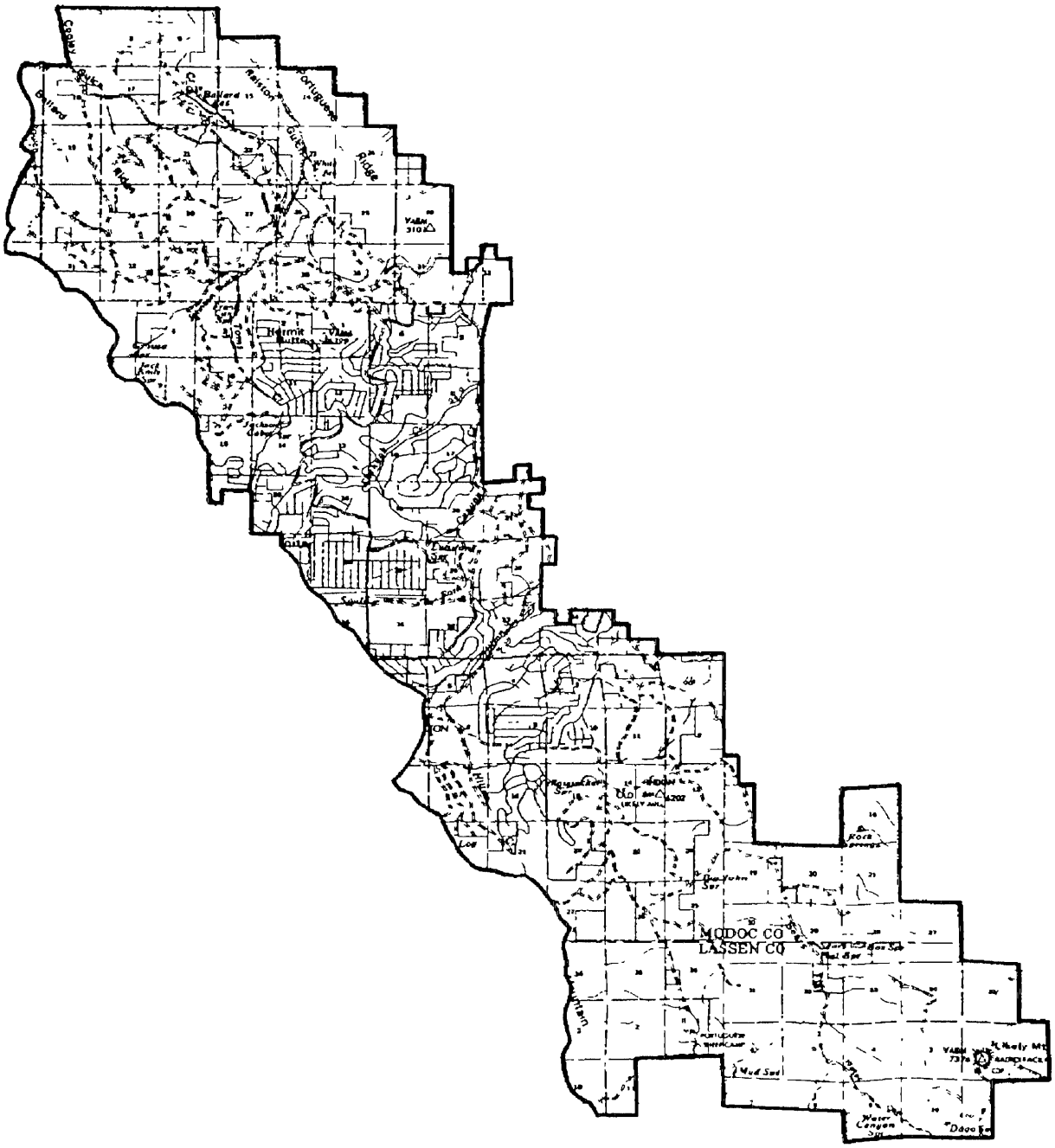
Prescription Allocation

Prescription		>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	935	338	1,578	**2,851**
4	Semi-Primitive Non-Motorized	228			**228**
7	Visual Retention	234	54		**288**
9	Raptor Management	1,717	952	1,860	**4,529**
10	Rangeland			7,834	**7,834**
11	Range-Forage			7,922	**7,922**
12	Even-Aged Timber	5,172			**5,172**
13	Timber-Visuals	3,452			**3,452**
16	<20 Cu Ft Timber		3,472		**3,472**
17	Riparian Area	147	44	47	**238**
Total		**11,885**	**4,860**	**19,241**	**35,986**

Range Allotment Strategies

Allotment	Strategy
Crites	B
Crank Springs	D
Gerig	B
Stone Coal	C
Splawn Mountain	B
Shawville	C

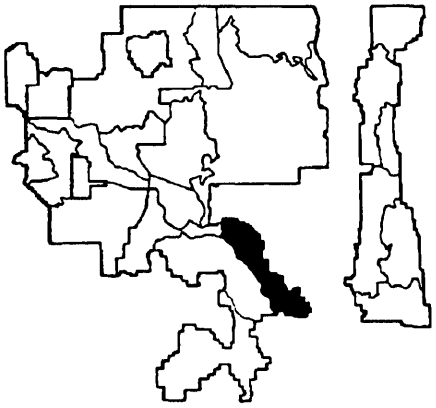
PORTUGUESE RIDGE • Management Area 43



43 - Portuguese Ridge

Big Valley Ranger District

Acreage			
National Forest	29,562		
Rangelands		19,043	
Timberlands		10,519	
	< 20 cu. ft. per acre		3,309
	> 20 cu. ft. per acre		7,210
Unsuitable for Timber Management		1,771	
	< 20 cu. ft. per acre		409
	> 20 cu. ft. per acre		1,362



Portuguese Ridge Management Area extends south of Canby along Portuguese Ridge to Likely Mountain. The outstanding features of this area are the large parcels of private land (California Pines Recreational Estates) which isolate the Ridge from the rest of the District.

The Likely Mountain area grows predominantly juniper and grasses. Most of the timberland, consisting primarily of ponderosa pine, lies in the Portuguese Ridge area with white fir at higher elevations. Although the MA has several good timber sites, steep terrain, poor access, and lack of rights-of-way in the Ridge area render timber management costly and difficult. The area includes timber compartments 436-440 and 445-448.

Grazing is the major activity for this entire area, which also provides important winter range for mule deer. Other wildlife include osprey at White Reservoir and golden eagles throughout the MA.

Hunting is the most popular dispersed recreation form. The potential for developed recreation in this MA is extremely low because sites are generally of poor quality.

Virtually the entire area is leased for oil and gas, but no exploration or development has taken place. Potential for geothermal resources exists at the extreme northern edge of the MA.

The land is droughty with shallow, porous soils and low surface water. The water from this low-value watershed is used for irrigation.

Likely Mountain is an important electronic site providing microwave communications services to the Alturas area under special use permits. The California Department of Forestry also maintains a fire lookout during summer months on Likely Mountain.

Access to the MA is provided by Modoc County Roads 71, 77 and 175, and a developed system of National Forest roads.

Standards and Guidelines

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Range

- Use an interdisciplinary team or coordinated resource management planning approach (1) to recommend needed changes in permitted numbers or grazing seasons, and (2) to develop grazing systems in the Management Area.

Soil

- Conduct an SRI Order 2 on sensitive soil areas identified in the Modoc SRI Order 3 (Luckow 1984) (see FEIS bibliography). Develop site-specific management practices for soil-disturbing activities during the project planning phase.
- On sensitive soil areas, allow OHV use only on established roads and trails. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails when necessary to protect the soil resource and maintain water quality.

- Analyze white fir timber stands for possible fertilization projects to improve the nutrient balance and tree growth rates.

Water and Riparian

- Use watershed improvement funding to correct gullying in Sears Flat, and to correct streambank erosion in Canyon Creek.

Wildlife and Fish

- Manage for 170 acres of old growth in mixed conifer and 195 acres in eastside pine.
- Increase snag densities through use of snag management techniques. Base actual recruitment needs on snag surveys.
- Maintain Portuguese Ridge as deer winter range.
- Inventory and protect active goshawk nest territories necessary to meet target population levels.

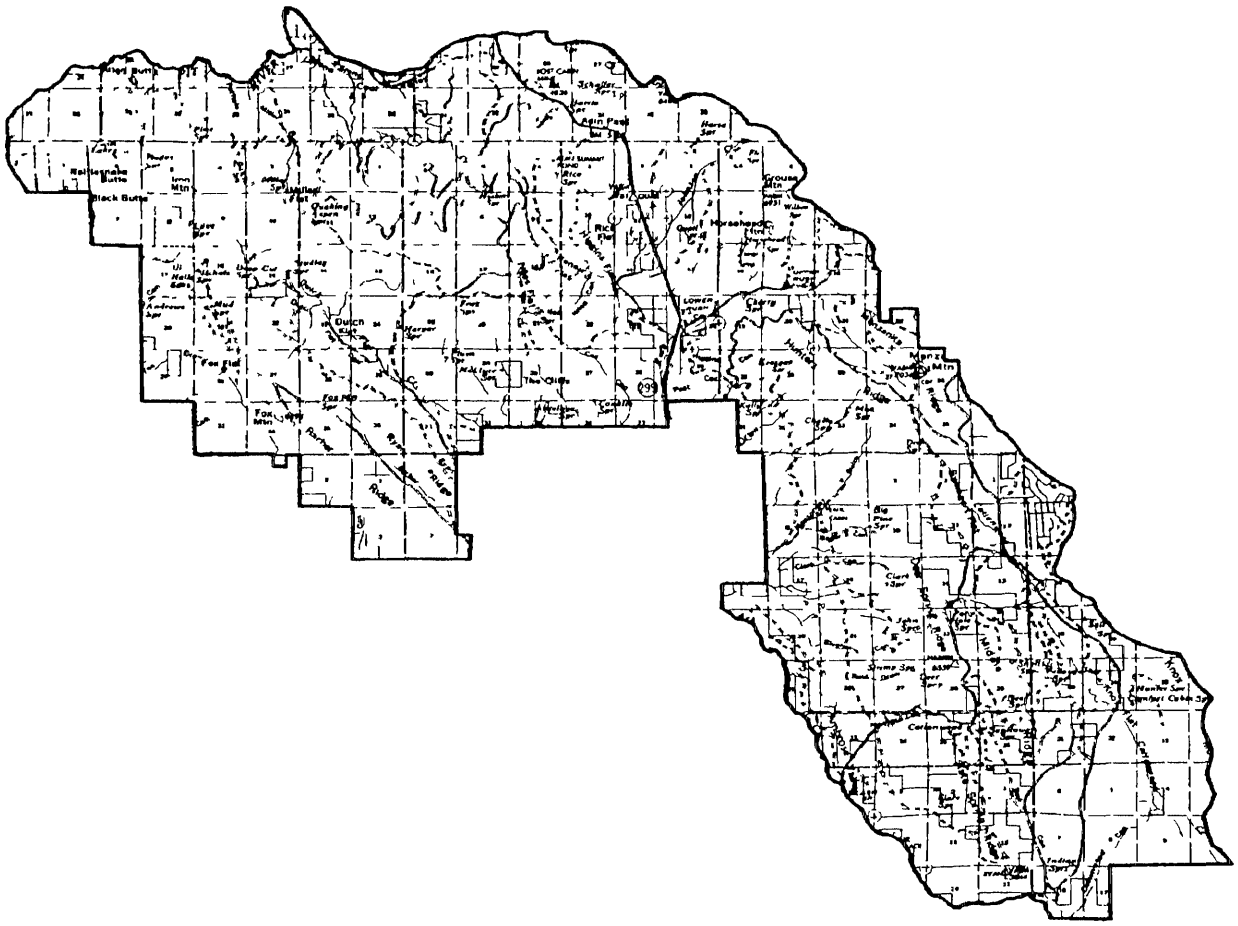
Prescription Allocation

Prescription		>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	938		20	**958**
4	Semi-Primitive Non-Motorized		392		**392**
7	Visual Retention	22			**22**
9	Raptor Management	424	17	314	**755**
10	Rangeland			7,667	**7,667**
11	Range-Forage			11,042	**11,042**
12	Even-Aged Timber	4,680			**4,680**
13	Timber-Visuals	1,146			**1,146**
16	<20 Cu Ft Timber		2,900		**2,900**
Total		**7,210**	**3,309**	**19,043**	**29,562**

Range Allotment Strategies

Allotment	Strategy
Ballard Ridge	B
Centerville	B
Delta Lake	C
Rocky Prairie	B

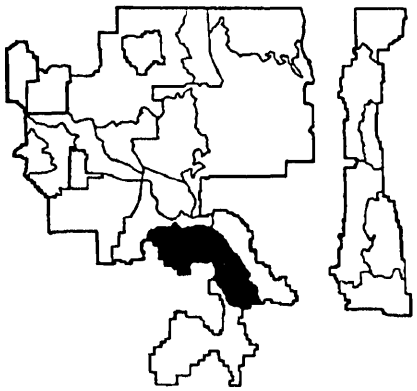
NORTH ADIN • Management Area 44



44 - North Adin

Big Valley Ranger District

Acreage		
National Forest	88,640	
Rangelands	28,958	
Timberlands	59,682	
< 20 cu. ft. per acre		16,301
> 20 cu. ft. per acre		43,381
Unsuitable for Timber Management	11,673	
< 20 cu. ft. per acre		5,996
> 20 cu. ft. per acre		5,677



North Adin Management Area provides most of the timber for the Big Valley Federal Sustained-Yield Unit. The MA wraps around the northern part of Adin, extending from Rattlesnake Butte on the west to Stone Coal Valley on the north, and from Manzanita Ridge on the east to Ash Creek on the south. Highway 299 crosses the area. Topography varies from steep, forested slopes to flat, open meadows.

Most of the Sustained-Yield Unit's volume is contained in this MA. Timber species include ponderosa pine and white fir, with moderate amount of incense-cedar. California black oak grows at lower elevations. Timber compartments contained in the area are 420-423, 426-428, 432-435, 441-444, 456, and 464. It is an important grazing area as well.

This MA supports wildlife habitat for several species of birds and large mammals. The Modoc sucker, federally listed as an endangered species, inhabits Dutch, Rush, and Johnson Creeks. This area produces most of the goshawks found on the District. Golden and bald eagles, in addition to osprey, inhabit areas along the Pit River and Ash Creek.

The most popular form of dispersed recreation is deer hunting.

Although oil and gas leases cover the MA, there has been no activity. The Winters Mining District, in the Adin Pass area, was active from about 1890 to the 1920's. In 1982, an enterprise received a mining patent which has been validated by suitable quantities of gold and silver.

Rush and Ash Creeks are important watersheds for trout fisheries and downstream irrigation. Most of the MA drains into Ash Creek and subsequently into the Pit River. The area has an abundant snowpack for water production.

Access to the MA is provided by State Highway 299, Modoc County Roads 85, 88, and 198, and a developed system of National Forest roads.

