

United States
Department of
Agriculture

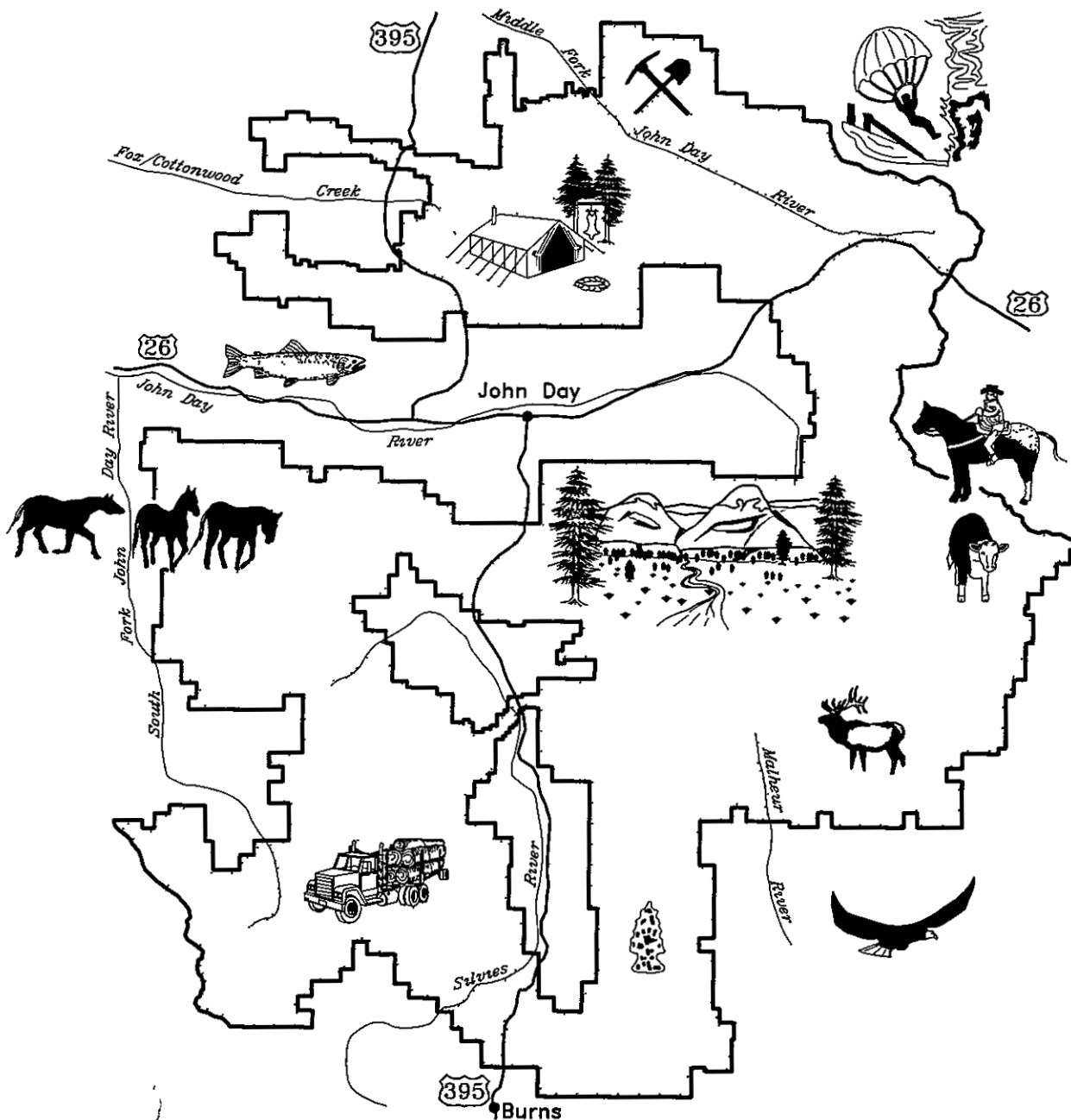
Forest Service

Pacific
Northwest
Region

1990

Land and Resource Management Plan

Malheur National Forest



PREFACE

This Land and Resource Management Plan (Forest Plan) for the Malheur National Forest complies with the National Forest Management Act of 1976 (NFMA), the regulations for National Forest Land and Resource Management Planning (36 CFR Part 219), and the National Environmental Policy Act of 1969 (NEPA).

The Forest Plan establishes direction for the Malheur National Forest for the next 10 to 15 years, when used in conjunction with Forest Service Manuals and Handbooks and the Pacific Northwest Regional Guide

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

Further information about this Forest Plan can be obtained from

Cathy S Barbouletos, Planning Staff Officer
or
Mark A. Boche, Forest Supervisor

Malheur National Forest
139 N E. Dayton Street
John Day, Oregon 97845
(503) 575-1731



MALHEUR NATIONAL FOREST PLAN

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Chapter I

INTRODUCTION



CHAPTER I INTRODUCTION

A. Purpose

This Forest Plan establishes the direction for the Malheur National Forest for the next 10 to 15 years when used in conjunction with Forest Service Manuals and Handbooks and the Pacific Northwest Regional Guide. It will guide all natural resource management activities and establish management standards for lands administered by the Malheur National Forest. It describes resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management

The Forest Plan will ordinarily be revised on a 10-year cycle or at least every 15 years. It also may be revised whenever the Forest Supervisor determines that conditions or demands in the area covered by the Plan have changed significantly or when changes in Resource Planning Act policies, goals, or objectives would have a significant effect on Forest programs. The Forest Supervisor will review the conditions on the land covered by the plan at least every 5 years to determine whether conditions or demands of the public have changed significantly

This Forest Plan embodies the provisions of the National Forest Management Act, the implementing regulations (36 CFR Part 219), and other guiding documents

The land assignments, goals, objectives, standards, and monitoring and evaluation requirements comprise the Forest Plan's management direction. However, the projected outputs, services, and rates of implementation are dependent on the annual budget allocations

B. Relationship to Other Documents**Final Environmental Impact Statement and Record of Decision**

This Forest Plan sets forth the direction for managing the land and resources of the Malheur National Forest. The Plan results from extensive analysis and considerations addressed in the accompanying Final Environmental Impact Statement (FEIS) and Record of Decision. The planning process and the analysis procedures used to develop this Plan are described or referred to in the FEIS. The FEIS also describes other alternatives considered in the planning process. Specific activities and projects will be planned and implemented to carry out the direction in this Plan. The Forest will perform environmental analysis on these projects and activities. This subsequent environmental analysis will use the data and evaluations in the Forest Plan and FEIS as its basis. Environmental analysis of projects will be tiered to the FEIS accompanying this Forest Plan.

Regional Guide

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

Other Plans

This Forest Plan serves as the single land management plan for the Malheur National Forest. All other land management plans are replaced by the direction in this Forest Plan, see Chapter V, Section B for a listing of existing plans that this Forest Plan supersedes.

INTRODUCTION

C. Plan Structure

The plan is presented in seven sections, each briefly described as follows:

Chapter I is the introduction which describes the purpose of the Plan, discusses the Plan's relationship to other documents, summarizes the content, and establishes the area covered by the Plan.

Chapter II provides a summary of the Analysis of the Management Situation. It includes brief descriptions of resource management situations, demand and supply conditions for various commodities and services, productivity potentials, *use and development opportunities, and information needs.*

Chapter III summarizes the major public issues and management concerns, explaining how each was resolved in the planning process.

Chapter IV describes the goals, objectives, and standards established for the period of the Plan. Included is a section describing multiple resource prescriptions that are specific to each management area.

Chapter V includes implementation direction, a plan for monitoring and evaluating Forest Plan implementation, and a description of the process for Plan amendment and revision.

Chapter VI contains a glossary of terms, acronyms and abbreviations used in this document

The seventh section includes Appendices A-N.

D. Forest Description

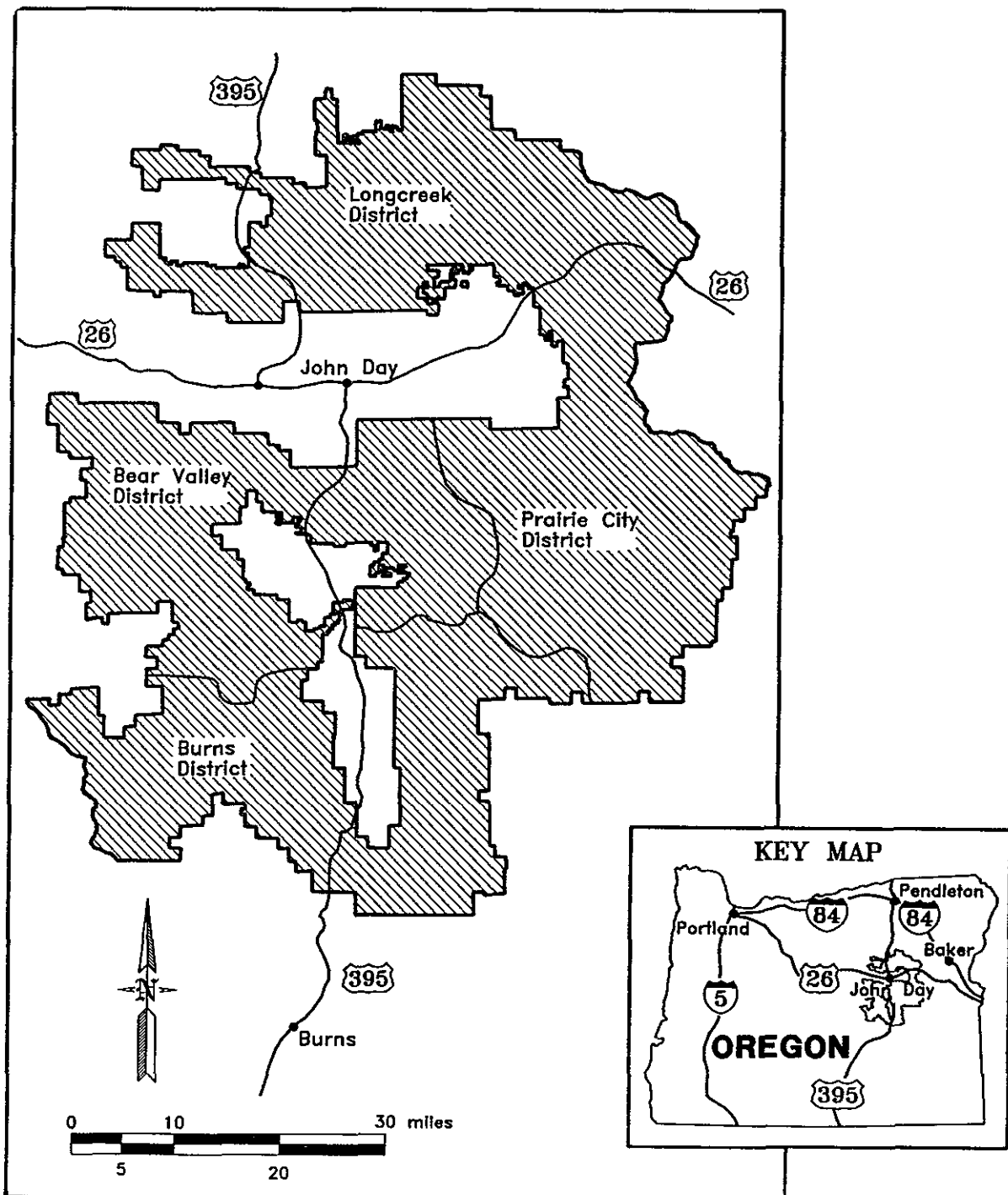
The Forest's 1,459,422 acres are located in eastern Oregon, approximately equidistant from the borders of Washington, Idaho, and Nevada (see Figure I-1). The Strawberry Mountain Range, part of the Blue Mountains, extends east to west through the center of the Forest. This range splits the Forest into two geologic provinces, the Columbia Basin to the north and the Great Basin to the south. *Elevations on the Forest vary from 3,900 feet (at the Forest boundary south of Mt. Vernon, Oregon) to 9,038 feet on Strawberry Mountain.* The result is a diverse and productive landscape of grasslands, sage, and juniper; forests of pine, fir, and other tree species; and mountain lakes and meadows.

The northern part of the Forest is drained by the John Day River System into the Columbia River Basin. The southern part of the Forest is drained, principally, by the Silvies River System into the Great Basin, and by the Malheur River System into the Snake River.

These lands are in Grant (1,119,161 acres), Harney (293,876 acres), Baker (45,786 acres) and Malheur (599 acres) counties. The Forest is within a day's drive from Portland, Oregon. Principal access routes are U.S. 26 and U.S. 395, winding two-lane, rural routes. There are two main population centers: the John Day Valley from Dayville to Prairie City, and a 5-mile radius around Burns.

FIGURE I-1
FOREST LOCATION MAP

Malheur National Forest





Chapter II

SUMMARY OF AMS



CHAPTER II SUMMARY OF THE ANALYSIS OF THE MANAGEMENT SITUATION

A. INTRODUCTION

This chapter briefly summarizes the Forest's potential to supply various goods and services and projections of demand for goods and services. Information needs for the Malheur National Forest are also identified

The key issues which guided the development of this Forest Plan include economic stability, timber management, big-game habitat, riparian areas, roadless areas, and road management. "Benchmarks" were developed to help define the resource and economic potentials of the Forest, while satisfying all legal requirements. The legal requirements included those pertaining to maximum size and dispersion of harvest units and management requirements (MRs) needed to maintain viable populations of fish and wildlife and to protect water quality.

B. RESOURCE AND ECONOMIC SUPPLY POTENTIALS

Development of the benchmarks described below is detailed in the benchmark formulation section of Appendix B of the FEIS.

Minimum Level Management - Determines the minimum costs (with resultant outputs and effects) necessary to retain the National Forest lands in Federal ownership, subject to certain environmental constraints and protection of life, health, and safety of incidental users.

Present Net Value (PNV Assigned) - Estimates the maximum PNV that might be attained by maximizing the net value of market resources under a non-declining policy, and assigning values to the production and output of all nonmarket resources (see Glossary). This benchmark serves as a basis for an economic comparison between benchmarks and alternatives, as well as a basis for determining the effects of various constraints on outputs and costs.

Present Net Value (PNV Market) - Estimates the maximum PNV that might be attained by maximizing the net value of market resources under a non-declining policy. The difference between this benchmark and the present net value (assigned) benchmark is that this benchmark does not assign values to the nonmarket resources such as wildlife habitat, visuals, and other resources that are not sold in a market.

Current Direction - Estimates the outputs and effects of maintaining direction and policy found in existing unit plans, timber and other resource plans, special area management plans, and Malheur National Forest policy. This benchmark provides the basis for the No Change and No Action Alternatives. (Outputs are reported for the No Action Alternative in Table II-2 and Figure II-1.)

Max Timber - Estimates the highest sustainable timber harvest levels for the Forest, subject to legal requirements for other resources. The objective was to maximize timber production on the Forest under a nondeclining policy.

Max Range - Estimates the highest sustainable grazing levels for the Forest, subject to legal requirements for other resources. The objective was to maximize forage production for cattle grazing on the Forest.

Max Anadromous Fish - Estimates the maximum capability of the Forest to produce fish habitat and possible corresponding fish populations.

Max Big Game - Estimates the maximum capability of the Forest to produce and sustain habitat for big-game wildlife.

Table II-1 displays the upper output levels for specific resources analyzed in the resource maximization benchmarks. In addition to maximizing resource outputs, benchmarks were established which maximized present net value. The minimum level management benchmark established the lower bound of Forest management. The current direction benchmark (subsequently developed into the No Action Alternative) established the probable resource outputs and effects if existing management policies were to remain in effect. These benchmarks (displayed in Table II-2) defined the mix and range of realistic and attainable resource outputs (decision space) in which the alternatives could be developed.

TABLE II-1
Maximum Resource Output Benchmarks^{1/}

Benchmark	Average Annual Outputs
Max Timber Benchmark Timber Sale Program Quantity Decade 1 Decade 2 Decade 5 Long-Term Sustained Yield Capacity	Million Cubic Feet 59.2 59.4 60.1 68.8
Max Big-Game Benchmark Big-Game Use Decade 1 Decade 2 Decade 5	Thousand Wildlife-and-Fish-User-Days 168.3 162.4 194.7
Max Anadromous Fish Benchmark Commercial Harvests Decade 1 Decade 2 Decade 5	Thousand Pounds 43.0 68.6 77.6
Max Range Benchmark Livestock Use Decade 1 Decade 2 Decade 5	Thousand Animal Unit Months 194 247 274

^{1/}Only the maximum outputs of the respective resource for the benchmarks are displayed. The purpose of these benchmarks was to establish upper bounds of potential production of specific resources from the Forest.

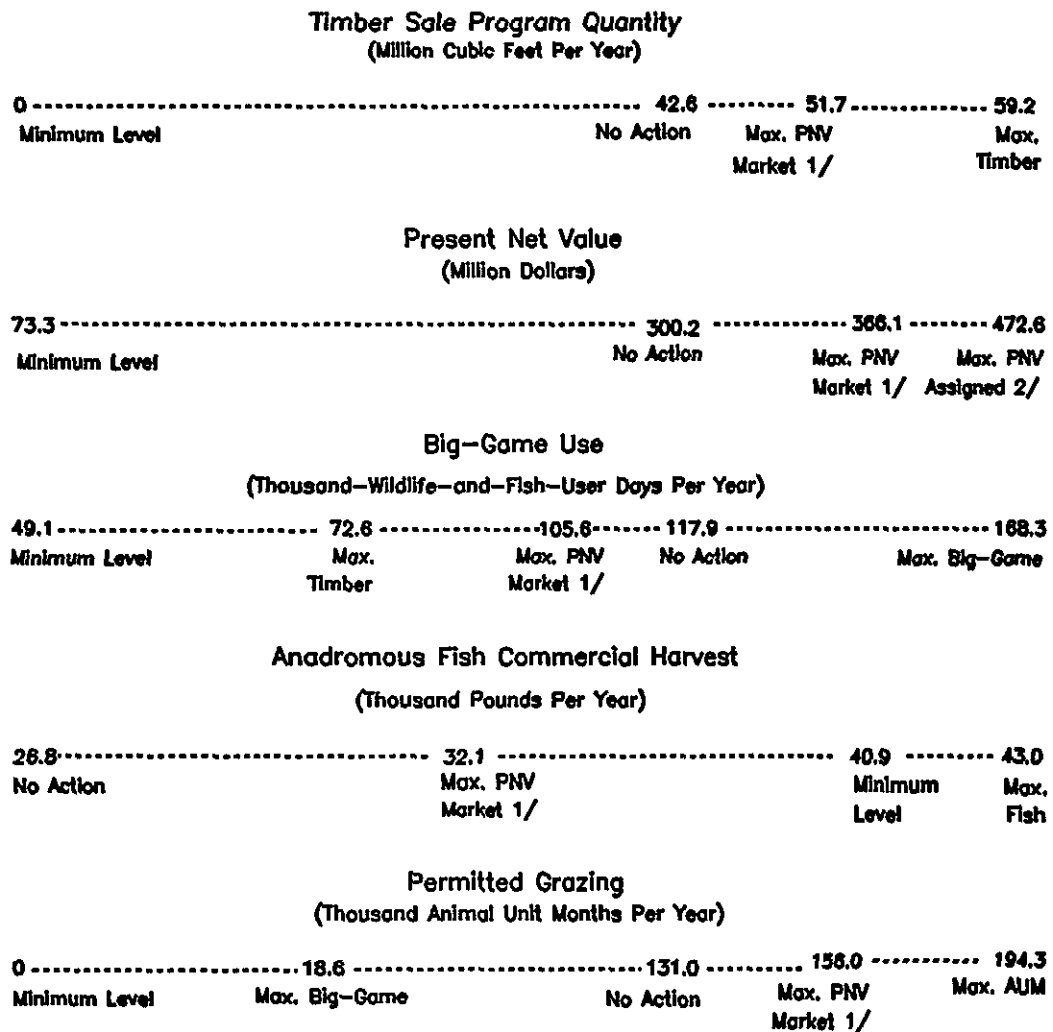
TABLE II-2
Quantifiable Outputs And Effects Of Benchmarks
And The No Action Alternative
(Average Annual Outputs)

	Benchmark			
	Minimum Level	Max PNV (Assigned) ^{1/}	Max PNV (Market) ^{2/}	No Action Alt.
Discounted Benefits (Millions of Dollars)				
Timber	0.7	612.4	612.4	460.7
Wildlife	76.6	81.6	0.8	63.3
Range	0.4	54.9	54.6	28.8
Other	25.3	25.4	0	23.1
Discounted Costs (Millions of Dollars)	35.1	301.7	301.7	277.1
Present Net Value (Millions of Dollars)	67.9	472.6	366.1	300.2
Timber Sale Program Quantity (Million Cubic Feet Per Year)				
Decade 1	0	51.7	51.7	42.6
Decade 2	0	52.0	52.0	42.6
Decade 5	0	52.3	52.3	43.0
Long-Term Sustained Yield Capacity (Million Cubic Feet Per Year)	0	61.7	61.7	45.3
Big-Game Use (Thousand Wildlife-and-Fish-User-Days Per Year)				
Decade 1	49.1	105.6	105.6	117.9
Decade 2	49.1	70.4	70.4	126.2
Decade 5	49.1	109.2	109.2	128.7
Anadromous Fish Commercial Harvest (Thousand Pounds Per Year)				
Decade 1	40.9	32.1	32.1	26.8
Decade 2	61.6	32.1	32.1	28.0
Decade 5	70.6	32.1	32.1	31.6
Livestock Use (Thousand Animal Unit Months Per Year)				
Decade 1	0	156	156	131
Decade 2	0	200	200	135
Decade 5	0	189	189	131

^{1/}Max PNV (Assigned) includes management requirements and is Benchmark 7 in FEIS, Appendix B
^{2/}Max PNV (Market) includes management requirements and is Benchmark 11 in FEIS, Appendix B.

Figure II-1 displays the decision space defined by the benchmark analysis for five major indicators: timber sale program quantity, present net value (PNV), big-game use, anadromous fish commercial harvest, and permitted grazing levels.

FIGURE II-1
Benchmark Decision Space For Five Major Resource Indicators
(Average Annual First Decade Outputs)



1/Max PNV market includes management requirements and is Benchmark 11 in FEIS, Appendix B.
2/Max PNV assigned includes management requirements and is Benchmark 7 in FEIS, Appendix B

C. RESOURCE DEMAND PROJECTIONS

This section summarizes projected demand for Forest goods and services for 50 years (RPA time period) The term "demand" is used to identify the amount of an output that users would be willing to pay for at a specified price, time period, and condition of sale. Table II-3 displays demand projections for key resource elements.

In Table II-3, the demand and supply projections for key resource elements are displayed to present demand-supply relationships for various benchmarks, the No Action Alternative, and this Forest Plan. The demand estimates shown reflect the future output levels anticipated by several public agencies, including the Forest Service. These projections are discussed in the Final Environmental Impact Statement (Chapters III and IV) and the Forest Analysis of the Management Situation. A brief discussion of the projected demand for some resources follows Table II-3.

**TABLE II-3
Supply And Demand Summary For Benchmark Resources
(Average Annual Outputs)**

	Decade 1	Decade 2	Decade 5
Timber Sale Program Quantity (Million Cubic Feet Per Year)			
Projected Demand	36.2	38.5	41.5
Projected Supply			
No Action	42.6	42.6	43.0
Maximum Timber Benchmark	59.2	59.4	60.1
Forest Plan	38.4	38.4	38.4
Big-Game Use (Thousand Wildlife-and-Fish-User-Days)			
Projected Demand	95.1	110.6	157.0
Projected Supply			
No Action	117.9	126.2	128.7
Maximum Big-Game Benchmark	168.3	162.4	194.7
Forest Plan	106.2	115.2	110.7
Anadromous Fish Commercial Harvest (Thousand Pounds Per Year)			
Projected Demand (Numerical Data Not Available)			
Projected Supply			
No Action	26.8	28.0	31.6
Maximum Anadromous Fish Benchmark	43.0	68.6	77.6
Forest Plan	37.0	48.4	66.9
Livestock Grazing (Thousand Animal Unit Months Per Year)			
Projected Demand	120	120	120
Projected Supply			
No Action	131	135	131
Maximum AUM Benchmark	194	247	274
Forest Plan	113	112	116

Timber	<p>The projected demand for timber from the Malheur National Forest displayed in Table II-3 is derived from the discussion in Chapter III of the FEIS. Essentially, the demand projections were based on historical demand (exhibited by raw material cut from the Forest) with some adjustments made for the cyclic nature of the industry and technological advancement. The demand figures presented in the table reflect the midpoint of the range of projected demand for Malheur National Forest timber. Demand projections in the FEIS in Tables III-6 and IV-3 include projected demand for all sources of timber supply in Grant and Harney counties; this cumulative demand would be partially supplied by private ownership and other National Forests (Ochoco, Umatilla) in Grant and Harney counties.</p>
Wildlife	<p>Projected demand for big-game use on the Malheur National Forest includes elk and mule deer hunter-days as estimated in the Forest Analysis of the Management Situation. An increase of about 10-15 percent per decade is projected over time. Projections were derived from regression curves based on Oregon Department of Fish and Wildlife hunter-days data.</p>
Fish	<p>Quantified projections of the demand for anadromous fish from the Malheur National Forest have not been performed at this time. As stated in the Forest Analysis of The Management Situation, however, the demand for chinook salmon and steelhead trout in the Columbia Basin exceeds the current supply. Indications of demand exceeding supply include court cases involving allocation of fish stock between Indian and non-Indian harvest groups, reduced or canceled sport-fishing seasons, and legislation designed to protect depleted stocks of fish for commercial fishery operations. Consequently, the assumption was made that all anadromous fish produced from waters within the Malheur National Forest would be demanded (i.e., utilized). However, the production potential of the Forest is a very small percentage of the total increase necessary in the entire Columbia River Basin to meet demand.</p>
Range	<p>The demand for forage from the Forest, primarily for livestock, is affected by the price that permittees have to pay. In past years, the price of National Forest forage has been below the appraised market value. As detailed in the Grazing Fee Review and Evaluation Final Report completed by the USDA Forest Service and USDI Bureau of Land Management (1986), the appraised market value of grazing on public rangelands is \$5 90 per AUM. However, the price that permittees pay currently is \$1.54 per AUM. Consequently, despite declines in the beef-producing industry, the demand for National Forest permitted grazing remains high because of the price permittees pay. Expectations are that the demand for Malheur National Forest forage will remain strong until the price of National Forest forage approximates the appraised market value for forage on public rangelands.</p>
Recreation	<p>The demand for dispersed and developed recreation on the Malheur National Forest is expected to increase over time (from 200,000 recreation visitor days of annual dispersed use currently to about 300,000 recreation visitor days by the year 2030). The demand for wilderness use on this Forest is expected to increase slowly, and the alternatives and benchmarks do not vary significantly in the supply of wilderness. Demand projections generated were derived from historical use patterns and National and Regional trends applied to the local situation.</p>

D. SUPPLY AND DEMAND DISCUSSION

The following discussion summarizes the interactions of the projected supply of some resources and the corresponding demand for those resources. The primary emphasis of this discussion is the supply of various resources under this Forest Plan when compared to projected demand for those resource outputs.

Timber

The supply of timber under this Forest Plan is expected to be adequate to meet demand in the Forest zone of influence (Grant and Harney counties) through the year 2000. As displayed by the maximum timber benchmark, however, the Forest does have the capability to produce more timber supply than would be offered under this Forest Plan. Other resource outputs (e.g., dispersed recreation, anadromous fish) would be affected if the maximum amount of timber were produced. Changes in demand for the Malheur National Forest timber supply could result from changes in supply from adjacent sources of timber (e.g., other National Forests). These changes could translate into increased demand for Malheur National Forest timber.

Wildlife

The supply of and demand for wildlife on the Malheur National Forest has been presented primarily in terms of Wildlife-and-Fish-User-Days (WFUDs); that is, wildlife-oriented recreation. The demand for wildlife-oriented recreation [primarily consumptive use (hunting) of substantial economic value to the local economy] is contingent upon the quality and/or quantity of the animals being sought. Consequently, as deer and elk herds on the Forest increase in quality and/or quantity, the demand (exhibited in hunting pressure) would increase also. As displayed in Table II-3, the supply of wildlife-oriented recreation (WFUDs) under this Forest Plan is compatible with projected demand for the first two decades. Projections derived from Oregon Department of Fish and Wildlife data indicate that demand will be substantially greater than supply by the fifth decade. In comparison, the maximum big game benchmark identifies the upper bound of potential supply of deer and elk, to achieve this level of supply would result in substantial reductions in permitted livestock and timber harvest.

The implementation of management requirements, Forest-wide standards, and management area standards should ensure viable populations (i.e., supply) of nongame species under this Forest Plan. Demand for these nongame species is present but difficult to quantify.

Fish

The demand for anadromous fish in the Columbia River Basin, of which the John Day River is a part, currently exceeds supply. Projections are that demand will continue to be strong and will be greater than supply. The Forest contributes a very small portion to the total anadromous fish supply, but the demand for production from all sources is strong. Major factors affecting the Forest's ability to achieve projected increases in habitat capability for anadromous fish are: (1) implementation of livestock management strategies to achieve better distribution of livestock, with better control of forage utilization in riparian areas; (2) implementation of lower intensity riparian timber management prescriptions; and (3) the amount of watershed and fish habitat improvement work accomplished.

Forest-wide, resident and planted fish supply appears to meet demand for the foreseeable future. This may not be the case for all types of fishing experiences. For example, lake fishing opportunities are limited due to the fact that there are few lakes on the Forest. The availability of fishing in a semiprimitive setting will become more limited. Data are not available to quantify these projections. The implementation of Forest-wide and management area standards, along with application of watershed and fish habitat improvements will result in increased habitat capability for resident fish.

Range

The supply of forage available for livestock grazing under this Forest Plan will be near historic levels of use. As detailed above in the demand projections for range, *the demand for National Forest forage is affected by the price that permittees have to pay.* Historically, because the price charged for public forage has been less than the appraised market value of that forage, the demand for National Forest forage has remained strong despite fluctuations in the demand for beef. Projections are that the supply of forage will approximate demand (defined by past permitted grazing levels). However, any increase in supply would be promptly utilized as long as current pricing policies remain in effect.

Recreation

The supply of recreation settings (primitive, semiprimitive nonmotorized, semiprimitive motorized, roaded natural, rural, and urban) available on the Malheur National Forest *currently exceeds the demand for all types of recreation.* The supply of specific recreation experiences such as cross-country skiing on a groomed trail, or mountain bike trail riding, does not meet the demand. During the elk and deer firearms seasons, the demand for big-game hunting exceeds the supply for most of the game management units on the Forest. The number of hunting permits for big-game are regulated by the State of Oregon to meet herd management objectives. Projections are that, although demand will increase, the supply of all types of recreation settings will continue to meet or exceed demand throughout the life of this Forest Plan (i.e., the next 10 to 15 years). Projections show that the demand may exceed the supply for semiprimitive motorized opportunities by the fifth decade.

Old Growth

Under this Forest Plan, a supply of old-growth forest would be retained as habitat for old-growth dependent species. This supply satisfies the projected demand to maintain habitat for old-growth dependent species at 30 percent or more above minimum viable population levels.

Undeveloped Areas

Under this Forest Plan, a supply of undeveloped areas (i.e., roadless, research natural areas, special interest areas) will be provided. However, the demand for these types of areas is difficult to assess and quantify. From best available information, the supply of undeveloped areas provided under this Forest Plan will meet demand for such areas for the next 10 to 15 years.

E. INFORMATION NEEDS

1. Research Needs

The following research needs have been identified during development of this Forest Plan. They will be evaluated by the Regional Forester for inclusion in the Regional research program proposal. It is anticipated that more research needs will become apparent during monitoring and evaluation of the Plan as it is implemented.

- | | |
|----------------------------|--|
| Timber/Soils | 1. Long-term studies of timber growth are needed to assess the effects of various treatment methods on the long-term soil productivity. Long-term effects of soil compaction, removal of timber harvest residue, and other effects need to be assessed. |
| Fire | 2. Study of the characteristics of emissions from prescribed burning of forest residues in eastern Oregon fuel types is needed to measure emission factors for particulate matter, carbon monoxide, and hydrocarbons. |
| Fisheries | <p>3. Develop methods to verify fish production coefficients used to calculate fish outputs of this Forest Plan.</p> <p>4. Conduct taxonomic and distribution studies on the redband trout to determine taxonomic classification and make recommendation for listing/not listing the species under the Threatened and Endangered Species Act.</p> <p>5. Determine stand conditions that will provide the amount and type of instream woody material needed to maintain fish habitat in Blue Mountain streams.</p> <p>6. Determine habitat needs for the Malheur mottled sculpin (<i>Cottus baridi</i> spp.).</p> <p>7. Determine the taxonomy of redband trout and the need for sensitive species listing.</p> |
| Wildlife | 8. Determine the effects of uneven-aged management on meeting habitat requirements of deer and elk. |
| Integrated Pest Management | 9. Determine the effects of management practices on the incidence and severity of pathogens and insects as they affect long-term timber productivity. Evaluate the effects of insects and pathogens on forest composition and the influence of forest composition on the population dynamics of insects and pathogens. |
| Timber/Wildlife | <p>10. Evaluate alternatives for managing old-growth forests and for maintaining habitat characteristics (e.g., snags and logs) in young, managed forests.</p> <p>11. Determine feasibility of meeting growth and yield objectives and sanitation requirements while trying to meet elk thermal cover requirements in ponderosa pine stands.</p> |
| Watershed | <p>12. Determine the cumulative effects of management activities (timber harvest, road construction, site preparation, grazing, etc.) on water quality and stream stability.</p> <p style="padding-left: 40px;">(a) Determine the maximum percent of a watershed that could be in a harvested condition at any point in time and not cause long-term changes in watershed condition on Blue Mountain Forests.</p> <p style="padding-left: 40px;">(b) Determine a recovery rate to simulate hydrologic or watershed recovery over time for stands and harvest prescriptions on Blue Mountain Forests.</p> <p>13. Evaluate the effectiveness of best management practices to meet water quality standards.</p> |

2. Additional Data Requirements

Table II-4 identifies additional data requirements that are needed to improve the Forest's data base, to revise current data base inventories to new standards, and to incorporate new data base requirements that have recently been identified.

**TABLE II-4
Additional Data Requirements And Accomplishment Schedule**

Data Requirement	Information Source	Accomplishment Schedule
Elk Habitat Inventory - Refine Blue Mountain Elk Habitat Effectiveness model variables to provide more accurate assessment of forest habitat condition. (Region Office Task Committee)	Blue Mountain Habitat Handbook Forest Service Manual 2620, 2630	1992
Elk Winter Range Survey: Verify Condition and Boundaries	Forest Service Manual 2620, 2630	1995
Forage requirements for livestock/big-game on winter range. (Starkey Study)	Forest Service Manual 2200	1995
Effect on watertable of log and rock structures placed in streams to create pools	Forest Service Manual 2500	1995
Riparian area classification. (Plant Associations)	Forest Service Manual 2526	1995
Old-Growth Inventory: Survey and verify condition	Forest Service Manual 2620, 2630	1993
Management status and distribution of the Malheur mottled sculpin (<i>Cottus bairdi</i> spp.) on the Forest.	Forest Service Manual 2620, 2630, 2670	1994
In-Place Timber Inventory.	Forest Service Handbook 2409.21	1993
Riparian Area Inventory	Forest Service Manual 2526, 2636	2000
Baseline data on water temperature and turbidity on major drainages.		
American Indian Cultural Sites: Contemporary and traditional use areas, as related to subsistence and religious activities on the Forest.	Appropriate American Indian Tribal members	1999
Threatened, Endangered, and Sensitive Species survey and evaluation of habitat needs.	Forest Service Manual 2670	2000
Management status and distribution of the bull trout (<i>Salvelinus confluentus</i>) on the Forest.	Forest Service Manual 2630, 2670	1995

TABLE II-4 (Continued)
Additional Data Requirements And Accomplishment Schedule

Data Requirement	Information Source	Accomplishment Schedule
Management status and distribution of cutthroat trout (<i>Salmo clarki</i>) on the Forest	Forest Service Manual 2630	1995
Determine Cooper's and sharp-shinned hawks population levels and habitat requirements to maintain long-term viability	Forest Service Manual 2620, 2630	1996
Air Quality Related Values (AQRV) survey and evaluation in Class I Airshed (Strawberry Wilderness)	Forest Service Manual 2320, 2580	1995





Chapter III

**RESPONSE TO ISSUES
AND CONCERNS**



CHAPTER III RESPONSE TO ISSUES, CONCERNS, AND OPPORTUNITIES

A. INTRODUCTION

A major step in the development of this Plan was the identification of issues, concerns, and opportunities related to management of the Malheur National Forest. Public issues and management concerns were identified through citizen participation including public meetings, requests for comments, and personal contacts with individual members of the public, owners of adjacent private land, other agencies, local industry and conservation groups, and Indian tribes. Over 30 potential issues were identified. Some were beyond the jurisdiction of the Forest Service, resolved by existing laws, or best handled on a case-by-case basis. These were not addressed in this planning process. The remaining issues and concerns were then grouped based on common elements and similarities. The reader is encouraged to read Chapter I and Appendix A of the Final Environmental Impact Statement for a more detailed description of development of the issues. In the remainder of this chapter, the background of the issues is summarized and the response of this Plan to those issues is described.

B. RESPONSE TO ISSUES

Economic Stability

How will management of Forest resources affect local communities?

Background:

The Malheur National Forest comprises about 39% of Grant County's acreage and 5% of Harney County's acreage, as well as small acreages in Baker and Malheur Counties. Because of the substantial acreages, distinct economic ties, and the people's use patterns, the Forest's primary zone of influence has been determined to be Grant and northern Harney counties. Industries and communities in adjacent counties are also affected by resource management policies on the Forest.

Malheur National Forest policies have a direct impact on local, dependent industries which, in turn, affect business income, wages, employment, and revenues to the counties. The principal industries in the Forest's zone of influence are wood manufacturing, agriculture (i.e., ranching), and retail trade. These three industries account for about half of all employment in the area. Another large part of the economy is government employment, and much of that is also based on timber and livestock management.

Forest management activities and the resulting outputs influence job opportunities, incomes, and the way of life of the approximately 15,000 residents in local communities. Changes in Forest outputs and activities will affect the social and economic life of the local population.

Economic and community stability are acknowledged to be very important, and social stability is strongest when the local industries are healthy. Some people equate stability with a sustained supply of Malheur National Forest timber adequate to meet the demands of local industry. Others believe that the counties have been too dependent on timber manufacturing, and that a more diversified economy should be cultivated, including growth in tourism.

The Malheur National Forest also plays a role in county finances through payment of 25% of its revenues to the counties. This money, of which 99% is from timber-generated receipts, has a significant effect on the finances of county schools and roads. In 1989, Grant County received \$8.7 million and Harney County received \$2.3 million from Malheur National Forest receipts.

Forest Plan Response:

Alternative I strives to maintain economic and community stability. Under this Plan a sufficient mix of resource uses will be provided to meet foreseeable demand for most resource uses. Range outputs will decline slightly from recent use; however, the ranching industry will be provided with sufficient access to Forest forage to maintain most herd levels. This will assist in maintaining an industry which contributes to the social stability of the area. The selected alternative also produces an average annual allowable sale quantity (ASQ) of 200 MMBF. As the timber industry health is of paramount concern, the following discussion portrays the relationship of timber supply to local economic stability.

From 1980-1989, the average annual timber sold on the Malheur NF was 219 MMBF (ASQ). The selected alternative will make available an amount that is slightly (9%) below this level. The average annual harvest over the same ten years was 174 MMBF. This period has included the worst recession since establishment of the local timber industry (65 MMBF of net sawtimber harvested in 1982) to the highest recorded harvest (281 MMBF harvested in 1986) in Malheur NF history.

However, from 1970 through 1989, the average annual timber sale level (net volume, similar to ASQ) was about 198 MMBF. Average annual harvest for this time was 168 MMBF. This 20 year period of time gives a clearer picture of the long term timber supply history on the Malheur NF, as the extremes that have occurred within the last 8 years are moderated.

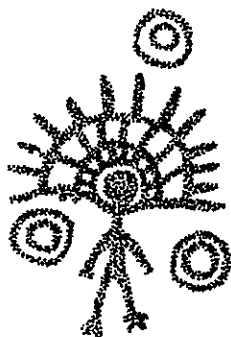
With only a slight decrease in the timber supply level over recent years (1980-89), and essentially the same as the long term average, a stable amount of raw material is projected to be available for timber industries within and adjacent to the Forest's zone of influence. This is expected to be a stable supply of timber in order to maintain local industries currently in place. This is virtually the same amount of timber that has been supplied annually over the last 20 years from the Malheur NF, and so should help to remain a cornerstone of a stable and predictable local economy. Competition is expected to intensify for the high quality, large diameter material (primarily ponderosa pine) available from the Forest during the life of this plan.

Local counties are attempting to provide a more diverse economic base, including an emphasis on tourism. This will depend to considerable extent on encouraging visitors to enjoy the natural scenic and recreational attractions of the area as well as its historical features. The National Forest will figure prominently in any such plans. These efforts to create a more diverse economic base can only help the overall economy in the long run.

This Plan manages noncommodity resources at a level which maintains the rural, forested setting important to local lifestyles, as well as providing a strong foundation for diversifying the economic base of the affected communities. Approximately 40% of the Forest will be managed under guidelines which do not include scheduled timber harvest. Much of this area will provide a recreation setting relatively free of human intrusions. Many other areas will be managed to meet other concerns important to Forest visitors, such as scenic travel corridors and big-game habitat. We will work with partners to develop and enhance recreational use of the Malheur National Forest and promote tourism in the area.

Frequently publics have commented that payments to counties must not be reduced. Returns to counties for schools and roads depend on the price of timber as much as on the amount sold because payments are based on receipts rather than harvest volume. Ponderosa pine is the most valuable species on the Malheur National Forest, thus this species influences payments to counties. The portion of ponderosa pine offered for sale must be reduced. It simply is no longer available in the amounts necessary to sustain annual harvest at past rates. This alternative emphasizes future harvest of ponderosa by reverting 75,000 acres of currently mixed conifer stands back to ponderosa pine type over the next 50 years. In addition the selected alternative schedules commercial thins in many ponderosa pine stands. This "thins" the stands, allowing the remaining stand more room to grow, thus gaining some harvest now and more rapid growth of the remaining stand. Both these efforts will help support a strong economic base for the future.

The Forest Plan provides a balance between commodity outputs and amenity resources that will contribute to economic stability of dependent communities, while maintaining the natural character and recreational settings desired by many of our publics. Decisions contained in the Forest Plan will affect communities. The Forest Service will work with communities to address these effects within the framework of the Pacific Northwest Strategy.



What level of sustained annual yield of timber products should the Forest provide while still maintaining Forest productivity and meeting local, regional, and national needs? How much timber land should be managed for wood fiber production, what species should be favored, and what management methods should be used to achieve the desired harvest level and species mix?

Background:

The Forest has been providing timber products to the local and national markets for over 70 years. The average annual total sale program quantity of timber sold over the last 10 years (1980-1989) has been 228 million board feet (MMBF) per year. The Malheur National Forest 1979 Timber Resource Plan called for an average net sell volume of 230 MMBF per year over the same decade. An analysis of the Forest's ability to produce timber indicates that the Forest could supply up to 59.2 MMCF (326 MMBF) per year on a nondeclining harvest schedule.