Standards and Guidelines

Cultural Resources

- Complete inventory of the Lassen Emigrant Trail and nominate to the National Register of Historic Places.

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Range

- Use an interdisciplinary team or coordinated resource management planning approach (1) to recommend needed changes in permitted numbers or grazing seasons, and (2) to develop grazing systems in the Management Area.

Sensitive Plants

- Monitor and protect populations of *Calochortus longebarbatus longebarbatus* at Higgins Flat and in other suitable habitats.

- Monitor and protect populations of *Eriogonum prociduum* near Knox Flat and in other suitable habitats.

Soil

- Conduct an SRI Order 2 on sensitive watersheds 071, 072, and 073, and sensitive soil areas identified in the Modoc SRI Order 3 (Luckow 1984) (see FEIS bibliography). Develop site specific management practices for soil disturbing activities.
- On sensitive watersheds and other sensitive areas, limit OHV to established roads and trails, as needed. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality.
- Maintain fertilization monitoring plots and analyze white fir timber stands for possible fertilization projects to improve the nutrient balance and tree growth rates.

Timber

- One compartment (427) within this management area has been set aside for evaluating uneven-aged management.

Water and Riparian

- Use watershed improvement funding to correct gullying in Roney Flat, Higgens Flat, Swaggert Flat, and Pothole Springs. Correct streambank erosion and headcutting along Rush Creek, Johnson Creek, Messenger Gulch, and Dutch Flat Creek. Obliterate the Plum Springs and Harper Springs Roads.
- Maintain the watershed improvement structures in Roney and Higgens Flats.
- In watersheds 071, 072, and 073, minimize the cumulative watershed impacts on stream channel condition and water quality by assessing the effects of each land-disturbing activity prior to its undertaking.
- When an estimated cumulative watershed threshold is approached, increase buffer and filter strip width, install erosion control structures, and rip and scarify disturbed areas as needed to minimize impacts to water quality and beneficial uses.
- Use range structural improvement funds to restore degraded riparian areas in the Rush Creek and Round Valley Allotments.

Wildlife and Fish

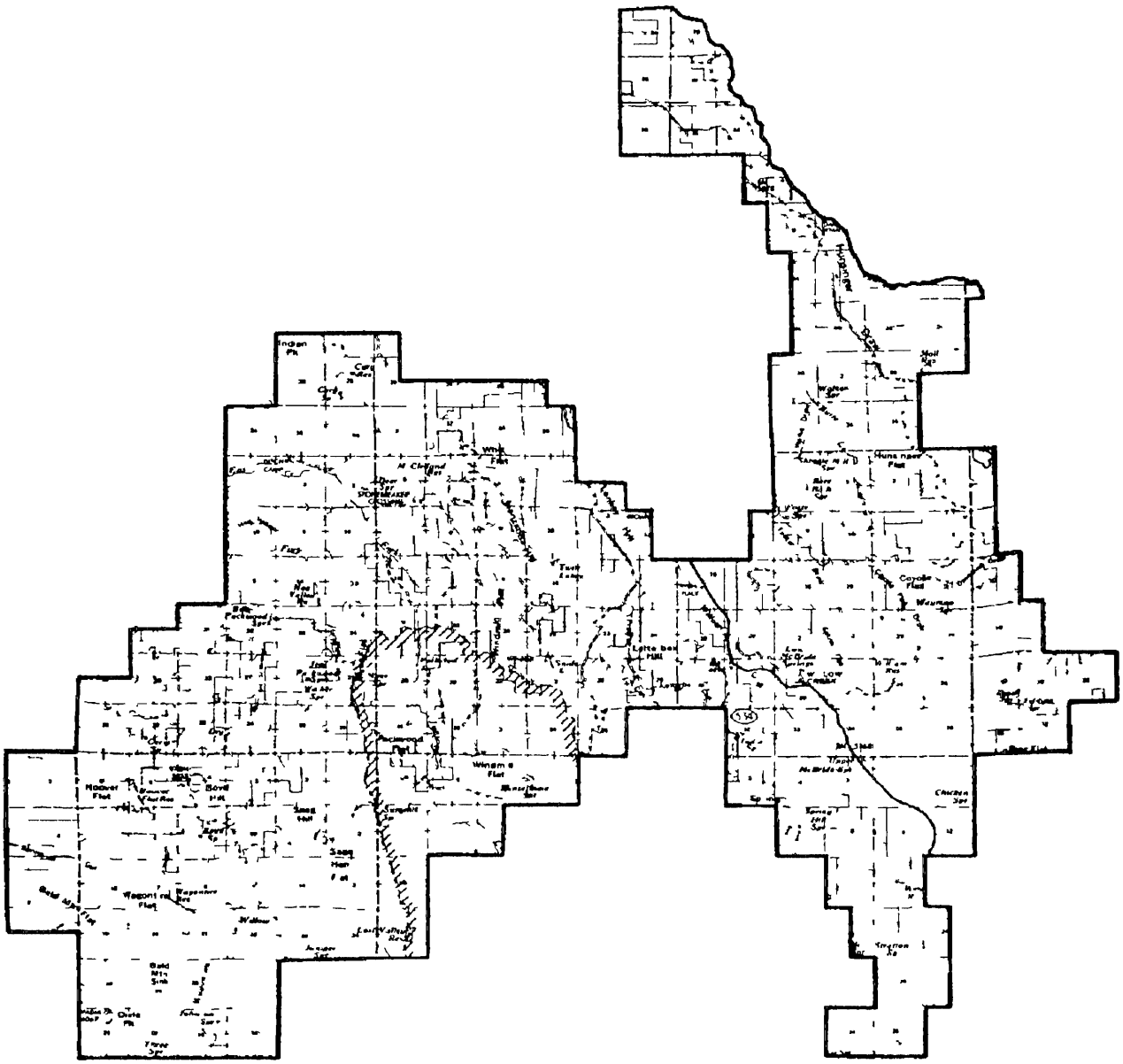
- Designate 1325 acres of old growth in mixed conifer and 850 acres in eastside pine.
- Increase snag densities through use of snag management techniques. Base actual recruitment needs on snag surveys.
- Fence and improve springs and seeps for nongame species.
- Maintain or improve oak densities through timber sales.
- Improve Modoc sucker habitat in Rush, Johnson, and Dutch Flat creeks. Improve trout habitat in upper Rush Creek and Ash Creek.
- Identify opportunities for blue grouse improvements in timber sale planning.
- Implement habitat needs for pileated woodpecker.
- Inventory and protect active goshawk nest territories necessary to meet population targets.

Prescription Allocation					
Prescription		> 20 Acres	< 20 Acres	Range Acres	Total Acres
1	Minimum Level	3,853	5,156	204	**9,213**
4	Semi-Primitive Non-Motorized	1,150			**1,150**
7	Visual Retention	337	506		**843**
9	Raptor Management	404	757	200	**1,361**
10	Rangeland			28,522	**28,522**
12	Even-Aged Timber	20,843			**20,843**
13	Timber-Visuals	12,490			**12,490**
15	Uneven-Aged Timber	4,034			**4,034**
16	< 20 Cu Ft Timber		9,799		**9,799**
17	Riparian Area	270	83	32	**385**
Total		**43,381**	**16,301**	**28,958**	**88,640**

Range Allotment Strategies

Allotment	Strategy
Ash Valley	B
Barber Canyon	B
Barrows	B
Johnson Creek	B
Rush Creek	C
Round Valley	C

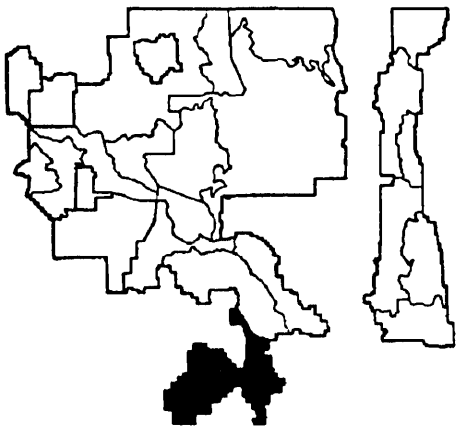
SOUTH ADIN • Management Area 45



45 - South Adin

Big Valley Ranger District

Acreage			
National Forest	90,226		
Rangelands		39,158	
Timberlands		51,068	
	< 20 cu. ft. per acre		20,269
	> 20 cu. ft. per acre		30,799
Unsuitable for Timber Management		7,692	
	< 20 cu. ft. per acre		2,130
	> 20 cu. ft. per acre		5,562



Forest land in South Adin Management Area is interspersed with parcels of private land. Ash Creek forms the northern border, with the balance of the MA extending southwest to Dixie Valley. Outstanding landmarks include Hayden Hill, the Gerig Burn area, Willow Creek, and Hunsinger Flat. Highway 139 crosses the area.

Pure pine with juniper is the predominant vegetation type. California black oak grows on some valley-facing slopes. The area, all of which is contained within the Big Valley Federal Sustained-Yield Unit, produces large volumes of ponderosa pine. It includes timber compartments 429-431, 449-455, and 457-463.

Heavy forage production and range use are characteristic of this MA. Pronghorn use the area as summer and winter range, depending on forage availability. This is also mule deer summer range, with winter range use concentrated along the perimeters. Golden eagles inhabit lands where timber opens into valley-facing slopes. The Hayden Hill State Game Refuge is contained in this area.

Nearly all the water from this area is used for off-site irrigation and on-site stock watering. The Forest has developed numerous reservoirs and ponds for a variety of wildlife and range uses. South Adin MA is a low-value watershed because surface flows are minimal.

Willow Creek picnic site and campground provide a roadside recreation opportunity for many travelers along Highway 139. Willow Creek within the Forest is a low-quality fishery for trout. Deer hunting is the primary dispersed use for the rest of the area.

The Hayden Hill mining district lies in the southern portion of this MA. It was an historical gold mining community (1869-1920), and further exploration and development is planned.

Access to the MA is provided by State Highway 139, Modoc County Road 527, Lassen County Roads 510, 512, 513, 527, and 534, and a developed system of National Forest roads.

Standards and Guidelines

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Range

- Use an interdisciplinary team or coordinated resource management planning approach (1) to recommend needed changes in permitted numbers or grazing seasons, and (2) to develop grazing systems in the Management Area.

Sensitive Plants

- Monitor and protect populations of *Ivesia paniculata* near Willow Creek Campground and in other suitable habitats.

Water and Riparian

- Use watershed improvement funding to correct streambank erosion in Willow Creek.

- Use range structural improvement funds to restore degraded riparian areas in the Willow Creek and East Bieber Allotments.

Wildlife and Fish

- Provide for 1535 acres of old growth in eastside pine.
- Increase snag densities through use of snag management techniques. Base actual recruitment needs on snag surveys.
- Plan and implement habitat improvements, barriers and other actions necessary for reintroduction of Modoc suckers into Willow Creek.
- Inventory and protect active goshawk nest territories necessary to meet population targets.

Prescription Allocation

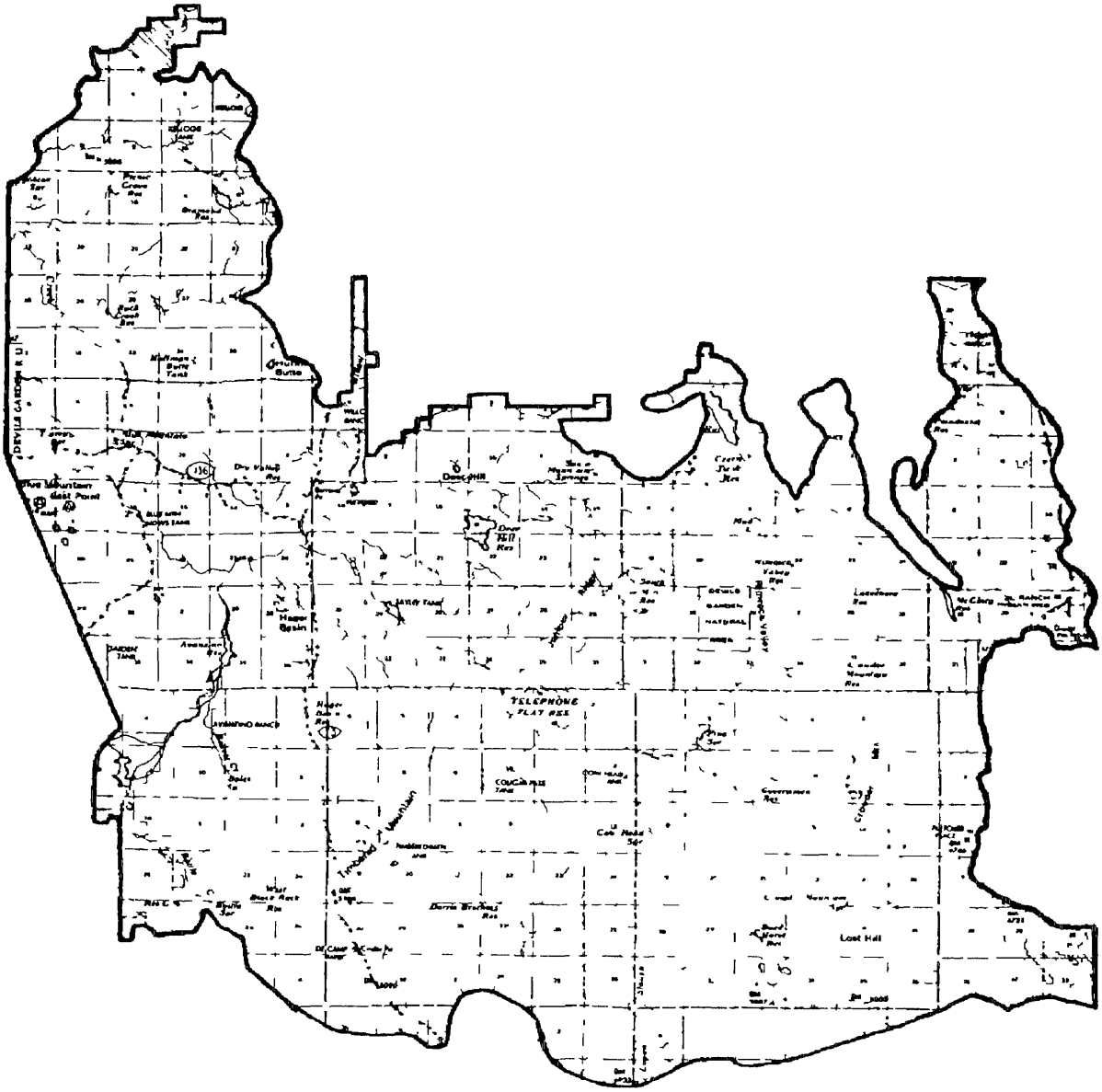
Prescription		>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	4,445		1,910	**6,355**
4	Semi-Primitive Non-Motorized		1,042		**1,042**
7	Visual Retention[1]	313	476		**789**
9	Raptor Management	958	999	1,278	**3,235**
10	Rangeland			35,917	**35,917**
12	Even-Aged Timber	19,431			**19,431**
13	Timber-Visuals	5,493			**5,493**
16	<20 Cu Ft Timber		17,663		**17,663**
17	Riparian Area	159	89	53	**301**
Total		**30,799**	**20,269**	**39,158**	**90,226**

[1] Current developed recreation sites contain nominal acreage (<10 acres per site), and will be managed under the Developed Recreation Prescription (#5).

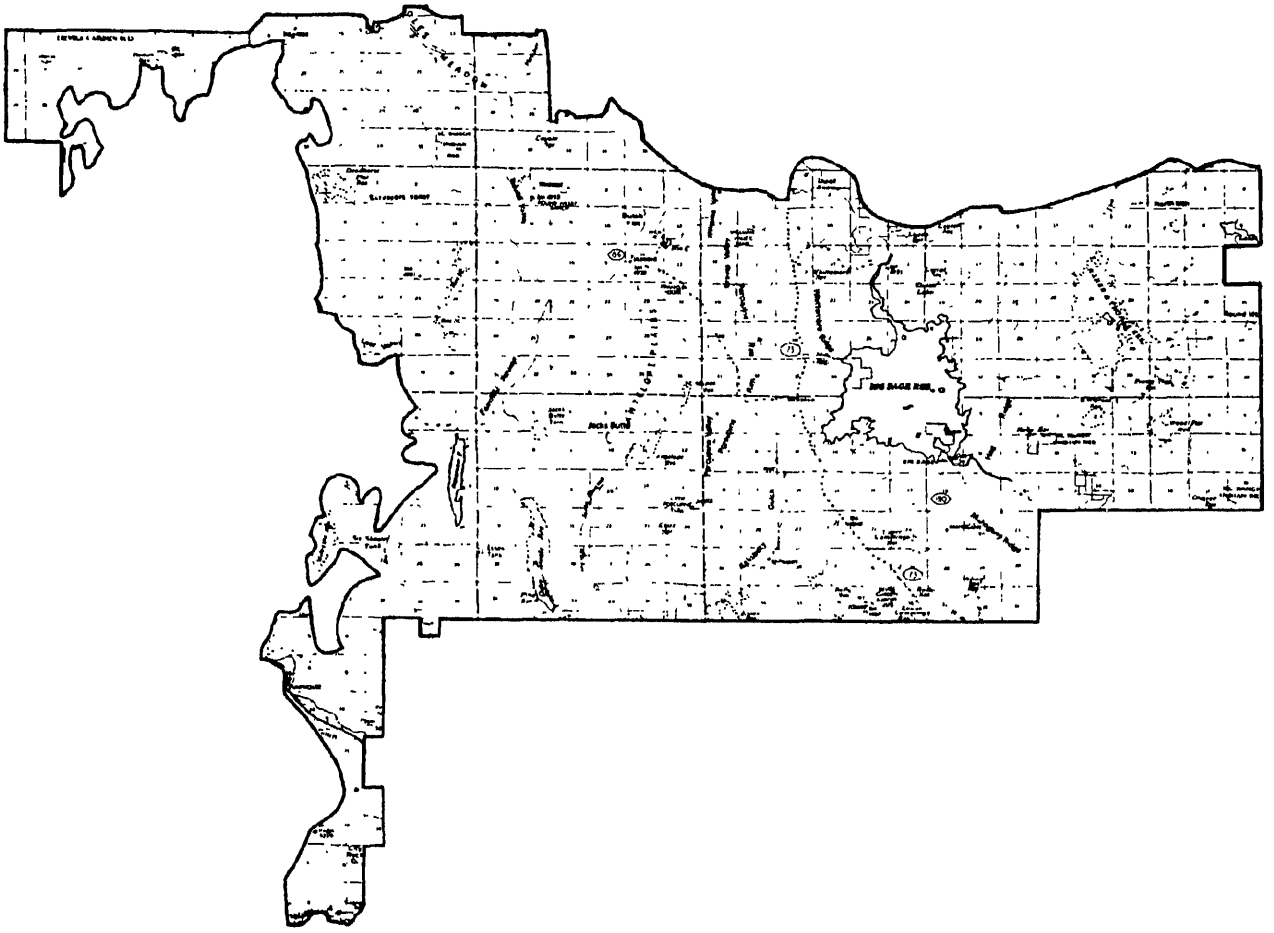
Range Allotment Strategies

Allotment	Strategy
East Bieber	D
Oxendine	B
Spring Hill	B
West Bieber	D
Willow Creek	B

DEVIL'S GARDEN • Management Area 51 North



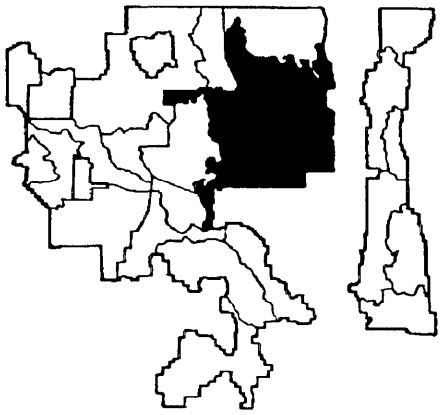
DEVIL'S GARDEN • Management Area 51 South



51 - Devil's Garden

Devil's Garden Ranger District

Acreage		
National Forest	348,830	
Rangelands	334,870	
Timberlands	13,960	
<20 cu. ft. per acre		7,148
>20 cu. ft. per acre		6,812
Unsuitable for Timber Management	2,733	
<20 cu. ft. per acre		1,039
>20 cu. ft. per acre		1,694



Devil's Garden Management Area is the largest MA on the District. It extends from Goose Lake on the northeast to the pine timber belt on the west, and from Fletcher Creek on the north to the Forest boundary above Canby. Prominant landmarks include the Devil's Garden Research Natural Area, Big Sage Reservoir, and the Blue Mountain Lookout. Bonneville Power Administration constructed a new (1985) 230kv power transmission line from Malin, Oregon, to Alturas, California, which crosses the southern portion of the MA, paralleling its boundary.

The primary vegetation of this flat, rocky terrain is juniper woodlands interspersed with sage and grass flats. Local woodcutters remove large volumes of juniper for firewood. Isolated patches of ponderosa pine and mixed conifer grow on Blue Mountain and Timbered Mountain and provide commercial timber sales. This MA includes timber compartments 512, 513, 517, and 518.

Because it produces large amounts of forage, the area is used heavily for grazing cattle. The area also contains fall and winter range important for the Interstate deer herd. Pronghorn use the range in summer and fall. Half the Forest's wild horse herd roams the MA. Waterfowl nest on the reservoirs and wetlands, Triangle Ranch being the focal development.

Water originating in the MA flows into the Klamath and Pit River drainages. Fishing in reservoirs, deer hunting and woodcutting are the main recreation activities. Primitive campgrounds are located at Big Sage Reservoir and Reservoir C. The Lost River and shortnose suckers, federally listed as endangered species, inhabit the Fletcher Creek system.

Geothermal potential exists along the southern and eastern edges of the Devil's Garden plateau. A few oil and gas leases have been filed for the area along the Forest boundary in the MA, but no activity has taken place.

Access to the MA is provided by State Highways 139, 299, and 395, Modoc County Roads 48, 53, 55, 73, 181, and 180, and a developed system of National Forest roads.

Standards and Guidelines

Cultural Resources

- Nominate the Fairchild Swamp Rock Art Site to the National Register of Historic Places. Conduct non-project related cultural resource inventories to locate, record, and evaluate other rock art sites, as opportunities arise.
- Complete inventory of the Applegate Emigrant Trail and nominate to the National Register of Historic Places.

Fire and Fuels

- Manage fire within the guidelines of the Big Sage Fire Management Unit Plan.
- In areas outside the Big Sage Fire Management Unit, suppress wildfires using the appropriate suppression response.

Range

- Use an interdisciplinary team or coordinated resource management planning approach (1) to recommend needed changes in permitted numbers or grazing seasons, and (2) to develop grazing system in the Management Area.

Research Natural Area

- Devils Garden Natural Research Area is found in this management area. Forest activities should not alter the scenic and scientific value of this resource.

Sensitive Plants

- Monitor and protect populations of *Polygonum polygaloides esotericum* at Rimrock Valley Reservoir and in other suitable habitats.
- Monitor and protect populations of *Antennaria flaggelaris* in low sagebrush flats.

Soil

- Conduct an Order 2 SRI on Timbered Mountain to more accurately assess the capability, suitability, and limitations for management.

Water and Riparian

- Use watershed improvement funding to correct gullying in Howard's Gulch.
- Maintain watershed improvement structures in Howard's Gulch.
- Use range structural improvement funds to restore degraded riparian areas in the Timbered Mountain Allotment.

Wildlife and Fish

- Maintain 340 acres of old growth in the eastside pine type.
- Increase snag densities through use of snag management techniques. Base actual recruitment needs on current detailed surveys.
- Implement sage grouse improvement projects based on needs identified through research.
- Improve up to 1000 acres of largemouth bass habitat in selected reservoirs. Work with California Department of Fish and Game to improve forage and harvest species mix.
- Manage seeps and springs to improve nongame species habitat.
- Complete wetlands developments in Fairchild Swamp, Boles Meadows and other selected wetlands and maintain existing developments to project standards in accordance with State cooperative agreements. Implement wetland improvements for water birds, sandhill cranes, and other nongame species.
- Develop management plans for the bald eagle nesting territory, and begin management of potential habitat.

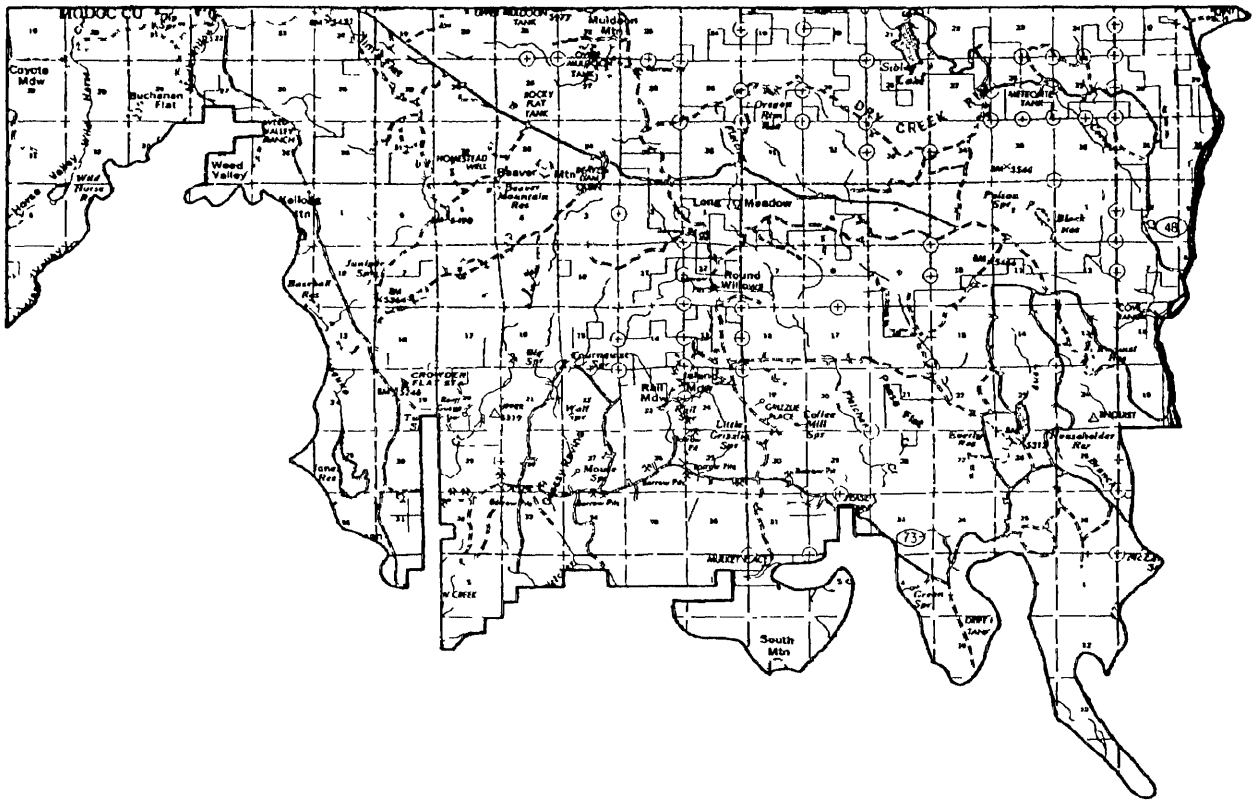
Prescription Allocation					
Prescription		>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	876		433	**1,309**
4	Semi-Primitive Non-Motorized		90		**90**
7	Visual Retention		187		**187**
8	Special Areas			800	**800**
9	Raptor Management	818	915	9,959	**11,692**
10	Rangeland			310,675	**310,675**
11	Range-Forage			12,423	**12,423**
12	Even-Aged Timber	5,118			**5,118**
16	<20 Cu Ft Timber		5,922		**5,922**
17	Riparian Area		34	580	**614**
Total		**6,812**	**7,148**	**334,870**	**348,830**

Range Allotment Strategies

Allotment	Strategy
Big Sage	C
Emigrant Springs	C
139	C
Pine Springs	C
Surveyor's Valley	C
Timbered Mountain	C
Triangle	D
Willow Creek Ranch	C

This page intentionally left blank.

CROWDER • Management Area 52



52 - Crowder

Devil's Garden Ranger District

Acreage		
National Forest	62,007	
Rangelands	24,695	
Timberlands	37,420	
< 20 cu. ft. per acre		8,517
> 20 cu. ft. per acre		28,903
Unsuitable for Timber Management	4,811	
< 20 cu. ft. per acre		1,316
> 20 cu. ft. per acre		3,495

Crowder Management Area is adjacent to the Oregon border in the northeastern portion of the District. Much of the MA is privately owned. Crowder Flat Guard Station is a prominent landmark of the area.

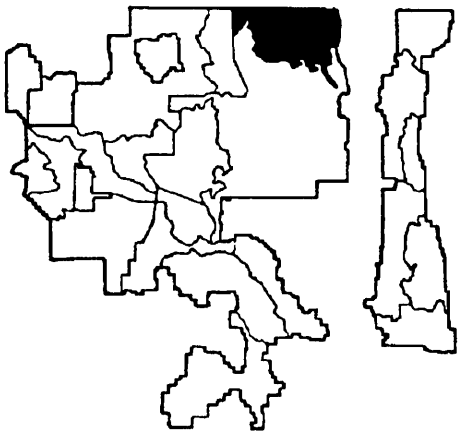
Important for commercial timber, the area grows ponderosa pine with some mixed conifer on wetter sites. Old-growth timber is particularly valuable and is currently being harvested. This MA encompasses timber compartments 501-507, 509-511, 514, and 516.