This could have future implications for the local timber industry which is almost totally dependent on the Forest for its supply of raw material, especially in view of the Forest and Rangeland Renewable Resources Planning Act (RPA), and national and regional projections for rising demands and prices in future decades. Local mills are maintaining a competitive market position currently by producing a quality ponderosa pine product.

The primary timber-producing species are ponderosa pine, Douglas-fir, western larch, lodgepole pine, and true firs. In the past, the majority of the volume sold has been from mature, open, ponderosa pine stands (69% of the total volume sold), especially those found in fairly level, easily roaded areas. Available areas for timber harvest are increasingly found in steeper areas forested predominantly with Douglas-fir, western larch, white fir, and grand fir. As timber stands are brought under management, trees of all species would be harvested at ages ranging from 50-150 years to maximize the utilization of the wood fiber production potential of the forest. Many trees are currently harvested at ages of 200 years and older.

Management of the timber resource interacts with every other resource on the Forest. The interrelationships are sometimes complementary, sometimes competitive, and sometimes mutually exclusive. Rising demands for other resource uses are increasing the complexity of timber management. The desire for old-growth habitat by groups such as the Izaak Walton League, Audubon Society, Oregon Department of Fish and Wildlife, Oregon Natural Resource Council, and Grant County Conservationists to meet the needs of specific plants and/or animal species or for other reasons would reduce the timber volume available to respond to national and regional demands and to maintain or expand the wood products industry in the community.

The management methods which would provide the largest amount of wood fiber to meet national demands would provide this wood fiber primarily in smaller diameter mixed conifer species. Although the local and sub-regional timber industry is anticipating and planning for this shift in product, some industry members express concerns because their mills are currently set up to process large diameter trees and they have a more favorable market position with ponderosa pine. Local residents, hunters, and forest visitors desire the appearance of mature, ponderosa pine stands and express concerns about the appearance and success of clearcuts on the Forest. County and State officials and private landowners emphasize the need for intensive management of the existing mixed conifer understory, particularly to reduce the losses related to western spruce budworm and other insect damage.

Competing demands for forest resources are exemplified by the demand for wilderness and roadless areas which preclude timber management. This is described in a separate issue.

Forest Plan Response:

This Plan schedules harvest on 835,970 acres (80% of those lands that were available and tentatively suitable for timber management). From these acres, an average annual ASQ is planned to be 34.8 MMCF (200 MMBF) over the next 10 years. An additional 3.6 MMCF (11 MMBF) per year of non-chargeable volume is expected to be harvested annually over the next decade in the form of salvage cutting, cull logs, and miscellaneous products such as firewood and posts and poles.

This 38.4 MMCF (211 MMBF) average annual total sale program quantity (ASQ, or chargeable volume, plus non-chargeable volume) is a decrease of 17 MMBF over the quantity sold during the past 10 years (1980-1989).

Timber outputs will be monitored and controlled on a cubic foot measure. The board foot volume associated with the cubic foot volume (i.e., the board foot/cubic foot conversion ratio) varies from stand to stand depending on the size and form of trees. Both board foot and cubic foot measure are displayed here since the board foot measure continues to be a customary unit of measure.

Of the ASQ, 16.1 MMCF per year (92 MMBF), or 46%, is expected to be ponderosa pine species. A significant component (about 30%) of this volume will be commercial thinnings. This is an immediate decrease of approximately 59 MMBF over the average annual pine (151 MMBF) volume offered from fiscal years 1980-1989. This decrease will bring the mix of species offered for sale closer to the mix reflected in the standing timber inventory. As intensive forest management occurs on forested lands managed for timber production, the amount of ponderosa pine offered for sale is expected to further decrease to 13.3 MMCF by 2039, 35% of the total sale volume. From the tenth decade on, ponderosa pine volume will increase to an average of 22.7 MMCF, an average of 59% of the total sale volume for decades 10 through 15.

Many publics, including the State of Oregon, emphasized the need to reduce even-aged management and placed a stronger emphasis on uneven-aged management. Our analysis shows that uneven-aged management techniques can be used to complement other resource objectives such as visuals, wildlife and riparian. For example, clearcutting (even-aged management) in riparian areas does not meet the riparian objective of providing stream stream shading, whereas selective cutting of individual trees or groups of trees (uneven-aged management) can occur while still meeting the riparian objective of stream shading. This is just one example of where uneven-aged management harvesting techniques can complement other resource objectives.

During the first decade, 64,242 acres (22%) will emphasize uneven-aged management, and 214,930 acres (78%) will emphasize even-age management.

Of the land scheduled for timber harvest, approximately 56% will be managed for a full yield of timber. Over the next 10 years, approximately 6,301 acres of two-storied stands will be harvested annually using overstory removal harvest methods. During this time approximately 3,330 acres will be harvested annually using clearcut harvest methods. This method of management is expected to be fully compatible with the multiple use management goals for those lands. The lands on which less-than-full-yield timber management occurs reflect modifications for resources such as riparian habitat, visual corridors, and uneven-aged management or even-aged management in the General Forest Management Area to produce more ponderosa pine volume in later decades. Under this management, growth on commercial forest lands would be increased from an average of 21 cubic feet per acre per year to 39 cubic feet per acre per year by the year 2039.

The ASQ includes volume scheduled from inventoried roadless areas and volume scheduled elsewhere on the Forest. If the volume scheduled from inventoried roadless areas cannot be sold, that volume will not be replaced by volume scheduled elsewhere. Volume scheduled from inventoried roadless areas is estimated to be 18.6 MMCF (108 MMBF) or 5.4% of the ASQ in the first decade. During implementation, the specific volume from roadless areas will be determined through site specific analysis. If the volume cannot be sold, the Plan may be amended.

Over the past decade, there have been serious insect epidemics and several forest fires on the Malheur. In view of these events, there are many people who suspect that the timber inventory for the Forest has been significantly reduced, thereby casting doubt on the ASQ calculation. However, the ASQ cannot be recalculated until 1996, when the new Forest-wide inventory is complete. In the interim, preliminary data from that inventory will be available in 1992. This preliminary information will be used to determine whether the Forest has sufficient volume to meet its assigned yearly harvest levels.

Timber harvest on all lands will result in a mosaic of forage and cover, providing temporary forage for wildlife and livestock, and will promote vegetative diversity. Trees will be selectively removed to maintain visually pleasing viewshed corridors.

Big-game Habitat

What level of big-game habitat should be provided to meet the needs for desirable big game herds?

Background:

Elk populations prior to 1970 were relatively stable but low. During the past decade, populations have steadily increased to a current summer population of about 6,600 elk; about one-third of which reside on the Forest during the winter period.

Mule deer populations have fluctuated during the past 40 years and are currently on a downward trend in two of seven game management units (GMUs) which include the Forest. Management of big game winter range for elk will provide for the wintering needs of mule deer as well since mule deer winter range is minimal on the Forest and overlaps with elk winter range. Mule deer winter ranges occur principally on lower elevation private lands adjacent the Forest

Ranchers on private land adjacent to the Forest are concerned about the movement of elk off the Forest to those private lands. The increased potential of the Forest to carry larger populations of elk will also increase the potential for more elk to winter on private land. The State management objective for big game populations for game management units, which occur on the Malheur National Forest, is to supply winter range for approximately 2,800 elk. Management of big game herd levels is the responsibility of the Department of Fish and Wildlife while the USDA Forest Service manages the habitat occurring on the Forest.

The wildlife issue of most concern to the public deals with elk habitat for elk hunting opportunities. Most of the dispersed recreation use occurs on the Forest during the deer and elk hunting seasons. Most local, and many regional and statewide residents and hunter's groups, are concerned about forest management activities and their effect on elk numbers and hunting opportunities. Most hunters are not only concerned about population numbers but are also concerned about the length of the hunting season, opportunities for success, and whether hunting will be on a limited entry basis that would reduce their hunting freedom.

Big game management and timber management are interrelated. Habitat quality for big game populations is determined by cover quality, size and spacing, and by forage and road density (disturbance) factors. Timber management activities have improved, and can further improve, the balance and distribution of cover and forage. Elk population numbers have increased, probably responding to available forage and controlled hunts.

Oregon Department of Fish and Wildlife (ODF&W) population objectives for the elk herds, hunter success rates, and the need to limit hunting opportunities in certain units are related to the anticipated effects of forest management on the habitat. For example, in addition to total population objectives, ODF&W has objectives for bull-to-cow ratios for each herd at the end of the hunting season. To avoid overharvesting bulls, the Forest Service must limit access (by closing roads) or ODF&W must regulate the number of hunters. The Forest activity that most affects the management actions of ODF&W to meet its population objectives is the control of access for hunters using motorized vehicles.

Forest Plan Response:

Big-game habitats will be managed to maintain deer and elk populations at approximately the State's population management objective levels. The application of the elk habitat effectiveness model (Thomas et al. 1988) and cover standards, will be used to balance cover quality, cover spacing forage, and security (open road densities) to achieve elk habitat effectiveness objectives on elk summer and winter range areas. Effective vegetation manipulation and road management techniques will contribute to a slight increase through time of the Forest-wide habitat effectiveness for elk. Any increases in elk populations are expected to be regulated and managed by the State through implementation of hunting regulations.

Presently, some elk herds move off the National Forest to winter on private land adjacent to the Forest. The amount and distribution of cover, snow depth, weather disturbance (human activities), and elk preference for forage, all influence elk use of public or private lands. The increased potential of the Forest to carry larger populations of elk will also increase the potential for more elk to winter on private land. Forage improvements on the winter range could increase the carrying capacity and retain more elk on National Forest lands when balanced with sufficient cover and reduced road densities.

This Plan establishes three big-game habitat management areas; summer range (primarily Management Area 1), winter range (Management Area 4A) and wildlife emphasis areas (Management Areas 20A, 20B and 21). Minimum standards have been established in each of these three habitat areas for HEI and satisfactory and total cover.

During the last year the Forest has collected new data which indicated that implementation of satisfactory cover standards may be extremely difficult, to impossible, in some drainages. The Forest Plan yield tables were calculated on 1980 data and ground conditions have changed since that time. Insects and disease have increased to epidemic levels. Although the yield tables were updated to 1990 conditions, this new data suggests that much of what was considered cover in the modeling process does not meet the definition of cover on the ground. This is in part due to the impacts from epidemic insects and disease infestations and in part due to the natural ecological potential of the land. In some areas nonforested lands such as scablands naturally limit the ability of the land to become big game cover.

In those instances where minimum standards are not attainable due to natural conditions (i.e., scablands or nonforest), insects and disease conditions or past management activities, then the highest possible cover percentage and index value will be created or maintained. Site-specific project analysis will address both short-term and long-term effects, particularly in the case of cover where short-term options to treat stands for insects and disease will improve forest health in the long-term. The Forest Supervisor will review and approve all recommendations to drop below cover and HEI standards as well as a strategy to reach standards within a reasonable length of time.

In February 1990 "The Blue Mountain Elk Initiative" was initiated. The primary goal of the proposal is to work in partnership with the Oregon and Washington State Wildlife Agencies, communities, private landowners, and interested groups and individuals for the benefit of elk management in the Blue Mountains.

To determine the effectiveness of elk habitat management prescriptions, standards, and guidelines during plan implementation, the three Blue Mountain Forests will develop and implement a coordinated monitoring program. Elk habitat condition, including road density, cover quality (satisfactory and marginal), cover size and spacing, forage quality and quantity, and any other appropriate factors, will be evaluated on a project basis and monitored on a watershed basis. The Oregon Department of Fish and Wildlife will be invited to cooperate in the development and execution of the monitoring and evaluation program. This program will be initiated within one year of Plan implementation for the three Blue Mountain Forests. The results will be evaluated yearly. Appropriate adjustments to the three Forest Plans will be initiated within three to five years if warranted.

The Forest will work with the State and other entities thru the Blue Mountain Elk Management Initiative, to address questions of public and private land interaction with elk habitat management, and other potential strategies for minimizing impacts on elk habitat during plan implementation, project design and execution, and monitoring.

During the next ten years, we anticipate that studies at the Starkey Experimental Forest and Range will yield new insights into the relationships between management of forest land and elk. The decisions we are making in this plan are, for the most part, reversible. New information that becomes available as part of the Starkey studies can be incorporated into the next land management plans, or by amendment to this plan if considered necessary.

Riparian Areas

What effect will forest management activities have on riparian areas, what level of fisheries habitat productivity should be maintained, what level of timber harvest is compatible with riparian values, and what level of livestock grazing can be provided while managing for riparian-dependent resources?

Background:

Although they occupy only 4% of the Forest's land base, riparian areas are the most productive and biologically diverse areas on the Forest. These areas provide important fish and wildlife habitat and often contain very productive timber stands and productive, lush forage in grazing allotments. Their gentle topography makes riparian areas attractive for road location and, in the semiarid west, the combination of water and riparian vegetation attracts recreationists. Because of the variety and sometimes conflicting nature of these concentrated uses, riparian areas have the greatest potential for resource-use conflict on the Forest.

National environmental groups (Izaak Walton League, Audubon Society, Sierra Club Oregon Trout, etc.) believe that overgrazing and unregulated livestock use of these areas results in a loss of streamside vegetation, increased water temperature, excessive bank erosion, and accelerated sedimentation of gravel fish-spawning areas. These groups have raised riparian management concerns to a National level, often calling for elimination of grazing. They urge that these areas receive special attention in land management planning. This is reflected in the special mention of riparian area management in the NFMA regulations.

Locally, environmental groups, Indian tribes and the Columbia River Inter-Tribal Fish Commission, and other agencies such as Oregon Department of Fish and Wildlife and the Environmental Protection Agency share these concerns to varying degrees.

Riparian area forage production and livestock access to water are critical to the grazing allotments on the Forest and degraded riparian areas do not benefit the permittees. On the other hand, local ranching operations would be adversely affected by significant reductions in permitted grazing levels. The Grant County Resource Council and the Oregon Watershed Improvement Coalition also recognize the importance of healthy riparian areas and advocate coordinated uses of these areas which include grazing.

Current inventories of Class I-IV streams on forest indicate 4,580 miles in all stream classes. The majority of these streams are in a condition which will meet the needs of the riparian-dependent resources. However, approximately 235 stream miles have been inventoried as being in an undesirable desirable condition. Less than desirable characteristics of these streams include: extensive areas of unstable eroding streambanks, lowering of the water table, and lack of adequate stream surface shading. Although uncontrolled logging practices, roads adjacent to streams, insect outbreaks, and fire can influence shading and streambank stability, the largest impacts on stream temperature and stability on the Malheur National Forest appear to be due to a reduction of hardwoods caused by ungulate grazing. With few exceptions, the majority of the gullies on the Forest are also the result of the loss of the stabilizing root system caused by a reduction in the hardwood community.

There is generally a consensus that improving streams and watersheds, which *are in an undesirable desirable condition is beneficial for all resources and user groups.* The issue centers around the cause of the decline, the specific methods and treatments used for improving the health of the stream systems, and the rate of improvement. There are opportunities for increasing the rate of improvement in riparian zones; however, these would reduce the amount of forage available for livestock grazing and timber outputs.

Forest Plan Response:

Riparian areas will be managed primarily to maintain and enhance their riparian characteristics. Roads, skid trails, grazing, timber harvest, and other soil-disturbing activities within and adjacent to these areas will be controlled and monitored to ensure that they are subordinate to riparian-dependent resources. This will occur through the implementation of Forest-wide and management area standards for riparian areas (Management Areas 3A and 3B).

Riparian habitat recovery projects will be planned, designed, and implemented so that all riparian areas in an undesirable condition will be improved to a desirable condition within 30 years for non-anadromous riparian areas (Management Area 3A) and 15 years for anadromous riparian areas (Management Area 3B).

Allotments have been identified which have riparian areas in unsatisfactory condition. A schedule for updating all allotment management plans on the Forest has been prioritized to update allotments with riparian areas in unsatisfactory condition first (see Appendix A). Riparian objectives will be set for each allotment management plan, management actions needed to meet the objectives will be identified, a time frame established for recovery, and the monitoring needed to determine if the desired rate of improvement is occurring.

Under extensive management (Strategy C), riparian forage utilization standards include utilizing grasses in satisfactory riparian condition to 45% and 0 to 35% in unsatisfactory riparian condition. Shrub utilization in satisfactory riparian condition may be 40% and up to a maximum of 30% in unsatisfactory riparian condition.

A riparian inventory will be undertaken for key parameters, such as stream surface shade, streambank stability, and streambank vegetation. All existing data such as Forest fisheries habitat stream surveys, Oregon Department of Fish and Wildlife data, and other existing sources will be used if appropriate and not outdated. In 1989 a riparian/aquatic survey was initiated on the Forest. The initial focus was to concentrate on those streams currently being studied while updating the allotment management planning documents for the priority allotments on the Forest.

The riparian timber management strategies are designed to maintain shade, provide for streambank stability, provide for a future supply of large woody debris, maintain a filter strip to prevent sediment from reaching the streamcourse, and most important to ensure that timber harvests are subordinate to riparian-dependent resources.

Within riparian areas, uneven-aged timber management will be emphasized with single tree selection in the ponderosa pine type and group selection in the mixed conifer and lodgepole pine types. Scheduled harvest may occur on Class III streams outside a 66 foot interior corridor. Timber harvest (non-scheduled) may occur on all other riparian areas if needed to accomplish specific riparian resource objectives. All timber harvest in riparian areas will be subordinated to riparian-dependent resources.

Watershed improvement projects will be applied to an average of 172 acres per year (see Appendix A, Activity Schedule, A-7). Watershed improvement projects are listed on the Watershed Improvements Needs (WIN) inventory, which is a comprehensive list of all known sites needing improvement. These recovery projects rehabilitate old burns, depleted ranges, closed timber sales with problem sites, abandoned mines, unstable streambeds and channels, localized erosion problems and others.

Fish habitat improvement will be achieved by both riparian vegetation management and instream structural habitat improvements. Riparian vegetation management will be accomplished by livestock allotment management, timber management, and wildlife habitat improvements. Strategies for allotment management plans and timber management have been discussed previously. Wildlife habitat improvement projects in riparian areas will increase the abundance of aspen and other riparian hardwoods, thus improving fish habitat benefits. Improvement in the abundance and diversity of riparian vegetation, with the associated geomorphic recovery of the stream channel, will account for the larger part of the expected increase in fish habitat capability over time.

> Structural work will be done to accelerate riparian improvement, as well as to provide direct habitat improvement. Structures can be used to stabilize stream-banks, and/or to raise the water table, both of which can accelerate the reestablishment and growth of riparian vegetation. This type of work will be done under watershed and fish habitat rehabilitation. Fencing to control ungulate grazing/browsing in the riparian area is also a tool to achieve faster vegetation recovery. Structures are also used to provide habitat features which are limited in the stream channel. For example, where pools with depth and cover are limiting rearing capacity during summer low flow and winter conditions, structures can be used to provide more of this type of habitat.

The schedule of habitat improvement work is shown in Appendix A, Activity Schedule, A-6. Funding for this work will come from a variety of sources. Knutsen-Vandenberg (K-V) funds, generated by timber sale receipts, will provide the largest single source. Funding from the Bonneville Power Administration for anadromous fish habitat enhancement is expected to continue through the early 1990's. In addition to appropriated funds, cooperative funding from other agencies and groups will also be sought.

Roadless Areas

Should some or all of the Forest's roadless areas remain roadless, be opened to roaded development, or be recommended to Congress for wilderness classification?

Background:

The Forest currently has 18 separate undeveloped areas comprising 180,948 acres. Some people enjoy the recreation experience available in areas which have many characteristics of wilderness but fewer restrictions. Such areas can be characterized as providing semiprimitive nonmotorized or motorized recreation opportunities. Maintaining the undeveloped character would mean excluding such areas from regulated timber harvest and road construction. In areas providing for motorized use, off-road vehicle use may continue; mineral exploration and extraction could continue in both types of area.

Areas maintained in an undeveloped state would also be eligible for future wilderness consideration. National and Regional environmental groups such as the Wilderness Society, Native Plant Society, and Oregon Natural Resources Council are philosophically opposed to development of these areas stating that in many cases there is no need for development and they should remain undeveloped rather than foreclose on future wilderness possibilities. One of these areas, Pine Creek, was analyzed in this planning process for potential inclusion in the National Wilderness System because it was designated for further planning review by the RARE II Final Environmental Impact Statement. These same groups as well as local environmental groups, some hunters, and some local residents favor roadless management of these areas because they believe it protects sensitive plant species, wildlife habitat, water quality and other amenity values, better than management geared toward consumptive uses.

Others such as the mining and timber industry associations and businesses, many local residents, and local governments state that the management of these areas has been in limbo long enough. They want to develop access and the resources in these areas to end the uncertainty about their availability. They state that the resources in these areas need to be managed so that they can contribute to local industrial and economic needs. They believe that wildlife habitat can be improved and the vegetation will be in a more vigorous condition if the resources are managed for consumptive uses (primarily wood fiber production).

There are approximately 119,950 acres of tentatively suitable land in the RARE II areas. These same acres provide 92,408 acres of old growth. Timber management activities could occur on 107,658 acres. Of these available acres, 101,205 acres would be considered suitable for timber harvest and would provide a first decade annual allowable sale quantity of 28 MMBF (4.9 MMCF) and a long-term sustained yield capacity of 5.74 MMCF/yr.

Forest Plan Response:

No new wilderness is recommended. Three of the current roadless areas, Malheur River, Flag Creek, and North Fork Malheur River have, however, been affected by the 1988 legislation adding two rivers to the National Wild and Scenic River Act. The rivers, the Malheur and the North Fork Malheur, both have scenic segments, only the Malheur River has a wild segment. Acres within wild river designation will have no timber harvest and no road building. Acres within scenic river designation may be available for timber harvest and road construction after development of river management plans.

Approximately 79,854 acres (44% of the current roadless area inventory) will be managed with no scheduled timber harvest and no additional roads (through semiprimitive motorized or nonmotorized and the wild portion of the wild and scenic river allocations). These acres consist of two roadless areas in their entirety and parts of six others. These include: Aldrich (8,609 acres); Shaketable (8,997 acres); parts of McClellan Mountain (18,717 acres), Bear Creek (former North Fork Malheur River) (2,710 acres); Malheur River (3,066 acres); Glacier Mountain (14,578 acres); Myrtle-Silvies (9,855 acres); and Greenhorn Mountain (13,322 acres). Greenhorn Mountain is also known as Vinegar Hill-Indian Rock Scenic Area, Management Area 7, (See Appendix J, Allocation of RARE II Lands).

Approximately 23,674 acres in, or adjacent to, two other roadless areas will be managed with a "wildlife emphasis - with scheduled timber harvest" prescription. These include 14,629 acres in the Dry Cabin Wildlife Emphasis Area (Management Area 20A), and 9,045 acres in the Utley Butte Wildlife Emphasis Area (Management Area 20B).

Also, 22,076 acres in, or portions of, four roadless areas will be managed with a "wildlife emphasis - no scheduled timber harvest" prescription (Management Area 21). These areas include the Jump-Off Joe area (4,006 acres); Baldy Mountain (5,380 acres); Dixie Butte (6,895 acres); and Nipple Butte (5,795 acres). In these areas timber harvest will be allowed only if it is needed to meet wildlife objectives.

While roads in the wildlife emphasis areas, with and without scheduled timber harvest (Management Areas 20A, 20B, and 21), will be allowed, additional road construction will be minimized. In these areas all roads will be obliterated or closed to vehicle traffic once project activities are completed.

Before timber harvesting and road building takes place in any former RARE II roadless area, an area transportation analysis will be completed for it and the surrounding area.

Approximately 2,646 acres of the Dixie roadless area will be allocated to the General Forest Management Area. However, these acres will be managed to emphasize recreation winter potential opportunities.

Those areas not selected for unroaded management were assigned to a variety of management emphases. Developmental activities will occur in all these areas to varying degrees. In some areas the activities will occur over much of the land area, significantly reducing its roadless character. In other areas, varying amounts of undeveloped land area will remain.

The Pine Creek area will be managed primarily to maintain big-game winter range habitat. The remainder of the area will be managed primarily to protect bald eagle winter roosts and maintain old growth.

Road Management

How can road management be used to make timber harvest, big game habitat needs, and recreation opportunities more compatible?

Background:

Currently, there are an estimated 8,570 miles of Forest Service roads on the Forest. Under Alternative F (the Preferred Alternative in the Draft Environmental Impact Statement), approximately 870 miles of roads would be constructed and 1,360 miles of road reconstructed by timber purchasers during the first decade of the Forest Plan (1990-1999). Of this total, 200 miles would be built in roadless areas that are assigned to timber production.

The Malheur National Forest, in conjunction with the Oregon Department of Fish and Wildlife (ODF&W), has four Cooperative Travel Management Areas. These seasonal road closures are designed to protect wildlife habitat, minimize harassment of wildlife, maintain adequate buck and bull escapement, and promote nonmotorized hunting. These management areas are under the "green dot system" during the hunting seasons, with enforcement through the State Police and ODF&W. Total national Forest land affected by these seasonal closures is approximately 172,000 acres.

The Oregon Department of Fish and Wildlife, and the public have expressed concerns about the lack of a specific road and access management policy for the Forest as a whole and for some resources in particular. General concerns include a belief that road densities are too high, that local roads should be closed and put back into resource production immediately following timber harvest, and that in many cases road construction and maintenance standards were too high.

The greatest concern is the road management policy in relation to big-game habitat and hunting. Specific desires expressed included permanently or seasonally closing roads to enhance big game summer and winter range. Included in this was increasing elk habitat effectiveness, providing elk escapement areas, and providing for a nonmotorized hunting experience.

Forest Plan Response:

Under this Forest Plan 618 miles of new road would be constructed by timber purchasers during the Plan period (1990-1999). Of this total, 70 miles will be built in roadless areas that are assigned to timber production. This represents a 252-mile decrease from Alternative F (the preferred alternative in the Draft Environmental Impact Statement). In addition, road reconstruction by timber purchasers will approximate 1,320 miles during the Plan period. By 1999, roads on the Forest will approximate 9,188 miles. Approximately 2,688 miles (30%) of these will be closed to vehicle traffic or obliterated and removed from the transportation system.

Access management planning will strive for 1.5 mi/mi² on summer range and 1.0 mi/mi² on winter range unless these densities do not allow for a healthy and productive forest as envisioned in the desired future condition, or interferes with access to private land. At a minimum, road densities of 3.2 miles per square mile in summer range, 2.2 mi/mi² in winter range (Management Area 4A) and 1.5 mi/mi² in wildlife emphasis areas (Management Areas 20A, 20B and 21), will be achieved by 1999. These densities will be monitored on a watershed basis (see Appendix I).

Road density concerns will be addressed through the access management plan which will establish road management objectives for each road on the Forest. The existing road system will be reviewed to identify roads to be closed or obliterated because they no longer contribute to integrated land management objectives. The status of all roads will be determined by integrated land management analysis, incorporating objectives for big-game habitat needs (including security needs), high quality recreation opportunities, timber harvest and removal, and firewood cutting opportunities. This will be an open process with public involvement, meeting the full intent of NEPA.

Forest goals, objectives, and standards have been strengthened and expanded in the Forest Plan to emphasize that roads will be planned, designed, constructed and maintained to the minimum level necessary to meet the needs of all resources. Chapter IV provides direction on how these objectives will be accomplished and how the transportation system will be managed.

The standards specify that the forest will be managed to meet stated elk habitat effectiveness objectives. In order to meet these objectives, selected roads will be physically closed with barriers, opened to use by permit only, opened to use for Forest Service administration only, opened seasonally only, or obliterated.

A Forest travel management plan will be developed, and updated annually to document travel management restrictions. Travel on roads will be monitored to establish compliance with restrictions and ensure that travel management objectives are being met.



Chapter IV

**FOREST MANAGEMENT
DIRECTION**



CHAPTER IV FOREST MANAGEMENT DIRECTION

A. INTRODUCTION

This Forest Plan establishes the direction for the Malheur National Forest for the next 10 to 15 years, when used in conjunction with Forest Service manuals and handbooks and the Pacific Northwest Regional Guide. This Forest Plan is based on the preferred alternative (Alternative I) described in the Malheur National Forest Final Environmental Impact Statement. The goals and objectives of that alternative are the basis for the Forest management goals, objectives, and standards described in this chapter. The projected resource outputs for the next 50 years are also displayed.

B. FOREST GOALS

The goals for the Malheur National Forest are to:

Recreation

1. Provide a range of opportunities and settings which are consistent with public demand for a variety of activities, both motorized and nonmotorized.
2. Provide for a distribution and variety of developed recreation facilities that are consistent with public demand for activities and experiences and are compatible with a forest environment.
3. Provide safe, well maintained developed facilities for the public's enjoyment.
4. Ensure high quality recreation experiences through facility location and design. Assure reasonably safe and accessible facilities to as many people as possible, including the handicapped.
5. Provide a diverse system of trails for the enjoyment of all users and to meet administration and resource management needs.
6. Encourage public participation in the development of partnerships with recreation users of the Forest.
7. Provide interpretation, information, and education on ecological principals and resource uses to enhance recreation and promote understanding of land management principals.

Cultural Resources

8. Provide for the identification, protection, interpretation, and management of significant cultural resources to preserve their historical, cultural, archaeological, and/or architectural values.

Visual Resources

9. Maintain and enhance the scenic character of the Forest through integration of the principles of landscape architecture and environmental design arts into forest land management practices.
10. Provide and maintain pleasant visual experiences for Forest visitors consistent with public demand and natural landscape capabilities.

Wilderness

11. Manage designated wilderness to preserve and protect their wilderness character in accordance with the Wilderness Act of 1964 and the Oregon Wilderness Act of 1984.

FOREST GOALS

12. *Manage to minimize user impacts while providing for spontaneous use as free from regimentation as possible.*
13. *Manage air quality to remain within standards set by the State of Oregon.*
14. *Provide a spectrum of opportunities for wilderness recreation consistent with preservation of wilderness values.*
- Fish and Wildlife
15. *Assist in the identification, protection and recovery of threatened, endangered and sensitive species.*
16. *Coordinate fish and wildlife management activities with other agencies and organizations to achieve mutual resource goals and utilize project cost share opportunities.*
17. *Provide for the maintenance and enhancement of big-game habitat so as to sustain elk and deer populations at the state management objective level.*
18. *Provide for improved fish habitat conditions to support increased populations of anadromous and resident fish.*
19. *Provide a diversity of habitat sufficient to maintain viable populations of all species.*
- Range
20. *Provide a sustained production of palatable forage for grazing by livestock and dependent wildlife species.*
21. *Manage rangelands to meet the needs of other resources and uses at a level which is responsive to site-specific objectives.*
22. *Permit livestock use on suitable range when the permittee manages livestock using prescribed practices.*
- Wild Horse Habitat
23. *Conduct livestock management on the Murders Creek Wild Horse Territory to ensure the maintenance of a wild horse herd averaging 100 head.*
- Timber
24. *Provide a sustained flow of timber for lumber, fiber, and/or associated wood products at a level that will contribute to economic stability, while providing for regional and national needs.*
25. *Provide and utilize wood fiber in the form of sawtimber, fiber, and/or associated wood products in a manner which will minimize losses and maximize outputs in a cost-effective manner, consistent with the various resource objectives and environmental standards.*
26. *Provide an economic return to the public.*
- Water, Soil, and Air
27. *Provide a favorable flow of water (quantity, quality, and timing) for off-Forest users by improving or maintaining all watersheds in a stable condition.*
28. *Maintain or enhance water quality to meet State of Oregon standards, considering downstream uses and protection of other riparian and floodplain values.*

- 29. Secure water rights when needed, and assert reserved rights where applicable to assure an adequate supply of water for the protection and management of the Forest.
 - 30. Manage the soil resource of the Forest by using management practices that will maintain or enhance its productive properties.
 - 31. Rehabilitate degraded sites that pose a hazard or threat to public health and safety.
 - 32. Cooperate with other Federal, State, and local regulatory agencies to meet the standards required in the Clean Air Act regulations and State of Oregon Implementation Plan.
- Minerals
- 33. Facilitate orderly exploration, and development of mineral resources.
 - 34. Facilitate the inventory, exploration, and development of domestic energy sources and encourage conservation of energy in Forest activities.
- Facilities
- 35. Plan, design, operate, and maintain a safe and economical transportation system providing efficient access for the movement of people and materials involved in the use and protection of the National Forest lands.
 - 36. Plan, design, construct and maintain roads to the minimum level necessary to meet resource objectives including, but not limited to, objectives for timber harvest and removal, big-game habitat needs (including security needs), high quality recreation opportunities and firewood cutting opportunities.
 - 37. Provide adequate and cost effective facilities at administrative sites to perform the required work
- Lands
- 38. Allow uses which are consistent with Forest management objectives.
 - 39. Provide energy and transportation corridors adequate to meet regional and national needs.
 - 40. Use land adjustment to accomplish resource management objectives and to improve management efficiencies on both public and private lands.
 - 41. Acquire the access needed to serve both administrative and public user needs.
- Human and Community Resources
- 42. Contribute to the social and economic health of communities which are significantly affected by National Forest management.
 - 43. Protect civil rights, promote public safety, and be a good host in providing assistance to forest users.
 - 44. Protect and preserve for Native Americans their reserved treaty rights according to the applicable treaties.
 - 45. Provide an information program to assist the public in understanding management of the various resources and to assist them in their search for a variety of challenging and pleasing experiences.

DESIRED FUTURE CONDITION - 1999

- Integrated Pest Management 46. Protect resource values through the practice of integrated pest management.
- Research Natural Areas 47. Protect existing and recommended areas for the research natural areas System to provide: (a) baseline areas against which effects of human activities can be measured, (b) sites for study of natural processes in undisturbed ecosystems, and (c) gene pool preserves for all types of organisms; especially rare, threatened, endangered, and sensitive species.
- Fire 48. Initiate initial suppression action that provides for the most reasonable probability of minimizing fire suppression costs and resource damage, consistent with probable fire behavior, resource impacts, safety and smoke management considerations.
49. Identify, develop and maintain fuel profiles that contribute to the most cost-efficient fire protection program consistent with management direction.

C. DESIRED FUTURE CONDITION OF THE FOREST

This section describes what the future Malheur National Forest should be like if the management direction contained in this Forest Plan is implemented. It summarizes the anticipated physical changes which would result from carrying out planned management practices at two points in time: at the end of 10 years and at the end of 50 years (RPA planning horizon).

1. The Forest in 1999

Pacific Northwest Strategy

Opportunities for the Forest to help enhance the vitality of surrounding communities will occur through a Regional initiative called the Pacific Northwest Strategy. It is envisioned that the Pacific Northwest Strategy will be a new focus of operation for many people, one that empowers Forest Service people and local citizens to look and work beyond the traditional boundaries. At the same time, it reaffirms and emphasizes working with other government agencies, local businesses, and the communities themselves in a spirit of interdependency and cooperation that has always existed at the local Ranger District level. As the strategy becomes an integral part of doing business, its central focus will be to foster and enhance communication, cooperations, and partnerships.

Recreation

There will continue to be a variety of recreation settings in which activities and experiences can be enjoyed. The area in which unroaded experiences can be gained outside wilderness will have decreased from 180,836 acres to 101,330 acres. Wilderness acres will remain the same as today at 81,320 acres.

Dispersed recreation opportunities will be emphasized on approximately 5% of the Forest outside the wilderness. Of this, 14,578 acres will be managed for semiprimitive motorized recreation opportunities and 62,392 acres will be managed with emphasis on semiprimitive nonmotorized recreation opportunities.

There will be 5 fewer developed campgrounds than today leaving a total of 20 developed campgrounds. These 20 campgrounds will continue to be managed as developed recreation facilities. Some of these campgrounds may be expanded to accommodate site-specific demands. An additional campground to accommodate recreational vehicle travelers and bicyclists is proposed for development in the Austin Area. The 5 sites previously managed as campgrounds will be managed as dispersed recreation sites. These sites have a minimum of developed facilities, usually no more than a vault toilet structure. Table A-1, Appendix A, displays the Forest's projected construction/reconstruction schedule for the campgrounds.

Vegetative management plans for campgrounds will be completed over the decade. Appendix A, Table A-3 outlines the necessary management practices that will need to be completed to maintain healthy, vigorous growing trees and shrubs in all campgrounds level 3 and above.

Trails

The trail system will have increased by 465 miles to 1,116 miles. Of these miles, 10.5 miles will be constructed in wilderness, increasing the wilderness trail miles to 138 miles. With 110 miles of snowmobile trails and as much as 94 miles of all terrain vehicle/off highway vehicle trails to be added to the system. There will also be approximately 118 miles of mountain bike and 79 miles of cross-country ski trails developed over the decade. Nineteen trailheads will be constructed and 11 reconstructed. Appendix A, Table A-2, displays the specific trails or trailheads that will be constructed and added to the system or reconstructed if the necessary funding is received.

Wild and Scenic

The character of the wild and scenic river corridors will be maintained in a natural or near natural condition. By the end of the first decade, detail river management plans will have been completed and activities will be occurring as outlined.

Cultural Resources

By 1999 about 90% of the Forest will have been surveyed for cultural resources. Surveying emphasis will have shifted from areas subject to impacts such as timber sales, to areas not subject to impacts such as wilderness. The updated overview, site evaluation, and data recovery will have increased our knowledge about the prehistory and history of the Forest and led to better management of cultural resources. Public education and interpretive projects will be enhancing the enjoyment, understanding, and involvement of the public in cultural resource management, especially through partnership. Additional properties will have been nominated to the National Register of Historic Places.

Visuals

The managed forest outside the viewshed corridors will have an altered appearance. A mosaic of cutting patterns of varying shapes, sizes, and arrangement will become more evident and the average tree size will be reduced. Fewer large-diameter old growth ponderosa pine will be found outside of viewshed corridors, old growth areas, semiprimitive areas, wilderness areas, bald eagle winter roosts, and wild and scenic river corridors.

Vegetative manipulation which will alter the character of the landscape will have begun within visually sensitive areas (viewshed corridors). These alterations will vary from not being evident to being obvious, while still borrowing from the natural character of the landscape. Nineteen viewshed corridor plans will be completed within the decade.

DESIRED FUTURE CONDITION - 1999

Fish and Wildlife

Approximately 215,000 acres of old-growth habitat occurs across the Forest. This includes 47,690 acres of dedicated old growth stands and 25,000 acres of replacement old growth stands distributed across managed forest lands. Riparian areas, visual corridors and semiprimitive unroaded areas provide travel routes between old growth units.

Many of the recently harvested riparian area stands of lodgepole pine will have been reestablished and will have attained sufficient size to once again provide shade and water temperature regulation in the affected streams.

- Wildlife species which utilize riparian areas will be responding positively to improved riparian vegetation conditions. The production of both anadromous and resident fish will be greater than it is now. Smolt habitat capability for Chinook salmon and steelhead trout will have increased to approximately 350,000 smolts. Most of the identified structural habitat improvement work on anadromous streams will have been completed (approximately 30 structures per year). Substantial work will also have been accomplished on resident streams (approximately 50 structures per year).
- Approximately 8,000 acres of fish and wildlife habitat improvements will have been completed by the end of the first decade. The types of improvements which will have occurred include prescribed burning, seeding, browse planting, pruning, mechanical disturbance, and fertilizing to enhance forage production. Other projects will include aspen stand enhancement and riparian vegetation plantings.

Big-game habitat effectiveness will increase through vegetation manipulation and road management. Total forest open road mileage will be reduced approximately 30% to meet HEI standards within each of the seven watersheds. Total cover will decrease to 51%. Close coordination on forage utilization by big game and livestock and application of enhancement techniques will result in increase of browse condition and forage quality and quantity.

An aggressive access management plan will have helped reduce road densities to at least 3.2, 2.2 and 1.5 miles of road per square mile area in summer range, winter range and wildlife emphasis areas respectively. Many watersheds will have achieved even lower road densities, approaching the desired levels of 1.0 mi/mi² in winter range and 1.5 mi/mi² in summer range.

Habitat for cavity excavators and cavity nesters will be provided Forest-wide; at natural levels in wilderness areas, Vinegar Hill-Indian Rock Scenic Area, bald eagle winter roosts, and research natural areas, at 80-100% of potential population levels in dedicated old growth and riparian areas, at 60-100% in wildlife emphasis areas, and 40% in the general forest and elk winter ranges. Snags will be well distributed and green replacement trees will be available to provide snag replacements through time.

Bald eagle winter habitat will have been maintained and viable populations of other candidate species for listing as Threatened or Endangered will have been maintained.

American peregrine falcons will have been reintroduced in the Strawberry Mountain Wilderness and other suitable areas of the Forest, as part of the recovery effort to reestablish this species in the western United States.

Range By 1999, modified grazing strategies will have been applied to selected allotments which will increase the rate of improvement in the riparian vegetation. Some will be showing dramatic improvement by the end of the decade. Other riparian areas within allotment pastures will also show improvements due to reduced utilization of grasses and shrubs. Woody shrubs will be more prevalent. Some existing gullies will have been treated and as revegetation occurs erosion will be reduced. Ninety allotment management plans will be updated within the decade.

Timber By 1999, 279,176 acres of forested lands will have been sold for harvest. Of these 63,006 acres will receive overstory removals and their existing understories will be managed and 64,242 acres will be treated through the use of uneven-aged management techniques in visual foreground areas, wildlife areas, riparian areas, and in the general forest. Utilization of biomass residue will have been increased throughout the decade, in balance with long-term site productivity and habitat diversity.

Lands The current changes in ownership and use of intermingled private lands will continue. There will be fewer parcels of non-Federal land intermingled with Federal lands.

Roads The principal roads will be readily identifiable. They will have paved or gravel surfaces and look suitable for passenger car use. Signs will assist the traveler in finding their destination. The other roads will appear less inviting for use. They will look rough or primitive, but most are available for use by the more experienced traveler.

By the end of the decade, 618 miles of new road will have been constructed for a total of 9,188 miles of road. Approximately 30%, or 2,688 miles, of these will be closed to vehicle traffic or obliterated and removed from the transportation system.

Road construction will have declined, yet some new roads will need to be constructed. Timber purchaser roads will continue to be built to the standard needed for log haul. Most of these will be single-lane, unsurfaced roads. New culverts, widening, more turnouts, and surfacing will be added to some existing roads in timber sale areas. Surface rock replacement of crushed rock on main haul roads will occur. Additional paving will occur on some existing roads. Roads will be reconstructed where the existing curves are too sharp, where grades are too steep, where culverts will not allow fish passage, or where the existing road is too close to a stream. Some bridges will be reconstructed and new bridges will be constructed.

2. The Forest in 2039

Pacific Northwest Strategy Each community will have capitalized on its uniqueness and involved its citizens in the development of a desired future. The activities associated with the Pacific Northwest Strategy will continue to support the goals and plans of resource-dependent communities.

Recreation A variety of recreation opportunities will still exist on the Forest. Roadless recreation outside wilderness will still be available at the same level it was at the end of the first decade. Wilderness will still be at 81,320 acres.

DESIRED FUTURE CONDITION - 2039

The existing developed recreation sites will still accommodate the anticipated demand during the majority of the summer and fall use seasons. Most of these sites will have been constructed to accommodate the increased use and some of the more used facilities will have been expanded to meet demand. No new campgrounds will have been constructed.

The Forest will continue to provide areas where semiprimitive recreation opportunities both motorized and nonmotorized can be experienced. These areas will be sought after by recreationists in attempt to deviate from the swift pace of urban living.