The timbered sites on this relatively flat terrain are intermingled with many meadows. The range produces forage of high quality for cattle grazing, as well as good spring and summer range for deer and pronghorn, and fall range for the Interstate deer herd. An active bald eagle nest is located at Wildhorse Reservoir. Wetlands provide nesting and rearing habitat for waterfowl.

In addition to wetlands, several irrigation reservoirs dot the landscape. The area is within Goose Lake and Klamath River watersheds.

Although the MA has no developed recreation sites, deer hunting, fishing and camping are popular dispersed activities.

The Lost River and shortnose suckers, federally listed as endangered species, inhabit the Willow Creek system.



Access to the MA is provided by Modoc County Roads 48, 73, and 181, and a developed system of National Forest roads.

Standards and Guidelines

Cultural Resources

- Complete inventory of the Applegate Emigrant Trail and nominate to the National Register of Historic Places.

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Water and Riparian

- Maintain watershed improvement structures in Stateline Meadow and in Wildhorse Creek.
- Implement range structural improvements and grazing strategies to improve riparian vegetation and water quality along Willow Creek.

Wildlife and Fish

- Manage for 115 acres of old growth in the mixed conifer type and 1320 acres in the eastside pine type.
- Increase snag densities through use of snag management techniques. Base actual recruitment needs on current detailed surveys.

– Continue to improve trout and warmwater fisheries through fencing and instream improvements. Improve habitat for largemouth bass in selected reservoirs and work with California Department of Fish and Game to improve forage and harvest species mixes.

– Develop a bald eagle nest territory management plan and begin managing potential habitat.

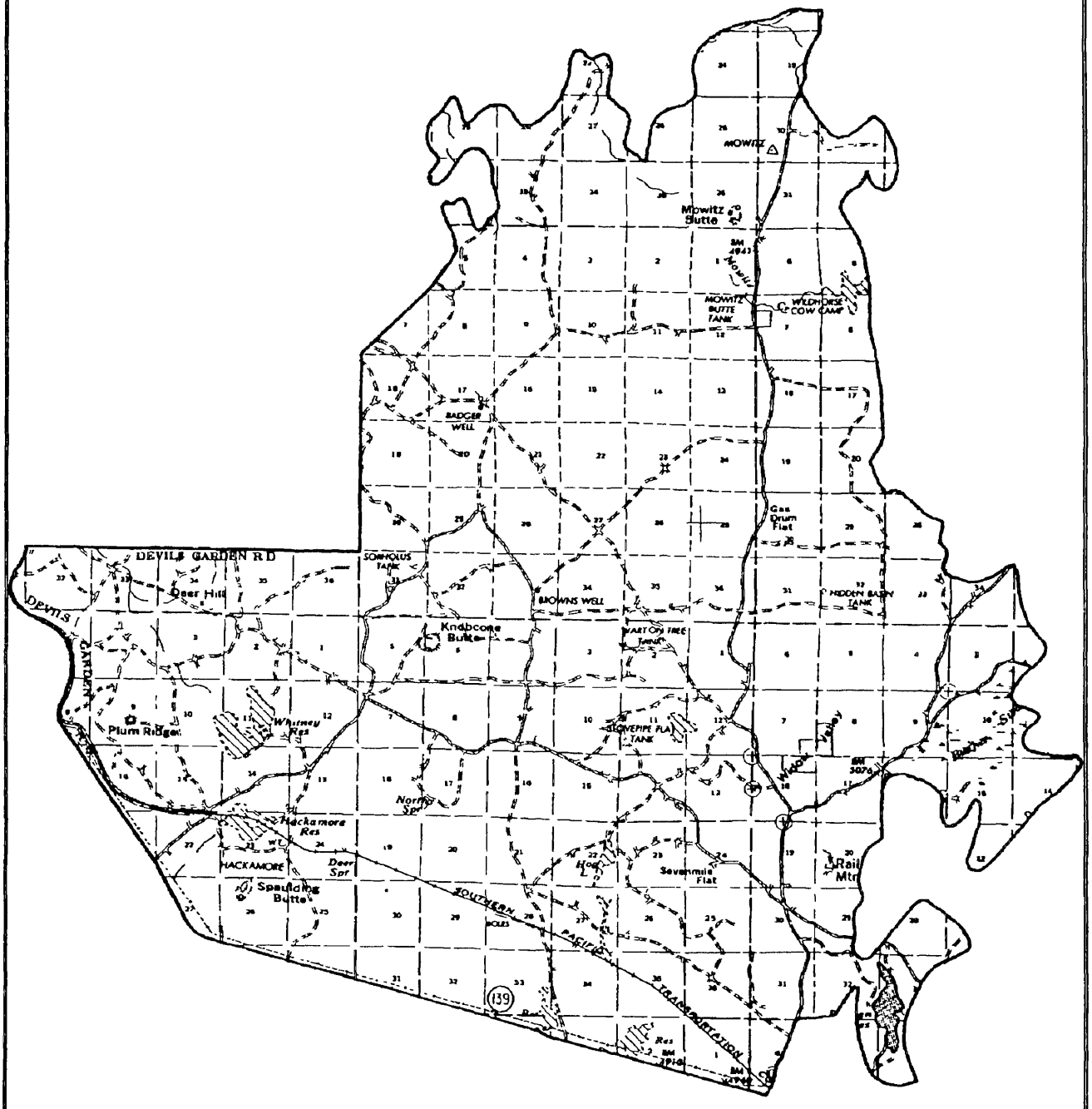
Prescription Allocation					
Prescription		>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	1,346		157	**1,503**
9	Raptor Management	1,946	1,224	3,430	**6,600**
10	Rangeland			20,863	**20,863**
12	Even-Aged Timber	23,823			**23,823**
13	Timber-Visuals	1,585			**1,585**
16	<20 Cu Ft Timber		7,201		**7,201**
17	Riparian Area	203	92	245	**540**
Total		**28,903**	**8,517**	**24,695**	**62,115**

Range Allotment Strategies

Allotment	Strategy
Beaver Dam	C
Blue Mountain	D
East Grizzlie	C
West Grizzlie	C

This page intentionally left blank.

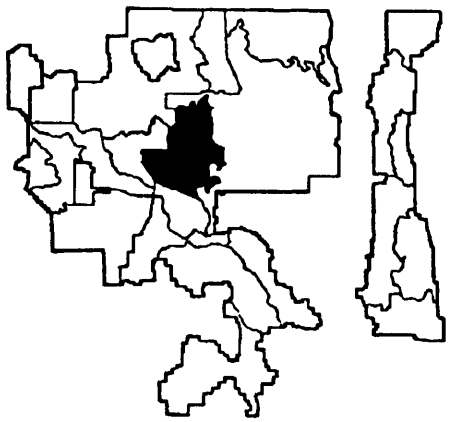
HACKAMORE • Management Area 53



53 - Hackamore

Devil's Garden Ranger District

Acreage		
National Forest	91,720	
Rangelands	20,455	
Timberlands	71,265	
< 20 cu. ft. per acre		7,240
> 20 cu. ft. per acre		64,025
Unsuitable for Timber Management	4,401	
< 20 cu. ft. per acre		40
> 20 cu. ft. per acre		4,361



Hackamore Management Area is located on the west side of the District. Its flat, timbered terrain is bordered on the south by Highway 139. The Southern Pacific Railroad passes through the MA. Bonneville Power Administration constructed a new (1985) 230kv power transmission line from Malin, Oregon, to Alturas, California, which parallels the western and southern boundaries of the MA.

The primary vegetation of the land is ponderosa pine and juniper with a shrub understory. Mixed conifer stands grow on wetter sites. An important timber producer, the area is forested with a large volume of old-growth pine. Most of the District's remaining old-growth timber lies within this MA in which the majority of future timber sales are concentrated. The MA encompasses timber compartments 519-537.

Many low sage flats and several productive wetlands are scattered throughout the area. The range produces high value forage for domestic livestock as well as wildlife. Excellent bitterbrush understory is used by sheep and provides fall range for the entire Interstate deer herd. Pronghorn use open areas and wetlands which also provide nesting and rearing habitat for waterfowl. The area supports an active bald eagle nest, and potential for others exists.

The MA lies in the Pit and Klamath River watersheds. The irrigation reservoirs are productive fisheries.

Although the area contains no developed recreation sites, deer hunting, fishing, and woodcutting are popular activities.

Approximately one-third of the MA is covered by oil and gas leases, but no activity has taken place.

Access to the MA is provided by State Highway 139 and a developed system of National Forest roads.

Standards and Guidelines

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Sensitive Plants

- Monitor and protect populations of *Calochortus longebarbatus longebarbatus* near Sevenmile Flat and in other suitable meadow habitats.

Soil

- Restore soil productivity through fertilization or topsoil redistribution on problem areas near the Mears burn.
- Develop site specific management practices on timber plantation sites and monitor for effectiveness.
- Maintain fertilization monitoring plots and analyze for effectiveness.

Timber

- One compartment (532) within this management area has been set aside for evaluating uneven-aged management.

Wildlife and Fish

- Designate 3200 acres of old growth in the eastside pine type.
- Increase snag densities through use of snag management techniques. Base actual recruitment needs on current detailed surveys.
- Conduct studies on bitterbrush and timber regeneration practices to monitor effectivness of Timber-Forage Prescription.

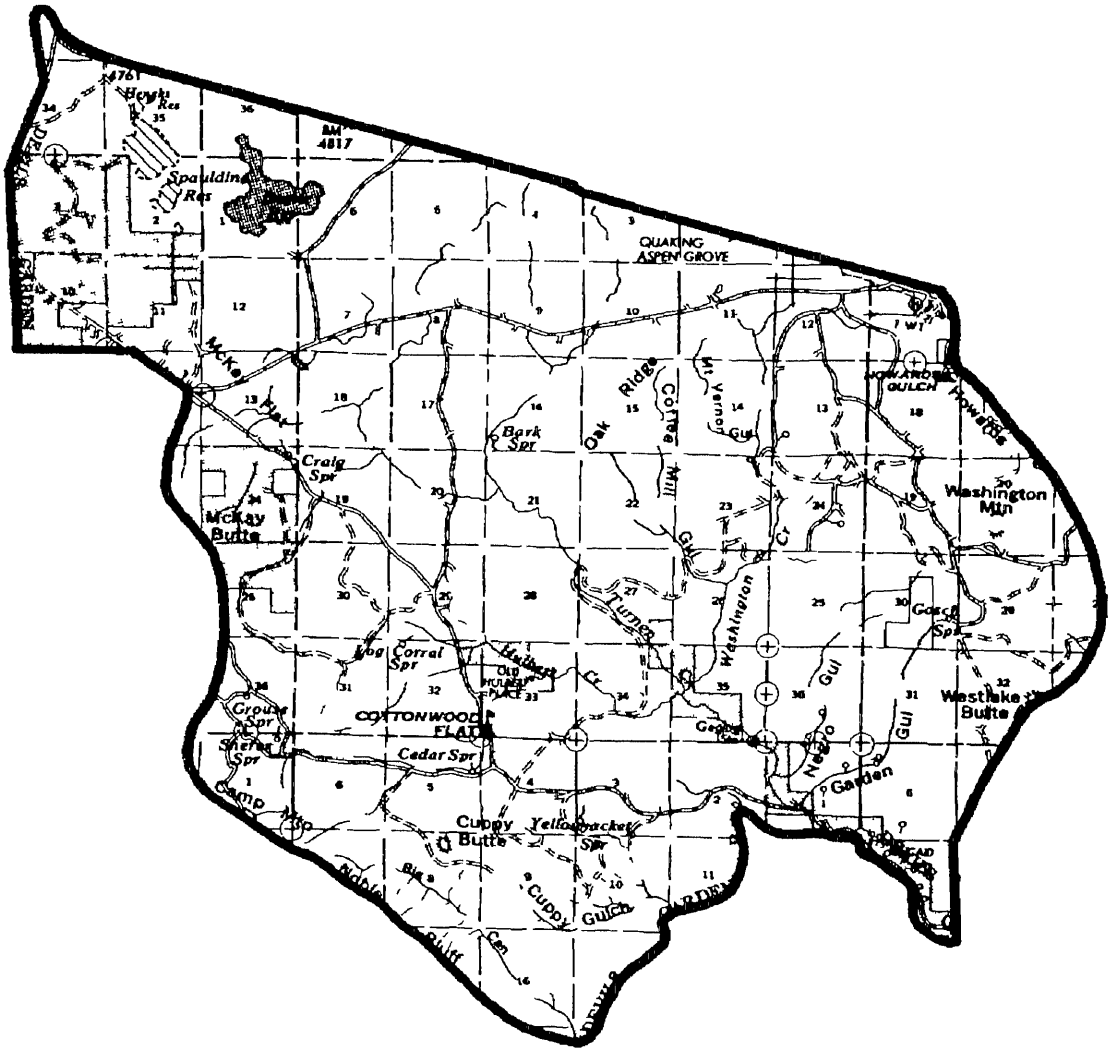
Prescription Allocation					
Prescription		>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	4,347		82	**4,429**
7	Visual Retention	78			**78**
9	Raptor Management	14	40	254	**308**
10	Rangeland			20,119	**20,119**
14	Timber-Forage				**55,981**
	Partial Retention	31,489			
	Modification	24,492			
15	Uneven-Aged Timber	3,605			**3,605**
16	<20 Cu Ft Timber		7,200		**7,200**
Total		**64,025**	**7,240**	**20,455**	**91,720**

Range Allotment Strategies

Allotment	Strategy
Howard's Gulch	C
Mowitz	C

This page intentionally left blank.

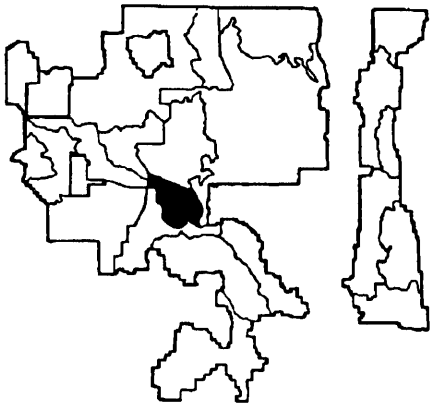
HAPPY CAMP • Management Area 54



54 - Happy Camp

Devil's Garden Ranger District

Acreage			
National Forest	41,280		
Rangelands		17,513	
Timberlands		23,767	
	< 20 cu. ft. per acre		5,725
	> 20 cu. ft. per acre		18,042
Unsuitable for Timber Management		2,516	
	< 20 cu. ft. per acre		1,248
	> 20 cu. ft. per acre		1,268



Happy Camp Management Area is located south and west of Highway 139 to the District boundary with a terrain that consists of plateaus and mountains. Happy Camp Mountain the most prominent land feature upon which are a fire lookout and an electronic site.

Vegetation is a mixture of pine stands with a shrub understory and low sage flats on the plateau. On the mountains, black oak, aspen and mixed conifer stands grow with a shrub understory and scattered brushfields. This MA is the best timber producer on the District. Most of the stands have been or are scheduled to be harvested. Located within the area are timber compartments 538-546.

The high quality forage produced in this MA is important for cattle as well as deer and pronghorn. Part of Happy Camp MA provides important fall and winter range for the Adin deer herd.

Other wildlife depend on the streams, reservoirs, and wetlands of this MA which are within the Pit River watershed. The Modoc sucker, a federally listed endangered species, inhabits Washington, Turner, and Hulbert Creeks. A bald eagle nesting territory is located at Beeler Reservoir; and wetlands are important waterfowl producers.

The major recreation activities in this MA are deer hunting and woodcutting. In addition, developed campgrounds are located at Howard's Gulch and Cottonwood Flat.

Approximately one-half of the MA is covered by oil and gas leases, but no activity has taken place.

Access to the MA is provided by State Highways 139 and 299, Modoc County Roads 84 and 91, and a developed system of National Forest roads.

Standards and Guidelines

Cultural Resources

- Complete inventory of the Lassen Emigrant Trail and nominate to the National Register of Historic Places.

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Range

- Use an interdisciplinary team or coordinated resource management planning approach (1) to recommend needed changes in permitted numbers or grazing seasons and (2) to develop grazing systems in the management area.

Sensitive Plants

- Monitor and protect populations of *Calochortus longebarbatus longebarbatus* near Craig Springs and in other suitable habitats.
- Monitor and protect populations of *Antennaria flagellaris*.

Soil

- Maintain fertilization monitoring plots and analyze white fir timber stands for possible fertilization pro-

jects to improve the nutrient balance and tree growth rates.

Water and Riparian

- Use watershed improvement funding to correct streambank erosion in Hulbert Creek, Washington Creek, and Turner Creek.
- Maintain watershed improvement structures in Washington Creek.
- Use range structural improvement funds to restore degraded riparian areas in the Happy Camp and Pit River Allotments.

Wildlife and Fish

- Provide for 210 acres of old growth in the mixed conifer type and 695 acres in the eastside pine type.
- Increase snag densities through use of snag management techniques. Base actual recruitment needs on current detailed surveys.
- Improve seep and spring areas for nongame wildlife species.
- Manage habitat for pileated woodpecker requirements.
- Improve habitat for blue grouse in the Happy Camp area.
- Develop browse improvement plans for old burn areas near Happy Camp.
- Develop a bald eagle nest territory management plan, and begin managing potential habitat.
- Enhance Modoc sucker habitat with instream and range structural improvements in Hulbert, Washington, and Turner Creeks, and their significant tributaries.

Prescription Allocation

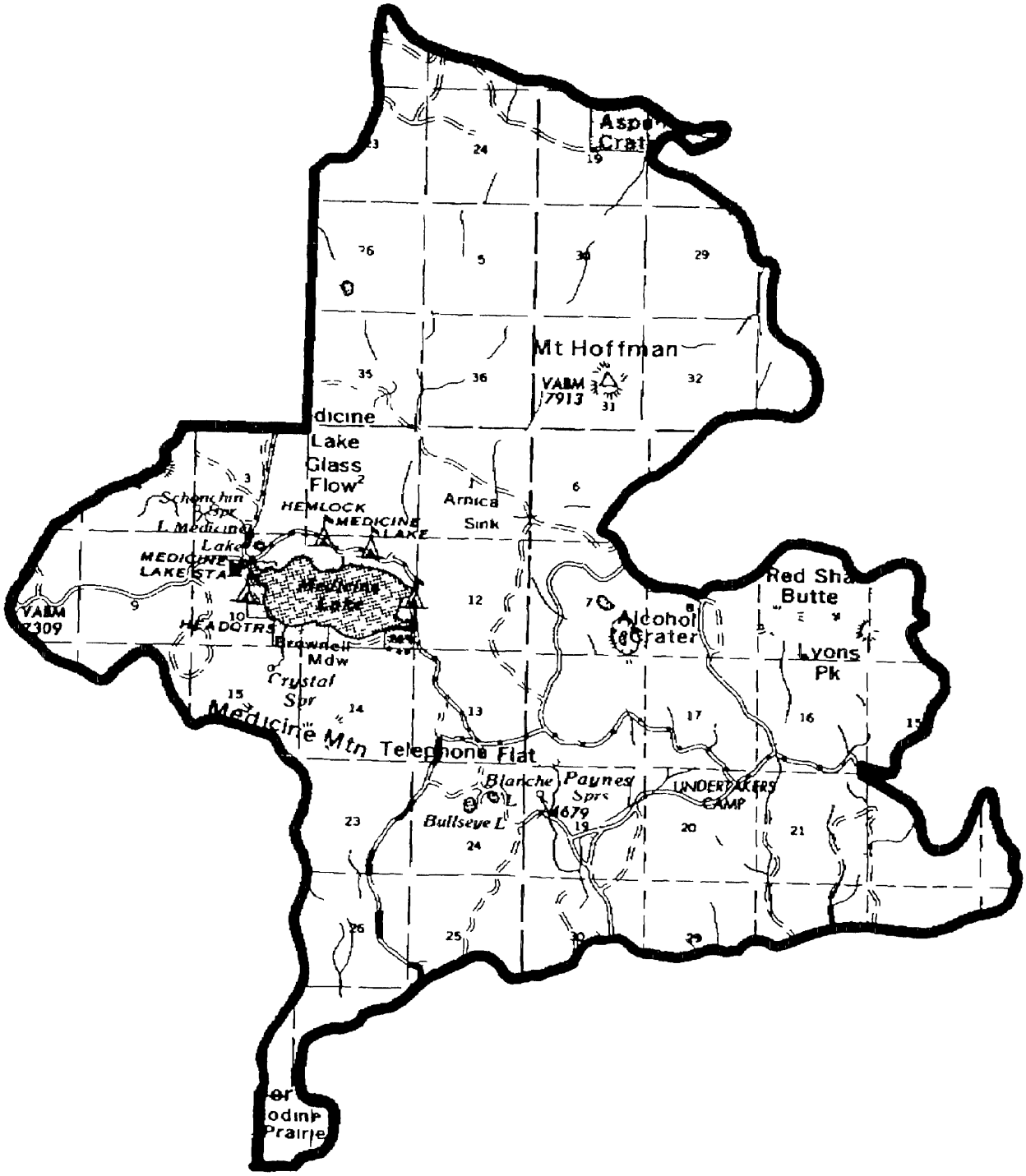
Prescription		>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	453	499		**952**
4	Semi-Primitive Non-Motorized	484	251		**735**
7	Visual Retention	159	89		**248**
9	Raptor Management	152	448	2,056	**2,656**
10	Rangeland			15,411	**15,411**
12	Even-Aged Timber	6,424			**6,424**
13	Timber-Visuals[1]	1,073			**1,073**
14	Timber-Forage[1]				**9,118**
	Partial Retention	3,702			
	Modification	5,416			
16	<20 Cu Ft Timber		4,388		**4,388**
17	Riparian Area	179	50	46	**275**
Total		**18,042**	**5,725**	**17,513**	**41,280**

[1]Current developed recreation sites within these prescription areas contain nominal acreage (<10 acres per site), and will be managed under the Developed Recreation Prescription (#5).

Range Allotment Strategies

Allotment	Strategy
Happy Camp	C
Pit River	B

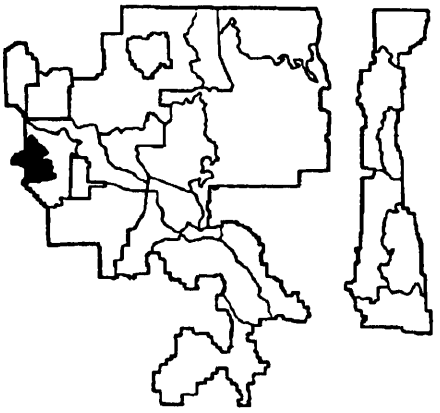
MEDICINE LAKE • Management Area 61



61 - Medicine Lake

Doublehead Ranger District

Acreage		
National Forest	26,549	
Rangelands	2,674	
Timberlands	23,875	
< 20 cu. ft. per acre		59
> 20 cu. ft. per acre		23,816
Unsuitable for Timber Management	7,730	
< 20 cu. ft. per acre		59
> 20 cu. ft. per acre		7,671



Medicine Lake Management Area borders the Klamath National Forest on the west, and consists of the summit and upper slopes of the Medicine Lake Highlands. The terrain is rocky with forested acres interrupted by volcanic flows. Elevations range from 6,200 feet at Medicine Lake to 8,000 feet at Mt. Hoffman. The Caldera, Mt. Hoffman, Little Mt. Hoffman, Lyons Peak, and Red Shale Butte are the dominant features of the area. A fire guard station is located at Medicine Lake.

The area is forested with dense stands of red fir, white fir, and lodgepole pine on better soils, small amounts of mountain hemlock, and sparse tree cover on volcanic soils. Most of the timber-producing areas have been entered for salvage or sanitation cutting. Only small areas have been thinned or cut for regeneration. Included in this area are timber compartments 609-611 and 614-616.

Lack of understory, scarce flowing water, and porous soils which inhibit forage production render domestic grazing virtually impossible. Mature timber stands provide habitat for goshawks and marten. Bald eagle habitat is located near Medicine Lake and Modoc Lake. Other major lakes such as Bullseye and Little Medicine are also stocked with rainbow and brook trout.

Most streams except Paynes Creek are intermittent, only flowing after snowmelt and as intense storm runoff. Medicine Lake is the largest lake on the District and the most popular recreation area. A paved road allows easy access into the area. Hemlock, Headquarters, A.H. Houge, and Medicine Campgrounds associated with the lake receive moderate to heavy use in late summer and early fall. Medicine Lake also features a concrete boat ramp with courtesy docks and paved parking, a developed swimming beach with paved parking and picnicking, day use and picnicking at Little Medicine Lake, and group camping at Schonchin Spring. In addition to camping, the developed lake area is used for boating, fishing, picnicking, water skiing, and swimming. Several summer homes ring the lake. Paynes Spring, Bullseye Lake and Blanch Lake are also popular developed sites. Dispersed recreation activities include camping, pleasure riding, fishing, and hunting, popular throughout summer and fall. Winter sports activities are currently under development.

All of the MA is within the Glass Mountain KGRA, and is almost covered by geothermal leases. Several temperature gradient holes and one deep exploratory well have been drilled, but no development of the resource has taken place.

An area of recent volcanic activity, Medicine Lake Glass Flow has been designated a Geologic Special Interest Area. Obsidian (volcanic glass) was quarried by prehistoric Indians from various tribes in northern California.

Access to the MA is provided by Modoc County Road 97, and a developed system of National Forest roads.

Standards and Guidelines

Cultural Resources

- Research the prehistoric obsidian sites located in the management area and nominate to the National Register of Historic Places.

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Minerals

- Other management activities should not preclude geothermal development.

Sensitive Plants

- Monitor and protect populations of *Collomia debilis larsenii* on the talus slopes of Little Mt. Hoffman and in other suitable habitats.

Recreation

- Feature outdoor recreation use in the Medicine Lake caldera.

Soil

- Conduct an SRI Order 2 on sensitive soil areas identified in the Modoc SRI Order 3 (Luckow 1984) (see FEIS bibliography). Develop site-specific management practices for soil-disturbing activities during the project planning phase.
- On sensitive soil areas, allow OHV use only on established roads and trails. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails when necessary to protect the soil resource and maintain water quality.
- Analyze timber stands for possible fertilization projects to improve the nutrient balance and tree growth rates.

Special Interest Areas

- Medicine Lake Glass Flow Geologic Special Interest Area is located within this management area. Forest activities should not alter the scenic and scientific value of this resource. This direction is applied by the Klamath National Forest on their share of the Flow. Recommend this SIA for nomination as an NNL.

Timber

- One compartment (610) within this management area has been set aside for evaluating uneven-aged management.

Water and Riparian

- Maintain the water quality of Medicine Lake. Evaluate the potential of each project in the watershed to degrade the lake's water quality. Periodically monitor water quality to establish gackground data and detect changes.

Wildlife and Fish

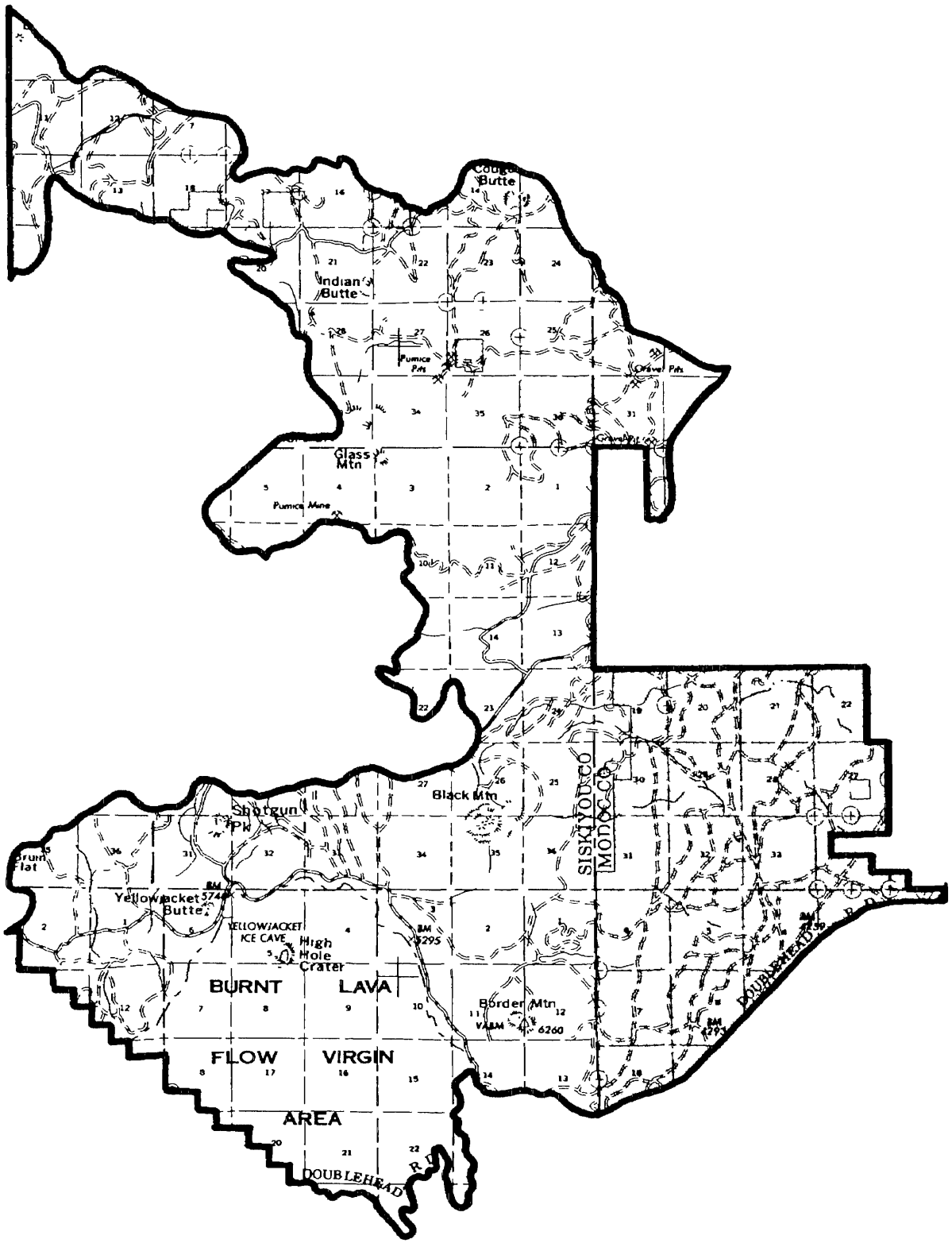
- Manage four territories for pine marten. Also manage down logs, snags and riparian areas for marten habitat. Maintain habitat for marten during geothermal exploration and development.
- Manage for snags through natural recruitment.
- Inventory and protect active goshawk territories needed to meet population targets.
- Develop a bald eagle nest territory management plan.