Trails	The trail system will have increased to 1,155 miles. No additional miles of trail will have been added to the wilderness areas beyond the 10.5 miles completed in the first decade.
Wild and Scenic	The wild and scenic rivers on the Malheur will provide a river setting where future generations can still experience a feeling of being in an area unaffected by development activities. This will be an area where one can enjoy the scenic beauty of a river corridor.
Cultural Resources	By 2039 the entire forest will have been surveyed and re-entry survey will be rare. There will be an excellent understanding of area prehistory and history due to the synthesis from several generations of overviews and numerous data recovery projects. Advances in archaeological methods will have significantly changed the amount of information recoverable from sites and the ways we manage them. Primary concern will have shifted from the management of sites in the field to the management of data and collections. Management plans will have been written and implemented for most National Register districts and properties. Site enhancement, and interpretation and public education will continue to be a very large part of the cultural resource program.
Visuals	<p>Vegetative manipulation will have created more stand diversity within the visually sensitive areas. A variety of species and multilevel stands will be evident. These changes will continue to be designed to maintain a natural appearance and to accentuate large diameter trees. Changes in landscape character within the most sensitive viewshed corridors will be subtle; changes within the less sensitive viewshed corridors will be more obvious.</p> <p>The managed forest outside the viewshed corridors will have an altered appearance. The evidence of logging activity will be very obvious. A mosaic of cutting patterns of varying shapes, sizes, and arrangements will be very evident and the appearance will be that of an intensively managed younger forest. The large diameter old growth pine will be found only in viewshed corridors, old growth areas, roadless areas, wilderness areas, bald eagle winter roosts, semiprimitive areas, wild and scenic river corridors, and those acres where uneven-aged management is being practiced in the general forest. Additionally, replacement snags will be retained over the entire forest and these may or may not be ponderosa pine.</p>

Fish and Wildlife

Old-growth habitat will exist on approximately 121,000 acres Forest-wide and will be found within designated old growth areas, semiprimitive areas, wilderness areas, and bald eagle winter roosts. In addition, there will be 25,000 acres of old growth replacement stands being managed of which some additional acres will be at or near old growth. Viable populations of mature/old growth dependent species will be maintained.

All riparian areas in less than desirable condition will have been improved to provide for all riparian-dependent resources. These improvements will have been brought about by better control and administration of livestock use in riparian areas, reduced timber harvest in forested riparian areas, more road closures and obliteration, completed watershed and fisheries habitat improvement projects on all priority streams, and increased or reestablished riparian hardwood communities. Bank stability, water quality, fish and wildlife habitat, recreation opportunities, and aesthetics will all have improved. Streamside vegetation will be more diverse and abundant with native species

Anadromous fish production potential on the Forest will have about doubled. Resident fish habitat capability will have also increased substantially. Wildlife species which utilize riparian areas will respond positively to improved riparian conditions.

Satisfactory cover will have increased slightly; total cover approaches the optimum level, and distribution and size of cover stands will improve slightly. Forage quantity and quality will have improved as a result of habitat improvement techniques, and a reduction in total cover. Big game populations should experience a slight increase in conjunction with an increase in habitat capability. Road management is a major element in balancing habitat effectiveness needs and the hunter recreation experience with other resource activities and public uses of the Forest.

Access management planning will be an aggressive program. Road closures, both year-round and seasonal, will have achieved road densities of 1.0 mi/mi² in big game winter range and 1.5 mi/mi² in big game summer range.

Habitat for cavity excavators and cavity dependent species will continue to be provided through time at the levels outlined for the year 1999

Approximately 40,000 acres of fish and wildlife habitat improvement projects will have been completed by this time. The types of improvements that will have occurred include prescribed burning, seeding, and fertilizing to enhance forage production in winter range; aspen stand enhancement; and riparian vegetation planting.

Bald eagle roosts will continue to be maintained and increased use of the roosts should be evident from a larger population of bald eagles in the Pacific States. As outlined in the bald eagle recovery plan, there should be two or three pairs of bald eagles established in nesting territories on major river systems on the Forest. Populations of the American peregrine falcon should be well established in the western United States, with the Forest contributing nesting habitat for at least a pair of these birds.

OBJECTIVES

- Range** By 2039, management of most of the 1,351,275 acres of available suitable livestock range on the Forest will include full utilization of forage available for livestock during the growing season. All allotments will have exterior boundary fences in place and more subdivisions (pastures). Adequately designed water developments will have been installed and functioning to obtain relatively uniform cattle distribution, use of forage, and maintenance of plant vigor.
- Timber** By 2039, over 800,000 acres will be under some level of intensive timber management. Average stand growth rates will have increased from 21 cubic feet to roughly 39 cubic feet per acre per year (see Appendices D and F). By the year 2039, most acres of the total suitable land base will have received some type of silvicultural treatment at least once, and some twice. Uneven-aged management methods will have been applied to approximately 200,000 acres. Approximately 75,000 acres will have been reverted from predominately mixed conifer stands back to ponderosa pine stands. These management activities will cause more acres to be stocked by younger vigorous trees which should reduce and/or limit the impacts of most insect pests on the Forest.
- Lands** The current changes in the ownership and use of intermingled private lands will be far advanced and ongoing. There will be few parcels of non-Federal land intermingled with Federal lands; private lands within wilderness will be substantially reduced.
- Fire** Prescribed fire will have played a role in converting 75,000 acres of mixed conifer stands back to ponderosa pine stands. Most all of the subclimax ponderosa pine timber type will have been underburned. Ground fuels will be reduced significantly, resulting in increased range and wildlife forage. Total smoke production on an annual basis will be reduced substantially as a result of fewer and lower intensity wildfires.
- The use of prescribed fire as a management tool will be extensive. Underburning (the use of low intensity ground fire), will be common for managing mixed ponderosa pine and associated fir stands to reduce fir encroachment and perpetuate ponderosa pine. By the end of this period, 1,000 acres will be burned as rangeland improvement and another 2,000 to 4,000 acres as wildlife habitat improvement. Smoke from these projects will be visible during spring, early summer, and fall.
- Roads** The principal road systems will be complete with improved or paved surfaces. Other roads will be closed or available for use by forest travelers with high clearance type vehicles.
- Approximately 1,159 miles of road will have been constructed. Virtually all available and suitable commercial forest land will be accessed. New road construction will be limited to small amounts of local road construction for timber sales, recreation uses, and special projects. Road and bridge reconstruction will continue.

D. OBJECTIVES

Table IV-1 displays the outputs and activities which can be anticipated if this Forest Plan is fully implemented. Actual achievement of the levels of outputs and activities is dependent, to a large extent, on the level of funding received for implementation. If the funding is significantly different from that called for in this Plan, the output levels are likely to vary accordingly. Projected outputs could also change as new information is acquired.

A narrative description of the various resource objectives follows Table IV-1.

1. Projected Outputs

Projections of average annual outputs that will be used for programming, budgeting, and attainment reporting are displayed in Table IV-1. The projected budget required to implement the Forest Plan is shown in Appendix H.

2



PROJECTED OUTPUTS

TABLE IV-1
PROJECTED OUTPUTS

OUTPUT OR ACTIVITY	ACTIVITY CODE ^{1/}	UNIT ^{2/}	AVERAGE ANNUAL UNITS					
			1ST DECADE	2ND DECADE	3RD DECADE	4TH DECADE	5TH DECADE	
RECREATION								
Recreation Resource Administration	AN12	MPAOT	371	400	400	400	400	
Trail Construction/Reconstruction	AT22	Miles	46/4	4/9	0/9	0/9	0/9	
Trail Maintenance	AT23	Miles	1,116	1,155	1,155	1,155	1,155	
CULTURAL RESOURCES								
Survey	AC111	M Acres	89	32	10	7	5	
Evaluation	AC112-1	M Acres	252	150	76	48	36	
Monitoring	AC121	Sites	206	237	259	265	265	
Mitigation	AC123	Sites	295	263	234	200	174	
Management Plans	AC112	Sites or Dist.	2	2	2	2	2	
National Register Nominations	AC122	Sites or Dist.	2	2	2	2	2	
Enhancement	AC124	Sites	2	2	2	2	2	
FISH AND WILDLIFE IMPROVEMENTS								
Wildlife Habitat Structural	CW221	Structures	300	300	300	300	300	
Wildlife Habitat Non-Structural	CW222	Acres	750	750	750	750	750	
Resident Fish Structural	CI221	Structures	50	10	10	10	10	
Resident Fish Non-Structural	CI222	Acres	30	20	10	10	10	
Anadromous Fish Structural	CA221	Structures	30	20	5	5	5	
Anadromous Fish Non-Structural	CA222	Acres	20	20	10	5	5	
TE&S Structural	CT221	Structures	2	2	2	2	2	
TE&S Non-Structural	CT222	Acres	4	4	4	4	4	
RANGE								
Range Resource Operations	DN1	MAUMs	110	116	114	111	112	
Allotment Management Plans	DN112	Plans	90	105	105	105	105	
Range Structural Improvements	DN221	Structures	250	300	100	100	100	
Range Non-Structural Improvements	DN222	Acres	4,800	6,000	6,000	6,000	6,000	
Noxious Weed Control	DN24	Acres	200	200	200	200	200	
SOIL AND WATER								
Watershed Improvements	FW22	Acres	172	100	100	100	100	
MINERALS								
Mineral Proposals, Leases, and Applications	GM114-2	Cases	92	105	110	125	130	
TIMBER								
Timber Sale Program Quantity	ET114	MMBF	211					
	ET114	MMCF	38.4	38.4	38.4	38.4	38.4	
Allowable Sale Quantity	ET114	MMBF	200					
	ET114	MMCF	34.8	34.8	34.8	34.8	34.8	
Reforestation (Planting)	ET24	MAcres	5.5	3.6	2.9	4.4	5.5	
Timber Stand Improvement	ET25	MAcres	10.8	16.2	13.3	11.6	16.4	
LANDS								
Landline Location	JL24	Miles	50	0	0	0	0	
Land Ownership Adjustments	JL26	MAcres	2	2	2	2	2	
PROTECTION								
Activity Fuels Treatment	PF2	MAcres	10	10	11	11	13	
Natural Fuels Treatment	P2	MAcres	2	2	2	2	2	
FACILITIES								
Facility Construction	LF22	Structures	26	2	2	2	2	
Road Construction/Reconstruction	LT22	Miles	26	26	29	32	35	
Timber Purchaser Road Construction	LT214-12	Miles	62	30	12	4	9	
Timber Purchaser Road Reconstruction	LT214-22	Miles	132	120	110	105	117	
Road Maintenance	LT23	Miles	8,879	9,337	9,544	9,621	9,684	

^{1/} All activity codes are from Forest Service Handbook 1309 16 / National Activity Structure Handbook

^{2/} See Glossary for definitions of acronyms.

2. Resource Summaries

Following are brief summaries of how the various resources will be managed under this Forest Plan. The narratives describe activities necessary to produce the outputs displayed in Table IV-1. These planned activities will be the foundation for developing the Forest's annual budget proposal and program of work.

Many of the resources described below will be monitored to determine if projected outputs are realized and if standards and objectives are being met. For monitoring details, see Chapter V.

Dispersed Recreation

Provide unroaded recreation opportunities on about 5% of the Forest outside wilderness. Of this, 14,578 acres will provide semiprimitive motorized opportunities and 48,888 acres will provide semiprimitive nonmotorized opportunities. The Vinegar Hill-Indian Rock Scenic Area and the Wild and Scenic Rivers will also provide 23,578 acres of semiprimitive recreation opportunities. The Scenic Area will be managed for semiprimitive nonmotorized recreation outside of the winter and semiprimitive motorized recreation in the winter. There are three areas on the Forest that will be managed for wildlife emphasis (45,750 acres), but will provide a range of semiprimitive recreation opportunities.

Provide roaded recreation opportunities on 51% of the Forest (743,775 acres). These figures represent the larger blocks of land managed for roaded natural and roaded modified recreation opportunity spectrum (ROS) classes combined.

The remaining 474,700 acres on the Forest will be managed for a variety of recreation opportunities ranging from semiprimitive to roaded modified.

Evaluate requests for commercial outfitter and guide permits for hunting and packing on the basis of public demand, the effect on the environment, and the financial impact to other outfitters and guides.

Construct, reconstruct, and manage trails to protect the resources and meet the objectives of each ROS class. During the Plan period (1990-1999) construct 272 additional miles of nonwinter trails and 189 miles of winter trails and reconstruct 43 miles of the existing trail system. Conduct road planning to have the least possible impact on trails. Replace deteriorated trails, where feasible.

The North Fork (6,722 acres) and the Malheur (3,534 acres) river corridors will be managed to preserve their scenic and wild character in conformance with the Omnibus Oregon Wild and Scenic Rivers Act of 1988. Site specific analysis to determine management prescriptions for each of the rivers must be completed by 1991 and documented in a river management plan. The guiding direction for the two rivers will be to protect, enhance, and maintain the outstandingly remarkable values and natural beauty for the use and enjoyment of present and future generations.

OBJECTIVES

Developed Recreation

Manage the following 20 campgrounds as developed facilities: Magone Lake, Yellowjacket, Canyon Meadows, Starr, Wickiup, Parish Cabin, Idlewild, Strawberry, Trout Farm, North Fork Malheur, Big Creek, Dixie, Crescent, Elk Creek, Little Crane, McNaughton, Murray, Slide Creek, Middlefork and Beech Creek. All of these sites will be cleaned and maintained at frequencies necessary to meet the standards outlined in the March 1988 update of "Cleaning Recreation Sites" special report 8023-1801.

Where the need is identified, upgrade, replace, and add facilities. Consider expansion or addition of new facilities where recreation demand and environmental concerns warrant. Consider conversion of any sites from nonfee to fee status where identified as being economically feasible.

Convert 5 small, minimum-development sites receiving low use to dispersed occupancy sites. Remove the facilities from these sites as they are needed for use in the developed sites. Retain facilities needed for sanitation reasons.

Vegetative management plans will be completed outlining the necessary management practices that will need to be completed to maintain healthy vigorous growing trees and shrubs in all campgrounds, level 3 and above.

Continue management of Lake Creek Organization Camp as in the past. Do not issue new recreation residence permits. Handle other activities or new development proposals on a case-by-case basis.

Roadless Areas

No new wilderness is recommended. Approximately 79,854 acres (44% of the current roadless area inventory) will be managed with no scheduled timber harvest and no additional roads (through semiprimitive motorized or nonmotorized and the wild portion of the wild and scenic river allocations). These acres consist of two roadless areas in their entirety and parts of six others. These include: Aldrich (8,609 acres); Shaketable (8,997 acres); and parts of McClellan Mountain (18,717 acres); Bear Creek (former North Fork Malheur River) (2,710 acres); Malheur River (3,066 acres); Glacier Mountain (14,578 acres); Myrtle-Silvies (9,855 acres); and Greenhorn Mountain (13,322 acres). Greenhorn Mountain is also known as the Vinegar Hill-Indian Rock Scenic Area, Management Area 7.

Approximately 23,674 acres in, or adjacent to, two other roadless areas will be managed with a "wildlife emphasis - with scheduled timber harvest" prescription. These include 14,629 acres in the Dry Cabin Wildlife Emphasis Area (Management Area 20A), and 9,045 acres in the Utley Butte Wildlife Emphasis Area (Management Area 20B).

Also, 22,076 acres in, or portions of, four roadless areas will be managed with a "wildlife emphasis - no scheduled timber harvest" prescription (Management Area 21). These areas include the Jump-Off Joe area (4,006 acres); Baldy Mountain (5,380 acres); Dixie Butte (6,895 acres); and Nipple Butte (5,795 acres). In these areas timber harvest will be allowed only if it is needed to meet wildlife objectives.

While roads in the wildlife emphasis areas, with and without scheduled timber harvest (Management Areas 20A, 20B, and 21) will be allowed, additional road construction will be minimized. In these areas all roads will be obliterated or closed to vehicle traffic once project activities are completed.

Before timber harvesting and road building takes place in any former RARE II roadless area an area transportation analysis will be completed for it and the surrounding area (see Appendix J, Allocation of RARE II Lands).

Approximately 2,646 acres of the Dixie roadless area will be allocated to the General Forest Management Area (Management Area 1). However, these acres will be managed to emphasize their winter recreation potential (see Appendix K, Unroaded Area Boundaries).

Cultural Resources

Conduct cultural resource survey and evaluation on all Forest Service lands. Appropriate historic preservation laws, regulations, and policies--plus the Forest-wide Standards--will direct future management decisions regarding significant cultural resources.

Coordinate the cultural resource program with other resource management activities on the Forest. Cultural resource surveys under the direction of a cultural resource professional will precede all resource projects. During the first decade, it is expected that most of the Forest will be inventoried.

Take action to enhance and interpret cultural resources such as the Sumpter Valley Railroad, Wickiup Historic Campground, Logan Valley and Middle Fork John Day River.

Identify contemporary Native American use of traditional cultural sites, and consider these needs in the early stages of project planning.

Consolidate previous surveys and establish context and research directions in an updated overview. Initiate data recovery projects on selected resources.

Develop management plans for the most significant cultural resources on the Forest. Monitor sites to identify causes of deterioration and take corrective actions. Analyze and document the effectiveness of various mitigation measures, such as over-snow logging.

Utilize public education and law enforcement efforts to protect sites from vandalism and illegal collecting. Involve the public more fully in cultural resource management through the use of co-operative agreements, volunteers, etc.

Visuals

Emphasize visual quality along all of the State and Federal highway corridor viewsheds (sensitivity level I). Manage as major corridor viewsheds the road to Strawberry Campground, County Road 62, the 15 and 16 roads as they loop around the Strawberry Mountain Wilderness and portions of the Federal Wild and Scenic River corridors. Manage lands within view of these scenic routes under foreground retention and middleground partial retention visual quality objectives (see Appendix L)

Manage other specified forest and county roads with a lower emphasis on maintaining visual quality (sensitivity level II). Meet the visual quality objectives of foreground partial retention and middleground modification in these corridor viewsheds. The effects of management activities will be obvious in these middle-grounds.

OBJECTIVES

Emphasize horizontal diversity in the visual corridors (both sensitivity levels I & II). This will be experienced as one moves through the corridor, not as vertical diversity on every acre. Create this by developing a sequence of visual experiences utilizing group selection harvest techniques applied to small treatment units (1/4 - 5 acres) *in foregrounds, applying even-aged management in treatment units up to 10 acres in partial retention middlegrounds, and applying uneven-aged management to 15,089 acres in the first decade.* The effect is to have a multi-aged appearance in the corridor utilizing group selection and even-aged management.

A total of 140,811 acres is assigned to retention and partial retention in the more-sensitive corridor viewsheds and 63,404 acres to partial retention in the less-sensitive corridor viewsheds.

Manage unroaded areas and wilderness with sensitivity for the visual resource. The visual quality objective for wilderness is preservation. Manage semiprimitive nonmotorized areas to meet the retention visual quality objective, and semiprimitive motorized areas to meet the partial retention visual quality objective.

Manage 1,104,564 acres under modification and maximum modification visual quality objectives. The appearance of these lands as viewed from forest roads will be altered to heavily altered. Even though management activities may dominate the landscape, they are still to be designed to borrow from the natural character of the land utilizing the principles contained in *National Forest Landscape Management*, volumes 1 and 2, and the *Visual Management System* handbooks.

Develop 19 corridor viewshed plans by 1999 (see Appendix A, Activity Schedule A-4). With the proper application of visual management direction in the Forest-wide and management area standards and the visual management handbooks, the predicted visual appearance of inventoried viewsheds will be as indicated in Appendix L.

Wilderness

Manage the Strawberry Mountain (68,700 acres) and Monument Rock (12,620 acres) wildernesses to preserve their wilderness character in conformance with the Wilderness Act of 1964 and the Oregon Wilderness Act of 1984. Overall management action will be aimed at reducing the evidence of human activities within the wilderness areas.

Project work conducted within either wilderness, either by Forest Service personnel or under contract, will be guided by the principles implied by the questions: "is it required for management of the area as wilderness?" and if so, "are the tools used the minimum necessary to accomplish the job?"

Coordinate implementation actions with other Forests and agencies. Coordinate activities in the Monument Rock Wilderness with the Wallowa-Whitman National Forest to assure consistent management direction for the entire wilderness. *Coordinate fish stocking of wilderness lakes with the Oregon Department of Fish and Wildlife. Assess the impact of improved fishing within the wilderness.*

Fish and Wildlife

Manage big-game habitat to achieve a sustained habitat capability level over time which supports elk and mule deer population levels identified by Oregon Department of Fish and Wildlife. This will be achieved through the management of cover, forage quality, quantity and distribution as well as road use.

Plan and design all management activities to avoid actions which may cause a species to become threatened or endangered. Critical habitats and other habitats necessary for the conservation of these species will not be destroyed or suffer adverse modification. All actions will be coordinated with other agencies as appropriate.

Cooperate with future recovery efforts on behalf of the bald eagle, American peregrine falcon, and other threatened, endangered, or sensitive species. Consult with the U.S. Fish and Wildlife Service, the Oregon Department of Fish and Wildlife, the Oregon Department of Agriculture, and the Natural Heritage Foundation for technical assistance in developing management guides and in determining viable population levels.

Species	Required Habitat/Objectives
Bald eagle	Winter roost protection; summer nesting habitat inventory
American peregrine falcon	Inventory potential nest sites; reintroduction to suitable habitat
All others	Inventory, protect

Manage bald eagle winter roosts in accordance with the Pacific States Bald Eagle Recovery Plan and in a manner which encourages use by bald eagles. Monitor known roosts for use or potential use in March and April.

Manage habitat of candidate species for listing as threatened or endangered in cooperation with the U.S. Fish and Wildlife Service. Monitor known populations and survey for additional populations with the cooperation of the Nature Conservancy and the Oregon Natural Heritage Data Base

Cooperate with other resources such as timber, range, recreation, minerals, etc., to identify means of facilitating the achievement of fish and wildlife standards. Cooperate with other agencies and groups to promote mutual objectives including funding through the Challenge Cost-Share Program and program accomplishment through use of volunteer efforts.

Projects to improve wildlife habitat include prescribed burning, seeding, browse planting, pruning, mechanical disturbance and fertilizing to enhance forage production. In addition, aspen stands will be enhanced and riparian vegetation planted along streambanks.

Manage fish habitat and riparian areas to achieve increases in fish habitat capability. This habitat improvement will be accomplished by a combination of the following.

- (a) Implementation of livestock management strategies to achieve better distribution of livestock, and better control of forage utilization in riparian areas. This will help achieve a more diverse and abundant riparian vegetation condition and geomorphic recovery of the stream channel.
- (b) Implementation of the riparian timber management prescriptions, which will provide for improved stream shading and a better supply of large woody material to the stream channel.

OBJECTIVES

- (c) Implementation of watershed and fish habitat improvement structures, to improve habitat conditions and accelerate geomorphic recovery of the stream channel.

Similar management activities will be applied to resident and anadromous streams and riparian areas, but emphasis for appropriated funds will go to anadromous streams until major structural improvements are completed in most of these streams.

Habitat for cavity excavators will be managed to provide continuous supplies of dead and down trees to maintain populations of dead tree dependent species. Dead tree habitat will be provided by subwatershed to maintain 40% of potential populations of cavity excavators in lands scheduled for timber harvest like the general forest, visual corridors, and the forested areas of elk winter ranges. In riparian areas dead tree habitat will be managed to provide 60% of cavity excavator population potential, 60-100% in wildlife emphasis areas, and at or near natural levels in areas not scheduled for timber harvest.

Provide old growth units on lands managed for timber production to sustain populations of dependent species at 30% above minimum viable levels. Maintain a total of 121,208 acres of old growth Forest-wide to provide habitat for at least 166 pairs of pileated woodpeckers, 120 pairs of pine marten, and other old growth dependent species.

Range

- Manage uplands to utilize available forage while maintaining vegetation and site productivity. Coordinate management of these areas with adjacent riparian pastures.

It is estimated that permitted grazing use will decrease from an average of 117 thousand animal unit months (MAUMs) per year to an average of 110 MAUMs per year during the first decade; 116 MAUMs; 114, MAUMs; 111 MAUMs; and 112 MAUMs per year during decades 2-5, respectively. However, this Forest Plan does not establish an absolute level of livestock grazing. Annual forage utilization requirements will be established in each allotment management plan as a tool to achieve or maintain the desired condition.

The annual use of available forage on allotments in a satisfactory condition will be 45% on forested lands; 50% on grasslands; and 50% on shrublands. On allotments in an unsatisfactory condition the annual use of available forage will range from 0 to 35% on forested lands and grasslands; and 0 to 30% on shrublands. This corresponds to Strategy C, Extensive Management in Table IV-3.

All allotment management plans will be prepared or updated based on the goals, objectives, and standards in this Forest Plan. Ninety allotment management plans will be prepared in the first decade (see Appendix A, Activity Schedule, A-10).

Analyze allotments to determine proper stocking levels. Use specific management area goals and standards to resolve conflicts between wild horses, cattle, and big game.

Wild Horse Habitat

Provide forage to maintain the Murderer's Creek wild horse herd at 100 animals and to meet big game population objectives agreed upon between the Forest, Oregon Department of Fish and Wildlife, and the Oregon Wildlife Commission.

Riparian Areas

All riparian areas will be managed to protect or enhance their value for water quality, fish habitat and wildlife.

Uneven-aged timber management will be emphasized on all riparian areas. Scheduled harvest may occur on Class III streams outside a 66 foot interior corridor. Timber harvest (non-scheduled) may occur on all other riparian areas if needed to accomplish specific riparian resource objectives. All timber harvest in riparian areas will be subordinate to riparian-dependent resources.

All new or updated allotment management plans will include a strategy for managing riparian areas for a mix of resource uses. A measurable desired future riparian condition will be established based on existing and potential vegetative conditions. When the current riparian condition is less than that desired, objectives will include a schedule for improvement. Allotment management plans will identify management actions needed to meet riparian objectives within the specific time frame. The allotment management plan will address the monitoring needed to determine if the desired rate of improvement is occurring.

A riparian inventory will be completed by 2000 for the entire Forest based on the process described in "Managing Riparian Ecosystems (Zones) for Fish and Wildlife in Eastern Oregon and Eastern Washington" 1979. This inventory procedure will evaluate the present condition of riparian habitat, its potential for improvement, and provide a basis for establishment of riparian area habitat management objectives for all riparian dependent resources. The schedule for updating the allotment management plans may be amended based on this inventory (see Appendix A, Activity Schedule A-10). The riparian inventory that will be implemented on the Forest will accomplish the following:

- (a) Identify and prioritize riparian areas where high riparian resource value potential exists.
- (b) Evaluate riparian areas using parameters such as percent stream surface shaded, percent streambank stability, percent streambed sedimentation, and percent grass, shrub, and tree cover.
- (c) Determine the site potential of each stream reach for vegetative response, the time frame required to attain the desired response, and the management actions needed to meet the objectives.

Grazing allotments with riparian areas in less than desirable condition are identified in this Forest Plan. Appendix A, Activity Schedule A-10 establishes a schedule for updating all the allotment management plans on the Forest. This schedule has been prioritized to update the allotments in less than desirable condition first.

The annual use of available forage in riparian areas on allotments in a satisfactory condition will be 45% of grass and grasslikes; and 40% of shrubs. In riparian areas on allotments in unsatisfactory condition the annual use of available forage will range from 0 to 35% of grass and grasslikes; and 0 to 30% of shrubs. This corresponds to Strategy C, Extensive Management in Tables IV-4 and IV-5.

OBJECTIVES

All available methods may be employed to achieve the desired levels of utilization by permitted livestock and big game. Design the methods selected for controlled livestock use to fit the site-specific requirements for improving the riparian area to satisfactory condition. Any one or a combination of methods may be used to treat less than desirable riparian areas such as: corridor fencing, herding, additional water developments, salting, nonuse for resource protection, early and late season use, shorter grazing season, reduced livestock numbers, control of degree of use, and/or creating additional pastures through fencing.

Approximately 1,715 acres of watershed improvement projects will be implemented during the first decade of the plan (see Appendix A, Activity Schedule A-7). These projects are identified on a map which is available for review in the Forest Supervisor's Office in John Day, Oregon.

Cavity excavator habitat levels will be managed to provide for 60% of potential populations in riparian areas.

Timber

Of 1,039,868 acres tentatively suitable for timber management, manage 835,970 acres for timber production. Of this, manage 526,811 acres with a primary emphasis on timber production; 138,857 acres to emphasize visual quality objectives of retention or partial retention; 20,060 acres to protect or enhance riparian-dependent resources; 115,164 acres to maintain big-game habitat on winter ranges; 25,000 acres for old growth replacement; 12,054 acres to emphasize wildlife management; and 224 acres to protect the beneficial uses of the Long Creek Municipal Supply Watershed (see Appendix B).

From 835,970 suitable acres the first decade average annual allowable sale quantity of timber is 34.8 million cubic feet (200 million board feet), (see Appendix E). In addition, 3.6 million cubic feet (11 million board feet) per year of nonchargeable volume is expected to be harvested annually in the form of salvage cutting, cull logs, and miscellaneous products such as firewood and posts and poles.

Emphasize even-aged timber management which includes shelterwood, seed tree, and clearcut silvicultural systems. Apply uneven-aged timber management to 64,242 acres during the first decade. Of these acres, 37,801 will be in the General Forest Management Area (MA 1) 4,407 acres in riparian areas (MA 3A and 3B), 15,089 acres in visual areas (MA 14) and the remaining 6,945 acres in wildlife areas (MA 20A, 20B and 4A). Base the final determination of the silvicultural system to be used on a site-specific silvicultural prescription (see Appendix C).

Of the first decade average annual allowable sale quantity, harvest approximately 37.4% of the volume by overstory removal on existing stands; 14.6% by commercial thinnings; 15.2% by shelterwood and seed tree cuts; 18.4% by clearcuts; and 14.4% by selection cuts (see Table E-1).

Approximately 16.1 million cubic feet (92 million board feet) or 50% of the first decade average annual allowable sale quantity, is expected to be ponderosa pine. This is a decrease of approximately 59 million board feet over the average ponderosa pine volume sold annually during the fiscal years 1980 through 1989. By 2039 a further decrease in the amount of ponderosa pine being offered for sale will occur to an average of 13.3 million cubic feet per year, or 40% of the total harvest volume.

In the first decade there will be approximately 10,842 acres of precommercial thinnings occurring on an annual basis. Of this acreage, thin 6,700 acres per year following overstory removal treatment of an existing stand. The remaining precommercial thinning acres will be found in both uneven-aged and even-aged stands that are in need of this treatment. By the fifth decade precommercially thin approximately 16,400 acres annually.

Approximately 12,672 acres will be regenerated annually in the first decade; 7,211 acres through natural regeneration methods and 5,461 acres by artificial methods (planting). By the fifth decade the acres regenerated will average 19,320 acres annually; 13,810 acres by natural means and 5,510 acres through artificial methods. See Appendices C, D, E and F for additional timber management information.

Maintain opportunities to gather firewood by giving the public an opportunity to utilize logging residue.

Of 1,039,868 acres tentatively suitable for timber management, 203,898 acres were not selected for timber management. Of these, 29,090 acres were not selected because they were economically inefficient, or it would cost more to harvest than can be recovered in the short-term. Currently a portion of these lands are decadent, low value, mixed conifer species which have the potential of being productive in the next stand rotation. Under this Plan, these acres may be brought into timber management, based on site-specific analysis, as market conditions change, new technology is developed or the budget allows. The remaining acres are low-site lands of scattered ponderosa pine which have low benefit values and low volume per acre (see Appendix C).

Soil and Water

Manage soil and water resources to maintain or enhance the long-term productivity of the Forest. All management activities will be subject to the Forest-wide Standards requiring a minimum of 80% of an activity area be left in a condition of acceptable productivity. For acres exceeding this standard, corrective action will be taken.

Problem areas will be included on the Watershed Improvement Needs inventory and prioritized for improvement. Projects will be completed at the rate of about 172 acres per year (see Appendix A, Activity Schedule A-7).

Much of the management activity under this Plan will be directed toward improving those riparian areas which are in undesirable condition. A combination of watershed improvements in or adjacent to riparian areas and improved management of livestock in riparian areas will be the major soil and water improvement activities on the Forest. Any one method or a combination of methods may be incorporated to treat a less than desirable riparian area. Examples of such methods include corridor fencing, range riders, extra water developments, extra salting, nonuse of pasture, early or late season grazing, shorter grazing seasons, reduced livestock numbers, control of grass and shrub utilization, or fencing to create additional pastures.

Integrate mitigation into management activities. Examples of mitigation for soil and water protection include waterbarring skid trails, seeding disturbed soil along riparian areas and size and distribution of harvest units.

OBJECTIVES

In addition to these types of activities, complete approximately 100 acres of watershed improvement projects annually. The types of projects which may occur include streambank erosion restoration, gullied meadow restoration, and check damming to raise water tables.

Minerals

Prompt responses will be given to all proposals for mineral exploration, development and extraction and will meet NEPA compliance. Of the 80,400 acres of mineralized land open under mining laws, 66,125 acres will be managed under standard resource protection and reclamation stipulations. More stringent stipulations will be applied to 8,405 acres to protect special values of the impacted area. The remaining 5,870 acres are withdrawn from mineral entry.

Lands with potential for oil and gas, and open under the mineral leasing laws total 558,240 acres. Of these lands, 537,780 acres will be managed under standard resource protection and reclamation stipulations. The remaining 20,460 acres will have more stringent stipulations to protect the special values of the impacted area.

All stipulations must pass a test of reasonableness to protect the surface resource values, and provide an opportunity to develop the mineral resource without undue hardship being placed upon the operator.

Forest rock resources will be inventoried to allow for orderly development and efficient use of resources. Each developed site will include a plan for surface reclamation upon termination of mining, once mineable resources have been exhausted. Withdrawals will be made when necessary to protect rock resources for forest needs.

Roads

Access management planning will strive for 1.5 mi/mi² on summer range and 1.0 mi/mi² on winter range unless these densities do not allow for a healthy and productive forest as envisioned in the desired future condition, or interferes with access to private land. Open road densities will be no greater than 3.2 miles per square mile in summer range, 2.2 mi/mi² in winter range (MA 4A) and 1.5 mi/mi² in wildlife emphasis areas (MA 20A, 20B and 21) by 1999. These densities will be monitored on a watershed basis (see Appendix I).

Road density concerns will be addressed through the access management plan which will establish road management objectives for each road on the Forest. The existing road system will be reviewed to identify roads to be closed or obliterated because they no longer contribute to integrated land management objectives. The status of all roads will be determined by integrated land management analysis, incorporating objectives for big-game habitat needs (including security needs), high quality recreation opportunities, timber harvest and removal, and firewood cutting opportunities. This will be an open process with public involvement, meeting the full intent of NEPA.

The development, maintenance, and management of the Forest road system is to be continued as needed to respond to resource management objectives. Roads will be planned, designed, constructed and maintained to the minimum level necessary to meet integrated land management objectives (i.e., the needs of all the resources). Most road-related activities will occur in support of the timber management program, with additional activities undertaken to facilitate recreational use, forest administration, and resource protection.

The projected operational status of the Forest development road system is as follows:

	Passenger Car Mileage	High Clearance Vehicles		Total Forest Mileage
		Open Mileage	Year Round Closure Mileage	
1990	1,200	6,806	564	8,570
1999	1,200	5,300	2,688	9,188

By the end of the first decade, approximately 618 miles of new road will have been constructed for a total of 9,188 miles of road on the Forest. Approximately 30%, or 2,688 miles, will be closed to traffic or obliterated and removed from the transportation system.

Road reconstruction by timber purchasers will approximate 1,320 miles during the plan period. In addition to that work performed by timber purchasers, construct or reconstruct an average of 26 miles of roads annually for the next 10 years to meet recreation and other resource needs (see Appendix A, Table A-8).

Manage the transportation network to reduce the cost and impact of roads, to provide road access to developed sites to a service level comparable with their development level, to correct chronic sediment sources and prevent fish barriers, and to provide dispersed recreation and wilderness access.

Research Natural Areas

Manage research natural areas as part of a Federal system of tracts established for nonmanipulative research and educational purposes. Each research natural area is a site where features are preserved for scientific purposes and natural processes are allowed to dominate. Their main purposes are to provide: (1) baseline areas against which effects of human activities can be measured, (2) sites for study of natural processes in undisturbed ecosystems, and (3) gene pool preserves for all types of organisms, especially those classified as rare and endangered.

Complete a comprehensive formal report which contains direction for management of the area. Submit this report to the Chief of the Forest Service for approval and establishment of proposed research natural areas.

FOREST-WIDE STANDARDS

There is one established research natural area on the Forest. Canyon Creek Research Natural Area on the Bear Valley District covers approximately 661 acres within the Strawberry Mountain Wilderness.

The Research Natural Area Committee for the Pacific Northwest Region determined that Baldy Mountain, Dixie Butte, Dugout Creek, and Shaketable candidate Research Natural Areas represent the best examples of particular kinds of natural ecosystems in the Region and are needed to meet present and future demands. The 2,850 acre Baldy Mountain area is located within the Strawberry Mountain Wilderness and represents forested communities on serpentine soils. The Shaketable area (approximately 375 acres) is located on the Bear Valley District and represents various sagebrush communities. Alpine sedge communities are found in the Dixie Butte area (approximately 100 acres) on the Long Creek District. Dugout Creek, on Prairie City Ranger District is approximately 270 acres, and includes mixed conifer/pinegrass communities or moderate slopes with ash soils.

Manage these areas to preserve their integrity until an establishment report is prepared and approved by the Chief of the Forest Service. Upon approval of this report, manage the area under the direction established in the report.

There may be some future research natural area needs that can best be satisfied on the Malheur National Forest. When suitable new areas are identified, consider them for addition to the research natural area inventory.

E. FOREST-WIDE STANDARDS

The following standards apply to National Forest land administered by the Malheur National Forest. In some cases standards represent a minimum or maximum permissible level of an output or activity and under some circumstances more restrictive standards may be applied, provided changes in outputs or effects on other resources do not occur. They are intended to supplement, but in some cases may take the place of, national and Regional policies, standards, and guidelines found in Forest Service manuals and handbooks and the Pacific Northwest Regional Guide.

General

1. Subsequent activities affecting the Forest, including budget proposals, shall be based on this Forest Plan. Proposed activity schedules may be changed to reflect differences between proposed annual budgets and appropriated funds. Such scheduled changes shall be considered an amendment to the Forest Plan but shall not be considered a significant amendment or require the preparation of an Environmental Impact Statement, unless the changes significantly alter the long-term relationship between levels of multiple use goods and services projected under planned budget proposals as compared with those projected under actual appropriations.
2. Plan, design, and implement all projects in an interdisciplinary manner to achieve integrated land management objectives.

3. If it is determined during project analysis that the best way to meet the management area goals of the Forest Plan conflicts with a Forest Plan standard, the Forest Supervisor may approve a nonsignificant amendment to that standard for that project; such exceptions and the rationale must be described in the project's documentation. These changes shall be considered an amendment to the Forest Plan and will be implemented only after appropriate public notification and satisfactory completion of all National Environmental Policy Act procedures (see Chapter V, Section D).
4. *Delineate riparian areas in project areas during environmental analysis of project activities and manage them as directed by the standards for Management Area 3.*
5. Provide for cost effective improvements and the enhancement of all renewable resources in sale area improvement plans.

Recreation

6. Develop a Forest Recreation Opportunity Guide and update annually.
7. Recognize undeveloped campsites, hunter camps, or areas where concentrated recreation use occurs as being significant in providing dispersed recreation opportunities in a roaded setting. Manage these areas for partial retention. Inventory, evaluate, and develop management objectives for these sites.
8. Update the inventory of recreation opportunities on the Forest by recreation opportunity spectrum (ROS) class every 5 years.
9. Emphasize public awareness of no trace recreation, especially pack-it-in, pack-it-out program.
10. Designate areas for off-road vehicle (ORV) use through the Forest Travel Plan and in conformance with ROS designations for specific areas. Manage ORV use to minimize resource damage and to promote public safety.
11. Construct, relocate, or protect designated system trails and facilities during *management activities*.
12. Limit regulation, constraint, and supervision of recreation use to the minimum necessary for resource protection and safety.

Cultural Resources

13. Continuously update the Forest cultural resource files with new data on the history, ethnography, and prehistory of the Forest, including known cultural resource sites.
14. Conduct a professionally supervised cultural resource survey on National Forest lands to identify cultural resource properties. Use sound survey strategies and the Malheur National Forest Cultural Resource Inventory Survey Design. Proposed "project" planning area lands will be given first inventory priority, but all "non-project" lands, such as wilderness and non-commercial timber lands, will also be surveyed.

FOREST-WIDE STANDARDS

15. Consider the effects of all Forest Service undertakings on cultural resources. If a National Register and eligible property is affected, consideration shall include the formulation and analysis of alternatives, and the examination of interactions and impacts among cultural resources and other resource uses. Coordinate the formulation and evaluation of alternatives with the State cultural resource plan, State Historic Preservation Officer and State Archaeologist, other State and Federal agencies, and with traditional and religious leaders of Native American Indian groups and tribes with historic ties to the project planning area.
16. Document newly discovered cultural resource sites using USDA Forest Service, Region 6, cultural resource site report forms.
17. Maintain confidentiality of cultural resource site locations.
18. Conduct reentry surveys over all previously surveyed areas now planned for projects when the nature of the newly proposed undertakings or projects have the potential to have a direct or indirect impact on significant cultural resources. Reentry surveys will be sufficient to verify the validity of previous surveys and document previously identified sites to current documentation standards. Additional inventory in such areas will be designed to consider: (a) the types of newly proposed impacts; (b) changed conditions of site visibility; and (c) new information and knowledge concerning survey methods and techniques, and site distribution patterns and locations.
19. Evaluate the significance of sites by applying the criteria for eligibility to the National Register of Historic Places. Evaluate the National Register eligibility of resources that may be affected by project activities on a case-by-case basis. Develop a schedule to evaluate similar cultural resources properties.
20. Nominate cultural resources that meet the criteria of significance to the National Register of Historic Places. Schedule nominations incidentally until completion of the Forest-wide inventory.
21. Protect National Register and eligible properties from human impacts and natural destruction. Protection plans may include physical protection such as fences and barriers, scientific study and collection, monitoring and patrol, proper use or removal of signs, maintaining site anonymity and confidentiality of location, and gaining public understanding and support through education.
22. Synthesize the results of previous forest surveys, evaluate and refine the Forest survey design, and establish context and research directions through an updated overview document. Initiate data recovery projects on selected resources through data recovery plans approved by the State Historic Preservation Office.
23. "Management Strategy for Treatment of Lithic Scatter Sites", 1988, as published by the Pacific Northwest Regional Office, provides guidance for management of one type of prehistoric site.
24. Identify and initiate opportunities for interpretation of cultural resources for the education and enjoyment of the American public.

Visuals

25. The minimum visual quality objective for the Forest is maximum modification. This visual quality objective will apply unless otherwise specified. A record of the visual quality objective assigned to each acre of the Forest by this Plan will be contained in the Forest's Total Resource Information (TRI) data base. Modifications to the established visual quality objectives shall be considered an amendment to this Forest Plan (see Forest-wide Standard No. 3).

Forest Service Manual 2380 and Agricultural Handbooks 462, 434, 478, 484, 559, and 608 provide the details on how to meet specific visual quality objectives under various conditions and vegetative types.

26. Maintain a current inventory of visual conditions on the Forest
27. Rehabilitate landscapes containing negative visual elements.

Fish and Wildlife

Big Game
Summer Range

28. Manage elk and deer summer range to provide for 20% cover and an elk habitat effectiveness index (HEI) of 0.4.

The HEI model provides a means of balancing cover quality, cover spacing, and open road densities. If these minimums are not attainable due to natural conditions (e.g., extensive nonforest areas), insect and disease conditions or past management activities, then the highest possible cover percentage and index value will be maintained or created. Site-specific project analysis will address both short-term and long-term effects, particularly in the case of cover where short-term options to treat stands for insects and disease will improve forest health in the long-term. The Forest Supervisor will review and approve all recommendations to drop below cover and HEI standards as well as a strategy to reach standards within a reasonable length of time (see Forest-wide Standard No. 3).

Cover and habitat effectiveness determinations for site-specific projects will be calculated on a subwatershed basis. Calculations will include both forested and non-forested lands regardless of their suitability for timber production.

Habitat Effectiveness Index (HEI) Model

The model to be used to calculate elk habitat effectiveness on summer range is:

$$HEI = (HE_c \times HE_s \times HE_r)^{1/3}$$

where:

HE_c = habitat effectiveness derived from the quality of cover

HE_s = habitat effectiveness derived from the size and spacing of cover

HE_r = habitat effectiveness derived from the density of roads open to vehicular traffic

The elk cover and habitat effectiveness standard for summer range areas and minimum values for model variables are shown below:

Summer Range	HEI	Minimum ^{1/} Values For Variables			Minimum Amount ^{2/} of Area in Cover		
		HE _c	HE _s	HE _{r3/}	Satis.	Marginal	Total
Fox/Cottonwd	.4	.3	.3	.4	12%	5%	20%
MF John Day	.4	.3	.3	.4	12%	5%	20%
SF John Day	.4	.3	.3	.4	12%	5%	20%
NF Malheur	.4	.3	.3	.4	12%	5%	20%
Upper JD	.4	.3	.3	.4	12%	5%	20%
Malheur River	.4	.3	.3	.4	5%	5%	20%
Silvies	.4	.3	.3	.4	8%	5%	20%

^{1/}The interactions between cover stand size and spacing, road density, and cover quality are compensatory to a limited extent, that is, variables with low values tend to be compensated by those with high values. Because elk tend to respond primarily to habitat variables of relatively low value, minimum values have been established for each variable in the habitat effectiveness model. While it is desirable to meet or exceed the minimum value for each variable it may not be possible to do this in every case due to site condition or potential. However, if all the variables are met at only the minimum values, the minimum standard for HEI will not be met. Therefore, to meet the HEI standard, if one or more variables are at the minimum or below, other variables must be met at higher levels in order to achieve the HEI standard.

^{2/}For cover definitions, see Glossary. Where satisfactory cover is below the minimum standard, retain sufficient hiding cover to mitigate this shortage.

^{3/}A closed road is one where use is not physically evident, no greater than one trip/week.

29. Select satisfactory cover to meet elk habitat objectives in stands within 1/2 mile of Class I, II, and III streams in preference to cover that is farther away providing that other considerations such as elk security are met. Protect calving/fawning areas, migratory corridors and transition zones (areas of concentrated use in the late fall prior to arrival on winter range).
30. In the Malheur and Silvies watersheds, provide for satisfactory and marginal cover in blocks of at least 10 acres and a minimum of 600 foot wide to ensure effective use of cover by big game.
31. In all other watersheds, provide for satisfactory and marginal cover in blocks of at least 30 acres and a minimum of 600 feet wide to ensure effective use of the cover by big game. While it is desirable to meet or exceed the 30 acre cover size, it may not be possible to do this in every case due to site condition or potential. Where cover in 10-30 acre blocks is known to provide adequate habitat, site-specific analysis will recognize the value of these smaller cover areas and include these acres in HEI calculations.
32. Maintain or enhance significant communities of mountain shrubs. Timber harvest and road construction activities should avoid these areas.

- 33. To limit disturbance to big game, the open road density will be no greater than 3.2 mi/mi² by 1999. Where existing conditions do not meet this goal, project transportation system designs will be developed in order to move toward the goal in the shortest time frame possible. Densities will be monitored on a watershed basis (see Appendix I).
 - 34. Provide annual recommendations for the Access Management Plan to achieve wildlife management objectives. Monitor use of forest roads to identify any emerging conflicts with objectives.
 - 35. Utilize road and/or area closures to achieve the specific wildlife habitat management objectives of individual management areas.
 - 36. To prevent harassment in designated calving areas, restrict off-highway vehicles and other motorized traffic use to designated roads and trails from May 1 to June 31.
 - 37. Identify on a subwatershed basis (see Appendix N) areas that are of greater importance to mule deer than elk. Recommend these areas to the Forest Supervisor for review and approval. Such changes shall be considered an amendment to the Forest Plan and will be implemented only after appropriate public notification and satisfactory completion of all National Environmental Policy Act procedures (see Chapter V, Section D)
- Primary Excavators
- 38. Manage dead tree (snag) habitat to provide for at least 40% of the potential populations of primary excavator species throughout stand rotations (Wildlife Habitat in Managed Forests, 1979).

Snags Required Per 100 Acres

Potential Population Level	≥ 12" DBH	≥ 20" DBH	Total
20%	45	3	48
40%	90	5	95
60%	135	8	143
80%	180	11	191
100%	225	14	239

- 39. Maintain dead tree habitat capable of supporting at least 20% of the potential population level within land areas no greater than 40 acres and an additional 20% or greater within land areas no larger than the respective subwatershed
- 40. Where existing snag numbers are below the 20% of management requirements per 40 acre area, additional snags should be created to meet the desired population potential

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41. Utilize modeling techniques in conjunction with silvicultural practices. This will ensure desired population potential by providing adequate number of green replacement trees throughout the full stand rotation. If snags cannot be created, manage for higher snag levels and green tree replacements in adjacent areas and average them to achieve the required density.
 42. On lands under even-aged management, provide snags and green replacement trees with emphasis on patchy distribution. Lands under uneven-aged management should emphasize a uniform distribution.
 43. Only hard snags will be counted in meeting population potential goals; however, provide for retention of soft snags where feasible.
 44. Marking guides for green replacement trees will be developed jointly by a silviculturist and wildlife biologist to minimize conflicts. Mistletoe and other disease and insect infected trees may be retained if they do not pose a significant hazard to the residual stand.
 45. Select snags and green replacement trees using the descending order of preference as follows:
 - ponderosa pine
 - western larch
 - Douglas fir
 - White fir
 - subalpine fir
 - lodgepole pine
 46. Locate snags and green replacement trees to minimize safety hazards, high risk areas to firewood cutting and windthrow. Snags and replacements will be at least one to two tree lengths from the edge of clearcut units to minimize hazards to a burn crew.
 47. Maintain woody debris for wildlife habitat and long-term site productivity by providing at least 2 down sound logs per acre which are a minimum of 10 inches in diameter at the small end and 12 feet or more in length. Larger logs are preferred. At least 75% of these logs will be uncharred.
 48. In the absence of down logs or marginal cover, leave unburned slash pile concentrations and additional wildlife trees to meet long-term site productivity and habitat needs.
 49. Maintain feeding areas for pileated woodpeckers that contain an average of two hard snags or more per acre within 1/4 mile of old growth units. Each of these areas should total 300 acres in patches of at least 50 acres in size. Where possible, feeding areas will overlap with old growth replacement units.
- Featured Species
50. Maintain grouse winter roost habitat. The preferred habitat is clumps of mistletoe infected Douglas-fir on tops or upper slopes of ridges.

- 51. Protect and enhance sagebrush habitats with documented use by sage grouse or high potential for use. Coordinate with other resource uses and the Oregon Department of Fish and Wildlife.
 - 52. Maintain the openness that is characteristic of antelope habitat by controlling the invasion of trees as identified through project level environmental analysis. Incorporate design modifications in all new construction and major reconstruction projects on fences to facilitate the movement of antelope where needed
 - 53. Protect and enhance occupied habitats of upland sandpipers that are critical to nesting and rearing of young Cooperate with other agencies and groups in determining habitat use areas.
 - 54. Maintain or create large nesting snags and green replacement trees for osprey within 1/2 mile of streams, lakes, or reservoirs that are currently used for feeding by osprey Preference will be given to large (30 inches or greater in diameter, 60 foot minimum height) ponderosa pine with broken tops and large limbs at a density of one per 1/4 mile of linear stream length or shoreline. Provide green tree replacements, which include a minimum of one tree 30 inches or greater in diameter and two trees 20 inches or greater in diameter, for each 1/4 mile of linear stream length or shoreline. All dead and green trees will be counted towards the minimum Forest-wide wildlife tree standards. Generally, snags and replacements should be located in areas of solitude.
 - 55. Maintain the openness that is characteristic of bighorn sheep habitat. Do not stock livestock allotment pastures within bighorn sheep range with domestic sheep. On all fence projects within bighorn range involving new construction or significant reconstruction, implement design changes to facilitate bighorn sheep movements where needed and practical Review all activities within prime habitat, including migration routes, to identify and mitigate human disturbance Cooperate with the Oregon Department of Fish and Wildlife in all bighorn releases.
- | | |
|---|--|
| Unique and Sensitive Habitats (Microhabitats) | <ul style="list-style-type: none"> 56. Maintain the integrity of unique habitats including meadows, rimrock, talus slopes, cliffs, animal dens, wallows, bogs, seeps and springs by incorporating cover buffers approximately 100 feet in width. Utilize additional mitigation/enhancement measures identified through project level analysis. 57. Maintain or enhance quaking aspen stands using clearcutting and prescribed fire as the principal means of regeneration where appropriate. Protect root sprouts where needed and practical |
| Elk Calving Habitat | <ul style="list-style-type: none"> 58. Maintain the vegetative structure of confirmed calving habitats for elk by modification of management activities as appropriate on a site-specific basis. Mitigation measures will be developed through project level environmental analysis. |
| Old Growth Lodgepole | <ul style="list-style-type: none"> 59. Identify potential or existing old growth lodgepole pine habitat for three-toed woodpeckers as required by management requirements in 75-acre units at the proper spacing for species viability |

FOREST-WIDE STANDARDS

Raptors

60. Protect active raptor nest sites.
- (a) Hawks and owls - Maintain the nest trees of active raptor nests and habitat immediately surrounding, and mitigate potential adverse impacts from management activities during the nesting season. Mitigation measures will be developed based on site characteristics and biological needs of the species. Where possible, retain trees with inactive nests that may be important to secondary nesters (e.g., great gray owl).
 - (b) Bald and golden eagles - Refer to the Pacific Bald Eagle Recovery Plan for Protection of Bald and Golden Eagles for direction. Upon discovery of an active nest, suspend all management activities that could alter site characteristics or disturb the birds until the nest site is evaluated by a wildlife biologist.

Management Indicator Species

61. Provide habitat requirements for the following selected management indicator species.

Species	Reason for Selection and/or Habitat
Rocky Mountain elk	species commonly hunted
pileated woodpecker	old growth
pine marten	old growth
three-toed woodpecker	old growth
Lewis' woodpecker	primary cavity excavator; dead and defective habitat
yellow-bellied sapsucker	primary cavity excavator, dead and defective habitat
red-breasted sapsucker	primary cavity excavator, dead and defective habitat
Williamson's sapsucker	primary cavity excavator, dead and defective habitat
downy woodpecker	primary cavity excavator; dead and defective habitat
hairy woodpecker	primary cavity excavator, dead and defective habitat
white-headed woodpecker	primary cavity excavator, dead and defective habitat
three-toed woodpecker	primary cavity excavator, dead and defective habitat
black-backed woodpecker	primary cavity excavator; dead and defective habitat
northern flicker	primary cavity excavator; dead and defective habitat
pileated woodpecker	primary cavity excavator, dead and defective habitat
steelhead	anadromous riparian
bull trout	non-anadromous riparian
cutthroat trout	non-anadromous riparian
rainbow/redband trout	non-anadromous riparian

Threatened, Endangered and Sensitive Species

62. Meet all legal and biological requirements for the conservation of threatened, and endangered plants and animals. Assess all proposed projects that involve habitat changes or disturbance and have the potential to alter the habitat of threatened, endangered or sensitive plant and animal species.
63. Maintain and update lists of threatened, endangered and sensitive plants and animals periodically as new information is collected. Submit pertinent forest information to the Regional Office for updating the Regional Forester's sensitive species lists, and to the appropriate agency for inclusion in state wide data bases.

- 64. When threatened or endangered species or habitat are present, follow the required biological assessment process, according to the requirements of the Endangered Species Act (Public Law 93-205). Meet all consultation requirements with the USDI Fish and Wildlife Service and state agencies.
- 65. Specify all protection or mitigation requirements (36 CFR 219.27(a) (8)) before project implementation begins. Manage all habitat for existing Federally classified threatened and endangered species to help achieve recovery objectives.
- 66. Perform a biological (field) evaluation for use in planning of proposed projects when sensitive species are present or suspected. Conduct surveys in cooperation with other agencies and groups to document the locations of sensitive species populations and to provide more specific information on habitat requirements and relative management guidelines.
- 67. Determine the suitability of forest lands for nesting bald eagle territories as specified by the Pacific Bald Eagle Recovery Plan for the following areas:
 - (a) Management Zone 9 (Blue Mountains) - John Day River, 2 target recovery territories
 - (b) Management Zone 16 (Boise Valley) - Malheur River, 1 target recovery territory

If potential nesting sites are found, address through long-range planning to meet the recovery goals.

- 68. Cooperate with the Peregrine Fund, U.S. Fish and Wildlife Service and Oregon Department of Fish and Wildlife in the inventory and reintroduction of American peregrine falcons in support of the Pacific Coast Recovery Plan for the American Peregrine Falcon
- 69. Cooperate with the Oregon Department of Fish and Wildlife in studies of big game movements using tagging, radio collars, etc , as appropriate.
- 70. Develop habitat improvement projects for Challenge Cost-Share and volunteer cooperation.
- 71. Identify research and study needs that are essential to long-term attainment of wildlife and fish objectives. Promote opportunities to implement the necessary studies in cooperation with other agencies and groups.
- 72. Cooperate with the Oregon Department of Fish and Wildlife in the implementation of black bear or mountain lion research that is initiated by the Department. Coordinate with the Oregon Department of Fish and Wildlife and permittees in the identification and resolution of livestock predation by black bear or mountain lion.
- 73. Recognize fishing and hunting rights of the Confederated Tribes of the Warm Springs and the Confederated Tribes of the Umatilla, Paiute Tribe, and the Nez Perce Tribe through fish and wildlife management.

Coordination and Cooperation

FOREST-WIDE STANDARDS

74. Coordinate with the Oregon Department of Agriculture, Oregon Department of Fish and Wildlife, and U.S. Fish and Wildlife Service as needed in all predator control activities with particular emphasis on those actions using toxic chemicals.

Miscellaneous

75. Evaluate proposals for introducing fish, wildlife, or plants (case-by-case) through the environmental analysis process.

76. Plan and implement structural and non-structural habitat improvement projects through the environmental analysis process. Give priority to habitat enhancement as follows: (a) threatened, endangered, and sensitive species; (b) riparian/instream habitat; (c) unique/special habitats; and (d) old growth.

77. Provide for a full array of habitat improvement opportunities for non-game species (e.g., water developments, slash piles, down logs, nest boxes, etc.).

Range

78. Manage big game and livestock numbers at a level which utilizes available forage while maintaining plant vigor, composition and density.

Range Management

79. Prepare, update, or revise allotment management plans (AMPs) according to Activity Schedule A-10 (see Appendix A) to address emerging resource management issues or concerns.

80. Inventory and analyze forage resource production, condition and trend.

81. Administer and manage the range resource to ensure permit compliance and resource protection.

82. Manage residues to facilitate the use of forage by domestic livestock.

Wild Horse Habitat

83. Conduct livestock management on the Murderers Creek Wild Horse Territory to ensure that resource conditions meet management goals and standards. Resolve conflicts between livestock, big game, and wild horses in accordance with the maintenance of a wild horse herd averaging 100 head.

Range Improvement

84. Schedule cost-efficient range improvements to improve range condition when and where needed.

85. Design improvements to protect tree regeneration areas and/or to distribute livestock use.

86. Grazing allotments with lands in unsatisfactory condition have been identified and will have their AMP updated according to the schedule shown in Appendix A (Activity Schedule A-10). Develop AMPs with specific objectives for these lands on a priority basis. In the development of objectives, define a desired future condition for an area based on existing and potential values for all resources. In the AMP, include: (a) a time schedule for improvement; (b) activities needed to meet forage objectives; and (c) an economic efficiency analysis.

- 87 Establish annual forage utilization requirements for each grazing allotment as a tool to achieve or maintain the desired condition. Use the forage utilization standards listed in Table IV-2 except: (a) in Management Areas 3A, 3B, 17, 18, and in specific portions of other management areas; and (b) where site-specific monitoring information has been collected and evaluated which supports a determination that a higher level of utilization will achieve the desired future condition without delaying the rate of improvement. As a minimum, the desired condition must be "satisfactory."

Employ all available methods to achieve the desired levels of utilization by permitted livestock and big game. Design the methods selected for controlled livestock use to fit the site-specific requirements for improving the riparian area to satisfactory condition. Any one or a combination of methods may be used to treat unsatisfactory riparian areas such as corridor fencing, herding, additional water developments, salting, nonuse for resource protection, early and/or late season use, shorter grazing seasons, reduced livestock numbers, control of degree of use, and/or creating additional pastures through fencing.

- 88 Design and implement structural and nonstructural range improvements to maintain productivity and range condition in addition to benefiting both wildlife and livestock. Locate range structural and nonstructural improvements to encourage livestock movement away from riparian areas.

TABLE IV-2
Allowable Utilization of Available Forage on Suitable Range
(Percent Allowable Use of Available Forage)^{1/}

Range Resource Management Level	Forest		Grasslands ^{1/}		Shrublands	
	S ^{2/}	U ^{3/}	S	U	S	U
STRATEGY B - Stewardship Management^{4/}	40	0-30	50	0-30	40	0-25
STRATEGY C - Extensive Management^{5/}	45	0-35	55	0-35	50	0-30

^{1/}Utilization based on percent removed by weight for grass, grasslike, and forbs

^{2/}S - Satisfactory condition - See glossary

^{3/}U - Unsatisfactory condition - See glossary

^{4/}Management controls livestock numbers so that livestock use is within present grazing capacity. Distribution is achieved through riding, herding, and/or salting. Improvements are minimal and constructed only to the extent needed to cost effectively maintain stewardship of the range in presence of grazing.

^{5/}Management seeks full utilization of forage available to livestock. Cost-effective management systems and techniques, including fencing and water development, are designed and applied to obtain relatively uniform livestock distribution and use of forage and to maintain plant vigor.

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Timber

- Harvest
89. A harvested area of commercial forest land will no longer be considered a created opening for silvicultural purposes when stocking surveys, carried out in accordance with Regional standards, indicate prescribed tree stocking is at least 4 1/2 feet high and free to grow. When other resource management considerations prevail, a created opening will no longer be considered an opening when the vegetation in it meets specific management area objectives.
90. Limit forest openings created by the application of even-aged harvest cutting systems to a maximum size of 40 acres. Exceptions are permitted for natural catastrophic events, such as fires, windstorms, or insect and disease attacks, or on an individual basis after a 60-day public notice period and review by the Regional Forester. In addition, the limits may be exceeded by up to 50% without necessitating review by the Regional Forester or 60 days public notice when exceeding the limit will produce a more desirable combination of net public benefits based on any of these four criteria:
- (a) When a larger opening will enable the use of an economically feasible logging system that will lessen the disturbance to soil, water, fish, riparian resources, or residual vegetation. Such lessening is to be achieved by reducing landing or road construction, by enabling such construction away from unstable soil, or by reducing soil and vegetation disturbance caused by dragging logs;
 - (b) When created openings cannot be centered around groups of trees infected with dwarf-mistletoe or root rot and, therefore, need to be expanded to include these trees in order to avoid infection of susceptible adjacent conifers;
 - (c) When visual quality objectives require openings to be shaped and blended to fit the landform; or
 - (d) When larger openings are needed to achieve regeneration objectives in harvest areas being cut by the shelterwood method and where destruction of the newly created stand would occur as a result of delayed removal of shelter trees. This exception applies only to existing shelterwood units and to shelterwood units under contract prior to approval of this Forest Plan.
91. Created openings contiguous to 30 acres or larger natural openings should normally not exceed one-third the size of the natural opening and not occupy more than one-third of the natural opening perimeter. Openings should not be created adjacent to any natural openings (regardless of size) unless adequate vegetation along the edge can be developed or retained in sufficient density to protect wildlife and visual management objectives. The determination of adequate vegetation will be made by an appropriate interdisciplinary team.
92. Created openings will be separated by blocks of land that are not classed as created openings and that contain one or more logical harvest units. These areas shall be large enough and contain a stand structure appropriate to meet resource requirements of this Forest Plan. Resource requirements may include wildlife habitat, watershed, landscape management, and others.

93. All harvest units (considered to be created openings) which corner or otherwise touch will be considered as a single opening. All requirements for size, exception procedures, and justification for created openings must be met.
94. Conduct silvicultural examination and prepare prescriptions before implementing any silvicultural treatment. Final determination of the silvicultural system will be based on an approved site-specific silvicultural prescription (see Appendix C)
95. Stands scheduled for harvest using even-aged management will be managed on rotations which are equal to or greater than 95% of culmination of mean annual increment of growth based on cubic measure. Harvest of trees or stands before this is permitted for (1) sound silvicultural practices such as thinnings or other stand improvement measures, (2) salvage or sanitation harvesting of stands substantially damaged by fire, windthrow, or other catastrophes, or stand that are in imminent danger from insect or disease attack; (3) experimental and research purposes; and (4) removal of particular species of trees, after consideration of the multiple use objectives
96. Stands managed for timber production will be managed to produce a sawlog product using best management practices.
97. The utilization standards for all species will be seven inches diameter at breast height (dbh) to a minimum top diameter inside bark (dib) of four inches for all stands except existing mature stand not previously entered for management.
98. Maintain stand vigor through the uses of integrated pest management such as stocking level control and species composition in order to minimize losses due to insects and diseases.
99. Uneven-aged stands will be managed on cutting cycles where growth equals or exceeds the volume harvested for the cycle.
100. Each entry in uneven-aged stands should eliminate excess stocking in all diameter classes as appropriate. Separate sanitation and salvage entries will not occur between cutting cycles except under catastrophic damage situations.
101. Harvest timber from slopes which are less than 35% using ground skidding equipment and from slopes greater than 35% using cable or aerial systems. Approve exceptions through the environmental analysis process, which will include a logging feasibility analysis.
102. Based on site-specific silvicultural prescriptions, apply even-aged or uneven-aged management systems to forest timber stands. Determine the applicable management system for any timber stand through the use of specific management area direction and project level environmental analysis

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103. Timber harvest is prohibited on lands classified as unsuitable for timber management except when necessary to accomplish multiple-use objectives other than timber production. Examples include, but are not limited to, timber removal for right-of-way clearings, research, public safety, improvement of administrative sites, wildlife needs, Christmas tree cutting, firewood cutting, control of insect and disease epidemics that threaten adjacent land suitable for timber management on non-National forest lands, or removal of volume lost through catastrophic mortality.

104. Restrict logging and post sale operations when necessary to protect roads, soil, water, deer and elk winter/summer range, and calving and fawning areas.

Reforestation

105. Before scheduling stands for regeneration harvest, ensure that the site has the capability to be adequately restocked within five years. A reforestation period of more than five years may be permitted to meet other resource management objectives.

106. While favoring high quality natural regeneration, consider the effectiveness of various regeneration methods and prescribe the best site-specific method. Satisfactory stocking of any regenerated stand will be expected to occur within 5 years after final harvest.

107. Collect seed from selected phenotypically superior trees. Plant stock grown from this seed within the seed and elevation zones of collection, except where a certified silviculturist certifies that another location is acceptable without loss of productivity.

108. Implement animal control when necessary to ensure adequate stocking and uninhibited growth of crop trees.

109. Coordinate livestock grazing on timber harvest units as necessary to protect tree regeneration.

110. Accomplish site preparation using a combination of chemical, mechanical, silvicultural, or physical methods.

111. Manage to maintain or re-establish ponderosa pine, at time of regeneration, on sites where ponderosa pine is subclimax.

Stand Improvement

112. Schedule and implement precommercial thinning to achieve desired stocking level based on a site-specific silvicultural examination and interdisciplinary prescription.

113. Delay or modify precommercial and commercial thinnings when needed to meet elk habitat objectives. Base this determination on a site-specific environmental analysis.

Other

114. Where timber management practices create firewood, secondary utilization (personal firewood use, commercial utilization) will be preferred to on-site disposal whenever such utilization meets management objectives. Give preference to public demand for firewood.

- Water, Soil, and Air**
115. Reevaluate land suitability during site-specific analysis to determine correct land type.
116. Prepare soil, water, and air resource inventories and plans to ensure that accurate and current information is available for forest and project level planning.
- Protection of Water Quality**
117. Comply with State requirements in accordance with the Clean Water Act for protection of waters of the State of Oregon (Oregon Administrative Rules, Chapter 340-41) through planning, application, and monitoring of best management practices (BMPs) in conformance with the Clean Water Act, regulations, and federal guidance issued thereto.
118. In cooperation with the State of Oregon, the Malheur National Forest will use the following process:
- (a) Select and design BMPs based on site-specific conditions.
 - (b) Implement and enforce BMPs.
 - (c) Monitor to ensure that practices are correctly applied as designed.
 - (d) Monitor to determine the effectiveness of practices in meeting design expectations and in attaining water quality standards.
 - (e) Evaluate monitoring results and mitigate where necessary to minimize impacts from activities where BMPs do not perform as expected.
 - (f) Adjust BMP design standards and application when beneficial uses are not being protected and water quality standards are not being achieved. Evaluate the appropriateness of water quality criteria for reasonably assuring protection of beneficial uses. Consider recommending adjustment of water quality standards.
119. Implement the State Water Quality Management Plan, described in Memoranda of Understanding between the Oregon Department of Environmental Quality and U.S. Department of Agriculture, Forest Service (February 2, 1979 and December 2, 1982), and "Attachments A and B" referred to in this Memoranda of Understanding (Implementation Plan for Water Quality Planning on National Forest Lands in the Pacific Northwest, December 1978, and Best Management Practices for Range and Grazing Activities on Federal Lands, respectively).
- Site-specific BMPs will be identified and documented during environmental analysis, along with evaluations of ability to implement and estimated effectiveness. BMPs are described in *General Water Quality Best Management Practices*, Pacific Northwest Region, November 1988.
120. Evaluate site-specific water quality effects as part of project planning. Design control measures to ensure that projects will meet Oregon water quality standards. Projects that will not meet Oregon water quality standards shall be redesigned, rescheduled, or dropped.

FOREST-WIDE STANDARDS

121. Conduct a watershed cumulative effects analysis in watersheds where project scoping identifies cumulative effects of activities on water quality or stream channels as an issue. This will include land in all ownerships in the watershed. Disperse activities in time and space to the extent practicable, and at least to the extent necessary to meet management requirements. On intermingled ownerships, coordinate scheduling efforts to the extent practicable.

122. Rehabilitate disturbed areas that could contribute sediment to perennial streams.

Water Rights

123. Obtain required State permits for the permanent use of water when the reservation principal does not apply.

124. Permit only authorized diversions or impoundments which will maintain minimum instream flows and protect populations of anadromous fish and resident trout.

Soils

125. Evaluate the potential for soil displacement, compaction, puddling, mass wasting, and surface soil erosion for all ground-disturbing activities.

126. The total acreage of all detrimental soil conditions shall not exceed 20% of the total acreage within any activity area, including landings and system roads. Consider restoration treatments if detrimental conditions are present on 20% or more of the activity area. Detrimental soil conditions (see glossary) include compaction, puddling, displacement, and severely burned soil, and surface erosion.

127. Minimum percent effective ground cover levels following land management activities:

Erosion Hazard Class	Minimum Percent Effective Ground Cover	
	1st Year	2nd Year
Low	20-30	30-40
Medium	30-45	40-60
High	45-60	60-75
Very High	60-75	75-90

128. Seed all disturbed soil that occurs within 100-200 feet of a stream or areas further than 200 feet that could erode into a stream.

129. Seed all skid trails with slopes greater than 20%.

Air

130. Plan management activities to maintain air quality at a level adequate for the protection and use of the National Forest resources.

131. Coordinate and cooperate with appropriate air quality regulatory agencies.

- 132. Plan and conduct all prescribed burning in accordance with the State Smoke Management Plan and State Implementation Plan of the Clean Air Act, as amended in 1972.
- 133. Apply mitigating measures listed in the FEIS of the Pacific Northwest Regional Guide for reducing emissions from prescribed burning, where appropriate.
- 134. Use the best available technology to minimize the impact of prescribed burning on Class I airsheds and smoke sensitive areas.
- 135. Protect the forest air resource from pollution sources outside forest boundaries through application of the Prevention of the Significant Deteriorations regulations contained in the Clean Air Act. Give special protection to air quality related values found in Class I wilderness.

Minerals

- 136. Administer the appropriate laws and regulations relating to minerals in a reasonable and consistent manner. Coordinate with appropriate agencies.
- 137. Provide common variety minerals and materials if consistent with the management area direction. Authorize common variety mineral exploration and removal under terms and conditions to prevent, minimize, or mitigate adverse impacts on surface resources and uses. Return disturbed land to a condition suitable for planned uses through reclamation requirements.
- 138. As required by applicable mining laws, provide mining claimants reasonable access to their mining claims. Analyze alternatives for access to explore for and develop locatable mineral resources in the proposed operating plan. Determine reasonable access through the environmental analysis process. Applicable road construction specifications and standards shall be met.
- 139. Assist miners in developing operating and reclamation plans that provide for environmental protection and ultimate rehabilitation, while allowing exploration, development, and production to proceed in a reasonable and timely manner. Reclamation plans should clearly state final management objectives for specific mined areas and detail the procedure and time frames which will be followed to accomplish those objectives.
- 140. Analyze all sites to be utilized for Forest Service designated rock sources using the NEPA process. Initiate mineral withdrawals when necessary.
- 141. Notify mining claimants of impending Forest Service actions that may affect their claims. Reasonable effort should be made to protect claim corners and mine workings from disturbance as a result of Forest Service activities. Secure permission before entering claims with recognized surface rights.
- 142. Apply appropriate special stipulations to oil and gas leases when necessary to protect surface resources and/or achieve Forest-wide and management area goals, objectives, and standards.
- 143. Complete additional site-specific analysis of environmental effects before recommendations are made on any lease application. Document this analysis in either an environmental impact statement, environmental assessment, or categorical exclusion.

FOREST-WIDE STANDARDS

144. Apply a "no surface occupancy" stipulation to leases when (a) surface occupancy would cause significant resource disturbance which cannot be mitigated by any other means; (b) where resource impacts would be irreversible or irretrievable; or (c) the activity is incompatible with the surface management objectives.
145. Reevaluate areas withdrawn from mineral entry every five years to determine if the withdrawal is still necessary.
146. Notify miners of applicable laws with which they must comply, including the Removal-Fill Law (Oregon Division of State Lands), the Mineral Land Reclamation Act (Oregon Department of Geology and Mineral Industries), the Waste Discharge Permit Program (Oregon Department of Environmental Quality) and the State Scenic Waterway Act.

Lands

147. Base approval of special-use applications for proposed uses of National Forest land on site-specific analyses and compatibility with management area objectives.
148. Evaluate designs, plans, and location for construction of facilities.
149. Grant and administer rights-of-way across National Forest lands in accordance with management area goals and standards.
150. Acquire rights-of-way on forest system roads and trails that cross private lands when needed to meet management area goals and standards.
151. Maintain land status records to acceptable standards and incorporate information into the TRI system.
152. Locate, mark, post, and maintain landlines and record the information in the TRI system according to the following priorities: (a) lines needed to meet planned activities, (b) lines needed to protect National Forest Systems lands from encroachment, and (c) other lines as financing allows.
153. Prohibit additional recreation residence lots.
154. Acquire, transfer, and/or dispose of lands as needed to meet Forest-wide and management area goals and standards (see Appendix M).
155. Plan, design, and manage projects to protect established boundaries of wildernesses, research natural areas, and other special interest areas.

Facilities

Roads and Trails

156. No more than 618 miles of new road will have been constructed in the decade. Road closure or obliteration and removal from the transportation system will have been identified on 2,688 miles of road.
157. Plan, design, construct and maintain roads and trails to the minimum level required to meet integrated land management objectives (i.e., the needs of all resources). Minimize tie-through roads.

- 158 Identify road construction and management as an issue for projects involving either new road construction or re-construction. Items to be considered shall include the existing and future road densities (both open and closed), design standards, etc. The analysis will discuss the need for, and cumulative effects of, additional roads on the area of analysis. A project alternative with additional roads will be approved only after consideration is given to obliterating roads that are no longer needed in the project area.
- 159. The access management plan will establish road management objectives for each road on the Forest. The existing road system will be reviewed to identify roads to be closed or obliterated because they no longer contributing to integrated land management objectives. The status of all roads will be determined by integrated land management analysis, incorporating objectives for timber harvest and removal, big-game habitat needs (including security needs), high quality recreation opportunities, and firewood cutting opportunities.
- 160 Complete an area transportation analysis before constructing roads in any released RARE II roadless area or previously unaccessed watershed. Minimize new road construction. When developing management strategies for these areas, assume that roads will be closed to vehicular use unless specific resource needs or public benefits are identified that warrant keeping roads open year-round or seasonally to meet management objectives.
- 161. Plan, design, and construct roads to ensure the re-establishment of vegetative cover on disturbed areas within 10 years after termination of a contract, lease, or permit, unless the road is a permanent addition to the Forest's transportation system.
- 162. Prepare and maintain road management objectives for all proposed and existing system roads through interdisciplinary analysis. Incorporate road management objectives into the Forest Travel Plan.
- 163. Mitigate or prevent any impacts of road construction on unique or fragile habitats.
- 164. Operate and maintain all roads according to maintenance levels established in road management objectives, and standards defined as follows:

Minimum Maintenance Level	Use
Obliterated	No current or future use (36 CFR 261.5)
1 (Closed)	No current use; planned future use
2	High clearance vehicles
3, 4, 5	Low clearance vehicles

- 165. Maintain trails to the level commensurate with use, user safety, and protection of the facility and resources.
- 166. Prepare and update the Forest travel map annually. Update and reprint the travel map as necessary.

FOREST-WIDE STANDARDS

167. Maintain transportation system inventories.

168. Prepare, update, and implement the Forest sign plan.

Administrative Sites

169. Develop, administer, and maintain potable water and waste water systems and solid waste facilities where applicable.

170. Provide and manage administrative facilities to accomplish land and resource management and protection objectives of the Forest. Prepare forest facility master plan and site development plan for all administrative sites. Consider long-term development and maintenance costs in facilities planning.

Transportation and Utility Corridors

171. Accommodate new transportation/utility proposals within existing corridors to the maximum extent feasible. Designate additional corridors needed for major utilities or highways through an interagency environmental analysis. Objectives for utility corridors are specified for each management area where appropriate (see Chapter IV, Section F).

Electronic Communication Facility Sites

172. Comply with all laws, regulations, and policies when locating and developing communication facility sites.

173. Locate and develop all installations to meet the visual quality objective for the site on which it is located.

174. Survey all sites for cultural resources and threatened, endangered, and sensitive plant and animal species. If any are located, adhere to current laws, regulations, and policy.

175. Utilize all facilities fully before allowing additional facilities to be developed.

176. Facilitate other resources and uses through design, location, and construction of the electronic installation and associated improvements whenever possible.

177. Prepare an electronic site plan for each electronic site and address at least the following:

- (a) Consolidation of structures when practical
- (b) Safety and sanitation requirements
- (c) Landscaping and erosion control specifications
- (d) Coordination with other resources
- (e) Access routes and maintenance specifications
- (f) Existing facilities and improvements
- (g) Needs for protection of the facility such as fences and fire equipment
- (h) Any other appropriate items

Protection

Fire Management

178. Fire management direction in this Forest Plan shall guide the fire management analysis and resulting Fire Management Action Plan. The fire management action plan will give specific fire management direction for each management area and will be incorporated into this Forest Plan as an amendment (see Chapter V, Section D).

- 179. Apply an appropriate suppression response (see Glossary) to all wildfires. Implement responses cost efficiently and consistent with land and resource management objectives. Specific strategies for suppression will depend upon the fire location, expected fire behavior, and resource values at risk. Appropriate suppression criteria will be outlined in the fire management action plan.
 - 180. Utilize prescribed fire to meet land management objectives. Normally, plan human ignition sources for prescribed fire; however, when appropriate, utilize lightning ignition sources for prescribed fire.
- Residue Management
- 181. Manage residue profiles at a level that will minimize the potential of high intensity catastrophic wildfires and provide for other resource objectives in individual management areas.
 - 182. Utilize the Regional fuels analysis process as a guide to determine the most cost effective fuel profile for fire protection purposes. Finance treatment beyond the level needed for fire protection by the requesting or benefiting function.
 - 183. Use all methods of fuel treatment as prescribed by site-specific analysis to achieve resource management objectives. Encourage utilization of wood residue as a priority treatment, consistent with long-term site productivity and wildlife habitat needs.
 - 184. Integrate residue treatment with pest management practices.
- Law Enforcement
- 185. Prevent criminal activities as first priority. Discover and investigate violations of applicable laws and regulations. Continue investigations until responsibility has been established or reasonable leads have been exhausted. Initiate appropriate criminal and/or civil action where responsibility has been established.
- Insects and Disease
- 186. Apply integrated pest management principles to minimize the impacts of the mountain pine beetle, western spruce budworm, tussock moth, and other insect and disease infestations to the extent necessary to achieve the overall goals and objectives of this Forest Plan.
 - 187. Avoid the creation of vegetation conditions which could promote insect and disease infestations
- Noxious Weeds
- 188. Implement a weed control program to confine present infestations and prevent establishment of noxious weeds in new areas. Favor biological control for noxious weeds that have effective host insects. Where biological control is not effective, a combination of hand grubbing, spot application of herbicides, and aerial application of herbicides will be used. This program will be coordinated with county, State, and other Federal agencies. All National Environmental Policy Act requirements will be completed prior to using any herbicides.
- Administration
- 189. Coordinate with all appropriate agencies on rights-of-way, road maintenance, law enforcement, noxious weed control, and other activities to produce mutual benefits.

F. MANAGEMENT AREA DIRECTION

The National Forest land administered by the Malheur National Forest has been divided into management areas, each with different management goals, resource potentials, and limitations. Some of the management areas are shown on the accompanying map (Alternative I) which display the general management area assignments for the Forest. The management area maps of record consist of a set of larger scale maps on file in the Forest Supervisor's office. Each District office has their own record maps on file.

Overlap of management areas is inevitable. When a specific segment of land falls under the goals of several management areas, acres are assigned to the higher priority management area. The hierarchy developed to prioritize assignment of management areas is based primarily upon: established authority (i.e., Congress or Forest Supervisor), designated use, and forest requirements. As an example, the management area for the Strawberry Mountain Wilderness (MA 6A) has acres that could be classified as riparian zones, old growth, research natural areas, etc., but all these areas are tracked under the wilderness management area. The numbering of management areas does not reflect any hierarchy of acreage assignment.

The detailed management area assignments for each capability area are contained in the Forest's TRI data base. During more site-specific project level analysis, this data base will be queried to obtain the management area assignment for each capability area.

Following, in Table IV-3, is a summary of the management goals for each management area.

The remainder of this chapter describes each management area and lists the goals, management standards, and schedule of management practices for each area. The schedule of management practices are not intended to act as limits, but will be monitored to ensure that management area goals and objectives are achieved.



**TABLE IV-3
MANAGEMENT AREA GOALS**

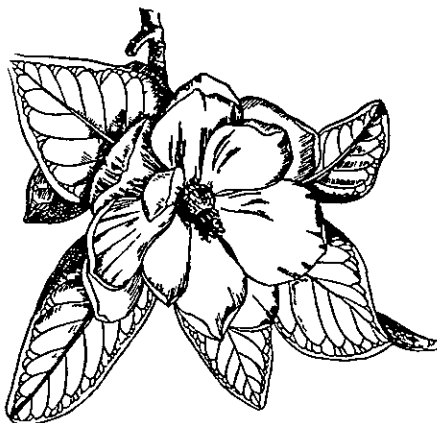
Management Area	Management Goals	Total Acres
1 /	GENERAL FOREST - Manage for timber production and other multiple uses on a sustained yield basis.	553,053
2 /	RANGELAND - Manage for livestock forage production and other multiple uses on a sustained yield basis.	99,203
3A /	NON-ANADROMOUS RIPARIAN AREAS - Manage to protect or enhance riparian-dependent resources in watersheds supporting resident fish.	19,268
3B /	ANADROMOUS RIPARIAN AREAS - Manage to protect or enhance riparian-dependent resources in watersheds supporting anadromous fish.	28,092
4A /	BIG-GAME WINTER RANGE MAINTENANCE - Manage to maintain usable forage for elk and deer on potential winter range.	177,406
5	BALD EAGLE WINTER ROOSTS - Manage to maintain or enhance winter roost habitat for bald eagles.	4,040
6A /	STRAWBERRY MOUNTAIN WILDERNESS - Manage the wilderness values as specified by the Wilderness Act of 1964 and the Oregon Wilderness Act of 1984.	68,700
6B ✓	MONUMENT ROCK WILDERNESS - Manage the wilderness values as specified by the Wilderness Act of 1964 and the Oregon Wilderness Act of 1984.	12,620
7 ✓	SCENIC AREA - Manage to preserve and protect the outstanding natural esthetics of the Vinegar Hill - Indian Rock Scenic Area.	13,322
8 ✓	SPECIAL INTEREST AREAS - Manage to preserve areas of significant historical, geological, botanical, zoological, paleontological, or other special characteristics.	246
9 ✓	RESEARCH NATURAL AREAS - Manage areas for nonmanipulative research, observation, and study of undisturbed ecosystems.	750
10 ✓	SEMI-PRIMITIVE NON-MOTORIZED RECREATION AREAS - Manage to provide a wide range of semiprimitive nonmotorized recreation opportunities while protecting existing environmental quality Exclude new road construction.	48,888

**TABLE IV-3 (Continued)
MANAGEMENT AREA GOALS**

Management Area	Management Goals	Total Acres
11 ✓	SEMI-PRIMITIVE MOTORIZED RECREATION AREAS - Manage to provide a wide range of semiprimitive motorized recreation opportunities while protecting existing environmental quality. Exclude new road construction.	14,578
12 ()	DEVELOPED RECREATION SITES - Manage for developed recreation opportunities.	484
13 ✓	OLD GROWTH - Manage old growth for wildlife and plant habitat, ecosystem diversity, and aesthetic quality.	72,690
14 ✓	VISUAL CORRIDORS - Manage viewshed corridors with primary consideration given to their scenic quality and the growth of large diameter trees. Visual quality objectives of retention, partial retention, and modification will be applied while providing for other uses and resources.	186,682
16 ✓	MINIMUM LEVEL MANAGEMENT - Provide the minimum management necessary to provide for resource protection and to ensure public safety. Additional road construction will be allowed to manage adjacent areas.	74,668
17 ()	BYRAM GULCH MUNICIPAL SUPPLY WATERSHED - Manage to ensure that Oregon water quality standards for community public supply water use are met. Protect existing beneficial uses of the water. Protect and, where needed, improve the quality and quantity of the water resource in a manner consistent with National, State, and forest goals.	300
18 ()	LONG CREEK MUNICIPAL SUPPLY WATERSHED - Manage to ensure that Oregon water quality standards for community public supply water use are met. Protect existing beneficial uses of the water. Protect and, where needed, improve the quality and quantity of the water resource in a manner consistent with National, State, and forest goals	224
19 ()	ADMINISTRATIVE SITES - Provide and maintain sites for facilities necessary for the administration of Malheur National Forest lands.	1,369
20A	DRY CABIN WILDLIFE EMPHASIS AREA (WITH SCHEDULED TIMBER HARVEST)- Manage to provide for high quality fish and wildlife habitat, water quality, and nonmotorized recreation opportunity in a natural appearing setting. Emphasize high quality big-game hunting opportunities. Manage elk habitat to provide for at least 70% of elk habitat effectiveness while allowing for scheduled timber harvest utilizing low impact silvicultural systems and minimum roading.	14,629

**TABLE IV-3 (Continued)
MANAGEMENT AREA GOALS**

Management Area	Management Goals	Total Acres
20B	UTLEY BUTTE WILDLIFE EMPHASIS AREA (WITH SCHEDULED TIMBER HARVEST) - Manage to provide for high quality fish and wildlife habitat and water quality. Manage elk habitat to provide at least 70% of elk habitat effectiveness while allowing for scheduled timber harvest. Provide opportunities for high quality semiprimitive dispersed recreation.	9,045
21	WILDLIFE EMPHASIS AREA WITH NON-SCHEDULED TIMBER HARVEST - Manage to provide for high quality fish and wildlife habitat and water quality. Manage elk habitat to provide at least 70% of elk habitat effectiveness. Timber harvest will be on a non-scheduled basis and will be used only to meet a fish and or wildlife habitat objective. Provide opportunities for high quality semiprimitive dispersed recreation.	22,076
22	WILD AND SCENIC RIVER - Protect, enhance, and maintain the natural beauty, character, outstandingly remarkable values and water quality. Preserve the free flowing condition of this wild and scenic river and it's corridor for the use and enjoyment of present and future generations.	10,256



MANAGEMENT AREA 1

MANAGEMENT AREA 1 (553,053 acres) - GENERAL FOREST

1 Description Management Area 1 consists primarily of forested lands. Most timber productivity classes are represented as are a variety of commercially valuable softwood tree species (ponderosa pine, white fir, Douglas-fir, western larch, white pine, lodgepole pine, Engelmann spruce, and subalpine fir). A variety of physical and biological environments occur as determined by soil, slope, aspect, elevation (approximately 4,300 to 7,000 feet) and climatic factors.