Prescription Allocation

	Prescription	>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	4,139	59	1,628	**5,826**
4	Semi-Primitive Non-Motorized	1,934			**1,934**
7	Visual Retention	1,658			**1,658**
8	Special Areas			570	**570**
9	Raptor Management[1]	1,579		472	**2,051**
12	Even-Aged Timber	5,683			**5,683**
13	Timber-Visuals[1]	2,480			**2,480**
15	Uneven-Aged Timber[1]	6,324			**6,324**
17	Riparian Area	19		4	**23**
Total		**23,816**	**59**	**2,674**	**26,549**

[1]Current developed recreation sites within these prescription areas contain nominal acreage (< 10 acres per site), and will be managed under the Developed Recreation Prescription (#5).

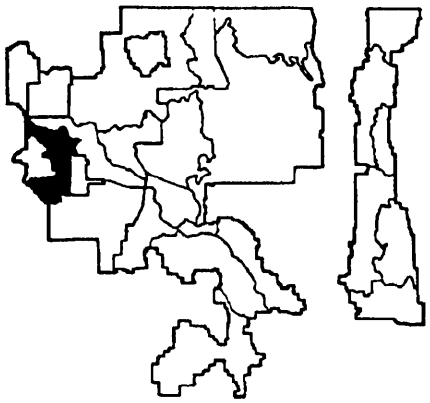
BLACK MOUNTAIN • Management Area 62



62 - Black Mountain

Doublehead Ranger District

Acreage		
National Forest	46,115	
Rangelands	14,299	
Timberlands	31,816	
< 20 cu. ft. per acre		832
> 20 cu. ft. per acre		30,984
Unsuitable for Timber Management	4,756	
< 20 cu. ft. per acre		354
> 20 cu. ft. per acre		4,402



Black Mountain Management Area is bounded by Glass Mountain on the northwest, Cougar Butte on the north, block of private lands on the east, and the Klamath National Forest on the southwest. Prominent features of the area include Yellowjacket Butte, Shotgun Peak, Black Mountain, and Burnt Lava and Glass Mountain Flows.

Vegetation consists of large areas of mixed conifer stands composed of ponderosa pine, white fir, incense-cedar, and sugar pine. In addition to these timber stands, brush fields and grasslands are broken by major lava flows. Most of the area suited for timber production has been harvested. Black Mountain has extensive ponderosa pine plantations established after fires in the early 1960's. Included in this MA are timber compartments 605-608, 612, 618, 619, and 622.

Although the area is too rugged for domestic livestock, it is an important provider of summer range for the Glass Mountain deer herd. Goshawk, marten and other animals dependent on old-growth habitat have been observed throughout timbered areas.

The area receives heavy dispersed recreation use during hunting season. Sightseeing and snowmobiling are popular during the rest of the year. Snowmobilers for the Medicine Lake area primarily use the Doorknob snowmobile trailhead located on Forest Rd. 49 two miles south of Lava Beds National Monument.

No permanent surface water sources are located in this MA.

Two significant pumice mining areas support numerous loose and block pumice claims. Most of the area is within the Glass Mountain KGRA, and is almost covered by geothermal leases. A few temperature gradient holes have been drilled in the MA, but no further activity has taken place.

The MA includes two designated Geologic Special Interest Areas: Glass Mountain, a unique mountain of obsidian; and the Burnt Lava Flow, originally classified as a virgin area because of virgin old-growth forested islands that break up 14 square miles of jet black lava. Prehistoric Indians used obsidian extensively to manufacture stone tools.

Access to the MA is provided by Modoc County Road 97 and a developed system of National Forest roads.

Standards and Guidelines

Cultural Resources

- Research the prehistoric obsidian sites located in the management area and nominate to the National Register of Historic Places.

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Minerals

- Other management activities should not preclude geothermal development.

Soil

- Maintain fertilization monitoring plots and analyze timber stands for possible fertilization projects to improve the nutrient balance and tree growth rates.
- On nutrient deficient pumice soils, develop site specific management practices for soil disturbing activities.
- Restore soil productivity through fertilization or topsoil redistribution on those affected acres on Black Mountain.

Special Interest Areas

- Burnt Lava Flow SIA and Glass Mountain Glass Flow SIA are located in this management area. Forest activities should not alter the scenic and scientific values of these resources. This direction is applied by the Shasta-Trinity National Forest on their share of the Burnt Lava Glass Flow. Recommend Burnt Lava Flow SIA for nomination as an NNL.
- Feature geological interpretive resources for the Burnt Lava Flow and Glass Mountain Glass Flow SIAs.

Wildlife and Fish

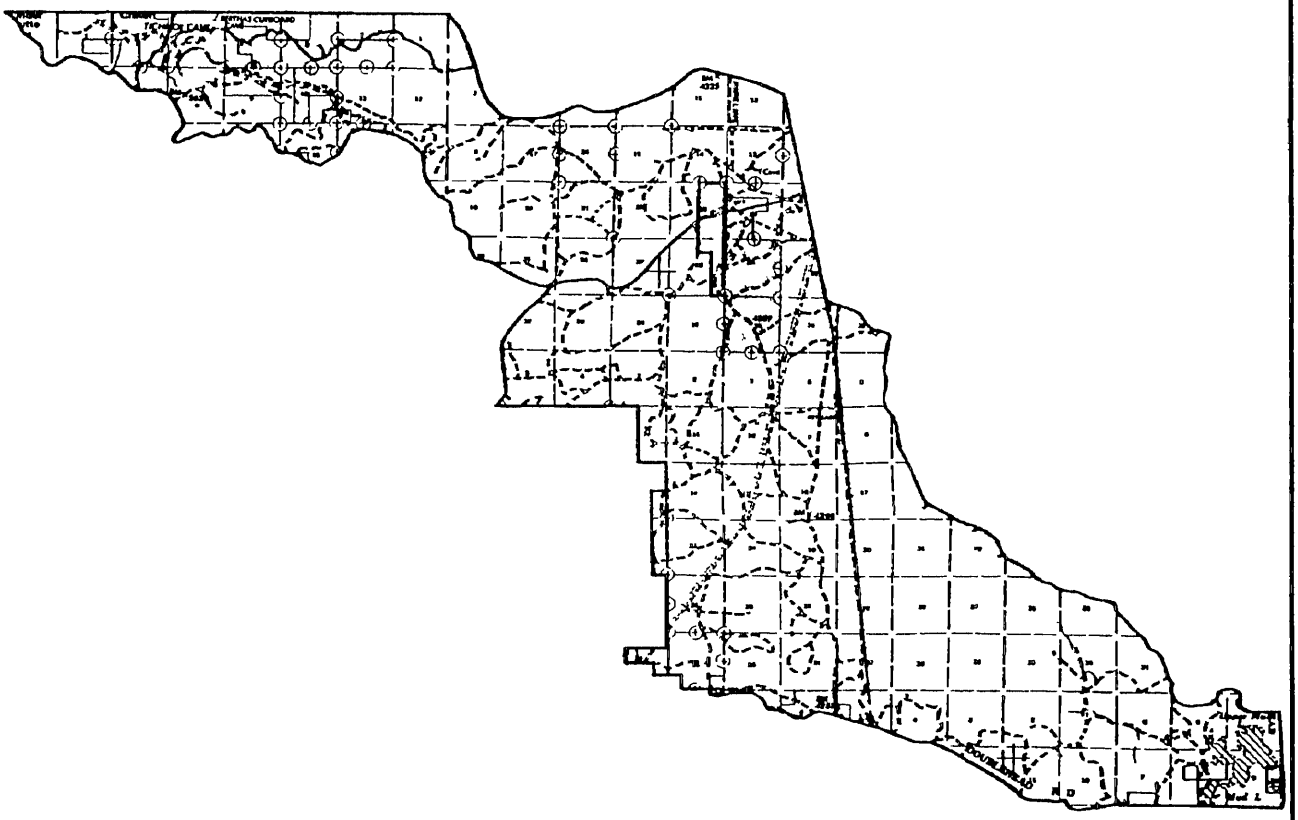
- Manage for 640 acres of old growth in the mixed conifer type, 655 acres in the eastside pine type, and 130 acres in the red fir type.
- Manage for snags through natural recruitment, except where snag densities are deficient in individual timber compartments.
- Develop a management plan and improve condition of stands at the bald eagle roost through silvicultural treatments.
- Install big game guzzlers to improve habitat capability for deer.
- Inventory and protect active goshawk nests needed to meet target populations.

Prescription Allocation

	Prescription	>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	3,654	263	1,081	**4,998**
4	Semi-Primitive Non-Motorized	438	40		**478**
7	Visual Retention	1,309	32		**1,341**
8	Special Areas			13,218	**13,218**
9	Raptor Management	310	51		**361**
12	Even-Aged Timber	15,130			**15,130**
13	Timber-Visuals	9,024			**9,024**
14	Timber-Forage				**1,119**
	Partial Retention	0			
	Modification	1,119			
16	<20 Cu Ft Timber		446		**446**
	Total	**30,984**	**832**	**14,299**	**46,115**

This page intentionally left blank.

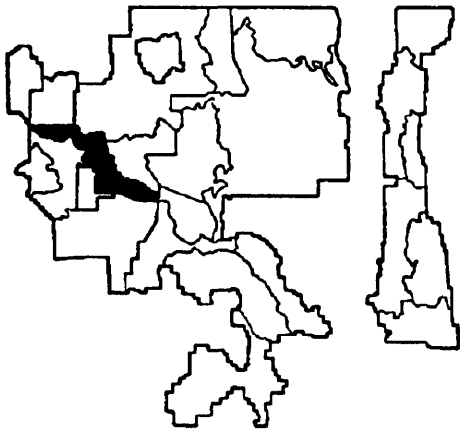
TIONESTA • Management Area 63



63 - Tionesta

Doublehead Ranger District

Acreage		
National Forest	56,246	
Rangelands	13,477	
Timberlands	42,769	
< 20 cu. ft. per acre		15,294
> 20 cu. ft. per acre		27,475
Unsuitable for Timber Management	6,674	
< 20 cu. ft. per acre		20
> 20 cu. ft. per acre		6,654



Tionesta Management Area borders the south side of the Lava Beds National Monument and extends to the southern boundary of the District. The terrain consists of gentle slopes at the base of the Medicine Lake Highlands. Burlington-Northern railroad, the California-Oregon transmission powerline (COTP), a 500kv Pacific Power and Western Area Power Administration utility line, and Pacific Gas and Electric natural gas line cross the MA.

Much of the area is timbered with ponderosa pine, sugar pine, white fir, and incense-cedar, with an understory of bitterbrush or mountain mahogany. The Twin Burn of 1978 and the Scarface Burn of 1977 have resulted in major reforestation projects. Included in this MA are timber compartments, 601-604, 613, 617, and 620.

About two-thirds of the area is within a sheep allotment. Much of the grazing is deferred for plantation establishment. The area provides key winter range and transitional range for the Glass Mountain deer herd.

Dispersed recreation is a primary use in summer and fall. Most popular are hunting and associated camping, wood and mushroom gathering, and viewing deer on winter range.

Mud Lake is the only source of permanent surface water. It has no outlet and is used marginally by transient and nesting waterfowl.

A small portion of the Glass Mountain KGRA and non-competitive geothermal leases are located in three-fourths of the MA. Little activity has taken place in this MA.

Access to the MA is provided by Modoc County Road 91 and a developed system of National Forest roads.

Standards and Guidelines

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Range

- Use an interdisciplinary team or coordinated resource management planning approach (1) to recommend needed changes in permitted numbers or grazing seasons and (2) to develop grazing systems in the management area.

Soil

- Conduct an SRI Order 2 on < 20 timberlands with SRI Order 3 soil map units 174, 222, and 223. Reassess the soil capabilities for other resource needs.
- Maintain fertilization monitoring plots and analyze timber stands for possible fertilization projects to improve the nutrient balance and tree growth rates.
- On nutrient deficient pumice soils, develop site specific management practices for soil disturbing activities.
- Restore soil productivity through fertilization or topsoil redistribution on affected areas near Mud Springs.

Special Uses

- Ensure that Forest activities do not significantly interfere with the use, operation, and maintenance of 500kv lines and natural gas lines in the area.

Wildlife and Fish

- Provide for 1365 acres of old growth in the eastside pine type.
- Increase snag densities through use of snag management techniques. Base actual recruitment needs on current detailed surveys.
- Continue efforts to reestablish bitterbrush stands that were destroyed in the Twin Fire.
- Implement browse forage projects in the Tionesta Bench area.
- Develop a management plan to implement improvements on the bald eagle winter roost.

Other

- Tichnor Cave, Bertha's Cave, and Mammoth Cave are several of the cave resources in this management area. Continue to monitor use and develop management plans if needed.