2. Goals Emphasize timber production on a sustained yield basis while providing for other resources and values. Develop equal distribution of age classes to optimize sustained timber production. Manage at levels and intensities consistent with the schedules described in this Plan to provide for other multiple uses and resources.

3 Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area except where superseded by the following standards:

- | | |
|--------------------------|--|
| Recreation | 1. Manage dispersed recreation for roaded modified conditions. |
| Visuals | 2. Manage for maximum modification visual quality objective. |
| Fish and Wildlife | 3. Design timber sales and cultural practices through an interdisciplinary process to meet objectives for management indicator and featured species where possible. Address appropriate mitigation measures through project level environmental analysis. |
| Range | 4. Manage allotments to utilize available forage while maintaining vegetation (including trees) and site productivity.
5. Create and utilize transitory forage resulting from timber harvest if restocking of cutover areas within planned regeneration period is assured.
6. Design structures which facilitate livestock distribution to protect tree regeneration.
7. Plan and implement range forage seedings that are not detrimental to tree restocking of harvested areas within planned regeneration periods. |
| Timber | 8. Schedule timber harvest on portions of the management area classified as "suitable" for timber management.
9. Emphasize even-aged silvicultural systems. |

10. Based on site-specific prescriptions, uneven-aged silvicultural systems will be applied to 5 to 15% of this management area.
11. While basing harvest entries on individual stand conditions and meeting all resource objectives, uneven-aged management may be applied to the following types of lands: (a) dispersed recreation sites or hunter camps; (b) areas with high scenic value; (c) areas adjacent to seeps, springs, wallows and bogs; (d) opportunity areas for mule deer habitat enhancement; (e) low site timber lands; (f) climax ponderosa pine and Douglas-fir sites with 50% or more ponderosa pine in the understory; and (g) slopes less than 35% , favoring slopes less than 20%.
12. When applying uneven-aged management, manage for the following target tree numbers and sizes:
 - (a) Twenty four inch uneven-aged management ponderosa pine and mixed conifer stands - Maintain at least 2 trees per acre that are 24 inches in diameter and 5 replacement trees that are 18 to 24 inches in diameter.
 - (b) Twenty inch uneven-aged management ponderosa pine and mixed conifer stands - Maintain at least 2 trees per acre that are 20 inches in diameter and 5 replacement trees that are 16 to 20 inches in diameter.
 - (c) Low site lands (all species) - Maintain at least 1 tree per acre 18 inches in diameter.
 - (d) Manage the stand, including understory, to maintain target tree standards through time and to meet regional direction for uneven-aged management (see glossary, uneven-aged management).
13. When applying uneven-aged management created openings are to be a maximum of two acres in size. Exceptions will be based on site-specific prescriptions which are responsive to integrated land management objectives.

Protection

Insects and Disease

14. Continually monitor pest populations and implement activities to prevent population buildups to epidemic levels. Aggressively suppress insects and diseases when outbreaks threaten timber management objectives.

MANAGEMENT AREA 1

4. Schedule of Management Practices

MANAGEMENT AREA 1 - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
RECREATION		
Trail Construction/Reconstruction ^{1/}	AT22	383.4 Miles
Trailhead Construction/Reconst. ^{1/}	AT22	22 Sites
Cultural Resource Survey ^{2/}	AC111	1000 M Ac
Cultural Resource Overview ^{2/}	AC111-1	1
Cultural Resource Evaluation ^{2/}	AC112-1	2,670 Sites ^{3/}
Cultural Resource Monitoring ^{2/}	AC121	1,980 Sites ^{3/}
Cultural Resource Mitigation ^{2/}	AC123	2,932 Sites
FISH AND WILDLIFE		
Wildlife Habitat Improvements ^{2/}	CW221	3,000 Structures
TIMBER		
Timber Harvest		
Clearcut	ET12	276.1 MMBF/24,667 Ac
Shelterwood - Seed Tree Cut	ET12	211.9 MMBF/32,341 Ac
Shelterwood - Removal Cut	ET12	9.8 MMBF/3,570 Ac
Selection	ET12	176.9 MMBF/37,801 Ac
Overstory Removal on Existing Stands	ET12	521.0 MMBF/42,649 Ac
Commercial Thin	ET12	228.9 MMBF/50,346 Ac
Salvage/Other Products	ET12	68.7 MMBF/Ac N/A
Total Timber Harvest	ET12	1,483.5 MMBF/187,804 Ac
Reforestation		
Planting	ET24	41,811 Ac
Natural	ET24	50,317 Ac
Timber Stand Improvement		
Precommercial Thinning	ET25	75,412 Ac
RANGE		
Structural Range Improvements ^{3/}	DN221	2,530 Structures/900 Miles
Non-Structural Range Improvements ^{3/}	DN222	46,500 Ac
Range Structural Maintenance ^{3/}	DN23	200 Miles
SOIL AND WATER		
Watershed Improvements ^{3/}	FW22	1,000 Ac
FACILITIES^{4/}		
Road Construction/Reconstruction	LT22	213 Miles
Timber Purchaser Road Construction	LT214-12	536 Miles
Timber Purchaser Road Reconstruction	LT23	1,129 Miles

^{1/}These activities will also occur in Management Areas 3A, 3B, 8, 13, 14, 20B and 21

^{2/}These activities will also occur in Management Areas 3A, 3B, 4A, and 14 They are listed here because it is expected that most of the activity will occur within this management area

^{3/}These activities will also occur in Management Areas 2, 3, 4A, and 14 They are listed here because it is expected that most of the activity will occur within this management area

^{4/}These figures are the totals of Management Areas 1, 3A, 3B, 14, 20A, and 20B. Roads for Management Area 4A are shown in the Management Area 4A section of this chapter.

MANAGEMENT AREA 2 - RANGELAND (99,203 acres)

- 1 Description Management Area 2 consists primarily of nonforested grasslands and low-site ponderosa pine lands that are unsuitable for timber production. In most areas it occurs as inclusions of nonforested lands within other management areas, primarily Management Area 1, General Forest. A variety of physical and biological environments occur as determined by soil, slope, aspect, elevation, (approximately 4,300 to 7,400 feet) and climate factors.
- 2. Goals Emphasize forage production on nonforested areas on a sustained yield basis while providing for other resources and values.
- 3. Standards

RESOURCE ELEMENT

STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area except where superseded by the following standards:

- Recreation**
 - 1. Manage for dispersed recreation ranging from semiprimitive to roaded modified.
- Fish and Wildlife**
 - 2. Design all structural and non-structural habitat improvement projects to achieve management area objectives.
 - 3. Design and administer range management activities to promote objectives of management indicator and featured species
- Range**
 - 4. Manage allotments to ensure that resource values other than forage are maintained at or above minimum requirements.
- Facilities**
- Roads**
 - 5. Maintain adequate local road access for range management activities (e.g., access for maintenance or construction of range improvements) Minimize the density of roads in this management area by limiting access or obliterating and revegetating unnecessary roads
- Protection**
- Residue Management**
 - 6. When appropriate, utilize prescribed fire from planned ignitions.

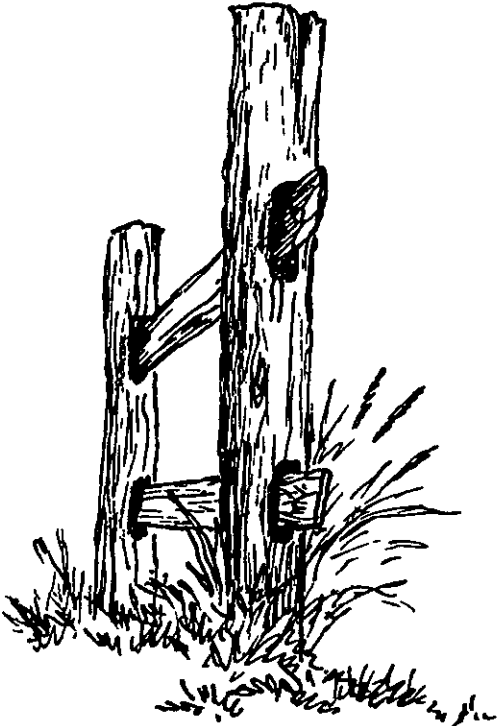
MANAGEMENT AREA 2

4. Schedule of Management Practices

MANAGEMENT AREA 2 - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
RANGE		
Range Resource Plans	DN112	23 Plans
Reanalysis of Allotment Plans	DN112	76 Plans
Non-Structural Range Improvements ^{1/}	DN222	1,100 Acres

^{1/}These activities will also occur in Management Areas 1, 3, 4A, and 14. They are listed here because it is expected that most of the activity will occur within this management area.



MANAGEMENT AREA 3A (19,268 acres) - NON-ANADROMOUS RIPARIAN AREAS

1. Description

Management Area 3A consists of lakes, perennial streams and seasonally flowing streams; lands adjacent to lakes, perennial and seasonal streams, floodplains and wetlands; wet, moist areas such as meadows, springs, seeps, bogs, and wallows; and quaking aspen stands in watersheds that do not support anadromous fish. These areas shall correspond to at least the recognizable area dominated by riparian vegetation. Often the area is nearly flat, and may be subject to various degrees of flooding or saturation.

Streams and adjacent lands in this management area support populations of resident fish, and include all Class I, II, and III streams and adjacent lands where practices are modified to protect water quality and aquatic resources. Also included in this management area are those Class IV streams and upland riparian areas, such as seeps, springs, meadows and bogs, which have high water table conditions during some parts of the growing season. Class IV channels will be recognized as the important link between the uplands and the downslope perennial streams. They will be managed to ensure bank and channel stability. This will be determined from a site specific evaluation which will include the size of the area, plant and animal species present, and overall watershed condition.

Geographical boundaries of riparian areas are to be determined by on-site characteristics of soil and vegetation, but will be a minimum of 100 feet from the edge of all Class I, II, and III streams. All other riparian areas including Class IV streams and upland riparian areas will be identified and mapped during project planning and implementation. These Class IV and other riparian areas will have a variable width, depending on site specific needs for all riparian-dependent resources.

2. Goals

Manage riparian areas to protect and enhance their value for wildlife, resident fish habitat, and water quality. Manage timber, grazing, and recreation to give preferential consideration to riparian-dependent species on that portion of the management area "suitable" for timber management, grazing, or recreation. Design and conduct management in all riparian areas to maintain or improve water quality and beneficial uses

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area except where superseded by the following standards:

Recreation

- 1 Manage for recreation ranging from semiprimitive to roaded modified depending on the ROS objectives of the adjacent lands.
- 2 Limit and distribute use as necessary to protect and/or rehabilitate riparian areas.

MANAGEMENT AREA 3A

Visuals

3. Locate new recreational facilities outside of riparian areas. Maintain existing recreational sites to protect riparian-dependent resources
4. Meet visual quality objectives ranging from retention to modification depending on the visual quality objective of adjacent lands.

Fish and Wildlife

5. Provide the necessary habitat to maintain or increase populations of management indicator species: bull trout, cutthroat trout, and rainbow/redband trout.
6. Cooperate and coordinate with other agencies and groups to achieve the following objectives:
 - (a) Develop instream habitat improvement projects for resident fish species with emphasis on cooperative projects with the Oregon Department of Fish and Wildlife, Bonneville Power Administration, Isaac Walton League, Trout Unlimited, and others, as appropriate.
 - (b) Maintain adequate minimum flows for resident fish species. Coordinate with Oregon Department of Fish and Wildlife in the identification of problems and the development of solutions.
7. Maintain dead and defective tree habitat capable of supporting at least 60% of the potential population of the management indicator species for primary excavators.
8. Manage the composition and productivity of key riparian vegetation to protect or enhance riparian-dependent resources. Emphasis will be on the reestablishment of remnant hardwood shrub and tree communities
9. Plan, design and implement riparian habitat improvement activities to upgrade riparian areas that are not in a condition to meet management objectives or the desired future condition.
10. Improve the rate of recovery in riparian areas that are not in a condition to meet management objectives by eliminating or reducing the impacts of management activities that may slow riparian recovery.
11. Maintain or enhance water quality and/or fish habitat through instream or riparian improvements. Implement instream activities outside of the spawning and egg incubation period.
12. Provide for input of large, woody debris into all classes of streams and evaluate to determine if objectives are being met. Remove material that causes unacceptable channel and/or bank damage.
13. Maintain or enhance wet meadow habitats that are used by greater sandhill cranes for nesting or feeding

14. Maintain non-stream associated riparian areas such as: seeps, springs, bogs and wallows together with their associated vegetative structure. Develop mitigation measures for management activities during project level environmental analysis.
- Range**
- > 15. Grazing allotments with riparian areas in less than desirable condition will be identified and updated according to the schedule shown in Appendix A (Activity Schedule A-10) <
- > 16. Include in allotment management plans (AMPs) a strategy for managing riparian areas for a mix of resource uses. Establish a measurable desired future riparian condition based on existing and potential vegetative conditions. When the current riparian condition is less than that desired, objectives will include a schedule for improvement. AMPs will identify management actions needed to meet riparian objectives within specific time frames. Measurable objectives will be set for key parameters, such as amount of stream surface shaded, streambank stability, sedimentation, cover provided by trees, shrubs, forbs, grasses and grasslike vegetation. This process is described in "Managing Riparian Ecosystems (Zones) for Fish and Wildlife in Eastern Oregon and Eastern Washington" (1979). The AMP will specify the monitoring needed to determine if the desired rate of improvement is occurring. AMPs currently not consistent with this direction will be developed or revised on a priority basis as shown in Appendix A (Activity Schedule A-10). <
17. Using Activity Schedule A-10 and available funding, prepare Allotment Management Plans for every grazing allotment on the Malheur National Forest as soon as possible. This process will use information gathered through the range allotment analysis activity, including the analysis of the management situation. Prepare an allotment management plan for each allotment that provides the techniques to reach an agreed upon interdisciplinary desired future condition. Establish resource value ratings and the range resource management level needed to reach the desired future condition. Use Table IV-5 to establish utilization levels for grass/grasslikes and shrubs by range resource management level. Inventory existing conditions to determine if the riparian area is satisfactory or unsatisfactory.
18. Establish annual forage utilization requirements for each grazing allotment as a tool to achieve or maintain the desired condition. Use the forage utilization standards shown in Table IV-4, except where site-specific monitoring information shows that a higher level of utilization will achieve the desired future condition without delaying the rate of improvement. As a minimum, the desired condition must be "satisfactory."
- Employ all available methods to achieve the desired levels of utilization by permitted livestock and big game. In cooperation with Oregon Department of Fish and Wildlife establish riparian area carrying capacity of big-game. Limit game populations to the level necessary to achieve riparian objectives for all riparian resources. Special emphasis needs to be placed on big game riparian winter range management. <

Design the methods selected for controlled livestock use to fit the site-specific requirements for improving the riparian area to desirable condition. Any one or a combination of methods may be used to treat less than desirable riparian areas, such as corridor fencing, herding, additional water developments, salting, nonuse for resource protection, early and late season use, short-term grazing rather than season long, reduced livestock numbers, control of degree of use, and/or creating additional pastures through fencing.



19. Manage allotments to protect or enhance riparian-dependent resources.
20. Manage livestock grazing so that water quality meets Oregon State standards and fish populations are maintained at an acceptable condition or in an upward trend.
21. Maintain sufficient streamside vegetation to maintain streambank stability and fish habitat capability.
22. Restrict season long grazing, unless specifically evaluated and approved through the environmental analysis process.

TABLE IV-4
Allowable Utilization of Available Forage in Riparian Areas
(Percent Allowable Use of Available Forage)

Range Resource Management Level	Grass and Grasslikes ^{1/}		Shrubs ^{2/}	
	S ^{3/}	U ^{4/}	S	U
STRATEGY B - Stewardship Management^{5/}	40	0-30	30	0-25
STRATEGY C - Extensive Management^{6/}	45	0-35	40	0-30

^{1/}Utilization based on percent removed by weight

^{2/}Utilization based on weight and twig length. Example, if 2/3 of the available leader length is removed then browsed utilization is 50% (USDA-FS-PNW-RN-472, April 1988).

^{3/}S - Satisfactory condition - See glossary

^{4/}U - Unsatisfactory condition - See glossary

^{5/}Management controls livestock numbers so that livestock use is within present grazing capacity. Distribution is achieved through riding, herding, and/or salting. Improvements are minimal and constructed only to the extent needed to cost effectively maintain stewardship of the range in presence of grazing.

^{6/}Management seeks full utilization of forage available to livestock. Cost-effective management systems and techniques, including fencing and water development, are designed and applied to obtain relatively uniform livestock distribution and use of forage and to maintain plant vigor.

Timber

23. No scheduled timber harvest along Class I or II streams (minimum width 200 feet, or 100 feet either side of stream). These lands are classified as "unsuitable" for timber management.

- 24. No scheduled timber harvest will occur within the interior portions of the riparian area (minimum 66 feet) along Class III streams. This 66 foot interior corridor may straddle the stream or may occur on one side depending on site specific needs. These lands are classified as "unsuitable" for timber management.
- 25. Timber harvest (non-scheduled) may occur within riparian areas classified as "unsuitable" for timber management in order to accomplish specific riparian resource objectives.
- 26. Schedule timber harvest on portions of the management area classified as "suitable" for timber management. Ensure that all timber harvests are subordinate to riparian-dependent resources.
- 27. Emphasize uneven-aged timber management, on riparian areas classified as "suitable" for timber management. Emphasize single tree selection in the ponderosa pine type and group selection in the mixed conifer and lodgepole pine types. Even-aged management may be applied in all timber types based on a site-specific silvicultural prescription which meets riparian management objectives.
- 28. When applying group selection harvests (uneven-aged management), do not create openings larger than one-half acre in size. Created openings in adjacent management areas may border openings in riparian areas. Limit the lineal distance of created openings to 150 feet or less, along Class III streams, while ensuring that adequate stream surface shading remains.
- 29. For any Class I, II, or III stream, limit the cumulative total acres of created openings to 10% of the total riparian acres along any given stream.
- 30. Design timber harvesting activities along streams to provide for streambank stability and a future supply of large woody debris.
- 31. In upland riparian areas, design timber harvest activities to protect the integrity of these areas and provide for the riparian associated resources.
- 32. Keep mechanized equipment out of all stream channels and upland riparian areas. When stream channel crossings cannot be avoided, conduct harvesting activities at times of minimum flow, outside the fish spawning and egg incubation period, and at locations specifically designated on the ground where streambank and channel disturbances are minimized. Constructed temporary crossings, such as log and culvert installations, will require maintenance, removal and rehabilitation.
- 33. No commercial or recreational firewood cutting will be permitted in riparian areas.
- 34. Emphasize natural regeneration but plant when needed to meet riparian management objectives.
- 35. Evaluate effects on wetlands and floodplains during project level environmental analysis.

Reforestation

Water, Soil, and Air

MANAGEMENT AREA 3A

36. Ensure that temperatures do not increase on Class I streams. Limit temperature increases on Class II and fish-bearing Class III streams to the quantitative criteria in Oregon State standards. Do not allow deterioration of water temperatures on Class III and IV streams when downstream Class I, II and fish-bearing Class III streams are affected.
37. Protect instream flow through critical analysis of all proposed water uses. Achieve instream flow protection by: (a) filing protests with States where applications are made that adversely affect National Forest resources; (b) asserting claims for this water under Federal or State laws where applicable; (c) inserting protection measures into special-use permits; or (d) reaching formal agreements over use. Purchase of water rights and impoundments are other means for reducing these impacts.

Minerals

38. Ensure that operating plans emphasize protection and/or mitigation of impacts to riparian-dependent species and that water quality standards are met through the application of BMPs.
39. Ensure that operating plans affecting resident fish habitat comply with Oregon standards pertaining to water quality and timing of instream activity.

Facilities

Roads

40. Avoid locating roads in riparian areas while providing adequate local road access for management activities (e.g., timber management, fisheries structural improvements, etc.). Minimize the density of open roads in this management area by obliterating, revegetating, or closing unnecessary roads or any roads causing significant resource damage.
41. Design and maintain roads to protect fisheries values and riparian area habitat.
42. Provide seasonal closures to reduce sedimentation.
43. Leave stream channels of Class I to IV streams undisturbed by roads, except for crossings. Minimize adverse impacts to water and fisheries resources when designing necessary crossings.
44. Apply erosion seeding on: (a) all disturbed soil that occurs within 100-200 feet of a Class I, II, III or IV stream or where eroded material could reach a stream; and (b) on compacted skid trails with slopes greater than 20%.
45. Maintain fish passage on fish-bearing streams unless passage obstruction is unavoidable and addressed during the project-level environmental analysis.
46. Mitigate unavoidable adverse impacts on floodplains or wetlands.

Trails

47. Construct and maintain trails to prevent environmental damage. Design reconstruction projects to mitigate sediment.

Protection

Residue Management

48. Manage residue profiles to maintain or enhance resident fish and wildlife habitat.

- 49. A site specific analysis is required for determining removal of activity-generated woody debris from all riparian areas unless nonremoval is specifically evaluated and approved in the project-level environmental analysis. Do not allow mechanized treatment of logging debris for site preparation or hazard reduction purposes in all riparian areas, unless evaluated and approved in a project-level environmental analysis. Burning of logging debris below the high waterline is prohibited
- 50. Use prescribed fire from planned ignitions to achieve forage production objectives
- 51. Apply integrated pest management principles to minimize losses and protect riparian area values.

Insects and Disease

4. Schedule of Management Practices

MANAGEMENT AREA 3A - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
FISH AND WILDLIFE Fish Habitat Improvements ^{1/}	CI221	300 Structures
TIMBER		
Timber Harvest ^{2/}		
Commercial Thin	ET12	0 MMBF/0 Ac
Clearcut	ET12	1.0 MMBF/145 Ac
Shelterwood - Seed Tree Cut	ET12	0 MMBF/0 Ac
Selection	ET12	14.7 MMBF/2,179 Ac
Overstory Removal on Existing Stands	ET12	0 MMBF/0 Ac
Salvage/Other Products	ET12	.8 MMBF/Ac N/A
Total Timber Harvest	ET12	15.5 MMBF/2,324 Ac
Reforestation		
Planting	ET24	472 Ac
Natural	ET24	545 Ac
Timber Stand Improvement		
Precommercial Thinning	ET25	1,307 Ac

^{1/}These activities will also occur in Management Area 14. They are listed here because it is expected that most of the activity will occur within this management area.

^{2/}Incidental amounts of these timber management activities may occur in categories where 0 appears. Retain trees needed for streambank stability, future input of large woody debris, stream temperature control, and wildlife habitat.

MANAGEMENT AREA 3B (28,092 acres) - ANADROMOUS RIPARIAN AREAS

1. Description

Management Area 3B consists of lakes, perennial streams and seasonally flowing streams; lands adjacent to lakes, perennial and seasonal streams; floodplains and wetlands; wet, moist areas such as meadows, springs, seeps, bogs, and wallows and quaking aspen stands in watersheds currently or potentially supporting anadromous fish. These areas shall correspond to at least the recognizable area dominated by riparian vegetation. Often the area is nearly flat, and may be subject to various degrees of flooding or saturation.

Streams and adjacent lands in this management area support populations of anadromous and resident fish, and include all Class I, II, and III streams and adjacent lands where practices are modified to protect water quality and aquatic resources. Also included in this management area are those Class IV streams and upland riparian areas, such as seeps, springs, meadows and bogs, which have high water table conditions during some parts of the growing season. Class IV channels will be recognized as the important link between the uplands and the downslope perennial streams. They will be managed to ensure bank and channel stability. This will be determined from a site specific evaluation which will include the size of the area, plant and animal species present, and overall watershed condition.

Geographical boundaries of riparian areas are to be determined by on-site characteristics of soil and vegetation, but will be a minimum of 100 feet from the edge of all Class I, II, and III streams. All other riparian areas including Class IV streams and upland riparian areas will be identified and mapped during project planning and implementation. These Class IV and other riparian areas will have a variable width, depending on site specific needs for all riparian-dependent resources.

2. Goals

Manage riparian areas to protect and enhance their value for wildlife, anadromous fish habitat, and water quality. Manage timber, grazing, and recreation to give preferential consideration to anadromous fish on that portion of the management area "suitable" for timber management, grazing, or recreation. Design and conduct management in all riparian areas to maintain or improve water quality and beneficial uses.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area except where superseded by the following standards:

Recreation

1. Manage for recreation ranging from semiprimitive to roaded modified depending on the ROS objectives of the adjacent lands.
2. Limit and distribute use as necessary to protect and/or rehabilitate riparian areas.

3. Locate new recreational facilities outside of riparian areas. Maintain existing recreational sites to protect riparian-dependent resources.

Visuals

4. Meet visual quality objectives ranging from retention to modification depending on the visual quality objective of adjacent lands.

Fish and Wildlife

5. Provide the necessary habitat to maintain or increase populations of management indicator species with special emphasis on steelhead.
6. Cooperate and coordinate with other agencies and groups to achieve the following objectives:
 - (a) Develop instream habitat improvement projects for anadromous species with emphasis on cooperative projects with the Oregon Department of Fish and Wildlife, Bonneville Power Administration, Isaac Walton League, Trout Unlimited, and others, as appropriate.
 - (b) Cooperate with the Oregon Department of Fish and Wildlife in the identification and resolution of illegal taking of anadromous species.
 - (c) Maintain adequate minimum flows for anadromous species. Coordinate with Oregon Department of Fish and Wildlife in the identification of problems and the development of solutions.
7. Maintain dead and defective tree habitat capable of supporting at least 60% of the potential population of the management indicator species for primary excavators.
8. Manage the composition and productivity of key riparian vegetation to protect or enhance riparian-dependent resources. Emphasis will be on reestablishment of remnant hardwood shrub and tree communities
9. Plan, design, and implement riparian habitat improvement activities to upgrade riparian areas that are not in a condition to meet management objectives or the desired future condition
10. Improve the rate of recovery in riparian areas that are not in a condition to meet management objectives by eliminating or reducing the impacts of management activities that may slow riparian recovery
11. Maintain or enhance water quality and/or fish habitat through instream or riparian improvements. Implement instream activities outside of the spawning and egg incubation period.
12. Provide for input of large woody debris into all classes of streams and evaluate to determine if objectives are being met. Remove material that causes unacceptable channel and/or bank damage
13. Maintain or enhance wet meadow habitats that are used by greater sandhill cranes for nesting or feeding.

14. Maintain non-stream associated riparian areas such as: seeps, springs, bogs, and wallows together with their associated vegetative structure. Develop mitigation measures for management activities during project level environmental analysis.

Range

15. Grazing allotments with riparian areas in less than desirable condition have been identified and will be updated according to the schedule shown in Appendix A (Activity Schedule A-10).
16. *Include in allotment management plans (AMPs) a strategy for managing riparian areas for a mix of resource uses. Establish a measurable desired future riparian condition based on existing and potential vegetative conditions. When the current riparian condition is less than that desired, objectives will include a schedule for improvement. AMPs will identify management actions needed to meet riparian objectives with specific time frames. Measurable objectives will be set for key parameters, such as amount of stream surface shaded, streambank stability, sedimentation, cover provided by trees, shrubs, forbs, grasses and grasslike vegetation. This process is described in "Managing Riparian Ecosystems (Zones) for Fish and Wildlife in Eastern Oregon and Eastern Washington" (1979). The AMP will specify the monitoring needed to determine if the desired rate of improvement is occurring. AMPs currently not consistent with this direction will be developed or revised on a priority basis as shown in Appendix A (Activity Schedule A-10).*
17. Using Activity Schedule A-10 and available funding, prepare Allotment Management Plans for every grazing allotment on the Malheur National Forest as soon as possible. This process will use information gathered through the *range allotment analysis activity, including the analysis of the management situation. Prepare an allotment management plan for each allotment that provides the techniques to reach an agreed upon interdisciplinary desired future condition. Establish resource value ratings and the range resource management level needed to reach the desired future condition. Use Table IV-5 to establish utilization levels for grass/grasslikes and shrubs by range resource management level. Inventory existing conditions to determine if the riparian area is satisfactory or unsatisfactory.*
18. Establish annual forage utilization requirements for each grazing allotment as a tool to achieve or maintain the desired condition. Use the forage utilization standards shown in Table IV-5, except where site-specific monitoring information shows that a higher level of utilization will achieve the desired future condition without delaying the rate of improvement. As a minimum, the desired condition must be "satisfactory."

Employ all available methods to achieve the desired levels of utilization by permitted livestock and big game. In cooperation with Oregon Department of Fish and Wildlife establish riparian area carrying capacity of big-game. Limit game populations to the level necessary to achieve riparian objectives for all riparian resources. Special emphasis needs to be placed on big game riparian winter range management

Design the methods selected for controlled livestock use to fit the site-specific requirements for improving the riparian area to desirable condition. Any one or a combination of methods may be used to treat less than desirable riparian areas such as corridor fencing, herding, additional water developments, salting, nonuse for resource protection, early and late season use, short-term grazing rather than season long, reduced livestock numbers, control of degree of use, and/or creating additional pastures through fencing.

- 19. Manage allotments to protect or enhance riparian-dependent resources.
- 20. Manage livestock grazing so that water quality meets Oregon State standards and fish populations are maintained at an acceptable condition or in an upward trend.
- 21. Maintain sufficient streamside vegetation to maintain streambank stability and fish habitat capability
- 22. Restrict season long grazing, unless specifically evaluated and approved through the environmental analysis process.

TABLE IV-5
Allowable Utilization of Available Forage in Riparian Areas
(Percent Allowable Use of Available Forage)

Range Resource Management Level	Grass and Grasslikes ^{1/}		Shrubs ^{2/}	
	S _{3/}	U _{4/}	S	U
STRATEGY B - Stewardship Management^{5/}	40	0-30	30	0-25
STRATEGY C - Extensive Management^{6/}	45	0-35	40	0-30

^{1/} Utilization based on percent removed by weight

^{2/} Utilization based on weight and twig length Example if 2/3 of the available leader length is removed then browsed utilization is 50% (USDA-FS-PNW-RN-472, April 1988)

^{3/}S - Satisfactory Condition - see glossary

^{4/}U - Unsatisfactory Condition- see glossary

^{5/}Management controls livestock numbers so that livestock use is within present grazing capacity Distribution is achieved through riding, herding, and/or salting Improvements are minimal and constructed only to the extent needed to cost effectively maintain stewardship of the range in presence of grazing

^{6/}Management seeks full utilization of forage available to livestock Cost-effective management systems and techniques, including fencing and water development, are designed and applied to obtain relatively uniform livestock distribution and use of forage and to maintain plant vigor

Timber

- 23. No scheduled timber harvest along Class I or II streams (minimum width 200 feet, or 100 feet either side of stream) These lands are classified as "unsuitable" for timber management.

MANAGEMENT AREA 3B

24. No scheduled timber harvest will occur within the interior portions of the riparian area (minimum 66 feet) along Class III streams. This 66 foot interior corridor may straddle the stream or may occur on one side depending on site specific needs. These lands are classified as "unsuitable" for timber management.
25. Timber harvest (non-scheduled) may occur within riparian areas classified as "unsuitable" for timber management in order to accomplish specific riparian resource objectives.
26. Schedule timber harvest on portions of the management area classified as "suitable" for timber management. Ensure that all timber harvests are subordinate to all riparian dependent resources.
27. Emphasize uneven-aged timber management, on riparian areas classified as "suitable" for timber management. Emphasize single tree selection in the ponderosa pine type and group selection in the mixed conifer and lodgepole pine types. Even-aged management may be applied in all timber types based on a site-specific silvicultural prescription which meets riparian management objectives.

- ↳ 28. When applying group selection harvests (uneven-aged management), do not create openings larger than one-half acre in size. Created openings in adjacent management areas may border openings in riparian areas. Limit the lineal distance of created openings to 150 feet or less, along Class III streams, while ensuring that adequate stream surface shading remains.
- ↳ 29. For any Class I, II, or III stream, limit the cumulative total acres of created openings to 10% of the total riparian acres along any given stream.
- ↳ 30. Design timber harvesting activities along streams to provide for streambank stability and a future supply of large woody debris.
- ↳ 31. In upland riparian areas, design timber harvest activities to protect the integrity of these areas and provide for the riparian associated resources.
- ↳ 32. Keep mechanized equipment out of all stream channels and upland riparian areas. When stream channel crossings cannot be avoided, conduct harvesting activities at times of minimum flow, outside the fish spawning and egg incubation period, and at locations specifically designated on the ground where streambank and channel disturbances are minimized. Constructed temporary crossings, such as log and culvert installations, will require maintenance, removal and rehabilitation.
- ↳ 33. No commercial or recreational firewood cutting will be permitted in riparian areas.

Reforestation

34. Emphasize natural regeneration but plant when needed to meet riparian management objectives.

Water, Soil, and Air

- ↳ 35. Evaluate effects on wetlands and floodplains during project level environmental analysis.

36. Ensure that temperatures do not increase on Class I streams. Limit temperature increases on Class II and fish-bearing Class III streams to the quantitative criteria in Oregon State standards. Do not allow deterioration of water temperatures on Class III and IV streams when downstream Class I, II and fish-bearing Class III streams are affected. L
37. Protect instream flow through critical analysis of proposed water uses. Achieve instream flow protection by: (a) filing protests with States where applications are made that adversely affect National Forest resources; (b) asserting claims for this water under Federal or State laws where applicable; (c) inserting protection measures into special-use permits; or (d) reaching formal agreements over use. Purchase of water rights and impoundments are other means for reducing these impacts.
- Minerals**
38. Ensure that operating plans emphasize protection and/or mitigation of impacts to riparian-dependent species and that water quality standards are met through the application of BMPs.
39. Ensure that operating plans affecting anadromous fish habitat comply with Oregon standards pertaining to water quality and timing of instream activity.
- Lands**
40. Make land ownership adjustments which emphasize obtaining or maintaining federal ownership adjacent to anadromous fish habitat.
- Facilities**
- Roads**
41. Avoid locating roads in riparian areas while providing adequate local road access for management activities (e.g., timber management, fisheries structural improvements, etc.) Minimize the density of open roads in this management area by obliterating, revegetating, or closing unnecessary roads or any roads causing significant resource damage.
42. Design and maintain roads to protect fisheries values and riparian area habitat.
43. Provide seasonal closures to reduce sedimentation.
44. Leave stream channels of Class I to IV streams undisturbed by roads, except for crossings. Minimize adverse impacts to water and fisheries resources when designing necessary crossings.
45. Apply erosion seeding on: (a) all disturbed soil that occurs within 100-200 feet of a Class I, II, III or IV stream or where eroded material could reach a stream; and (b) on compacted skid trails with slopes greater than 20%.
46. Maintain fish passage on fish-bearing streams unless passage obstruction is unavoidable and addressed during the project-level environmental analysis.
47. Mitigate unavoidable adverse impacts on floodplain or wetlands.
- Trails**
48. Construct and maintain trails to prevent environmental damage. Design reconstruction projects to mitigate sediment.

MANAGEMENT AREA 3B

Protection

- Residue Management
- 49. Manage residue profiles to maintain or enhance resident fish and wildlife habitat.
 - 50. A site specific analysis is required for determining removal of activity-generated woody debris from all riparian areas unless nonremoval is specifically evaluated and approved in the project-level environmental analysis. Do not allow mechanized treatment of logging debris for site preparation or hazard reduction purposes in all riparian areas, unless evaluated and approved in a project-level environmental analysis. Burning of logging debris below the high waterline is prohibited.
 - 51. Use prescribed fire from planned ignitions to achieve forage production objectives.

- Insects and Disease
- 52. Apply integrated pest management principles to minimize losses and protect riparian area values

4. Schedule of Management Practices

MANAGEMENT AREA 3B - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
FISH AND WILDLIFE Fish Habitat Improvements ^{1/}	CI221	500 Structures
TIMBER		
Timber Harvest ^{2/}		
Clearcut	ET12	7 MMBF/93 Ac
Shelterwood - Seed Tree Cut	ET12	0 MMBF/0 Ac
Selection	ET12	15.0 MMBF/2,228 Ac
Overstory Removal on Existing Stands	ET12	0 MMBF/0 Ac
Salvage/Other Products	ET12	0 MMBF/0 Ac
Commercial Thin	ET12	0 MMBF/0 Ac
Total Timber Harvest	ET12	16.5 MMBF/2,321 Ac
Reforestation		
Planting	ET24	469 Ac
Natural	ET24	516 Ac
Timber Stand Improvement	ET25	1,337 Ac
Precommercial Thinning		

^{1/}These activities will also occur in Management Area 14. They are listed here because it is expected that most of the activity will occur within this management area.

^{2/} Incidental amounts of these timber management activities may occur in categories where 0 appears. Retain trees needed for streambank stability, future input of large woody debris, stream temperature control, and wildlife habitat.

MANAGEMENT AREA 4A (177,406 acres) - BIG-GAME WINTER RANGE MAINTENANCE

- 1. Description Management Area 4A provides winter habitat for big game, including Rocky Mountain elk and mule deer. These areas are primarily below 5,200 foot elevation and include nonforested grasslands, bitterbrush and mountain mahogany brushfields, and forested lands. Nonforested areas are generally on southern and western aspects. Landtypes and slope vary.
- 2. Goals Maintain or enhance the quality of the winter range habitat for deer and elk through timber harvesting, prescribed burning, and other management practices. Manage for elk habitat by balancing cover quality, cover spacing, forage, and open road densities.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area except where superseded by the following standards:

- Recreation**
 - 1. Manage for recreation ranging from semiprimitive to roaded modified, depending on ROS objective of adjacent land
 - 2. Access by motorized recreational vehicles will be prohibited December 1 to April 1, except for designated routes through winter range which are compatible with the management area emphasis.
- Visuals**
 - 3. Meet visual quality objectives ranging from retention to modification depending on the visual quality objective of adjacent lands.
- Fish and Wildlife**
- Big Game**
 - 4. Manage elk and mule deer winter range habitat to provide for 25% cover and an elk habitat effectiveness index (HEI) of 0.5

The HEI model provides a means of balancing cover quality, cover spacing, forage, and open road densities. If these minimums are not attainable due to natural conditions (e.g., extensive nonforest areas), insects and disease conditions, or past management activities, then the highest possible cover percentage and index value will be maintained or created. Site-specific project analysis will address both short-term and long-term effects, particularly in the case of cover where short-term options to treat stands for insects and disease will improve forest health in the long-term. The Forest Supervisor will review and approve all recommendations to drop below cover and HEI standards as well as a strategy to reach standards within a reasonable length of time (see Forest-wide Standard No. 3)

Cover and habitat effectiveness determinations for site-specific projects will be calculated on a subwatershed basis. Calculations will include both forested and nonforested lands regardless of their suitability for timber production.

Habitat Effectiveness Index (HEI) Model

The model to be used to calculate elk habitat effectiveness on winter range is:

$$HEI = (HE_c \times HE_s \times HE_r \times HE_f)^{1/4}$$

where.

HE_c = habitat effectiveness derived from the quality of cover

HE_s = habitat effectiveness derived from the size and spacing of cover

HE_r = habitat effectiveness derived from the density of roads open to vehicular traffic

HE_f = habitat effectiveness derived from the quality and quantity of forage

Shown below are the minimum elk cover and habitat effectiveness standards for winter range and minimum values for the model variables.

Winter Range	HEI	Minimum ^{1/} Values For Variables				Minimum Amount ^{2/} of Area in Cover		
		HE _c	HE _s	HE _{r3/}	HE _f	Satis.	Marginal	Total
Fox/Cottonwd	.5	.4	.3	.5	.4	10%	10%	25%
MF John Day	.5	.4	.3	.5	.4	10%	10%	25%
SF John Day	.5	.4	.3	.5	.4	8%	10%	20%
NF Malheur	.5	.4	.3	.5	.4	8%	10%	20%
Upper JD	.5	.4	.3	.5	.4	10%	10%	25%
Malheur River	.5	.4	.3	.5	.4	5%	10%	20%
Silvies	.5	.4	.3	.5	.4	8%	10%	25%

^{1/}The interactions between cover stand size and spacing, road density, forage and cover quality are compensatory to a limited extent; that is, variables with low values tend to be compensated by those with high values. Because elk tend to respond primarily to habitat variables of relatively low value, minimum values have been established for each variable in the habitat effectiveness model. While it is desirable to meet or exceed the minimum value for each variable it may not be possible to do this in every case due to site condition or potential. However, if all the variables are met at only the minimum values, the minimum standard for HEI will not be met. Therefore, to meet the HEI standard, if one or more variables are at the minimum or below, other variables must be met at higher levels in order to achieve the HEI standard.

^{2/}For cover definitions, see Glossary. Where satisfactory cover is below the minimum standard, retain sufficient hiding cover to mitigate this shortage.

^{3/}A closed road is one where use is not physically evident, no greater than one trip/week.

5. Achieve at least 50% HEI and 25% cover on winter range that overlaps with Management Area 14 (Visual Corridor) unless natural vegetative conditions prevent it. Resolve all conflicts in objectives through project level environmental analysis.
6. Provide for satisfactory and marginal cover in blocks of at least 10 acres and a minimum of 600 feet wide to ensure effective use of the cover by big game.
7. Restrict activities that disturb wintering big game in a significant and prolonged manner from December 1 to April 1.

8. Review winter range boundaries in cooperation with the Oregon Department of Fish and Wildlife and adjust as necessary.
9. Coordinate annually with the Oregon Department of Fish and Wildlife in developing population goals which are in balance with habitat capability.
10. Conduct inventories and studies as needed to identify conflicts between big game and other resources and work for resolution in an interdisciplinary fashion.
11. Cooperate with the Oregon Department of Fish and Wildlife in studies of big game movements using tagging, radio collars, etc , and also in seasonal counts as appropriate to the achievement of objectives
12. Monitor winter range condition and utilization using transects, exclosures, photo points, vegetative plots, etc., as appropriate for the purpose of identifying improvement, mitigation, or research needs Give special emphasis to the determination of proper winter range restoration techniques (e.g., decadent mountain-mahogany).
13. Develop, in conjunction with silviculture, prescriptions, stocking levels and a stand treatment schedule for precommercial and commercial thinning that achieve long-term big game cover requirements with a minimum of adverse impacts on timber production.

Range

14. Prioritize forage utilization to provide for big game species at levels derived in consultation with the Oregon Department of Fish and Wildlife for each area.
15. Include the forage needs of big game in late fall when preparing or updating allotment management plans and when considering seasonal extensions of livestock grazing.

Timber

16. Lands in Management Area 4A are classified as both "suitable" and "unsuitable" for timber management. The nonforest grasslands and seral brushfields are "unsuitable" for timber management. Schedule timber harvest on the portion of the management area classified as "suitable" for timber management (see Appendix B, Table B-2).
17. On lands "suitable" for scheduled timber harvests, silvicultural prescriptions will be designed to provide for 50% habitat effectiveness and cover standards (both long and short-term).
18. Emphasize even-aged silvicultural systems. Based on site-specific prescription, uneven-aged silvicultural systems may be applied.
19. While basing harvest entries on individual stand conditions and meeting all resource objectives, uneven-aged management may be applied to the following types of lands: (a) dispersed recreation sites or hunter camps; (b) areas with high scenic value; (c) opportunity areas for mule deer habitat enhancement, (d) low site timber lands; (e) climax ponderosa pine and Douglas-fir sites with 50% or more ponderosa pine in the understory; and (f) slopes less than 35%, favoring slopes less than 20%.

MANAGEMENT AREA 4A

20. When applying uneven-aged management, manage for the following target tree numbers and sizes:
 - (a) Twenty four inch uneven-aged management ponderosa pine and mixed conifer stands - Maintain at least 2 trees per acre that are 24 inches in diameter and 5 replacement trees that are 18 to 24 inches in diameter.
 - (b) Twenty inch uneven-aged management ponderosa pine and mixed conifer stands - Maintain at least 2 trees per acre that are 20 inches in diameter and 5 replacement trees that are 16 to 20 inches in diameter.
 - (c) Low site lands (all species) - Maintain at least 1 tree per acre 18 inches in diameter.
 - (d) Manage the stand, including understory, to maintain target tree standards throughout time and to meet regional direction for uneven-aged management (see glossary, uneven-aged management).
 21. When applying uneven-aged management, the size of created openings are to be a maximum of two acres in size. Exceptions will be based on site-specific prescriptions which are responsive to integrated land management objectives.
- Other
22. Restrict activities for logging, firewood gathering, and post sale operations when necessary to protect wintering elk and deer, roads, soil, and water.
- Minerals
23. Stipulate in mineral leases the possible limitation of activity between December 1 through April 1 if necessary to provide for wintering needs of big game. Negotiate reasonable limitations in operating plans for locatable mineral development.
- Facilities
- Roads
24. To limit disturbance to wintering big game, the open road density will be no greater than 2.2 mi/mi² by 1999. Where existing conditions do not meet this goal, project transportation system designs will be developed in order to move toward this goal in the shortest time frame possible. Densities will be monitored on a watershed basis (see Appendix I).
 25. Restrict off-highway vehicles, over-the-snow vehicles, and other non-industrial traffic use from December 1 to April 1 to protect wildlife habitat and minimize harassment to wintering elk and deer.
 26. Close roads to motorized use if necessary to reduce harassment of wintering elk and deer.
- Protection
- Residue Management
27. Manage residue profiles to maintain or enhance big-game habitat and forage production.
 28. Limit treatment activities between Dec. 1 and April 1 to reduce disturbances to wintering elk and deer.

4 Schedule of Management Practices

MANAGEMENT AREA 4A - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
TIMBER		
Timber Harvest		
Clearcut	ET12	47.2 MMBF/3,653 Ac
Shelterwood - Seed Tree Cut	ET12	53.7 MMBF/7,790 Ac
Shelterwood - Removal Cut	ET12	2.5 MMBF/922 Ac
Selection	ET12	31.3 MMBF/6,775 Ac
Overstory Removal on Existing Stands	ET12	35.6 MMBF/2,968 Ac
Commercial Thin	ET12	32.8 MMBF/9,147 Ac
Salvage/Other Products	ET12	9.8 MMBF/Ac N/A
Total Timber Harvest	ET12	212.9 MMBF/31,255 Ac
Reforestation		
Planting	ET24	4,216 Ac
Natural	ET24	9,937 Ac
Timber Stand Improvement		
Precommercial Thinning	ET25	6,399 Ac
FISH HABITAT IMPROVEMENTS		
Non-Structural	CW222	5,000 Ac
FACILITIES		
Road Construction/Reconstruction	LT22	53 Miles
Timber Purchaser Road		
Construction	LT214-12	82 Miles
Reconstruction	LT214-22	191 Miles

MANAGEMENT AREA 5

MANAGEMENT AREA 5 (4,040 acres) - BALD EAGLE WINTER ROOSTS

1. Description Management Area 5 is composed of timbered stands in mature/overmature condition which provide winter roosting habitat for bald eagles. This habitat is located in drainages on the southern edge of the Forest. Roost sites are on slopes greater than 35% and are generally the first tall timber adjacent to the Harney Basin.
2. Goals Manage these stands to maintain or enhance winter roost habitat for bald eagles.

3. Standards

RESOURCE ELEMENT STANDARDS

Direction for managing bald eagle winter roosts is given in the *Pacific States Bald Eagle Recovery Plan* (see Appendix I). Forest-wide management direction included in Chapter IV, Section E, of this plan also applies to this management area unless superseded by the following standards:

- Recreation**
1. Manage for roaded natural recreation.
 2. Restrict winter recreation activities that conflict with bald eagles during roost periods.
- Visuals**
3. Meet visual quality objectives ranging from retention to modification depending on the visual quality objective of adjacent lands.
- Fish and Wildlife**
4. Preserve the integrity of active and potential bald eagle roost sites. Manage and protect them within the requirements of the *Pacific States Bald Eagle Recovery Plan*.
 5. Inventory all actual and potential winter roosts. Develop management plans for active roosts which address problems, opportunities, boundary adjustments, replacement roosts, etc., as directed by the *Pacific States Bald Eagle Recovery Plan*. Use an interdisciplinary process to resolve conflicts with other resources as appropriate. Coordinate with other agencies (e.g., Bureau of Land Management) as needed to develop sound plans.
 6. Examine potential roosts periodically to determine if any are being used by eagles and develop management plans as needed.
 7. Manage active and potential roosts to maintain desirable old growth conditions that are characteristic of roost habitat. Manipulate the structural features and vegetative composition of the roosts as necessary. Give preference to natural processes if they will achieve objectives in a timely manner.
 8. Assist in monitoring efforts of the roosts in cooperation with other agencies. Utilize the findings and recommendations of the roost surveys as appropriate.

- 9. Maintain dead and defective tree habitat capable of supporting natural occurring levels of populations of primary excavators.
- Timber**
- 10. Exclude scheduled timber harvest. Lands are classified as "unsuitable" for timber management. Timber may be harvested for the purpose of stand maintenance or enhancement to optimize roost habitat. Restrict harvest activities to occur only during the nonuse period to avoid eagle disturbance. Conduct all timber-related activity in accordance with the *Pacific States Bald Eagle Recovery Plan*.
 - 11. Leave appropriate numbers of large diameter trees for roosting sites as recommended in the *Pacific States Bald Eagle Recovery Plan*.
 - 12. Prohibit firewood cutting.
- Minerals**
- 13. Manage mineral activities during the roost site utilization period to mitigate adverse impacts.
- Lands**
- 14. Do not exchange these lands out of National Forest ownership as long as the bald eagle is a threatened and endangered species.
 - 15. Restrict permitted special uses that conflict with roost management objectives.
- Facilities**
- Roads**
- 16. Restrict road use when bald eagle roosts are occupied
 - 17. Avoid bald eagle roost sites when locating and designing roads.
- Utility Corridors**
- 18. Manage this area as a Category 1 Avoidance area for the location of utility corridors.
- Protection**
- Residue Management**
- 19. Manage residue to protect the management area from catastrophic wildfire and enhance habitat for bald eagles. Develop site-specific residue management objectives in the Bald Eagle Winter Roost Management Plan.
 - 20. Manage residue profiles to minimize the potential for high intensity fires. Use prescribed fire from planned ignitions to achieve resource management objectives.
- Insects and Disease**
- 21. Allow endemic levels of infestation to occur. Treat epidemic levels that threaten eagle roost values or adjacent lands
- 4. Schedule of Management Practices**
- No management practices are scheduled for Management Area 5.

MANAGEMENT AREA 6A (68,700 acres) - STRAWBERRY MOUNTAIN WILDERNESS

1. Description

Management Area 6A consists of the Strawberry Mountain Wilderness which is entirely within the Malheur National Forest. An east-west hydrologic divide separates the wilderness into two distinct parts. The northern portion drains into the mainstem of the John Day River and the southern portion drains into the Silvies and Malheur River systems.

A variety of physical and biological environments occur in the area, both forested and nonforested, as determined by soil, slope, aspect, elevation (approximately 4,600 to 9,038 feet at the top of Strawberry Mountain), and climatic factors.

This area was designated a Class I Airshed by the 1977 Clean Air Act Amendments.

2. Goals

Manage in accordance with values specified in the Wilderness Act of 1964 and the Oregon Wilderness Act of 1984. Preserve and protect the wilderness character of the resource. Provide naturalness and opportunities for solitude, challenge, and inspiration. Within these constraints and following a policy of nondegradation management, provide for recreational, scenic, educational, scientific, and historical uses.

Manage the area to be essentially free from evidence of restrictions and controls. Only facilities essential for resource protection are to be used and these will be constructed of native or natural-appearing materials. Provide no facilities for the comfort or convenience of the user. Space and disperse groups informally to minimize contacts with other groups or individuals.

Within Management Area 6A, two wilderness recreation opportunity spectrum (WROS) classes will be provided. Manage approximately 6,870 acres around Canyon Mountain north of Berry Creek for pristine wilderness opportunities; and the remaining 61,830 acres for primitive wilderness opportunities. Each wilderness recreation opportunity spectrum class has distinct management goals and standards in terms of physical/biological objectives, social setting objectives, and the desired managerial setting.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area unless superseded by the following standards:

Recreation

1. Limit dispersed recreation and distribute use as necessary to protect wilderness values. Use the "Limits of Acceptable Change" process to determine management actions necessary to preserve natural environments and provide for planned wilderness experiences.
2. Manage use employing the following techniques in descending order of priority: information services and public education, indirect management methods, area restrictions, mandatory permits, and closure to public use.

- 3. Retain the current number and type of outfitter-guide permits until better total capacity figures can be derived.
- Cultural Resources**
- 4. Recognize that cultural resources within and relating to the wilderness are a valuable, nonrenewable resource. Identify, evaluate, and manage these resources in compliance with Federal and State laws and Forest Service policy.
 - 5. Remove the works of humans in the wilderness unless they are: (a) deemed necessary to support public purposes; (b) serving administrative purposes necessary for protection of the wilderness resource, or (c) essential to cultural resource management
 - 6. For significant sites threatened with loss or deterioration, complete a comparative analysis evaluation which determines the site's importance to the understanding of comparable resources within and outside the wilderness. For archaeological sites conduct data recovery where appropriate. For historic structures and features perform stabilization where appropriate.
 - 7. For some significant standing historic buildings and engineering structures and features, abandonment and allowing natural deterioration to occur is an appropriate management decision. Before abandonment, conduct suitable mitigation such as documentation to Historic American Buildings Survey or Historic American Engineering Record Standards Follow the process outlined in 36 CFR 800 prior to any decision to abandon or remove buildings or structures which may meet National Register criteria Manage any retained or maintained buildings or structures to have a minimum impact on the wilderness resource
 - 8. Prohibit on-site interpretation by signs. Interpretation may be done outside the wilderness through brochures and audio-visual programs.
- Visuals**
- 9. Meet preservation visual quality objectives.
- Fish and Wildlife**
- 10. Continue aerial stocking of fish by the Oregon Department of Fish and Wildlife in Strawberry Lake provided it does not conflict with other wilderness management objectives.
 - 11. Assess proposals for re-introductions of wildlife, e.g., American peregrine falcon and bighorn sheep, using project level environmental analysis.
 - 12. Dead and defective tree habitat will be provided at natural levels.
- Range**
- 13. Limit livestock grazing and numbers to those allotments established prior to establishment of the wilderness.
 - 14. Use native materials that harmonize with the wilderness character for structural improvements.
 - 15. Remove unnecessary range improvements

MANAGEMENT AREA 6A

16. In the Strawberry Mountain Wilderness additions, designated by the 1984 Oregon Wilderness Act, allow the occasional use of motorized equipment for facility maintenance and other range activities when evaluated through the environmental analysis process and approved by the Regional Forester.
- Timber**
17. Exclude timber harvest; lands are classified as "unsuitable" for timber management.
- Water, Soil, and Air**
18. Identify the air-quality related values and develop standards for protecting them in conformance with Oregon State's Implementation Plan.
- Minerals**
19. The wilderness is closed to minerals entry and mineral leasing subject to valid existing rights, as of December 31, 1983, on the part of the wilderness classified prior to that date, and as of June 26, 1984, for wilderness classified on that date. Prior to approving any plan of operations, valid existing rights must be established through a mineral examination of the claim(s) by a qualified Forest Service mineral examiner. Include reasonable mitigation and reclamation measures to protect wilderness values in any approved operating plans. Periodically inspect all claims for potential unregulated activity.
- Lands**
20. Prohibit installation of permanent communication facilities.
- Facilities**
- Utility Corridors**
21. Manage this area as an "Exclusion Area" for the location of utility corridors.
- Protection**
- Fire Management**
22. Prepare, update, and implement a wilderness fire management action plan, which gives specific direction on how fires will be managed in this wilderness area, including the use of natural ignitions.
23. The use of planned or natural ignitions to achieve wilderness objectives may be considered in the future, if it is determined they are necessary to maintain the natural ecological evolution
- Insects and Disease**
24. Allow endemic levels of infestations. Treat epidemic levels that severely threaten adjacent lands.

Wilderness

PRISTINE AREAS

Area Characteristics: Area is characterized by an extensive unmodified natural environment. Natural processes and conditions have not and will not be measurably affected by the actions of users. The area is managed to be as free as possible from the influence of human activities. People are only brief visitors. Essentially no facilities are required to protect the wilderness resource. Terrain and vegetation allow extensive and challenging cross-country travel.

Experience Opportunity	Provides the most outstanding opportunity for isolation and solitude, free from evidence of past human activities and with very infrequent encounters with other users. The user has outstanding opportunities to travel cross-country utilizing a maximum degree of primitive skills, often in an environment that offers a high degree of challenge and risk.
Physical/Biological Standards	Management goal is to sustain or enhance the natural ecosystems. Adjacent areas and classes will be managed to protect the natural integrity of the area.
Air	25. Air quality resulting from outside activities is maintained as per Federal Clean Air Act and State standards. Air quality will not be degraded as a result of recreational use, such as from campfire smoke.
Soils	26. Soil degradation will be minimized to prevent a loss of native vegetation.
Water	27. Maintain the natural quality of streams and lakes. There will be no measurable degradation of water quality as a result of human activity, including Forest Service administrative use.
Vegetation	<p>28. Maintain healthy, native vegetation. Vegetative loss will not exceed 225 square feet at any impacted site, and less than 0.5% of any acre.</p> <p>29. Due to human activities, there will be no loss of trees, and there will be fewer than two trees with exposed roots per impacted site.</p> <p>30. There will be no long-term modification of natural plant succession as a result of human activities. Acceptable modifications are those which will recover in one growing season.</p> <p>31. All dead, standing vegetation will be left in place.</p> <p>32. Snags and down vegetation will be managed to approximate natural conditions.</p> <p>33. Manage to allow natural ecological successions, including natural infestations of insects, to operate freely, insofar as they do not endanger significant resources outside wilderness.</p>
Fish and Wildlife	<p>34. Maintain fish and wildlife indigenous to the wilderness with emphasis on preservation of threatened and endangered species.</p> <p>35. Riparian habitat will be protected from human and livestock impacts.</p> <p>36. Visitor use will seldom and only temporarily displace wildlife populations.</p> <p>37. Displacement of wildlife due to visitor use can be significant, and will be an overriding concern in wilderness where the primary objective is to maintain a natural ecosystem. Visitor use will not decrease habitat effectiveness in this class for any species by more than 10%. An indirect measure of visitor effects on wildlife can be travel route density. For example: specific to deer and elk there should be an average commonly used user-made travel route (see trails) density of less than 0.4 mile per 640 acres, throughout suitable habitat areas.</p>

MANAGEMENT AREA 6A

- Visuals**
38. Camping areas will be located within forested areas, on litter, where possible. In all cases, sites will be located to take advantage of topographic and vegetative screening. Camps will be located at least 200 feet from lakes, other camps and key interest features.
 39. Human activities should remain subordinate in foreground distance zones. Human activities should not be recognizable in middle-ground distance zones.
- Livestock**
40. Commercial allotments are prohibited..
- Social Standards**
- Encounters**
41. There will be at least an 80% probability of not more than one encounter per day between groups during all use periods.
- Group Size**
42. Maximum party size will be 6 people. Livestock limits should be based on vegetation and soil impacts, and in all cases must not exceed 9 head total.
- Camps**
43. There will be no other camps visible (within 500 feet) or audible from any site. Naturalize most, if not all, campfire sites.
- Livestock**
44. Recreation stock is held overnight at least 200 feet from lakes and streams and away from camp areas.
- Pets**
45. Pets will be under reliable voice control and/or physical restraint. They may be *banned for the protection of wildlife populations and to decrease resource impacts.*
- Managerial Standards**
- Off-Site Evidence of Control**
46. Management controls which are necessary to protect the ecological and social elements throughout the wilderness are evident outside the wilderness and at trail heads and boundary portals. Formal regulations, orders, and/or permits may be necessary to achieve management objectives. Formal and informal users education programs will be initiated to inform users about what to expect and how to use the area for optimum benefit of all. Information service actions are designed to help meet management objectives rather than to promote use.
- On-Site Evidence Of Control**
47. Patrols and monitoring of conditions by Forest Service and other appropriate state and Federal management personnel is conducted as necessary to achieve management objectives.
- Signs**
48. Use only the minimum signing that is essential to protect the wilderness resource.
- Trails**
49. There will be no system trails in this wilderness recreational opportunity *spectrum class*. User travel will be managed so visitor-use travel routes are not readily apparent or appear to be wildlife trails. Where natural appearing travel routes have been created from visitor use, they will not be shown on maps or Forest Service trail guides.

Wilderness**PRIMITIVE AREAS**

Area Characteristics: Area is characterized by essentially unmodified natural environment. Concentration of users is low and evidence of human use is minimal.

The area is managed to be essentially free from evidence of human-induced restrictions and controls. Only essential facilities for resource protection and safety are used and are constructed of native or natural appearing materials. No facilities for comfort or convenience of the user are provided. Visitors are encouraged to disperse to desirable existing sites to minimize contacts with other groups.

Experience Opportunity: High opportunity for exploring and experiencing considerable isolation, solitude, and self-reliance through application of primitive recreation skills in an environment that offers a high degree of challenge and risk.

Physical/Biological Standards: Management goal is to sustain or enhance the natural ecosystems.

Air: 50. Air quality resulting from outside activities is maintained as per Federal Clean Air Act and State standards. Air quality will not be degraded as a result of recreational use, such as from campfire smoke.

Soil: 51. Soil degradation will be minimized to prevent a loss of native vegetation.

Water: 52. Maintain the natural quality of streams and lakes. Activities will not degrade water quality except for temporary changes which are transitory in nature, such that the water quality returns to its previous level when the activity ceases.

Vegetation: 53. Vegetative loss will not exceed 400 square feet at any site (1.0% of any acre). Due to human activities, there will be no loss of trees, and fewer than 4 trees with exposed roots per impacted site.

54. There will be no long-term modification of natural plant succession as a result of human activities on areas outside of campsites, trails, and administrative sites. Acceptable modifications are those which will recover in one growing season.

55. All dead, standing vegetation will be left in place, except to protect major bridges.

56. Snags and down vegetation will be managed to approximate natural conditions. Dead and down vegetation may be utilized in amounts that can be replaced annually through natural accumulation.

57. Vegetation impacts along trails will be confined to the planned location and to meet the objectives of the trail.

58. Manage to allow natural ecological successions, including natural infestations of insects, unless they endanger significant resources outside the wilderness.

MANAGEMENT AREA 6A

Fish and Wildlife

59. Riparian habitat will be protected from human and livestock impact.
60. Visitor use will not displace wildlife from critical areas during critical periods (such as fawning, and winter range areas).
61. Maintain fish and wildlife indigenous to the wilderness with emphasis on preservation of threatened and endangered species.
62. Displacement of wildlife due to visitor use can be significant, and will be an overriding concern in wilderness where the primary objective is to maintain a natural ecosystem. Visitor use will not decrease habitat effectiveness in this class for any species by more than 20%. An indirect measure of visitor effects on wildlife can be travel route density. For example: specific to deer and elk there will be an average trail density (system and commonly used user-made) of less than 0.8 mile per 640 acres throughout suitable habitat areas.

Visuals

63. Camping areas will be located within forested areas, on litter, where possible. In all cases, sites will be located to take advantage of topographic and vegetative screening. Camps will be located at least 200 feet from lakes, trails, other camps and key interest features. Site design (such as trails) should remain subordinate to the natural landscape.
64. Human activities will remain subordinate in foreground distance zones. Human activities will not be recognizable in middle ground distance zones.
65. Facilities, including trails, will be harmonious with natural landscape in middle ground and background distance zones. Native and natural materials must dominate.

Livestock

66. Commercial livestock grazing is permitted under approved management plans to the extent that such use is compatible with all resource values.

Social Standards

Encounters

67. Emphasis is on little or no interparty contact. There will be at least an 80% probability during all use periods of less than 7 other groups encountered per day while travelling along trails. Attempt to minimize conflicts between hiking and horseback groups at entry points, along travel routes, and at campsites.

Group Size

68. Party size limits will range from 6 to 12 people depending on the actual number of encounters in an area. Livestock limits will be based on vegetation and soil impacts, and in all cases must not exceed 18 head total. Only allow the party size to approach 12, and the number of livestock to approach 18, when 4 encounters or less are expected.

Camps

69. Campsites will provide a high degree of solitude. There must be greater than an 80% probability that none or at most only 1 campsite is visible (within 500 feet) or audible from any other campsite.
70. Camps will be separated from other campsites and set back from trails, meadows, lakes and streams at least 200 feet, where feasible.

- 71. Open fires will be banned or limited.
- Livestock
- 72. Grazing stock is permitted except in established camp areas. Recreation stock is held overnight at least 200 feet from lakes and streams, away from camp areas, and out-of-sight trails.
- Pets
- 73. Pets will be under reliable voice control and/or physical restraint. They may be banned for the protection of wildlife populations and to decrease resource impacts.
- Managerial Standards**
- Off-Site Evidence of Control
- 74. Management control necessary to protect the ecological and social elements throughout the wilderness are evident outside the wilderness and at trail heads and boundary portals. Formal regulations, orders, and/or permits may be necessary to achieve management objectives. Formal and informal user education programs will be initiated to inform users about what to expect and how to use the area for optimum benefit of all. Information service actions are designed to help meet management objectives rather than to promote use
- On-Site Evidence of Control
- 75. There is a periodic presence of wilderness rangers, technicians engaged in monitoring or project work, and trail crews. Management personnel shall conform to party size limitations, established social and ecological element standards, and where feasible work should be scheduled for low-use periods.
- Signs
- 76. Provide minimum signing necessary to protect wilderness resources. Visitor takes primary responsibility for personal safety. No more than one sign with a maximum of two route indicators will be placed at trail junctions. Distances will not be provided. Geographic features may be labeled on maps but will not be signed.
 - 77. Signing will be the minimum needed and primarily for resource protection. Destination signing is not permitted.
- Trails
- 78. Trails will be constructed and maintained to most difficult standards. Trails will not access all attraction features, such as lakes. Allow for cross-country travel within this class to provide a broad range of recreation experiences and to manage use levels.

MANAGEMENT AREA 6A

4. Schedule of Management Practices

MANAGEMENT AREA 6A - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
RECREATION Trail Construction/Reconstruction	AT22	23.3 Miles
Wilderness Implementation Schedule	AW112	1 Plan



MANAGEMENT AREA 6B (12,620 acres) - MONUMENT ROCK WILDERNESS

1. Description

Management Area 6B is the Malheur National Forest portion of the Monument Rock Wilderness. This 19,650 acre wilderness was established June 26, 1984. The 12,620 acres occurring on the Malheur National Forest are administered by the Prairie City Ranger District. This direction also applies to the remaining acres administered by the Unity Ranger District of the Wallowa-Whitman National Forest.

The area has been grazed by sheep and cattle and evidence of humans can still be found because of this activity.

A variety of physical and biological environments occur in the area, both forested and nonforested, as determined by soil, slope, aspect, elevation (approximately 4,900 to 7,035 at Table Rock), and climate factors. The Little Malheur River flows through this wilderness.

2. Goals

Manage in accordance with values specified in the Wilderness Act of 1964 and the Oregon Wilderness Act of 1984. Preserve and protect the wilderness character of the resource. Provide naturalness and opportunities for solitude, challenge, and inspiration. Within these constraints and following a policy of nondegradation management, provide for recreational, scenic, educational, scientific, and historical uses.

Manage the area to be essentially free from evidence of restrictions and controls. Only facilities essential for resource protection are to be used and these will be constructed of native or natural-appearing materials. Provide no facilities for the comfort or convenience of the user. Space and disperse groups informally to minimize contacts with other groups or individuals.

All of Management Area 6B will be managed for primitive recreation opportunities.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area unless superseded by the following standards:

Recreation

1. Limit dispersed recreation and distribute use as necessary to protect wilderness values. Use the "Limits of Acceptable Change" process to determine management actions necessary to preserve natural environments and provide for planned wilderness experiences.
2. Manage use following these techniques in descending order of priority: information services and public education, indirect management methods, area restrictions, mandatory permits, and closure to public use.
3. Retain the current number and type of outfitter-guide permits until better total capacity figures can be derived.

MANAGEMENT AREA 6B

Cultural Resources

4. Recognize that cultural resources within and relating to the wilderness are a valuable, nonrenewable resource. Identify, evaluate, and manage these resources in compliance with Federal and State laws and Forest Service policy.
5. Remove the works of humans in the wilderness unless they are: (a) deemed necessary to support public purposes, (b) serving administrative purposes necessary for protection of the wilderness resource, or (c) essential to cultural resource management.
6. For significant sites threatened with loss or deterioration, complete a comparative analysis evaluation which determines the site's importance to the understanding of comparable resources within and outside the wilderness. For archaeological sites conduct data recovery where appropriate. For historic structures and features perform stabilization where appropriate.
7. For some significant standing historic buildings and engineering structures and features, abandonment and allowing natural deterioration to occur is an appropriate management decision. Before abandonment, conduct suitable mitigation such as documentation to Historic American Buildings Survey or Historic American Engineering Record standards. Follow the process outlined in 36 CFR 800 prior to any decision to abandon or remove buildings or structures which may meet National Register criteria. Manage any retained or maintained buildings or structures to have a minimum impact on the wilderness resource.
8. Prohibit on-site interpretation by signs. Interpretation may be done outside the wilderness through brochures and audio-visual programs.

Visuals

9. Meet preservation visual quality objectives.

Fish and Wildlife

10. Dead and defective tree habitat will be provided at natural levels.

Range

11. Limit livestock grazing and numbers to those allotments established prior to establishment of the wilderness.
12. Use native materials that harmonize with the wilderness character for structural improvements.
13. Remove range improvements that are unnecessary.
14. Allow the occasional use of motorized equipment for facility maintenance and other range management activities when evaluated through the environmental analysis process and when approved by the Regional Forester.

Timber

15. Exclude timber harvest. Lands are classified as "unsuitable" for timber management due to legislation forbidding harvest.

Minerals

16. The wilderness is closed to minerals entry and mineral leasing subject to valid existing rights as of June 26, 1984.

Lands

17. Prohibit installation of permanent communication facilities.

Facilities

Utility Corridors 18. Manage this area as an "Exclusion Area" for the location of utility corridors.

Protection

Fire Management 19. Prepare, update, and implement a wilderness fire management action plan, which gives specific direction on how fires will be managed in this wilderness area, including the use of natural ignitions.

20. The use of planned or natural ignitions to achieve resource management objectives may be considered in the future, if it is determined they are necessary to maintain the natural ecological evolution

Insects and Disease 21. Allow endemic levels of infestations. Treat epidemic levels that severely threaten adjacent lands.

Wilderness

PRIMITIVE AREAS

Area Characteristics: Area is characterized by essentially unmodified natural environment. Concentration of users is low and evidence of human use is minimal.

The area is managed to be essentially free from evidence of human-induced restrictions and controls. Only essential facilities for resource protection and safety are used and are constructed of native or natural appearing materials. No facilities for comfort or convenience of the user are provided. Visitors are encouraged to disperse to desirable existing sites to minimize contacts with other groups.

Experience Opportunity High opportunity for exploring and experiencing considerable isolation, solitude, and self-reliance through application of primitive recreation skills in an environment that offers a high degree of challenge and risk.

Physical/Biological Standards Management goal is to sustain or enhance the natural ecosystems.

Air 22. Air quality resulting from outside activities is maintained as per Federal Clean Air Act and State standards. Air quality will not be degraded as a result of recreational use, such as from campfire smoke.

Soil 23. Soil degradation will be minimized to prevent a loss of native vegetation.

Water 24. Maintain the natural quality of streams and lakes. Activities will not degrade water quality except for temporary changes which are transitory in nature, such that the water quality returns to its previous level when the activity ceases.

Vegetation 25. Vegetative loss will not exceed 400 square feet at any site (1.0% of any acre). Due to human activities, there will be no loss of trees, and fewer than 4 trees with exposed roots per impacted site.

MANAGEMENT AREA 6B

26. There will be no long-term modification of natural plant succession as a result of human activities on areas outside of campsites, trails, and administrative sites. Acceptable modifications are those which will recover in one growing season.
27. All dead, standing vegetation will be left in place, except to protect major bridges.
28. Snags and down vegetation will be managed to approximate natural conditions. Dead and down vegetation may be utilized in amounts that can be replaced annually through natural accumulation.
29. Vegetation impacts along trails will be confined to the planned location and to meet the objectives of the trail.
30. Manage to allow natural ecological successions, including natural infestations of insects, unless they endanger significant resources outside the wilderness.

Fish and Wildlife

31. Riparian habitat will be protected from human and livestock impact.
32. Visitor use will not displace wildlife from critical areas during critical periods (such as fawning, and winter range areas).
33. Maintain fish and wildlife indigenous to the wilderness with emphasis on preservation of threatened and endangered species.
34. Displacement of wildlife due to visitor use can be significant, and will be an overriding concern in wilderness where the primary objective is to maintain a natural ecosystem. Visitor use will not decrease habitat effectiveness in this class for any species by more than 20%. An indirect measure of visitor effects on wildlife can be travel route density. For example: specific to deer and elk there will be an average trail density (system and commonly used user-made) of less than 0.8 mile per 640 acres throughout suitable habitat areas.

Visuals

35. Camping areas will be located within forested areas, on litter, where possible. In all cases, sites will be located to take advantage of topographic and vegetative screening. Camps will be located at least 200 feet from lakes, trails, other camps and key interest features. Site design (such as trails) should remain subordinate to the natural landscape.
36. Human activities will remain subordinate in foreground distance zones. Human activities will not be recognizable in middle ground distance zones.
37. Facilities, including trails, will be harmonious with natural landscape in middle ground and background distance zones. Native and natural materials must dominate.

Livestock

38. Commercial livestock grazing is permitted under approved management plans to the extent that such use is compatible with all resource values.

Social Standards

Encounters

39. Emphasis is on little or no interparty contact. There will be at least an 80% probability during all use periods of less than 7 other groups encountered per day while travelling along trails. Attempt to minimize conflicts between hiking and horseback groups at entry points, along travel routes, and at campsites.

Group Size

40. Party size limits will range from 6 to 12 people depending on the actual number of encounters in an area. Livestock limits will be based on vegetation and soil impacts, and in all cases must not exceed 18 head total. Only allow the party size to approach 12, and the number of livestock to approach 18, when 4 encounters or less are expected

Camps

41. Campsites will provide a high degree of solitude. There must be greater than an 80% probability that none or at most only 1 campsite is visible (within 500 feet) or audible from any other campsite.

42. Camps will be separated from other campsites and set back from trails, meadows, lakes and streams at least 200 feet, where feasible

43. Open fires will be banned or limited.

Livestock

44. Grazing stock is permitted except in established camp areas. Recreation stock is held overnight at least 200 feet from lakes and streams, away from camp areas, and out-of-sight trails.

Pets

45. Pets will be under reliable voice control and/or physical restraint. They may be banned for the protection of wildlife populations and to decrease resource impacts.

Managerial Standards

Off-Site Evidence of Control

46. Management control necessary to protect the ecological and social elements throughout the wilderness are evident outside the wilderness and at trail heads and boundary portals. Formal regulations, orders, and/or permits may be necessary to achieve management objectives. Formal and informal user education programs will be initiated to inform users about what to expect and how to use the area for optimum benefit of all. Information service actions are designed to help meet management objectives rather than to promote use.

On-Site Evidence of Control

47. There is a periodic presence of wilderness rangers, technicians engaged in monitoring or project work, and trail crews. Management personnel shall conform to party size limitations, established social and ecological element standards, and where feasible work should be scheduled for low-use periods.

MANAGEMENT AREA 6B

- Signs**
- 48 Provide minimum signing necessary to protect wilderness resources. Visitor takes primary responsibility for personal safety. No more than one sign with a maximum of two route indicators will be placed at trail junctions. Distances will not be provided. Geographic features may be labeled on maps but will not be signed.
 - 49. Signing will be the minimum needed and primarily for resource protection. Destination signing is not permitted.
- Trails**
- 50. Trails will be constructed and maintained to most difficult standards. Trails will not access all attraction features, such as lakes. Allow for cross-country travel within this class to provide a broad range of recreation experiences and to manage use levels.

4. Schedule of Management Practices

MANAGEMENT AREA 6B - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
RECREATION Wilderness Implementation Schedule	AW112	1 Plan



MANAGEMENT AREA 7 (13,322 acres) - SCENIC AREA

1. Description Management Area 7 is the Malheur National Forest portion of the Vinegar Hill - Indian Rock Scenic Area. This 17,234-acre scenic area is administered by three National Forests. The Malheur portion, 13,322 acres, is administered by the Long Creek Ranger District. The area is drained by the Middle Fork and North Fork of the John Day River and the Burnt Powder River.

2. Goals Manage this area to preserve and protect outstanding natural esthetics.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area except where superseded by the following standards:

- | | |
|--------------------------|---|
| Recreation | <ol style="list-style-type: none"> 1. Manage for recreation ranging from a semiprimitive nonmotorized (nonwinter) to semiprimitive motorized (winter only) classification. 2. Snowmobile use may occur from December 1 to May 1. 3. Encourage dispersed recreation opportunities. 4. Design management controls necessary to protect ecological and social elements. 5. Use formal regulations and orders to achieve management objectives. Design and initiate information services to educate the public on use of the area. 6. Schedule maintenance and project work during low-use periods. |
| Visuals | <ol style="list-style-type: none"> 7. Manage to achieve retention visual quality level (see Management Area 14, Standard No. 17). |
| Fish and Wildlife | <ol style="list-style-type: none"> 8. Design and implement fish and wildlife habitat improvement/maintenance projects to meet visual quality objectives. 9. Maintain dead and defective tree habitat capable of supporting natural occurring levels of the potential population of the management indicator species for primary excavators where possible. |
| Range | <ol style="list-style-type: none"> 10. Permit livestock grazing in accordance with Forest-wide Standards. 11. Design range improvements to be compatible with the visual objectives. |
| Timber | <ol style="list-style-type: none"> 12. Exclude scheduled timber harvest. Lands are classified as "unsuitable" for timber management. |

MANAGEMENT AREA 7

- Minerals**
 - 13 Analysis of access proposals will consider factors such as the stage of operation and the feasibility and reasonableness of alternative methods of access. Roads will be constructed to the minimum standards suitable for the proposed use and will be obliterated to the extent feasible after completion of the activities.
- Lands**
 - 14. Retain the National Forest lands within this area.
 - 15. Prohibit installation of permanent communication facilities.
- Facilities**
- Roads**
 - 16 Close existing roads to public use.
- Trails**
 - 17. Maintain existing trails. Construct and reconstruct trails to the minimum level necessary to accommodate increased use, ensure public safety, and reduce environmental damage. Power equipment may be used to accomplish construction and maintenance work. Schedule this work during low-use periods.
- Utility Corridors**
 - 18. Manage this area as a "Category 1 Avoidance Area" for the location of utility corridors.
- Protection**
- Fire Management**
 - 19. Use planned and natural ignitions, when within prescription, to achieve resource management objectives and to allow fire to play its natural ecological role.
- Insects and Disease**
 - 20. Allow endemic infestations to occur. Treat epidemics that threaten scenic values or adjacent lands.

4. Schedule of Management Practices

MANAGEMENT AREA 7 - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
FACILITIES		
Trail Construction/Reconstruction	AT22	7.5 Miles
Trailhead Reconstruction	AT22	4 Sites

MANAGEMENT AREA 8 (246 acres) - SPECIAL INTEREST AREAS

1. Description Management Area 8 consists of both forested and nonforested lands which are set aside for their uniqueness. Areas included are the Cedar Grove Botanical Area (Alaskan yellow cedar), the Magone Lake Geological Area (landslide forming natural lake), the Tex Bridge Geological Area (natural rock formation), Fergy Spruce Grove, and the historic Sumpter Valley Railroad Cedar Grove and Tex Bridge are located in the Aldrich Mountains on the Bear Valley Ranger District. Magone Lake is located south of Lake Butte on the Long Creek Ranger District. Fergy Spruce Grove and the historic Sumpter Valley railroad are located on the Prairie City Ranger District. All acres for Cedar Grove are included in Aldrich Semi-Primitive Non-Motorized area (Management Area 10).

2. Goals Manage and preserve areas of significant historical, geological, botanical, zoological, paleontological, or other special characteristics To protect and, where appropriate, foster public enjoyment of these areas.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area unless superseded by the following standards:

- Recreation**
 - 1. Prohibit developed recreation use at Tex Bridge Geological Area and Cedar Grove Botanical Area.
 - 2. Encourage dispersed recreation opportunities.
 - 3. Encourage interpretive activities highlighting the unique aspects of the sites.
- Visuals**
 - 4. Manage for retention/partial retention visual quality objective (see Management Area 14, Standards No. 17-19) Site-specific visual quality objectives are identified in the TRI data base.
- Fish and Wildlife**
 - 5. Implement fish and wildlife habitat improvement/maintenance projects only if they met the objectives of the area. Emphasis is on habitat improvement for enhancing the viewing opportunities for wildlife.
- Range**
 - 6. Permit livestock grazing in accordance with Forest-wide Standards
 - 7. Utilize the forage resource consistent with area objectives.
- Timber**
 - 8. Exclude scheduled timber harvest. Lands are classified as "unsuitable" for timber management.
 - 9. Prohibit firewood cutting.
- Minerals**
 - 10. Recommend to the Secretary of Interior the withdrawal of these areas from mineral entry, if supported by a mineral potential evaluation.
- Lands**
 - 11. Retain the National Forest lands within this area.

MANAGEMENT AREA 8

12. Prohibit permitted special uses that conflict with management area objectives.

Facilities

Roads

13. Maintain existing roads at Magone Lake Geological Area.

Utility Corridors

14. Manage these areas as a "Category 1 Avoidance Area" for the location of utility corridors.

Protection

Fire Management

15. Use planned and natural ignitions, when within prescription, to achieve resource management objectives and to allow fire to play its natural ecological role.

Residue Management

16. Emphasize maintenance of the natural character of Special Interest Areas when designing residue treatments in and adjacent to these areas. Minimize high intensity wildfires which would result in stand replacement.

Insects and Disease

17. Allow endemic infestations to occur. Treat epidemics that threaten special interest areas or adjacent lands.

4 Schedule of Management Practices

No management practices are scheduled for Management Area 8.



MANAGEMENT AREA 9 (750 acres) - RESEARCH NATURAL AREAS (RNAs)

1. Description Management Area 9 contains one existing research natural area (RNA), Canyon Creek and four proposed RNAs, Dixie Butte, Baldy Mountain, Dugout Creek, and Shaketable. Canyon Creek and Baldy Mountain are both within the Strawberry Mountain Wilderness (Management Area 6A). The Shaketable area is located in the Shaketable Semi-Primitive Non-Motorized area. The Dixie Butte Proposed Research Natural Area is located near the top of Dixie Butte. Dugout Creek is located near the North Fork Malheur River campground. The acres within this management area are only those acres outside the wilderness (Shaketable, Dixie Butte and Dugout Creek) These areas are shown on management area maps.

2. Goals Provide areas for nonmanipulative research, observation, and study of undisturbed ecosystems. Maintenance of the natural processes within each area will be the prime consideration Proposed areas shall be managed to maintain their RNA qualities.

3. Standards General management direction for RNAs is described below. For the existing Canyon Creek Research Natural Area more specific management direction is contained in its establishment report. For proposed RNAs, more specific direction will be developed upon establishment and incorporated into this Forest Plan as amendments

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area unless superseded by the following standards:

- Recreation**
 - 1. Prohibit recreational use that threatens research or educational values.
 - 2. Prohibit developed recreation sites.
 - 3. Discourage dispersed recreation sites.
- Visuals**
 - 4. Manage to achieve retention visual quality level (see Management Area 14, Standard No 17).
- Wilderness**
 - 5. Ensure that, where RNAs overlap with wilderness, wilderness use is consistent with RNA objectives and that research activities will also be compatible with wilderness management.
- Fish and Wildlife**
 - 6. Dead and defective tree habitat will be provided at natural levels.
- Range**
 - 7. Permit livestock grazing only where essential to maintain a specific vegetative type for which the RNA was, or will be, established Boundary fencing may be used to exclude livestock.
- Timber**
 - 8. Exclude scheduled timber harvest. Lands are classified as "unsuitable" for timber management.