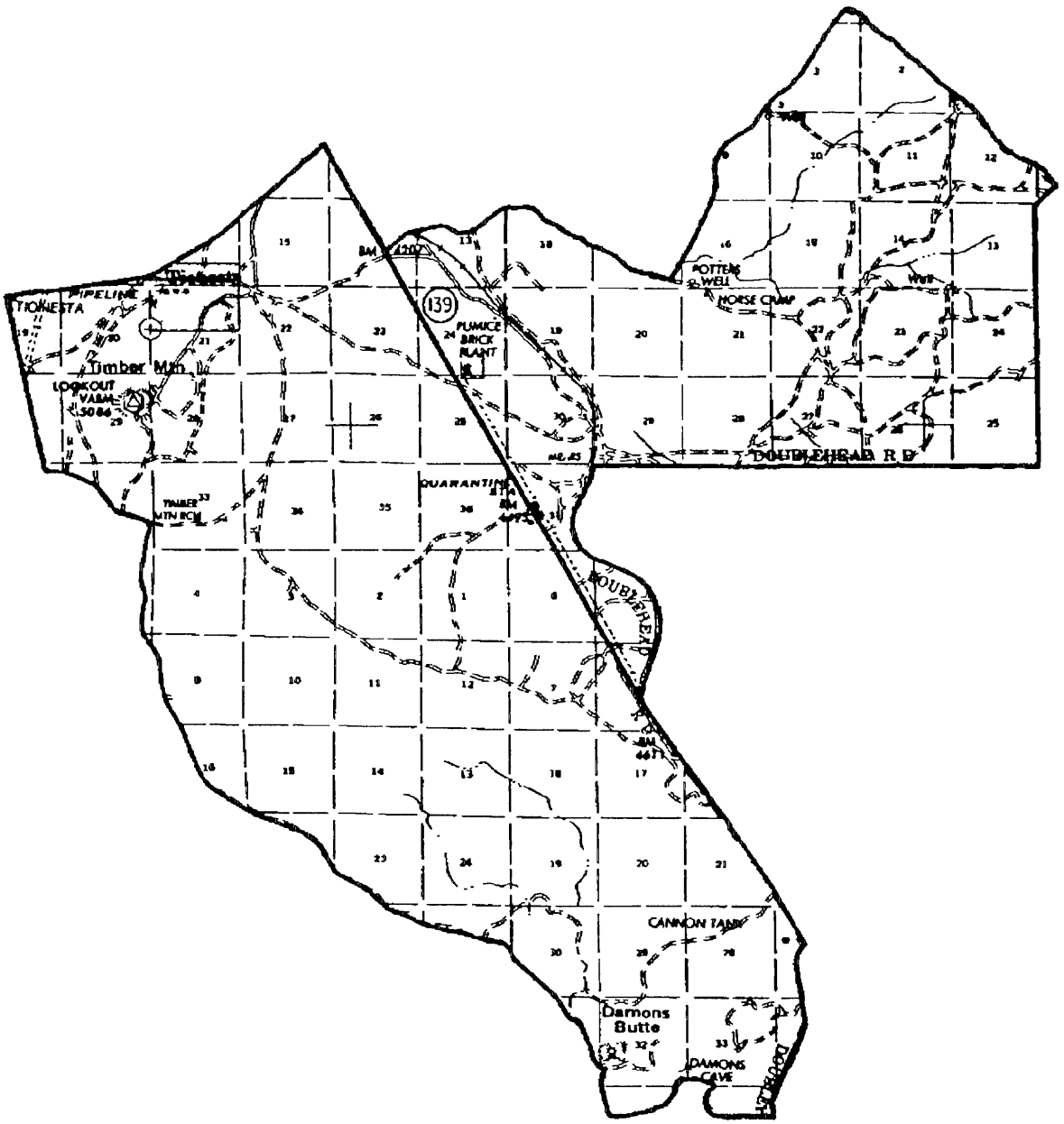
Prescription Allocation

Prescription		>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	3,912		1,283	**5,195**
4	Semi-Primitive Non-Motorized	77	14		**91**
7	Visual Retention	546	14		**560**
9	Raptor Management	2,665	6	760	**3,431**
10	Rangeland			5,960	**5,960**
11	Range-Forage			5,474	**5,474**
12	Even-Aged Timber	11,548			**11,548**
13	Timber-Visuals	8,727			**8,727**
16	<20 Cu Ft Timber		15,260		**15,260**
Total		**27,475**	**15,294**	**13,477**	**56,246**

Range Allotment Strategies

Allotment	Strategy
Glass Mountain	B
Mud Lake	C

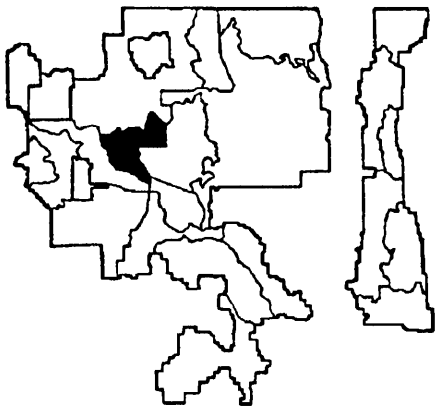
MEARS • Management Area 64



64 - Mears

Doublehead Ranger District

Acreage		
National Forest	45,349	
Rangelands	27,188	
Timberlands	18,161	
< 20 cu. ft. per acre		10,742
> 20 cu. ft. per acre		7,419
Unsuitable for Timber Management	1,336	
< 20 cu. ft. per acre		0
> 20 cu. ft. per acre		1,336



Mears Management Area consists of rolling timbered hills on the west and flat, open, rocky grasslands to the east. The prominent features are Timber Mountain and its fire lookout, Southern Pacific Railroad, and State Highway 139 which dissects the MA.

Commercial timber stands of ponderosa pine are located on Timber Mountain, and all such stands have been entered for sanitation and salvage cutting. Juniper is used for commercial and free-use firewood. The area includes timber compartments 621, 623, and 627.

Although water is scarce in this MA, the lowlands support juniper, sagebrush, and bunchgrass which are important forage for grazing cattle and sheep. Part of the wild horse territory is located in this MA. In addition to livestock, the area provides important range for the Interstate and Glass Mountain deer herds.

Primary dispersed recreation sports are deer and pronghorn hunting.

Access to the MA is provided by State Highway 139, Modoc County Road 91, and a developed system of National Forest roads.

Standards and Guidelines

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Range

- Use an interdisciplinary team or coordinated resource management planning approach (1) to recommend needed changes in permitted numbers or grazing seasons, and (2) to develop grazing system in the Management Area.

Sensitive Plants

- Monitor and protect populations of *Poa fibrata* near Potter's Well and in other suitable habitats.

Soil

- Conduct an SRI Order 2 on < 20 timberlands with SRI Order 3 soil map units 222 and 223. Reassess capability, suitability, and limitations for management.
- Restore soil productivity through fertilization or topsoil redistribution on affected acres in the Mears burn area.

Wildlife and Fish

- Manage for 370 acres of old growth in the eastside pine type.
- Increase snag densities through use of snag management techniques. Base actual recruitment needs on current detailed surveys.
- Implement browse improvement projects in the Timber Mountain and Potters areas.

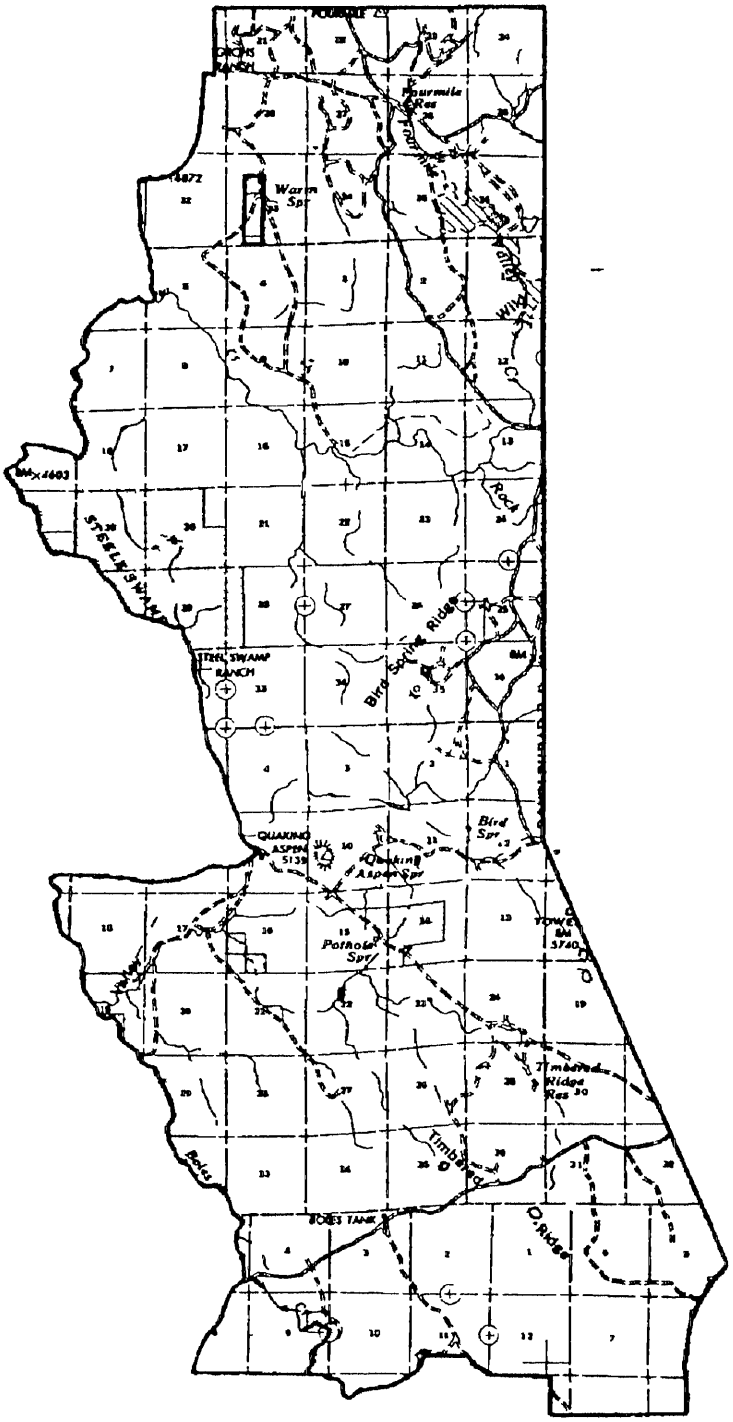
Prescription Allocation					
Prescription		**>20 Acres**	**<20 Acres**	**Range Acres**	**Total Acres**
1	Minimum Level	1,336			**1,336**
7	Visual Retention	292	235		**527**
10	Rangeland			12,438	**12,438**
11	Range-Forage			14,750	**14,750**
14	Timber-Forage				**5,791**
	Partial Retention	3,433			
	Modification	2,358			
16	<20 Cu Ft Timber		10,507		**10,507**
Total		**7,419**	**10,742**	**27,188**	**45,349**

Range Allotment Strategies

Allotment	Strategy
Potter's Pasture	D
Timber Mountain	C

This page intentionally left blank.

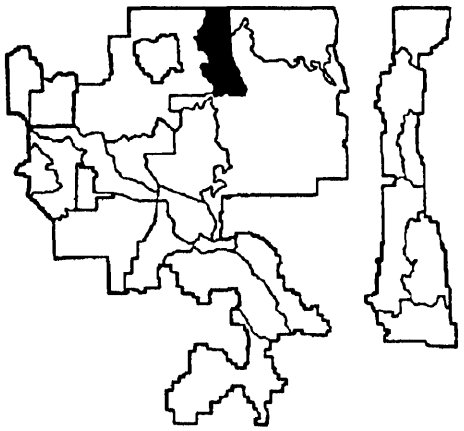
STEELE SWAMP • Management Area 65



65 - Steele Swamp

Doublehead Ranger District

Acreage		
National Forest	57,607	
Rangelands	47,615	
Timberlands	9,992	
<20 cu. ft. per acre		3,629
>20 cu. ft. per acre		6,363
Unsuitable for Timber Management	346	
<20 cu. ft. per acre		176
>20 cu. ft. per acre		170



Steele Swamp Management Area is bounded by the Oregon border to the north, Devil's Garden Ranger District to the east, Boles Meadow to the south, and sections of Boles and Willow Creeks to the west. The area is characterized by large stretches of relatively flat lands.

Ponderosa pine overstory with bitterbrush and mountain mahogany dominate higher points at Four Mile near the Oregon border, Bird Springs Ridge, and Timbered Ridge. All areas of productive timber land have been harvested. Included in this area are timber compartments 624-626.

The MA is dominated by juniper, bunchgrass, and sagebrush, and intersected by intermittent and permanent springs. The entire area is grazed by cattle or sheep. Part of the wild horse territory is located in the MA. In addition to livestock forage, the area provides good range for the Interstate deer herd.

The Lost River and shortnose suckers, federally listed as endangered species, inhabit the Willow and Boles Creek systems.

Although there are no developed recreation sites, the most popular dispersed recreation activities are deer and pronghorn hunting.

Access to the MA is provided by Modoc County Roads 73 and 136, and a developed system of National Forest roads.

Standards and Guidelines

Cultural Resources

- Complete inventory of the Applegate Emigrant Trail and nominate to the National Register of Historic Places. Consider nominating the Boles Creek Rock Art District to the National Register of Historic Places.
- Consider historical or archaeological interpretive trails or displays to provide recreation opportunities.

Fire and Fuels

- Manage fire within the guidelines of the Big Sage Fire Management Unit Plan.
- In areas outside the Big Sage Fire Management Unit, suppress wildfires using the appropriate suppression response.

Range

- Use an interdisciplinary team or coordinated resource management planning approach (1) to recommend needed changes in permitted numbers or grazing seasons, and (2) to develop grazing system in the Management Area.

Water and Riparian

- Use watershed improvement funding to correct streambank erosion and gullying in Boles and Willow Creeks.

- Use range structural improvement funds to restore degraded riparian areas in the Boles and Warm Springs Allotments.

Wild and Scenic Rivers

- Evaluate Willow and Boles creeks for classification and suitability as an inclusion to the Wild and Scenic River System.
- Provide interim protection of the outstandingly remarkable values (cultural resources) in the Willow and Boles drainages by applying the cultural resources standards and guidelines.