MANAGEMENT AREA 9

9. Prohibit firewood cutting.

Minerals

10. Recommend withdrawal upon establishment if not already withdrawn.

Lands

11. Retain National Forest lands.

Facilities

12. Allow temporary structures, such as gauging stations and instrument shelters, only if needed to meet research natural area objectives. The Pacific Northwest Experiment Station Director must approve, in consultation with the Forest Supervisor, any improvements or temporary facilities.

Roads

13. Build new roads only when they contribute to RNA objectives or to the protection of the RNA. Maintain existing roads as directed by management area objectives.

Trails

14. Maintain existing trails commensurate with use. Reconstruct trails where needed to provide for public safety and to reduce environmental damage.

15. Move existing trails out of RNAs as the opportunity occurs.

Utility Corridors

16. Manage this area as a Category 1 Avoidance area for the location of utility corridors.

Protection

Fire Management

17. Use prescribed burning, if needed, to perpetuate the vegetation for which the RNA was established or proposed.

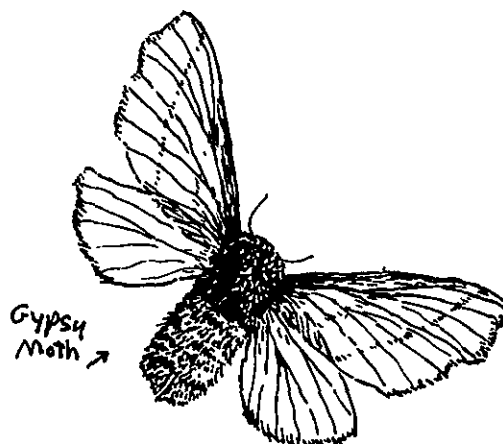
18. Control all wildfires within RNAs as quickly as possible. However, if fires within any area are desirable, develop a fire management action plan to allow planned and natural ignitions to burn when within prescription.

Insects and Disease

19. Take action against endemic or epidemic levels of insects or diseases in accordance with the direction given in the establishment report.

4. Schedule of Management Practices

No management practices are scheduled for Management Area 9.



MANAGEMENT AREA 10 (48,888 acres) - SEMI-PRIMITIVE NON-MOTORIZED RECREATION AREAS

1. Description Management Area 10 consists of 6 geographical areas on the Forest that are portions of, and lands adjacent to former roadless areas. These areas include Aldrich Mountain (8,609 acres), McClellan Mountain (18,717 acres); Bear Creek (former North Fork Malheur River) (2,710 acres); Malheur River (3,066 acres); Myrtle-Silvies (9,855 acres); and Shaketable (8,997 acres) areas. The acres for the Shaketable Research Natural Area are part of Management Area 9. A variety of physical and biological environments occur in these areas, both forested and nonforested, as determined by soil, slope, aspect, elevation, and climatic factors.

2. Goals Protect, enhance, and maintain the natural beauty and character of the undeveloped areas through effective visitor-use and resource management. Manage to provide a wide range of semiprimitive nonmotorized recreation opportunities while protecting existing environmental quality. Manage to provide a high probability of experiencing tranquility and isolation from sights of human use and to test one's self reliance and independence in an environment offering challenge and risk.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area unless superseded by the following standards:

- Recreation**
 - 1. Manage dispersed recreation for goals of semiprimitive nonmotorized recreation. Ensure that the Recreation Opportunity Spectrum (ROS) setting criteria for social encounters and remoteness are met.
 - 2. Manage developed recreation for development Level 1 facilities
- Visuals**
 - 3. Meet visual quality objective of foreground retention (see Management Area 14, Standard No. 17).
- Fish and Wildlife**
 - 4. Implement fish and wildlife improvement/maintenance projects to meet objectives of the semiprimitive nonmotorized recreation opportunity spectrum class
 - 5. Maintain dead and defective tree habitat capable of supporting 80-100% of the potential population of the management indicator species for primary excavators.
- Range**
 - 6. Permit grazing in accordance with Forest-wide Standards.
 - 7. Restrict livestock improvements to those compatible with the semiprimitive nonmotorized recreation opportunity spectrum class. All improvements will be cost efficient.
 - 8. Allow the occasional use of motorized equipment for facility maintenance and other range activities when approved by the Forest Supervisor.

MANAGEMENT AREA 10

- Timber** 9. Exclude scheduled timber harvest. Lands are classified as "unsuitable" for timber management.

- Minerals** 10. Provide access for exploration and development of locatable and leasable mineral resources. However, allow new road construction only where a road is necessary for the next logical stage of development of the mineral resource, and where other means of access (such as by helicopter, all-terrain vehicle, or pack animal) would be infeasible or unreasonable. Roads will be constructed to the minimum standards suitable for the proposed use, and will be obliterated to the extent feasible after completion of activities.

- Facilities** 11. Except for facilities necessary to protect fragile resources, limit facilities to trail shelters and structures which meet sanitary and safety needs. All facilities should be of simple design and native, rustic-like materials. Minimize site modifications for facilities. Site development level should be level 2 or less.

- Roads** 12. Exclude new road construction except for minerals access (see above).

- Trails** 13. Maintain existing trails. Construct or reconstruct trails to be consistent with management area objectives, accommodate increased use, ensure public safety, and reduce environmental damage. Motorized equipment and vehicles may be authorized by the Forest Supervisor for trail maintenance and construction; schedule this work during low-use periods.

- 14. Provide trails of varying levels of difficulty.

- Utility Corridors** 15. Manage this area as a Category 1 Avoidance area for the location of utility corridors.

- Protection**

- Fire Management** 16. Motorized equipment is authorized for fire suppression activities.

- Residue Management** 17. Use prescribed fire from planned ignitions to achieve resource management objectives. When based on site-specific analysis, use prescribed fire from natural ignitions (i.e., lightning) to allow fire to play its natural ecological role.

- Insects and Disease** 18. Allow endemic infestations to occur. Treat epidemics that threaten semiprimitive nonmotorized recreation values or adjacent lands.

4. Schedule of Management Practices

MANAGEMENT AREA 10 - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
FACILITIES Trail Construction/Reconstruction	AT22	44.8 Miles

MANAGEMENT AREA 11 (14,578 acres) - SEMI-PRIMITIVE MOTORIZED RECREATION AREAS

1. Description

Management Area 11 consists of portions of, and lands adjacent to the former Glacier Mountain roadless area. This area is located in the eastern part of the Malheur National Forest about 11 miles southeast of Prairie City, Oregon. Approximately three-quarters of the area is within Baker County and one-quarter is in Grant County, Oregon. This area runs along the west side of the headwaters of the North Fork Malheur River and includes several tributaries to this system. The north and west portions of the area include the Rail and Deardorff Creek drainages, which are tributaries to the mainstem of the John Day River.

During the summer of 1989, approximately 10,090 acres of this area burned due to multiple fires ignited by lightning. Due to heavy fuel accumulations and drought conditions, most of these acres burned with high fire intensities.

The high-elevation ridges support subalpine vegetation including subalpine fir, lodgepole pine, alpine sagebrush, and elk sedge. The northeastern portion of the area consists primarily of lodgepole pine which regenerated after the Big Cow Burn of 1939. The area is 95% forested and supports primarily Douglas-fir, white fir, larch, and lodgepole pine. Ground vegetation includes huckleberry, pinegrass, elk sedge, and Columbia brome. Riparian areas contain some meadow vegetation and riparian shrub species.

2. Goals

Protect, enhance, and maintain the natural beauty and character of the undeveloped areas through effective visitor use and resource management. Manage to provide a wide range of semiprimitive motorized recreation opportunities while protecting existing environmental quality. Provide a moderate probability of experiencing isolation from sites and sounds of humans and to test one's self reliance and independence in an environment offering challenge and risk.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area except where superseded by the following standards:

Recreation

1. Manage dispersed recreation for semiprimitive motorized recreation. Cross-country travel is permitted, but motorized use may be restricted to designated routes if unacceptable resource damage occurs. Limit motorized use to designated roads and trails in the Glacier Mountain area.
2. Manage developed recreation for development Level 1 and Level 2 facilities.
3. Provide cross-country skiing opportunities.
4. Consider construction of winter shelters/huts.

MANAGEMENT AREA 11

- Visuals** 5. Apply a visual quality objective of foreground retention (see Management Area 14, Standard No. 17).
- Fish and Wildlife** 6. Implement fish and wildlife improvement/maintenance projects to meet the objectives of the semiprimitive motorized recreation opportunity spectrum class.
7. Maintain dead and defective tree habitat capable of supporting 80-100% of the potential population of the management indicator species for primary excavators.
- Range** 8. Manage existing grazing allotments in accordance with Forest-wide Standards.
9. *Restrict livestock improvements to those that are compatible with the semiprimitive motorized recreation opportunity spectrum class. All improvements will be cost efficient.*
- Timber** 10. Exclude scheduled timber harvest. Lands are classified as "unsuitable" for timber management.
- Minerals** 11. Provide access for exploration and development of locatable and leasable mineral resources. However, allow new road construction only where a road is necessary for the next logical developmental stage of the mineral resource, and where other means of access (such as by helicopter, all-terrain vehicle, or pack animal) would be infeasible or unreasonable. Roads will be constructed to the minimum standards suitable for the proposed use, and will be obliterated to the extent feasible after completion of activities.
- Facilities** 12. Manage roads and trails to ensure that the Recreation Opportunity Spectrum (ROS) goals, objectives, and criteria setting for this management area are met. Take actions necessary to maintain an appropriate setting.
- Roads** 13. Maintain existing roads to accommodate high-clearance, four-wheel, and other off-road vehicles.
14. Exclude new road construction except for mineral access (see above.)
- Trails** 15. Maintain existing trails. Construct and reconstruct trails to be consistent with management area objectives, accommodate increased use, ensure public safety, and reduce environmental damage.
- Utility Corridors** 16. Manage this area as a Category 1 Avoidance area for the location of utility corridors.
- Protection**
- Residue Management** 17. Use prescribed fire from planned ignitions to achieve resource management objectives. Use prescribed fire, when based on site-specific analysis, from natural ignitions (i.e., lightning) to allow fire to play its natural ecological role.
- Insects and Disease** 18. Allow endemic infestation to occur. Treat epidemics that threaten semiprimitive motorized values or adjacent lands.

4. Schedule of Management Practices

MANAGEMENT AREA 11 - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
FACILITIES Trail Construction/Reconstruction Trailhead Construction	AT22 AT22	28.0 Miles 2 Sites



MANAGEMENT AREA 12 (484 acres) - DEVELOPED RECREATION SITES

Description Management Area 12 consists of 20 campgrounds and 7 picnic sites. Campgrounds include Magone Lake, Yellowjacket, Canyon Meadows, Starr, Wickiup, Parish Cabin, Idlewild, Strawberry, Trout Farm, North Fork Malheur, Big Creek, Crescent, Elk Creek, Little Crane, McNaughton, Murray, Slide Creek, Middle Fork, Dixie, and Beech Creek. Picnic sites include Canyon Meadows, Starr Ridge, Wickiup, Idlewild, Magone Lake, Trout Farm, and Dixie. The developments are limited in size and provide a rustic experience. Facilities are limited but do include paved roads, water systems, toilets, and boat launches at a few campgrounds. These areas are displayed on management area maps.

2. Goals Manage for developed recreation opportunities, providing interpretation and enhancement of cultural and natural resources.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area except where superseded by the following standards:

- Recreation**
1. Manage the following campgrounds to the full service level: Magone Lake, Yellowjacket, Canyon Meadows, Starr, Wickiup, Parish Cabin, Idlewild, Strawberry, Trout Farm, North Fork Malheur, Big Creek, Dixie, Crescent, Elk Creek, Little Crane, McNaughton, Murray, Slide Creek, Middle Fork, and Beech Creek.
 2. Emphasize expansion of existing high-use sites over the development of any new sites.
 3. Evaluate all developed recreation sites (Levels 3, 4, and above) for the fee system. Fees will be charged for facility use when it is administratively and economically feasible to do so.
 4. Evaluate developed sites for elimination when not cost-effective, not needed for resource protection, or to meet recreation management objectives.
 5. Restrict off-road vehicle use to roads and trails and regulate to minimize conflicts between users.
 6. Manage developed sites that encompass an area larger than the facility locations as a roaded natural setting. Develop trails to provide dispersed recreation opportunities.
- Cultural Resources**
7. Survey developed recreation sites, record and evaluate identified cultural resources, and mitigate the effects of recreational activities on significant cultural resource sites.
- Visuals**
8. Develop and implement a vegetative management plan for each development Level 3 and above site.

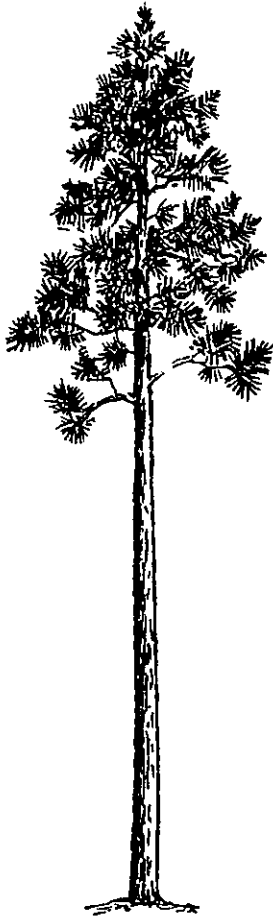
9. Meet foreground visual quality objective of retention or partial retention, to be determined during project level analysis (see Management Area 14, Standards 17-19). Site-specific visual quality objectives are identified in the TRI data base.
- Fish and Wildlife** 10. Maintain or enhance wildlife habitats to the extent that they do not conflict with the safety of developed site users, are consistent with the management of the site, and meet visual quality objectives.
- Range** 11. Prohibit livestock grazing.
- Timber** 12. Lands are classified as "unsuitable" for timber management. Exclude scheduled timber harvest. Harvest may occur to accomplish recreation resource objectives.
13. Prohibit firewood cutting.
- Minerals** 14. Recommend sites for withdrawal from mineral entry if not already withdrawn.
- Facilities** 15. Design, construct, and maintain facilities to protect the site and meet user demands.
- Roads** 16. Manage access roads to developed sites to permit passenger car traffic. Reconstruct, operate, and maintain local roads to encourage highway vehicle access to developed recreation sites
- Trails** 17. Maintain existing trails commensurate with use. Reconstruct trails to ensure public safety and reduction of environmental damage.
- Utility Corridors** 18. Manage this area as a Category 1 Avoidance area for the location of utility corridors.
- Protection**
- Fire Management** 19. Control wildfires.
- Residue Management** 20. Manage residues to provide a natural appearing landscape. Use low impact treatment methods
21. Make residue available as firewood for campground users.
22. Prescribe low intensity fire with minimal scorch when appropriate.

MANAGEMENT AREA 12

4. Schedule of Management Practices

MANAGEMENT AREA 12 - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
RECREATION Developed Recreation Site Construction/Reconstruction	AN22	1,735 PAOT
Vegetative Management For Developed Recreation Sites	AN112-1	14 Plans



MANAGEMENT AREA 13 (72,690 acres) - OLD GROWTH

1. Description Management Area 13 is composed of mature/overmature sawtimber (150 years old or older) which provides habitat for wildlife species dependent on mature/overmature forest conditions, provides for ecosystem diversity, and provides for the preservation of aesthetic qualities. Included are forested lands made up of a variety of landtypes. These areas are equally distributed across the Forest. Wildlife species dependent on these lands include the pileated woodpecker and the pine marten. These acres reflect both designated old growth and old growth replacement, and include only those acres outside of wilderness, research natural areas, semiprimitive areas, and wild and scenic rivers.

2. Goals Provide "suitable" habitat for old growth dependent wildlife species, ecosystem diversity, and preservation of aesthetic qualities.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area except where superseded by the following standards:

Recreation 1. Provide dispersed recreation setting consistent with adjacent lands.

Visuals 2. Manage for visual quality objective consistent with adjacent lands.

Fish and Wildlife

Old Growth 3. Provide old growth by dedicating approximately two-thirds of the acres in this management area (47,690 acres) to the retention of suitable old growth. Refer to Appendix G, FEIS for stand type, size and distribution criteria.

4. Inventory and validate all old growth areas. Correct previously dedicated old growth unit designations that are not meeting management requirement direction where possible. Utilize the interdisciplinary process to develop *recommendations for boundary adjustments, or unit relocation. Changes will require approval by the Forest Supervisor. Unit relocation must analyze location in regards to the total old growth network, which in most cases will be a larger analysis area than that used for timber sale planning.*

5. To counter possible catastrophic damage or probable deterioration of dedicated old growth, provide for replacement old growth in the future by managing at least one-third of this management area (25,000 acres) for a sustained yield of old growth. Locate replacement old growth areas within 1/4 mile of dedicated areas, and designate and map these areas. Provide old growth replacement areas that are one-half the size of its corresponding dedicated old growth unit. Refer to Appendix G, FEIS for stand type, size and distribution criteria.

MANAGEMENT AREA 13

6. When locating replacement old growth areas, use interdisciplinary teams that evaluate and recommend replacement stands for District Ranger approval. Complete the location of replacement stands primarily in conjunction with the timber sale planning process. Record site-specific information in the TRI data base.
7. As dedicated old growth stands deteriorate beyond suitable old growth conditions, maintain at least two-thirds of this management area in dedicated stands by manipulating replacement and dedicated stand boundaries by:
(a) changing the status of dedicated old growth to replacement habitat and take action to restore the habitat to suitable old growth conditions; and
(b) changing the status of replacement old growth to dedicated old growth.
8. Utilize interdisciplinary teams to develop prescriptions and long-term management strategies for each replacement area with the principal responsibilities to silviculturists and wildlife biologists.

Other

9. Maintain dead and defective tree habitat capable of supporting 100% of the potential population of management indicator species for primary excavators.
10. Designate coniferous plant associations other than lodgepole pine to meet dedicated or replacement old growth habitat, including corrections, for pine marten or pileated woodpecker units.

Range

11. Permit livestock grazing in accordance with Forest-wide Standards.

Timber

12. In dedicated old growth units, schedule no timber harvest. Lands are classified as "unsuitable" for timber management.
13. In replacement old growth units, allow scheduled timber harvests which maintain or enhance the capability of timber stands to provide suitable old-growth habitat in the future.
14. When applying uneven-aged management, manage for the following target tree numbers and sizes at the time the replacement stand becomes old growth.
 - (a) Ponderosa pine stands - At least 10 trees per acre that are 25 inches in diameter.
 - (b) Mixed conifer stands - At least 15 trees per acre that are 25 inches in diameter.
15. Prohibit firewood cutting in dedicated old growth stands.

Minerals

16. Manage mineral activities to minimize surface disturbance adversely affecting old growth stands.

Facilities

Roads

- 17. Restrict motorized vehicles to open roads and trails.
- 18. Locate and design roads to avoid old growth stands.

Utility Corridors

- 19. Manage this area as a Category 1 Avoidance area for the location of utility corridors.

Protection

Residue Management

- 20. Manage residue to maintain or enhance old-growth habitat. Protect old-growth habitat from catastrophic wildfire.

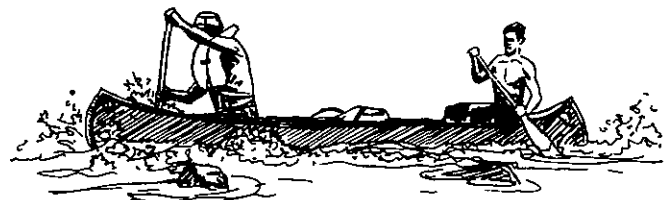
Insects and Disease

- 21. Allow endemic levels of infestations to occur. Favor biological methods of control if at an epidemic level

4. Schedule of Management Practices

MANAGEMENT AREA 13 - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
TIMBER Timber Harvest Overstory Removal on Existing Stands	ET12	89.5 MMBF/7,544 Ac
Timber Stand Improvement Precommercial Thinning	ET25	4,526 Ac



MANAGEMENT AREA 14 (186,682 acres) - VISUAL CORRIDORS

1. Description

Management Area 14 consists of the visible and potentially visible landscapes along major travel routes and the wild and scenic rivers where the traveling public has a high-to-medium sensitivity to the scenery. The following corridor viewsheds have been identified for management as scenic viewsheds and are shown on the management area maps:

Sensitivity Level 1: U.S. Highways 395 and 26, State Highway 7, Wilderness Loop, and Strawberry roads; portions of the Malheur and North Fork Malheur Wild and Scenic River corridors.

Sensitivity Level 2: Canyon Creek, Roads End, Izee, Forest Service Road 16, Yellowjacket, Emigrant, Magone, County Road 20, Forest Service Road 18, Glacier Loop, Skyline, Table, and portions of the Malheur and North Fork Malheur Wild and Scenic River corridors.

2 Goals

These corridor viewsheds are identified in the corridor viewshed plans and the TRI data base. Manage corridor viewsheds with primary consideration given to their scenic quality and the growth of large diameter trees. Visual quality objectives of retention, partial retention, and modification will be applied while providing for other uses and resources.

3. Standards

RESOURCE ELEMENT

STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area except where superseded by the following standards:

Recreation

1. Manage for roaded natural recreation.

Visuals

- 2. Meet a visual quality objective of retention, partial retention, or modification for the visible and potentially visible areas (see Appendix L). Site-specific visual quality objectives will be identified and recorded in the corridor viewshed plans and the TRI data base.
- 3. For the Malheur and North Fork Malheur rivers meet a visual quality objective of retention in the foreground and partial retention in the middleground.
- 4. Manage the background in the wilderness loop corridor that is viewed when looking at the Strawberry Mountain Wilderness as partial retention middle-ground.

Fish and Wildlife

- 5. Maintain visual corridors that overlap with big game winter range maintenance to achieve a minimum Habitat Effectiveness of 60% for elk. Refer to Management Area 4A for standards.
- 6. Design and implement fish and wildlife improvement/maintenance projects to meet visual quality objectives.

Range

7. Permit livestock grazing in accordance with Forest-wide Standards.

Timber

8. Design both structural and non-structural improvements to meet the visual quality objective of the given area.
9. Schedule timber harvest on portions of the management area classified as "suitable" for timber management. Design timber harvest and related activities to accomplish visual resource management objectives.
10. Harvest timber under the guidance of a Corridor Viewshed Plan, on a scheduled basis, utilizing standard silvicultural treatments.
11. Emphasize uneven-aged timber management in the foreground distance zones. The overall effect will vary from natural appearing to slightly altered. Manage foregrounds to meet a retention visual quality objective in Sensitivity Level 1 corridors to result in a natural appearing visual condition. Manage the foreground distance zones in Level 2 corridors to meet a partial retention visual quality objective to result in a slightly altered visual condition (see Appendix L for a list of the visual quality objective for each corridor viewshed).
12. No harvest will occur in foregrounds of Sensitivity Level 1 or 2 corridors until viewshed corridor plans have been completed. Exceptions to this will be considered for insect and disease conditions and sanitation salvage needs on a case-by-case basis, with visuals being the driving factor in decision making (see Forest-wide Standard #3).
13. A created opening is no longer an opening when trees in the stand reach a height of 20 feet. Consider terrain, species composition, and unit size when insuring that a created opening is closed. Objective is for opening to remain visually subordinate to the characteristic landscape.
14. When utilizing even-aged management in the middleground, use the shelterwood regeneration method in the ponderosa pine type, shelterwood and clearcut regeneration in the mixed conifer type, and clearcut regeneration in the lodgepole pine type. Manage middlegrounds as slightly altered (partial retention visual quality objective) in Sensitivity Level 1 corridors and modified (modification visual quality objective) in Sensitivity Level 2 corridors.
15. Standards are to be calculated for viewshed corridor areas. Until viewshed corridor plans are completed, standards are to be applied to specific planning areas.
16. Emphasize horizontal diversity of vegetation by developing a sequence of visual experiences to be viewed as one moves through the corridor. Apply uneven-aged management by utilizing group selection harvest techniques on small treatment units (1/4 - 2 acres) in foregrounds. Apply even-aged management in treatment units up to 10 acres in partial retention middlegrounds. The desired effect is to have a multi-aged appearance in the corridor (both Sensitivity Levels 1 and 2) emphasizing uneven-aged timber management (group selection) in the foreground distance zones and even-aged timber management in the middleground distance zones.

17. Apply the following standards while managing foreground retention areas:

Factor	WORKING GROUP		
	Ponderosa Pine	Mixed Conifer	Lodge-pole Pine
Percent of area open at one time	10	10	10
Percent cut in any 10 year period ^{1/}	3-7	3-7	3-7
Target Diameter (Inches)	36+	36+	10
Number of trees dedicated in 26" to 36" diameter class at time of final harvest	3-5 per acre	3-5 per acre	N/A
Maximum created opening ^{1/}	2 acres	2 acres	2 acres
Lineal feet of road frontage in an open condition per mile ^{1/}	Maximum 300 foot at 1 location or 600 feet per mile		

^{1/}Applies to regenerated harvest. Not applicable to intermediate cuts or overstory removals as long as an opening is not created

At target age, stands will be reduced to 10-15 large diameter trees per acre for regeneration purposes; in foreground retention, the target tree age is 250 years.

18. Apply the following standards while managing foreground partial retention areas:

Factor	WORKING GROUP		
	Ponderosa Pine	Mixed Conifer	Lodge-pole Pine
Percent of area open at one time	14	14	14
Percent cut in any 10 year period ^{1/}	5-9	5-9	5-9
Target Diameter (Inches)	26+	26+	10
Number of trees dedicated in 26" to 36" diameter class at time of final harvest	3-5 per acre	3-5 per acre	N/A
Maximum created opening ^{1/}	5 acres	5 acres	5 acres
Lineal feet of road frontage in an open condition per mile ^{1/}	Maximum 450 foot at 1 location or 800 feet per mile		

^{1/}Applies to regenerated harvest. Not applicable to intermediate cuts or overstory removals as long as an opening is not created

At target age, stands will be reduced to 10-15 large diameter trees per acre for regeneration purposes; in foreground partial retention, the target tree age is 180 years.

19. Apply the following standards while managing middleground partial retention areas'

Factor	WORKING GROUP		
	Ponderosa Pine	Mixed Conifer	Lodgepole Pine
Percent of area open at one time	20	20	20
Percent cut in any 10 year period ^{1/}	8-10	8-10	8-10
Maximum created opening ^{1/}	10 acres	10 acres	10 acres

^{1/}Applies to regeneration harvest Not applicable to intermediate cuts or overstory removal as long as an opening is not created

Minerals

- 20. Design operating plans to meet visual quality objectives to the extent reasonable.
- 21. Utilize existing access routes to developments wherever possible.
- 22. Design new motorized access routes to minimize impacts and provide for reclamation on completion of the operation.

Lands

- 23. Permit special-use sites that can be designed and located to blend with the landscape.
- 24. Review existing special-use sites to see how well they meet visual objectives; if not meeting standards, bring into compliance.

Facilities

Roads

- 25. Locate and design roads to meet the stated visual quality objective.

Utility Corridors

- 26. Manage this area as a Category 1 Avoidance area for the location of utility corridors.

Protection

Residue Management

- 27. Manage residues to provide a natural-appearing landscape in visual corridors.
- 28. Plan and time treatments in foreground distance zones to minimize adverse visual effects.
- 29. Prescribe low intensity fire with minimal scorch when appropriate.
- 30. Manage residues in middleground and background distance zones to meet visual resource objectives which are compatible with reforestation and wildlife objectives.

MANAGEMENT AREA 14

31. Manage to achieve residue profiles in foreground distance zones as depicted by photos in the *Photo Series for Quantifying Forest Residues (PNW-51, PNW-52, and PNW-105)*:

	Ponderosa Pine	Lodgepole Pine	Associated
Natural Fuels	1-PP-4	1-LP-3	3-PP & Assoc. -3 1-PP & Assoc. -4
Thinning Fuels (No acceptable photos) Partial Cut	1-PP-4-PC	2-LP-3-PC	1-DF-1-TH 1-PP & Assoc.-4-PC
Clearcut	2-LP-3-PC	2-LP-3-PC	2-DF-4-CC

4. Schedule of Management Practices

MANAGEMENT AREA 14 - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
RECREATION Corridor Viewshed Plans	AV112	19 Plans
TIMBER		
Timber Harvest		
Clearcut	ET12	50.9 MMBF/4,743 Ac
Shelterwood - Seed Tree Cut	ET12	37.0 MMBF/5,592 Ac
Shelterwood - Removal cut	ET12	1.7MMBF/626 Ac
Selection	ET12	55.8 MMBF/15,089 Ac
Overstory Removal on Existing Stands	ET12	77.6 MMBF/6,356 Ac
Commercial Thin	ET12	36.5 MMBF/8,290 Ac
Salvage/Other Products	ET12	12.5 MMBF/Ac N/A
Total Timber Harvest	ET12	272 MMBF/40,696 Ac
Reforestation		
Planting	ET24	7,602 Ac
Natural	ET24	10,769 Ac
Timber Stand Improvement	ET25	17,243 Ac
Precommercial Thinning		

MANAGEMENT AREA 16 (74,668 acres) - MINIMUM LEVEL MANAGEMENT

1. Description Management Area 16 consists primarily of nonforest and low-productivity forest lands that occur as small, dispersed parcels within the Forest. Some of the areas are rock outcrops, talus slopes, or areas of shallow soils along canyons and major drainages. Elevation and vegetation vary greatly from low-elevation grasslands along the major river drainages to high-elevation subalpine/treeline vegetation. Landforms are also variable-ranging from flat, nonforested openings in the Forest to rock outcrops on steep slopes. Some of these landforms can be unique animal and plant habitat; specific types of rock outcrops are known to be habitat for sensitive plants

2. Goals Provide the minimum management necessary to provide for resource protection and management of adjacent lands.

3 Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area except where superseded by the following standards:

- Fish and Wildlife**
 - 1. Protect the integrity of cliffs, talus, and caves including the adjacent vegetation that is important to the maintenance of these habitats. Coordinate with proposed timber harvest or other activities within the adjacent vegetation zone (generally 100 feet) to develop mitigation measures through a project level environmental assessment. Special attention will be given to the high probability of sensitive plants occurring in these areas.
 - 2. Lithosolic (scabland) habitats will be maintained or enhanced. Manage activities and projects to maintain these areas including the ecotones (edges) with adjacent habitat types Utilize project level environmental analysis if needed to identify mitigation or enhancement measures. Special attention will be given to the high probability Sensitive plants occurring in these areas.
- Range**
 - 3. Permit livestock grazing in accordance with Forest-wide Standards.
- Timber**
 - 4. No scheduled timber harvest. Lands are classified as "unsuitable" for timber management.
- Facilities**
- Roads**
 - 5. Restrict motorized vehicles to open roads and trails.
 - 6. Locate and design roads to avoid these areas.
- Protection**
- Residue Management**
 - 7. Use prescribed fire from planned ignitions to achieve resource management objectives.

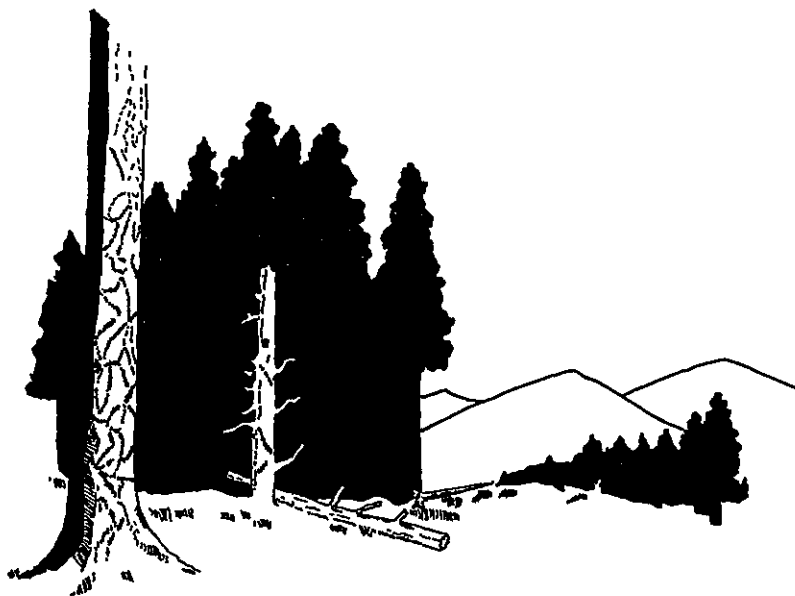
MANAGEMENT AREA 16

Insects and Disease

8. Control insect and disease epidemics if necessary to protect other resource values or to prevent spread to adjacent, suitable forestlands.

4. Schedule of Management Practices

No management practices are scheduled for Management Area 16.



MANAGEMENT AREA 17 (300 acres) - BYRAM GULCH MUNICIPAL SUPPLY WATERSHED

- 1. Description Management Area 17 consists of the National Forest portion (outside of the Wilderness) of the Byram Gulch Municipal Supply Watershed which provides water for domestic use to the town of Canyon City, Oregon.
- 2 Goals Manage to protect water quality for community public supply water use. Protect existing beneficial uses of the water. To protect and, where needed, improve the quality and quantity of the water resource in a manner consistent with national, state, and forest goals.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area except where superseded by the following standards:

- Recreation**
 - 1. Discourage dispersed recreation use.
 - 2. Prohibit construction of developed recreation sites.
 - 3. Restrict motorized recreation vehicles to designated roads and trails.
- Visuals**
 - 4. Manage to achieve retention visual quality level (see Management Area 14, Standard No. 17).
- Fish and Wildlife**
 - 5. Maintain sufficient stream quality to ensure that fish/water quality objectives are met.
 - 6. Prohibit management activities that adversely change the composition and productivity of key riparian vegetation
 - 7. Coordinate winter range objectives on that portion of the watershed within big game winter range.
- Range**
 - 8. Prohibit livestock grazing.
- Timber**
 - 9. Prohibit scheduled timber harvest; lands are unsuitable for timber management.
 - 10. If catastrophic conditions or resource objectives suggest timber harvests, conduct site-specific environmental analysis to determine whether timber harvest will occur.
- Water**
 - 11. Consider cumulative impacts of proposed activities on the municipal watershed. To the degree possible, management activities will be coordinated with other landowners in the watershed.
 - 12. Manage water yield to optimize quantity and quality.

MANAGEMENT AREA 17

Facilities

- Roads 13. Prohibit road construction.
- Trails 14. Design mitigation measures to assure that the existing beneficial uses of the waters of the watershed will be protected.
- Utility Corridors 15. Manage this area as a Category I Avoidance area for the location of utility corridors.

Minerals

16. The area is closed to mineral entry as of July 24, 1973, subject to valid existing rights.
17. Manage mineral activities to protect or enhance public supply water use.

Protection

- Insect and Disease 18. Protect water quality and quantity when applying integrated pest management practices.
19. Apply chemical pesticide only if beneficial uses of the water can be protected.
- Fire Management 20. Use planned ignitions, when within prescription, to achieve resource management objectives.
- Administration 21. Design all activities to protect the municipality's existing water conveyance and associated improvements. Maintenance of existing improvements is the responsibility of the municipality.
22. Consult with municipality prior to initiation of any project which may affect public supply water use.

4. Schedule of Management Practices

No management practices are scheduled for Management Area 17.



MANAGEMENT AREA 18 (224 acres) - LONG CREEK MUNICIPAL SUPPLY WATERSHED

- 1. Description Management Area 18 consists of the National Forest portion of the Long Creek Municipal Supply Watershed which provides water to the town of Long Creek, Oregon.
- 2. Goals Manage to protect water quality for community public supply water use. Protect existing beneficial uses of the water. To protect and, where needed, improve the quality and quantity of the water resource in a manner consistent with national, state, and forest goals.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area except where superseded by the following standards:

- Recreation**
 - 1. Discourage recreation use.
 - 2. Prohibit construction of developed recreation sites
 - 3. Restrict motorized recreation vehicles to designated roads and trails.
- Visuals**
 - 4. Meet visual quality objectives ranging from retention to modification depending on the visual quality objective of adjacent lands.
- Fish and Wildlife**
 - 5. Maintain sufficient stream quality to ensure that fish/water quality objectives are met.
 - 6. Prohibit management activities that adversely change the composition and productivity of key riparian vegetation.
- Range**
 - 7. Prohibit livestock grazing.
- Timber**
 - 8. Lands are classified as "suitable" for timber management; schedule timber harvest.
 - 9. Design timber harvest activities to protect or enhance the water resource. Emphasize sediment mitigation when harvest activities occur near streams.
 - 10. Locate timber harvest landings outside of riparian areas.
 - 11. Require directional felling of trees away from streams whenever possible.
 - 12. Prohibit harvesting equipment that will result in sediment production that would significantly affect the water supply
 - 13. Use full suspension of logs when crossing riparian areas.

MANAGEMENT AREA 18

14. Prohibit management activities that would change stream geomorphology by adversely altering streambanks, channel dimensions, or channel sediment.

Water

15. Consider cumulative impacts of proposed activities on the municipal watershed. To the degree possible, management activities will be coordinated with other landowners in the watershed.

16. Manage water yield to optimize quantity and quality.

Facilities

Roads and Trails

17. Design mitigation measures to assure that the existing beneficial uses of the waters of the watershed will be protected.

18. Minimize road and trail crossings in riparian areas. Avoid construction of roads and trails parallel to streams. Roads and trails should cross streams at as near a right angle as practical.

19. Consider opportunities to remove existing roads and trails from riparian areas if they are contributing to the degradation of water quality.

20. Open road density will be minimized to protect water quality and to meet other land use management objectives.

Utility Corridors

21. Manage area as a Category 1 Avoidance area for the location of utility corridors.

Minerals

22. Recommend "limited surface use" stipulation for mineral leases.

23. Design mineral activities to protect or enhance the water resource.

Protection

Insect and Disease

24. Protect water quality and quantity when applying integrated pest management practices.

25. Apply chemical pesticide only if beneficial uses of the water can be protected.

Fire Management

26. Use planned ignitions, when within prescription, to achieve resource management objectives.

Administration

27. Design all activities to protect the municipality's existing water conveyance and associated improvements. Maintenance of existing improvements is the responsibility of the municipality.

28. Consult with municipality prior to initiation of any project which may affect public supply water use.

4. Schedule of Management Practices

No management practices are scheduled for Management Area 18.

MANAGEMENT AREA 19 (1,369 acres) - ADMINISTRATIVE SITES

- 1. Description This management area includes Ranger Stations, work centers, other administrative sites and long-term special use areas such as the Lake Creek Organization camp. These sites are not displayed on management area maps.
- 2. Goals Provide and maintain sites for facilities necessary for the administration of Malheur National Forest lands

3 Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area, except where superseded by the following standards:

- Recreation** 1. Permit recreation activities that do not interfere with administrative functions
- Visuals** 2. Manage to achieve retention and partial retention visual quality level (see Management Area 14, Standards 17-19).
- Cultural Resources** 3. Consider the historic value and archaeological potential of Forest Service sites; record and evaluate as appropriate. Maintain sites for their historic and architectural values.
- Range** 4. Graze livestock where compatible with administrative functions.
- Timber** 5. Lands are classified as "unsuitable" for timber management; do not schedule timber harvest.
- 6. Remove timber for salvage, public safety, and administrative purposes.
- Minerals** 7. Recommend sites or portions of sites for mineral withdrawal where necessary to protect improvements. Stipulate "no surface occupancy" in mineral leases.
- Facilities**
- Roads** 8. Construct roads to provide access to and within areas as necessary for administrative purposes and to standards needed for the respective site.
- Trails** 9. Reconstruct and maintain trails for administrative access.
- Improvements** 10. Construct and manage improvements to meet facility needs for Forest administration
- Protection**
- Insect and Disease** 11. Salvage or treat infested and infected trees.
- Fire Management** 12. Control wildfires.

MANAGEMENT AREA 19

- 13. Planned ignitions may be used to achieve resource management objectives and enhance resource values.

4. Schedule of Management Practices

No management practices are scheduled for Management Area 19.



MANAGEMENT AREA 20A (14,629 acres) - DRY CABIN WILDLIFE EMPHASIS AREA (WITH SCHEDULED TIMBER HARVEST)

1. Description Management Area 20A consists of, and lands adjacent to, the former Dry Cabin roadless area. The manageable boundary for this area is 15,829 acres. Within this boundary, 337 acres were previously considered part of Aldrich Mountain RARE II area and 1,200 acres overlap with old growth and are covered under Management Area 13. The area is located on the northwestern edge of the Malheur National Forest, the south side of the Aldrich Mountain Range, about 10 miles southeast of Dayville, Oregon. The terrain is extremely variable. The major characteristics are long, open ridges and steep forested draws in the lower portions and larger blocks of densely forested slopes in the upper portion. Streamcourses include Chickenhouse Gulch and Cabin, Dry Cabin, Todd, North Duncan, and Duncan Creeks, plus many unnamed tributaries. Elevations range from about 6,440 to less than 3,440 feet. The area is approximately 77% forested. Ponderosa pine is the dominant species, associated with Douglas-fir and white fir on the moister sites, and white fir, Douglas-fir, and larch on the upper-elevation sites. Wildlife species of high public interest include Rocky Mountain elk and mule deer.

2. Goals Maintain the natural beauty and character of the area through effective visitor-use and resource management. Provide opportunities for high quality semiprimitive dispersed recreation with emphasis on big game hunting. Manage for wildlife habitat, and high quality water at the confluence with Murderers Creek, while allowing for scheduled timber harvest.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area unless superseded by the following standards:

- Recreation**
 1. Manage dispersed recreation for goals of semiprimitive nonmotorized recreation in a natural appearing environment with emphasis on quality big game hunting. Permit motorized use only on the Aldrich Ridge Road (2150) and Thorn Ridge Road (2170).
 2. Manage developed recreation for development Level 1 facilities where appropriate along the Aldrich Ridge Road.
- Visuals**
 3. Meet visual quality objective of foreground partial retention along the Aldrich Ridge Road (2150) and Thorn Ridge Road (2170). See Management Area 14, Standard No. 18.
- Fish and Wildlife**
 4. Provide necessary habitat to contribute to Forest-wide maintenance of viable populations of management indicator species and featured species. Develop strategies to promote a variety of species including those dependent upon old growth, riparian, and solitude.
- Big Game**
 5. Manage elk and mule deer habitat to provide for 40% cover and an elk habitat effectiveness index (HEI) of 0.7.

The HEI model provides a means of balancing cover quality, cover spacing, forage, and open road densities. If these minimums are not attainable due to natural conditions (e.g., extensive nonforest areas), insect and disease conditions, or past management activities, then the highest possible cover percentage and index value will be maintained or created. Site-specific project analysis will address both short-term and long-term effects, particularly in the case of cover where short-term options to treat stands for insects and disease will improve forest health in the long-term. The Forest Supervisor will review and approve all recommendations to drop below cover and HEI standards as well as a strategy to reach standards within a reasonable length of time (see Forest-wide Standard No. 3).

Cover and habitat effectiveness determinations for site-specific projects will be calculated on a subwatershed basis. Calculations will include both forested and nonforested lands regardless of their suitability for timber production.

Habitat Effectiveness Index (HEI) Model

The model to be used to calculate elk habitat effectiveness on summer and winter range is:

$$HEI = (HE_c \times HE_s \times HE_r \times HE_f)^{1/4}$$

where:

HE_c = habitat effectiveness derived from the quality of cover

HE_s = habitat effectiveness derived from the size and spacing of cover

HE_r = habitat effectiveness derived from the density of roads open to vehicular traffic

HE_f = habitat effectiveness derived from the quality and quantity of forage.