Wildlife and Fish

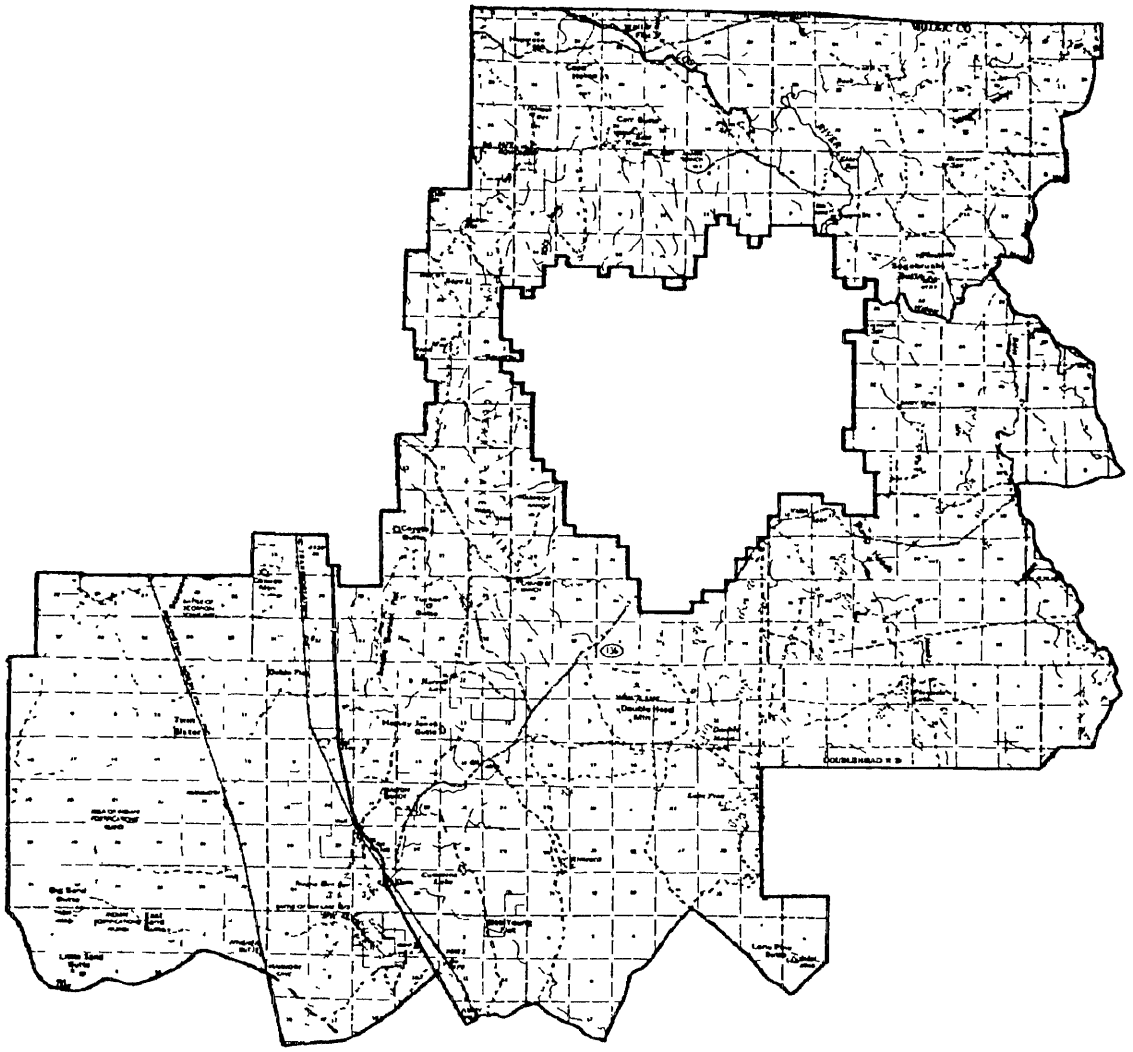
- Provide for 320 acres of old growth in the eastside pine type.
- Increase snag densities through use of snag management techniques. Base actual recruitment needs on current detailed surveys.
- Continue habitat improvement projects which remove juniper and release mahogany and other desirable forage species. Monitor livestock use to prevent other than light utilization by cattle.
- Develop a bald eagle nest territory management plan and begin managing potential habitat.

Prescription Allocation					
Prescription		>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	123			**123**
9	Raptor Management	22	115	1,615	**1,752**
10	Rangeland			59	**59**
11	Range-Forage			45,229	**45,229**
12	Even-Aged Timber	6,193			**6,193**
16	<20 Cu Ft Timber		3,453		**3,453**
17	Riparian Area	25	61	712	**798**
Total		**6,363**	**3,629**	**47,615**	**57,607**

Range Allotment Strategies

Allotment	Strategy
Boles	C
Warm Springs	D

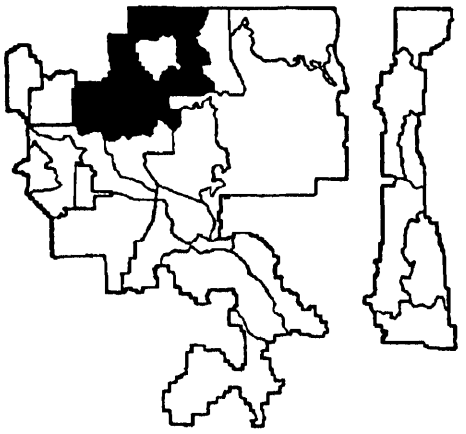
CLEAR LAKE • Management Area 66



66 - Clear Lake

Doublehead Ranger District

Acreage		
National Forest	206,207	
Rangelands	204,899	
Timberlands	1,308	
< 20 cu. ft. per acre		794
> 20 cu. ft. per acre		514
Unsuitable for Timber Management	439	
< 20 cu. ft. per acre		0
> 20 cu. ft. per acre		439



Clear Lake Management Area is bounded by the Oregon border on the north, Lava Beds National Monument on the west, and Steele Swamp on the east. Topography consists of closed basins and gently sloping drainages on the Devil's Garden Plateau. The area is crossed by State Highway 139, Southern Pacific Railroad, and Pacific Gas and Electric and Bonneville Power Administration power lines. Prominent landmarks include Dry Lake Guard Station, Modoc War military fortification ruins, and the Modoc War Battle of Scorpion Point.

Juniper dominates the area and varies from single trees to dense stands. Because sites are unproductive, timber activity is limited to firewood gathering. Included in this area are timber compartments 628 and 629.

Other vegetation includes stretches of bunchgrass and sagebrush which are broken up by rocks. The entire MA is grazed by cattle. Important for wildlife as well as livestock, the area provides important winter, spring, and fall range for the Interstate deer herd and year-round habitat for pronghorn. A portion of the Clear Lake pronghorn herd that summers in Oregon also winter in this MA.

Clear Lake National Wildlife Refuge, a protective haven for a variety of upland and migratory birds, is surrounded by the MA. Numerous man-made impoundments, a few natural springs, and permanent water courses (Willow and Boles Creeks) flow through the area. Lost River and shortnose suckers, federally listed as endangered species, inhabit Clear Lake and the Lost River, Willow, and Boles Creek systems.

Deer hunting is the most popular dispersed recreation activity. A small amount of waterfowl hunting occurs along the creeks, although the lake itself is closed.

One non-competitive geothermal lease exists in the extreme southwest corner of the MA. No activity has taken place.

The United States Air Force holds a special use permit for the construction, operation, and maintenance of the Over-the-Horizon Backscatter (OTH-B) electronic radar receiver site.

Access to the MA is provided by State Highway 139, Modoc County Roads 108 and 136, and a developed system of National Forest roads.

Standards and Guidelines

Cultural Resources

- Complete inventory of the Applegate Emigrant Trail and nominate to the National Register of Historic Places. Consider nominating the Boles Creek Rock Art District to the National Register of Historic Places.
- Complete inventory of sites related to the Modoc War; nominate to the NHRP and interpret for public education.
- Consider historical or archaeological interpretive trails or displays to provide recreation opportunities.

Fire and Fuels

- Manage fire within the Big Sage Fire Management Unit guidelines.
- In areas outside the Big Sage Fire Management Unit, suppress all wildfires using the appropriate suppression response.

Range

- Use an interdisciplinary team or coordinated resource management planning approach (1) to recommend needed changes in permitted numbers or grazing seasons, and (2) to develop grazing systems in the Management Area.

Sensitive Plants

- Monitor and protect populations of *Eryngium mathiasiae* and *Polygonum polygaloides esotericum* in the vernal pool habitats common to this management area.

Special Uses

- Coordinate management activities and resource developments (e.g., fire suppression, firewood use, timber management, and mineral development) ensuring their compatibility with the protection and use of the OTH-B radar system.

Water and Riparian

- Use watershed improvement funding to correct streambank erosion and gullying in Boles, Willow, and Mowitz Creeks.
- Use range structural improvement funds to restore degraded riparian areas in the Dalton, Mammoth, and Clear Lake Allotments.

Wild and Scenic Rivers

- Evaluate Willow and Boles creeks for classification and suitability as an inclusion to the Wild and Scenic River System.
- Provide interim protection of the outstandingly remarkable values (cultural resources) in the Willow and Boles drainages by applying the cultural resources standards and guidelines.

Wildlife and Fish

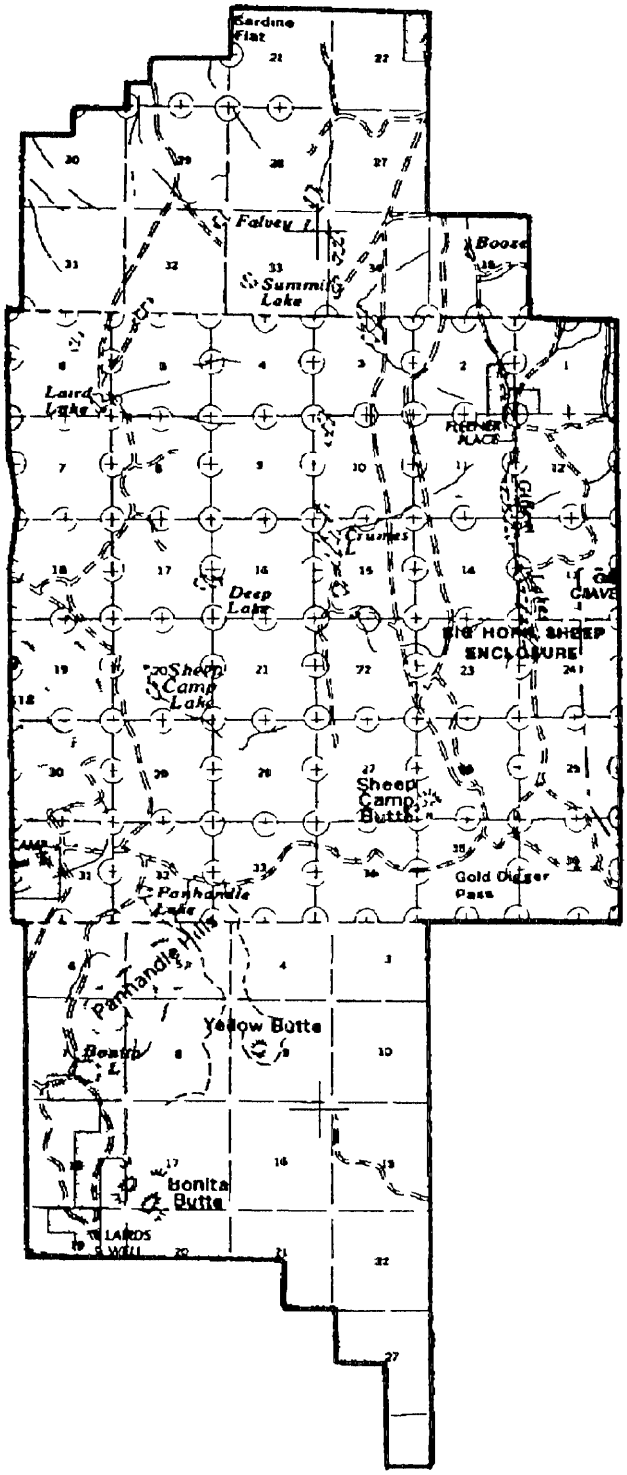
- Increase snag densities through use of snag management techniques where possible. Base actual recruitment needs on current detailed surveys.
- Improve spring range for deer through cover maintenance or improvement and selected forage plantings. Improve deer winter forage by ensuring proper levels of livestock utilization and by initiating habitat improvements, such as juniper removal and browse or other species establishment.
- Continue or initiate riparian improvements for Lost River/Shortnose suckers on Clear Lake Reservoir drainages (Mowitz, Boles and Willow Creeks).
- Manage livestock and initiate improvements based on research results for sage grouse populations in the Clear Lake area.
- Manage roads and road use on deer winter range to maintain high habitat capability.
- Prepare a bald eagle nest territory management plan.

Prescription Allocation					
Prescription		>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	439			**439**
9	Raptor Management			4,186	**4,186**
10	Rangeland			55,433	**55,433**
11	Range-Forage			144,695	**144,695**
12	Even-Aged Timber	75			**75**
16	<20 Cu Ft Timber		794		**794**
17	Riparian Area			585	**585**
Total		**514**	**794**	**204,899**	**206,207**

Range Allotment Strategies

Allotment	Strategy
Clear Lake	D
Dalton	D
Lavas	C
Mammoth	C
Perez	C
Tucker	C

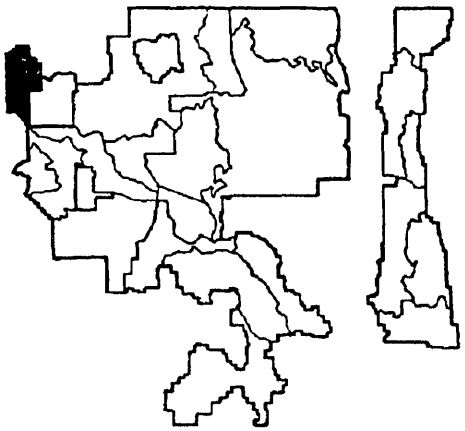
MOUNT DOME • Management Area 67



67 - Mount Dome

Doublehead Ranger District

Acreage		
National Forest	38,967	
Rangelands	38,520	
Timberlands	447	
< 20 cu. ft. per acre		370
> 20 cu. ft. per acre		77
Unsuitable for Timber Management	384	
< 20 cu. ft. per acre		307
> 20 cu. ft. per acre		77



Mt. Dome Management Area borders the Lava Beds National Monument to the east, the Klamath National Wildlife Refuge to the northwest, and the Klamath National Forest to the south. The highest point at 6,518 feet, Mt. Dome straddles the western border of the Forest. The terrain is a series of faults and intervening plains.

Grasses, sagebrush and juniper are dispersed within extensive lava fields. No manageable commercial timber or compartments exist in the area, all of which is used for livestock grazing. The MA provides spring and fall habitat for deer and pronghorn. Deer, pronghorn, and quail hunting and off-highway vehicle use are the most popular dispersed recreation activities. The Forest shares management responsibility for the Mt. Dome Bald Eagle roost. This MA is a reintroduction site for peregrine falcons.

Several lakes and man-made impoundments are located in this MA, noteably Crumes, Sheep Camp, Bonita, and Deep Lakes. They are part of the Lost River drainage, but have no run-off.

A non-competitive geothermal lease exists in the southeast corner of the MA. No activity has taken place.

Access to the MA is provided by State Highway 139, Modoc County Road 111, and a developed system of National Forest roads.

Standards and Guidelines

Cultural Resources

- Conduct non-project related cultural resource inventories to fill information gaps regarding prehistoric use of this area as opportunity arises.

Fire and Fuels

- Suppress all wildfires using the appropriate suppression response.

Range

- Use an interdisciplinary team or coordinated resource management planning approach (1) to recommend needed changes in permitted numbers or grazing seasons and (2) to develop grazing systems in the management area.

Wildlife and Fish

- Cooperate with the BLM on reintroduction of peregrine falcon and management of bald eagle habitat at Mount Dome. Implement and follow established management plans for the area.

Prescription Allocation					
Prescription		>20 Acres	<20 Acres	Range Acres	Total Acres
1	Minimum Level	32		2,087	**2,119**
9	Raptor Management	45	307	4,927	**5,279**
10	Rangeland			8,717	**8,717**
11	Range-Forage			22,789	**22,789**
16	<20 Cu Ft Timber		63		**63**
Total		**77**	**370**	**38,520**	**38,967**

Range Allotment Strategies

Allotment	Strategy
Crumes	D
Deep Lake	C
Mount Dome	C

Table of Contents