Below is displayed the cover and elk habitat effectiveness standards:

Forest Area	HEI	Minimum ^{1/} Values For Variables				Minimum Amount ^{2/} of Area in Cover		
		HE _c	HE _s	HE _{r3/}	HE _f	Satis.	Marginal	Total
MA 20A	.7	.5	.6	.6	.5	20%	20%	40%

^{1/}The interactions between cover stand size and spacing, road density, forage, and cover quality are compensatory to a limited extent; that is, variables with low values tend to be compensated by those with high values. Because elk tend to respond primarily to habitat variables of relatively low value, minimum values have been established for each variable in the habitat effectiveness model. While it is desirable to meet or exceed the minimum value for each variable it may not be possible to do this in every case due to site condition or potential. However, if all the variables are met at only the minimum values, the minimum standard for HEI will not be met. Therefore, to meet the HEI standard, if one or more variables are at the minimum or below, other variables must be met at higher levels in order to achieve the HEI standard. Calculate HE_r variable for winter range only

^{2/}For cover definitions, see Glossary. Where satisfactory cover is below the minimum standard, retain sufficient hiding cover to mitigate this shortage.

^{3/}A closed road is one where use is not physically evident, no greater than one trip/week.

6. Develop a long-range plan for achievement of wildlife objectives through use of timber harvest that will be the basis of scheduled entries.
 7. Maintain dead and defective tree habitat capable of supporting 60-100% of the potential population of management indicator species for primary excavators.
- Range**
8. Prioritize forage utilization to provide for big game species at levels derived in consultation with the Oregon Department of Fish and Wildlife.
 9. Structural improvements will be designed to not detract from the existing natural condition of the landscape.
 10. Allow the occasional use of motorized equipment for facility maintenance and other range activities when approved by the Forest Supervisor.
- Timber**
11. Lands in this management area are classified as both "suitable" and "unsuitable" for timber management. Schedule timber harvest on the portion of the management area classified as "suitable" for timber management.
 12. On lands "suitable" for scheduled timber harvest, silvicultural prescriptions will be designed to maintain and/or improve cover conditions.
 13. Design timber harvest to maintain a natural appearing landscape and quality wildlife habitat. Emphasize uneven-aged management while allowing even-aged management where site-specific silvics or wildlife habitat objectives dictate. The overall effect will vary from natural appearing to slightly altered.
 14. Emphasize diversity of vegetation, experienced as one moves through the area. Create this effect by developing a sequence of stand conditions by utilizing group selection techniques applied to small treatment units (1/4 to 2 acres) and even-aged management in units up to 10 acres.
 15. Emphasize uneven-aged timber management in the lower portion of the area (approximately 2/3 of the area) (see Appendix K). Manage for the following target tree numbers and sizes:
 - (a) Twenty four inch uneven-aged management ponderosa pine and mixed conifer stands - Maintain at least 2 trees per acre that are 24 inches in diameter and 5 replacement trees that are 18 to 24 inches in diameter.
 - (b) Twenty inch uneven-aged management ponderosa pine and mixed conifer stands - Maintain at least 2 trees per acre that are 20 inches in diameter and 5 replacement trees that are 16 to 20 inches in diameter.
 - (c) Low site lands (all species) - Maintain at least 1 tree per acre 18 inches in diameter.
 - (d) Manage the stand, including understory, to maintain target tree standards throughout time and to meet regional direction for uneven-aged management (see glossary, uneven-aged management)

MANAGEMENT AREA 20A

16. Emphasize even-aged timber management in the upper portion of the area (approximately 1/3 of the area) concentrated on the better, more operable sites. Use extended rotations (180 years) with target tree sizes in excess of 24 inches in diameter on approximately 1/2 of the even-aged acres, with standard rotation lengths applied to the remaining 1/2, striving for the desired stand structure variety. Limit unit size to a maximum of 10 acres. Consider created openings no longer openings when the stand has reached a height of 20 feet.
- Stand Improvement**
17. Defer precommercial and commercial thinnings when needed to meet elk habitat effectiveness objectives. Base this determination on a site-specific environmental analysis.
- Minerals**
18. Provide access for exploration and development of locatable and leasable mineral resources. However, allow new road construction only where a road is necessary for the next logical stage of development of the mineral resource, and where other means of access (such as by helicopter, all-terrain vehicle, or pack animal) would be infeasible or unreasonable. Roads will be constructed to the minimum standards suitable for the proposed use, and will be obliterated to the extent feasible after completion of activities.
- Facilities**
19. Except for facilities necessary to protect fragile resources, limit facilities to trail shelters and structures which meet sanitary and safety needs. All facilities should be of simple design and native, rustic-like materials. Minimize site modifications for facilities. Site development level should be Level 2 or less.
- Roads**
20. Minimize road construction when determining access needs for timber management activities. Favor logging systems that require less road construction. Close or obliterate all newly constructed roads once management activities are completed. Road design will be determined by visual management needs, with the goal of maintaining a natural appearing landscape, and wildlife habitat needs. An area transportation plan will be developed.
 21. To limit disturbance to big game, the open road density will be no greater than 1.5 mi/mi² by 1999. Where existing conditions do not meet this goal, project transportation system designs will be developed in order to move toward this goal in the shortest time frame possible. Densities will be monitored on a watershed basis (see Appendix I).
 22. All roads will be planned, designed and constructed to minimum level standards. No through roads.
 23. Access management will be identified as an issue during any project level environmental analysis.
 24. Restrict motorized vehicles to the Aldrich Ridge Road (2150) and the Thorn Ridge road (2170).
- Trails**
25. Maintain existing trails. Construct or reconstruct trails to be consistent with management area objectives, accommodate increased use, ensure public safety, and reduce environmental damage.

Utility Corridors 26. Manage this area as a Category 1 Avoidance area for the location of utility corridors.

PROTECTION

Fire Management 27. Motorized equipment is authorized for fire suppression activities.

Residue Management 28. Use prescribed fire from planned ignitions to achieve resource management objectives. When based on site-specific analysis, use prescribed fire from natural ignitions (i.e., lightning) to allow fire to play its natural ecological role.

4. Schedule of Management Practices

MANAGEMENT AREA 20A - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
TIMBER		
Timber Harvest Clearcut	ET12	0 MMBF/0 Ac
Shelterwood - Seed Tree Cut	ET12	0 MMBF/0 Ac
Selection	ET12	2 MMBF/104 Ac
Overstory Removal on Existing Stands	ET12	21.0 MMBF/2,144 Ac
Commercial Thinning	ET12	0 MMBF/0 Ac
Salvage/Other Products	ET12	1.0 MMBF/Ac N/A
Total Timber Harvest	ET12	22.2 MMBF/2,248 Ac
Reforestation Planting	ET24	20 Ac
Natural	ET24	20 Ac
Timber Stand Improvement Precommercial Thinning	ET25	1,348 Ac

MANAGEMENT AREA 20B (9,045 acres) - UTLEY BUTTE WILDLIFE EMPHASIS AREA (WITH SCHEDULED TIMBER HARVEST)

1. Description Management Area 20B consists of the former Utley Butte roadless area. The manageable boundary for this area is 9,945 acres, 900 of those acres overlap with old growth and are covered under Management Area 13. The area is located in the southwestern corner of the Forest on the Grant-Harney County line. The area is drained by Spoon, Alder, Utley, Rail, and Corral Creeks, all tributaries to the South Fork John Day River. Snow Mountain on the western edge of the area is the predominant landmark in the area. The topography of the area can be described as steep, primarily north-facing slopes and flat-topped ridges. Elevation of the area ranges from 5,000 to 7,163 feet. This area is approximately 77% forested. Vegetative distribution on this north-facing area is characterized by trees in the bottoms, on sideslopes, and on gentle flat-topped ridges. Grass and low shrubs are found on steeper sideslopes and rock areas. Ridges and south slopes support ponderosa pine and juniper with a mountain-mahogany understory. Ground cover is usually sagebrush and bunchgrasses. Conifers are primarily confined to north slopes and drainages. Overstories consist of ponderosa pine and fir with some larch; understories are mainly white fir and Douglas-fir with grass and forbs as ground cover. Streamside vegetation generally consists of alder, willow, and some scattered mountain ash. This vegetation is mainly confined to upper drainages since lower drainages have little or no streamside vegetation. Wildlife species of high public interest include Rocky Mountain elk and mule deer.

2. Goals Manage to provide for high quality wildlife and fish habitat and water quality, while allowing for scheduled timber harvest. Provide opportunities for high quality semiprimitive dispersed recreation.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area except where superseded by the following standards:

Recreation 1. Manage for semiprimitive motorized recreation on designated roads and trails. Manage for semiprimitive nonmotorized recreation on the remainder of the area.

Visuals 2. Meet visual quality objectives ranging from retention to modification depending on the visual quality objective of adjacent lands.

Fish and Wildlife 3. Provide necessary habitat to contribute to Forest-wide maintenance of viable populations of management indicator species and featured species. Develop strategies to promote a variety of species including those dependent upon old growth, riparian, and solitude.

Big Game 4. Manage elk and mule deer habitat to provide for 40% cover and an elk habitat effectiveness index (HEI) of 0.7.

The HEI model provides a means of balancing cover quality, cover spacing, forage and open road densities. If these minimums are not attainable due to natural conditions (e.g., extensive nonforest areas), insect and disease conditions, or past management activities, then the highest possible cover percentage and index value will be maintained or created. Site-specific project analysis will address both short-term and long-term effects, particularly in the case of cover where short-term options to treat stands for insects and disease will improve forest health in the long-term. The Forest Supervisor will review and approve all recommendations to drop below cover and HEI standards as well as a strategy to reach standards within a reasonable length of time (see Forest-wide Standard No. 3).

Cover and habitat effectiveness determinations for site-specific projects will be calculated on a subwatershed basis. Calculations will include both forested and nonforested lands regardless of their suitability for timber production.

Habitat Effectiveness Index (HEI) Model

The model to be used to calculate elk habitat effectiveness on summer and winter range is:

$$HEI = (HE_c \times HE_s \times HE_r \times HE_f)^{1/4}$$

where:

HE_c = habitat effectiveness derived from the quality of cover

HE_s = habitat effectiveness derived from the size and spacing of cover

HE_r = habitat effectiveness derived from the density of roads open to vehicular traffic

HE_f = habitat effectiveness derived from the quality and quantity of forage

Below is displayed the cover and elk habitat effectiveness standards:

Forest Area	HEI	Minimum ^{1/} Values For Variables				Minimum Amount ^{2/} of Area in Cover		
		HE _c	HE _s	HE _{r3/}	HE _f	Satis.	Marginal	Total
MA 20B	.7	.5	.6	.6	.5	20%	20%	40%

^{1/}The interactions between sizing and spacing, road density, forage and cover quality are compensatory to a limited extent, that is, variables with low values tend to be compensated by those with high values. Because elk tend to respond primarily to habitat variables of relatively low value, minimum values have been established for each variable in the habitat effectiveness model. While it is desirable to meet or exceed the minimum value for each variable it may not be possible to do this in every case due to site condition or potential. However, if all the variables are met at only the minimum values, the minimum standard for HEI will not be met. Therefore, to meet the HEI standard, if one or more variables are at the minimum or below, other variables must be met at higher levels in order to achieve the HEI standard. Calculate HE_r in winter range only.

^{2/}For cover definitions, see Glossary. Where satisfactory cover is below the minimum standard, retain sufficient hiding cover to mitigate this shortage.

^{3/}A closed road is one where use is not physically evident, no greater than one trip/week.

MANAGEMENT AREA 20B

5. Develop a long-range plan for achievement of wildlife objectives through use of timber harvest that will be the basis of scheduled entries.
 6. Maintain dead and defective tree habitat capable of supporting 60-100% of the potential population of management indicator species for primary excavators.
- Range**
7. Prioritize forage utilization to provide for big game species at levels derived in consultation with the Oregon Department of Fish and Wildlife.
 8. Schedule cost-efficient range improvements to improve range condition when and where needed and consistent with management area objectives.
 9. Design improvements to protect tree regeneration areas and/or to distribute livestock use.
- Timber**
10. Lands in this management area are classified as both "suitable" and "unsuitable" for timber management. Schedule timber harvest on the portion of the management area classified as "suitable" for timber management.
 11. On lands "suitable" for scheduled timber harvest, silvicultural prescriptions will be designed to maintain and/or improve cover conditions.
 12. When applying uneven-aged management, manage for the following target tree numbers and sizes:
 - (a) Twenty four inch uneven-aged management ponderosa pine and mixed conifer stands - Maintain at least 2 trees per acre that are 24 inches in diameter and 5 replacement trees that are 18 to 24 inches in diameter.
 - (b) Twenty inch uneven-aged management ponderosa pine and mixed conifer stands - Maintain at least 2 trees per acre that are 20 inches in diameter and 5 replacement trees that are 16 to 20 inches in diameter.
 - (c) Low site lands (all species) - Maintain at least 1 tree per acre 18 inches in diameter.
 - (d) Manage the stand, including understory, to maintain target tree standards throughout time and to meet regional direction for uneven-aged management (see glossary, uneven-aged management).
 13. When applying uneven-aged management, the size of created openings are to be a maximum of two acres in size. Exceptions will be based on site-specific prescriptions which are responsive to integrated land management objectives.
 14. Limit activities seasonally when needed to reduce wildlife harassment.
- Stand Improvement**
15. Defer precommercial and commercial thinnings when needed to meet elk habitat effectiveness objectives. Base this determination on a site-specific environmental analysis.

- Minerals**
16. Stipulate in mineral leases the possible limitation of activity between December 1 through April 1 if necessary to provide for wintering needs of big game. Negotiate reasonable limitations in operating plans for locatable mineral development
- Facilities**
- Roads**
17. Minimize road construction when determining access needs for timber management activities. Favor logging systems that require less road construction. Obliterate or close all newly constructed roads once project activities are completed unless road management objectives dictate otherwise. Road management objectives, including design criteria, operation criteria, and maintenance criteria, will be determined primarily by wildlife habitat needs (including security needs). An area transportation plan will be developed.
18. To limit disturbance to big game, the open road density will be no greater than 1.5 mi/mi² by 1999. Where existing conditions do not meet this goal, project transportation system designs will be developed in order to move toward this goal in the shortest time frame possible. Densities will be monitored on a watershed basis (see Appendix I).
19. All roads will be planned, designed and constructed to minimum level standards. No through roads.
20. Access management will be identified as an issue during any project level environmental analysis.
21. Restrict motorized off-highway vehicles, over-the-snow vehicles, and other motorized traffic use to designated roads and trails on winter range areas when necessary to protect wildlife habitat and minimize harassment to elk and deer.
- Trails**
22. Locate, design, and construct trails that accommodate projected recreational use, ensure public safety, and meet management area objectives. Schedule construction work to minimize disruption to wildlife.
- Protection**
- Residue Management**
23. Manage residue to maintain or enhance big-game habitat and forage production.
24. Use all methods of fuel treatment as prescribed by site-specific analysis to achieve resource management objectives. Use prescribed fire from planned ignition when appropriate.

MANAGEMENT AREA 20B

4. Schedule of Management Practices

MANAGEMENT AREA 20B - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
TIMBER		
Timber Harvest		
Clearcut	ET12	0 MMBF/0 Ac
Shelterwood - Seed Tree Cut	ET12	0 MMBF/0 Ac
Selection	ET12	.1 MMBF/66 Ac
Overstory Removal on Existing Stands	ET12	13.2 MMBF/1,348 Ac
Commercial Thinning	ET12	0 MMBF/0 Ac
Salvage/Other Products	ET12	.6 MMBF/Ac N/A
Total Timber Harvest	ET12	13.9 MMBF/1,414 Ac
Reforestation		
Planting	ET24	13 Ac
Natural	ET24	13 Ac
Timber Stand Improvement		
Precommercial Thinning	ET25	848 Ac

MANAGEMENT AREA 21 (22,076 acres) - WILDLIFE EMPHASIS AREA (WITH NON-SCHEDULED TIMBER HARVEST)

- 1. Description Management Area 21 consists of 4 geographical areas on the Forest that are in, or portions of, former roadless areas. These areas include the Jumpoff Joe area (4,006 acres); and portions of Baldy Mountain (5,380 acres); Dixie Butte (6,895 acres); and Nipple Butte (5,795 acres) A variety of physical and biological environments occur in these areas, both forested and nonforested, as determined by soil, slope, aspect, elevation, and climatic factors.
- 2. Goals Manage to provide for high quality fish and wildlife habitat and water quality. Timber harvest will be on a non-scheduled basis and will be used only to meet a wildlife and/or fish habitat objective. Provide opportunities for high quality semiprimitive dispersed recreation. Although road construction is allowed, overall objectives are to manage the area in an unroaded condition.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area except where superseded by the following standards:

- Recreation** 1. Manage for semiprimitive motorized recreation on designated roads and trails. Manage for semiprimitive nonmotorized recreation on the remainder of the area.
- Visuals** 2. Meet visual quality objectives ranging from retention to modification depending on the visual quality objective of adjacent lands.
- Fish and Wildlife** 3. Provide necessary habitat to contribute to Forest-wide maintenance of viable populations of management indicator species and featured species. Develop strategies to promote a variety of species including those dependent upon old growth, riparian, and solitude.
- Big Game** 4. Manage elk and mule deer habitat to provide for 40% cover and an elk habitat effectiveness index (HEI) of 0.7.

The HEI model provides a means of balancing cover quality, cover spacing, forage and open road densities. If these minimums are not attainable due to natural conditions (e.g., extensive nonforest areas), insect and disease conditions, or past management activities, then the highest possible cover percentage and index value will be maintained or created. Site-specific project analysis will address both short-term and long-term effects, particularly in the case of cover where short-term options to treat stands for insects and disease will improve forest health in the long-term. The Forest Supervisor will review and approve all recommendations to drop below cover and HEI standards as well as a strategy to reach standards within a reasonable length of time (see Forest-wide Standard No. 3).

Habitat effectiveness determinations for site-specific projects will be calculated on a subwatershed basis. Calculations will include both forested and nonforested lands regardless of their suitability for timber production.

Habitat Effectiveness Index (HEI) Model

The model to be used to calculate elk habitat effectiveness on summer and winter range is:

$$HEI = (HE_c \times HE_s \times HE_r \times HE_f)^{1/4}$$

where:

HE_c = habitat effectiveness derived from the quality of cover

HE_s = habitat effectiveness derived from the size and spacing of cover

HE_r = habitat effectiveness derived from the density of roads open to vehicular traffic

HE_f = habitat effectiveness derived from the quality and quantity of forage.

Below is displayed the cover and elk habitat effectiveness standards:

Forest Area	HEI	Minimum ^{1/} Values For Variables				Minimum Amount ^{2/} of Area in Cover		
		HE _c	HE _s	HE _r	HE _f	Satis.	Marginal	Total
MA 21	.7	.5	.6	.6	.5	20%	20%	40%

^{1/}The interactions between stand cover size and spacing, road density, forage and cover quality are compensatory to a limited extent, that is, variables with low values tend to be compensated by those with high values. Because elk tend to respond primarily to habitat variables of relatively low value, minimum values have been established for each variable in the habitat effectiveness model. While it is desirable to meet or exceed the minimum value for each variable it may not be possible to do this in every case due to site condition or potential. However, if all the variables are met at only the minimum values, the minimum standard for HEI will not be met. Therefore, to meet the HEI standard, if one or more variables are at the minimum or below, other variables must be met at higher levels in order to achieve the HEI standard. Calculate HEI for winter range only.

^{2/}For cover definitions, see Glossary. Where satisfactory cover is below the minimum standard, retain sufficient hiding cover to mitigate this shortage

^{1/}A closed road is one where use is not physically evident, no greater than one trip/week.

5. Develop a long-range plan for achievement of wildlife objectives through use of non-scheduled timber harvest.

Primary Excavators

6. Maintain dead and defective tree habitat capable of supporting 60-100% of the potential population of management indicator species for primary excavators.

Range

7. Prioritize forage utilization to provide for big game species at levels derived in consultation with the Oregon Department of Fish and Wildlife.
8. Schedule cost-efficient range improvements to improve range condition when and where needed and consistent with management area objectives.

- 9. Design improvements to protect wildlife habitat and distribute livestock use.
- Timber**
- 10. Exclude scheduled timber harvest. Lands are classified as "unsuitable" for timber management. Harvest may occur to accomplish wildlife habitat or fish habitat objectives, as established in a project-level environmental analysis
- Minerals**
- 11. Stipulate in mineral leases the limitation of activity between December 1 through April 1 if necessary to provide for wintering needs of big game. Negotiate reasonable limitations in operating plans for locatable mineral development.
- Facilities**
- Roads**
- 12. Minimize road construction when determining access needs for timber management activities. Favor logging systems that require less road construction. Obliterate or close all newly constructed roads once project activities are completed unless road management objectives dictate otherwise. Road management objectives, including design criteria, operation criteria, and maintenance criteria, will be determined primarily by wildlife habitat needs (including security needs) An area transportation plan will be developed.
 - 13. To limit disturbance to big game, the open road density will be no greater than 1.5 mi/mi² by 1999. Where existing conditions do not meet this goal, project transportation system designs will be developed in order to move toward this goal in the shortest time frame possible. Densities will be monitored on a watershed basis (see Appendix I).
 - 14. All roads will be planned, designed and constructed to minimum level standards. No through roads.
 - 15. Access management will be identified as an issue during any project level environmental analysis.
 - 16. Restrict motorized off-highway vehicles, over-the-snow vehicles, and other motorized traffic use to designated roads and trails to protect wildlife habitat and minimize harassment of elk and deer.
- Trails**
- 17. Locate, design, construct and maintain trails that accommodate projected recreational use, ensure public safety, and meet management area objectives Schedule construction work to minimize disruption to wildlife.
- Protection**
- Residue Management**
- 18. Manage residue to maintain or enhance big game and forage production.
 - 19. Use planned ignitions, when within prescription, to achieve resource management objectives. Prescribed fire from lightning ignitions may be used to allow fire to play its natural ecological role
- 4. Schedule of Management Practices**
- No management practices are scheduled for Management Area 21.

MANAGEMENT AREA 22 (10,256 acres) - WILD AND SCENIC RIVER

1. Description

The Omnibus Oregon Wild and Scenic Rivers Act of 1988 (P.L. 100-577) designated two rivers on the Malheur National Forest to be included in the National Wild and Scenic River System. The Malheur River has both wild and scenic segments designated, the North Fork Malheur River is entirely scenic. Both rivers are located in the southeast portion of the forest

A Wild River is defined as a river or section of river that is free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.

A Scenic River is defined as a river or section of river that is free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

The Malheur River has segments in both wild and scenic river classifications running from Bosenberg Creek to the Malheur National Forest boundary. The corridor of the designated river includes approximately 3,534 acres, and is approximately 11.8 miles in length. The segment from Bosenberg Creek to the Malheur Ford is classified as a scenic river, and the segment from the Malheur Ford to the Malheur National Forest Boundary is classified as a wild river.

As identified in the Act, the Malheur River's outstandingly remarkable value is its unique scenic character. Upon completion of a resource assessment, river geology was added as the river's second outstandingly remarkable value. The river is in a rugged canyon south of the Malheur Ford, that ranges from 300 to 1,000 feet in depth. There are prominent rock outcrops, particularly along the southwestern edge of the canyon. The canyon bottom vegetation is park-like, with sagebrush/grass, meadows, and scattered old growth ponderosa pine.

The Wild and Scenic Rivers Act described the designated portion of the Malheur River as 13.7 miles in length. Since that time, more accurate measurements have been made. It has been determined that the designated portion of the river is approximately 11.8 miles in length (4.9 miles in the Scenic classification and 6.9 miles in the wild classification).

The North Fork Malheur River is a scenic river from its headwaters to the Malheur National Forest boundary, approximately 22.8 river miles in length.

As identified in the Act, the North Fork Malheur River's outstandingly remarkable values are scenic and geological. From the headwaters south to Crane Creek Crossing the river flows through a mosaic of lodgepole pine, meadow/wetland areas and old growth mixed conifer-ponderosa pine. South of Crane Creek Crossing the river is in a steep, rugged canyon with basalt rimrock above the stream course. The canyon is, in some locations 250 to 750 feet in depth.

The Wild and Scenic Rivers Act described the designated portion of the North Fork Malheur River as 25.5 miles in length. Since that time more accurate measurements have been made. It has been determined that the designated portion of the river is approximately 22.8 river miles in length.

2. Goals Protect, enhance, and maintain the natural beauty, character, outstandingly remarkable values and water quality. Preserve the free flowing condition of wild and scenic rivers and their corridors for the use and enjoyment of present and future generations.

The Wild and Scenic Rivers Act (October 1988) requires that a detailed management plan be prepared within three years of classification for all wild and scenic rivers, outlining public use, development and administration. This plan will identify the specific direction, or prescriptions, to be followed in the management of the rivers. Until the management plan is completed, no timber harvesting or construction projects (i.e., recreation, trails, etc.) will be permitted.

3. Standards

RESOURCE ELEMENT STANDARDS

The Forest-wide management direction included in Chapter IV, Section E, of this Plan applies to this management area, except where superseded by the following standards:

SCENIC RIVER SEGMENT

- | | |
|---------------------------|--|
| Recreation | <ol style="list-style-type: none"> 1. Manage dispersed recreation for semiprimitive nonmotorized recreation. Motorized travel on land or water may be permitted, prohibited or restricted to protect the river values. 2. Larger scale public use facilities, such as moderate size campgrounds, public information centers, and administrative headquarters are allowed if such structures are screened from the river. Modest and unobtrusive marinas also can be allowed. |
| Visuals | <ol style="list-style-type: none"> 3. Visuals will be managed as seen from the river and North Fork Malheur trail. Foreground management will be retention, however, partial retention may be used for necessary structure facilities. The visual quality objective of partial retention for the middleground will be met (see Management Area 14, Standards 17-19). |
| Cultural Resources | <ol style="list-style-type: none"> 4. Recognize that cultural resources within and relating to the rivers are a valuable, nonrenewable resource. Identify, evaluate, protect, and enhance these resources in compliance with Federal and State laws and Forest Service policy. 5. Conduct a cultural resource survey of all lands within the corridor. Record historic and prehistoric sites, and evaluate all sites for significance. |
| Fish and Wildlife | <ol style="list-style-type: none"> 6. Implement fish and wildlife habitat improvement/maintenance projects only if they meet the objectives of the area. Emphasis is on habitat improvements for enhancing the viewing opportunities for wildlife and to protect/enhance habitat for threatened, endangered and sensitive species. |

MANAGEMENT AREA 22

7. Maintain dead and defective tree habitat capable of supporting 60-100% of the potential population of management indicator species for primary excavators.
- Range**
 8. Commercial livestock grazing is permitted under approved management plans which have analyzed compatibility of livestock grazing with other resource values. Design range improvements to be compatible with the visual objectives.
- Timber**
 9. Land suitability classification will be determined during River Management Planning. Until the management plan is completed, no timber harvest will be permitted.
 10. A wide range of silvicultural practices could be allowed provided that such practices are carried on in such a way that there is no substantial adverse effect on the river and its immediate environment. The river area will be maintained in its near natural environment.
- Minerals**
 11. The Secretaries of Agriculture and the Interior may prescribe to protect the values of rivers included in the National System and new mining claims, mineral leases and existing operations could be allowed to continue (36 CFR 228). However, mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.
- Lands**
 12. Retain the National Forest lands within this area.
- Facilities**
- Roads**
 13. Roads may occasionally bridge the river area. Short stretches of conspicuous or longer stretches of inconspicuous and well-screened roads could be allowed. Consideration will be given to the type of use for which roads are constructed and the type of use that will occur in the river area.
- Trails**
 14. Maintain existing trails. Construct and reconstruct trails to the minimum level necessary to accommodate increased use, ensure public safety, and reduce environmental damage. Power equipment may be used to accomplish construction and maintenance work. Schedule this work during low-use periods.
- Utility Corridors**
 15. New transmission lines, gas lines, water lines, etc. are discouraged. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated, the scenic, recreational, and fish and wildlife values must be evaluated in the selection of the site.
- Other**
 16. Concentrations of habitations are limited to relatively short reaches of the river corridor. New structures that would have a direct and adverse effect on river values would not be allowed. Structures and activities associated with fisheries enhancement program could be allowed.
 17. Water supply dams and major diversions are prohibited.

- 18. Hydroelectric power facilities are prohibited.
- 19. Flood control dams and levees are prohibited.

Protection

Fire Management

- 20. Use planned ignitions, when within prescription, to achieve resource management objectives. Prescribed fire from lightning ignitions may be used to allow fire to play its natural ecological role.

Insects and Disease

- 21. Allow endemic infestations to occur. Epidemics that threaten scenic values or adjacent lands may be treated.

WILD RIVER SEGMENT

Recreation

- 22. Manage dispersed recreation for semiprimitive nonmotorized recreation. Motorized travel on land or water could be permitted, but is generally not compatible with this classification.
- 23. Major public-use areas, such as large campgrounds, interpretive centers or administrative headquarters are located outside the wild river area. Simple comfort and convenience facilities, such as fireplaces, shelters and toilets may be provided as necessary within the river area. These should harmonize with the surroundings.

Visuals

- 24. Foreground management will be preservation, however, retention may be used for necessary recreation facilities. The visual quality objective of retention for the middleground and partial retention for the background will be met (see Management Area 14, Standards 17-19).

Cultural Resources

- 25. Recognize that cultural resources within and relating to the rivers are a valuable, nonrenewable resource. Identify, evaluate, preserve, protect, and enhance these resources in compliance with Federal and State laws and Forest Service policy.
- 26. Conduct a cultural resource inventory survey of all lands within the corridor. Record historic and prehistoric sites, and evaluate all sites for significance.

Fish and Wildlife

- 27. Maintain fish and wildlife indigenous to the area with emphasis on preservation of Threatened and Endangered Species.

Range

- 28. Commercial livestock grazing is permitted under approved management plans which have analyzed compatibility of livestock grazing with other resource values. Design range improvements to be compatible with the visual objectives.

Timber

- 29. Exclude timber harvest. Lands are classified as "unsuitable" for timber management.

MANAGEMENT AREA 22

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

Minerals

31. New mining claims and mineral leases are prohibited within 1/4 mile of the river. Valid claims will not be revoked. The Secretaries of Agriculture and Interior may prescribe to protect the rivers included in the National system, and other existing mining activity would be allowed to continue (36 CFR 228). Existing mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and visual impairment. Reasonable access will be permitted.

Lands

32. Retain the National Forest lands within this area.

Facilities

Roads

33. No roads or other provisions for overland motorized travel will be permitted within a narrow incised river valley, or if the river valley is broad, within 1/4 mile of the river bank.

Trails

34. Maintain existing trails. Construct and reconstruct trails to the minimum level necessary to accommodate increased use, ensure public safety, and reduce environmental damage. Power equipment may be used to accomplish construction and maintenance work. Schedule this work during low-use periods. Unobtrusive trail bridges are allowed.

Utility Corridors

35. New transmission lines, gas lines, water lines, etc. are discouraged. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated, the scenic, recreational, and fish and wildlife values must be evaluated in the selection of the site.

Other

36. A few minor existing structures can be allowed if compatible with the primitive and natural values of the viewshed. New structures are not allowed except in rare instances to achieve management objectives (i.e., structures and activities associated with fisheries enhancement programs could be allowed).

37. Water supply dams and major diversions are prohibited

38. Hydroelectric power facilities are prohibited.

39. Flood control dams, levees or other works are prohibited.

Protection

Fire Management

40. Use planned ignitions, when within prescription, to achieve resource management objectives. Prescribed fire from lightning ignitions may be used to allow fire to play its natural ecological role.

Insects and Disease

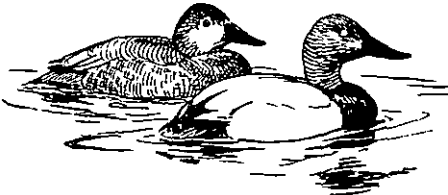
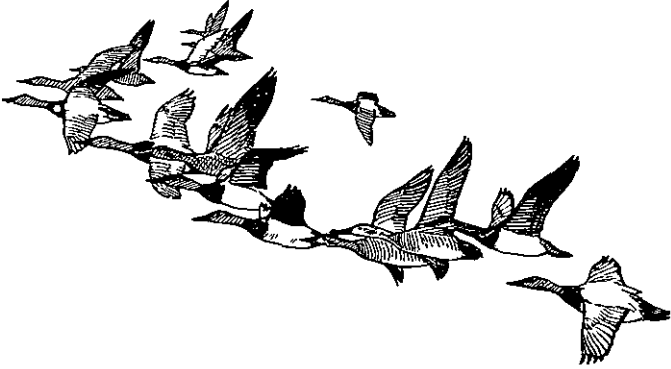
41. Allow endemic infestations to occur. Epidemics that threaten scenic values or adjacent lands may be treated.

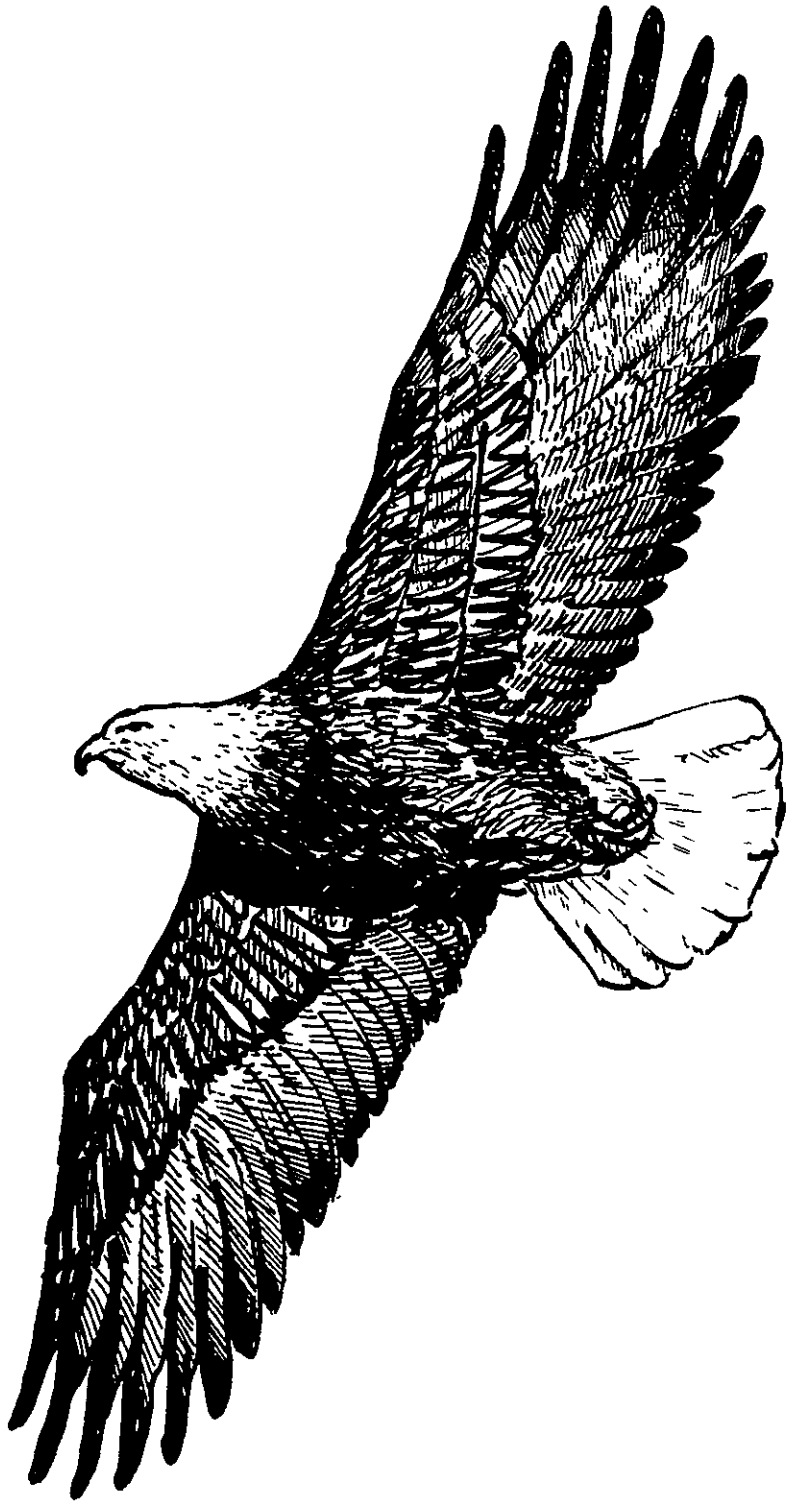
4. Schedule of Management Practices

MANAGEMENT AREA 22 - SCHEDULE OF MANAGEMENT PRACTICES

Management Practice	Activity Code	Total Planned for Decade (1990-1999)
RECREATION		
River Management Plan ^{1/}	AN112	2 Plans
Trail Construction	AT22	17 Miles
Trailhead Construction	AT22	2 Sites
CULTURAL RESOURCE SURVEY	AC111	10,256 Ac

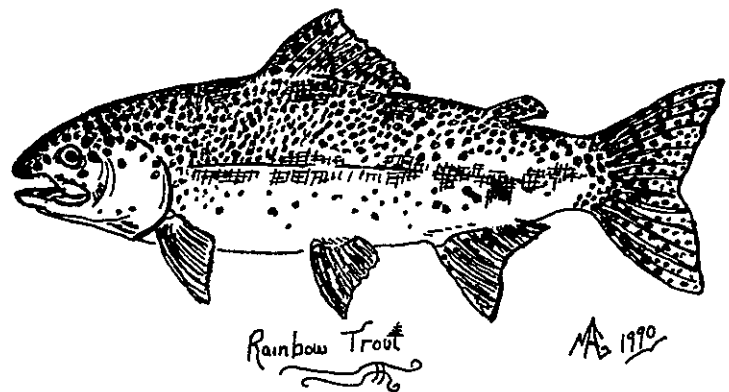
^{1/}River Management Plan will establish a site specific schedule of management activities





Chapter V

IMPLEMENTATION



CHAPTER V IMPLEMENTATION**A. INTRODUCTION**

The mission of the Forest Service is to "Care For The Land and Serve People." The Forest Plan is the best management tool that will allow us to accomplish this mission. Putting the Forest Plan to work on-the-ground is our task.

Implementation of the Malheur National Forest Plan requires moving from an existing management program, with a budget and "targets" for accomplishment, to a new management program with a budget, goals, objectives, and standards that provide a different way of addressing the issues. This Forest Plan establishes the direction for the Malheur National Forest for the next 10 to 15 years, in conjunction with Forest Service Manuals and Handbooks and the Pacific Northwest Regional Guide.

The remainder of this chapter explains how management of the Malheur National Forest will move from current direction and existing situation to implementation of this Forest Plan. The following sections describe how the public will be involved with Forest Plan implementation, the relationship between project planning and this Forest Plan, the goals of and requirements for monitoring and evaluation, and the circumstances which could require the Forest Plan to be amended or revised.

B. IMPLEMENTATION DIRECTION

Implementation of the Forest Plan occurs through identification, selection, scheduling, and execution of management practices to meet management direction provided in the Plan. Implementation also involves responding to proposals by others for use and/or occupancy of National Forest System lands.

Project Scheduling

Activity schedules of proposed projects are contained in Appendix A. These activity schedules represent a pool of possible projects and suggested time frames from which annual work programs can be developed contingent upon approved funding. The listing of projects and schedules for the ten year period are maintained by the unit managers. These listings will routinely change as projects are implemented or are removed from the lists for other reasons, and new projects take their place. Projects will be implemented in response to public demand, planned outputs of goods and services in this Plan and the annual budgeting process.

Consistency With Other Instruments

This Forest Plan serves as the single land management plan for the Malheur National Forest. All previous land management plans are replaced by this Forest Plan. These include the following plans:

- John Day Unit Plan
- Silvies-Malheur Unit Plan
- South Fork Unit Plan
- Malheur Timber Resource Management Plan

Table V-1 lists planning documents that must be brought into compliance with the Forest plan or developed under the Forest Plan.

**TABLE V-1
Planning Documents to be Revised and/or Developed**

Planning Document	Revise/Update	To Be Developed
Access Management Plan		X
Allotment Management Plans	X	
Aviation Plan	X	
Capital Investment Plan	X	
Communication Systems Plan		X
Co-op Agreements	X	X
Dispersed Recreation Management Plans		X
Electronic Site Plans	X	X
Facilities Management Plan	X	
Fire Management Action Plan		X
Genetic Tree Improvement Plan	X	
Hazardous Materials Plan	X	
Land Ownership Plan	X	
Law Enforcement Plan	X	
Pesticides Management Plan		X
Recreation Feasibility Analysis		X
Research Natural Areas Canyon Creek Dixie, Baldy, Dugout and Shaketable	X	X
Rock Materials Resource Management Plan	X	
Search and Rescue Plan	X	
Site Development Plan	X	

TABLE V-1 Continued
Planning Documents to be Revised and/or Developed

Planning Document	Revise/Update	To Be Developed
Special Interest Area Plans		X
Special Use Permits	X	
Spill Prevention and Response Plan	X	
Timber Harvest Activity Schedule	X	
Trail Management Plans	X	X
Tree Seed Inventory	X	
Vegetation Management Plan		X
Viewshed Corridor Plans		X
Wild and Scenic River Plans		X
Wild Horse Management Plan	X	
Wilderness Implementation Schedule		X
Wildlife Emphasis Area Plans		X

As soon as practicable, and generally no later than three years after approval of this Forest Plan, the Forest Supervisor will ensure that, subject to valid existing rights, all outstanding permits, contracts, cooperative agreements, and other instruments for occupancy and use of lands of the Malheur National Forest are consistent with this Forest Plan

Public Involvement

It is important to keep the affected and interested publics informed, and to invite their participation as the Forest Plan is implemented. We are dedicated to being good neighbors and working cooperatively with the public to implement the Forest Plan.

Throughout the life of the Forest Plan the Forest will maintain a mailing list of those members of the public who want to stay informed about Forest Plan implementation activities (e.g., monitoring and evaluation activities and results, project level analysis and decisions, Forest Plan amendments, etc.). The public will be notified prior to implementing a Forest Plan Amendment. Also, each year the Forest will prepare a report to summarize the previous years' successes and shortcomings in implementing the Forest Plan (e.g., what was accomplished and what wasn't, what was budgeted and what wasn't, what we learned from monitoring, what amendments were made, etc.).

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Project Implementation Implementation of the Forest Plan occurs through identification, selection, scheduling, and execution of projects to meet management direction provided in the Plan. Implementation also involves responding to proposals by others for use and/or occupancy of National Forest System lands.

The management direction provided by this Forest Plan comprises the sideboards within which project planning and implementation can take place. It defines management area goals and management standards that guide project activities toward achieving a desired future condition for the various management areas and, collectively, for the Forest. It specifies a schedule for project activities (management practices). It provides direction concerning potential landtype and habitat type constraints, including assumptions about the appropriate vegetation management practices for timber sale projects. On-the-ground project analysis will validate or invalidate the appropriateness of those assumptions. Within this guidance, projects are developed to most efficiently and effectively accomplish the management goals and objectives.

All phases in the Forest Plan implementation process may be affected by the monitoring and subsequent evaluation. For instance, management practices may be dropped or postponed, their scheduling revised, their design modified, or the execution process changed. Information attained is useful in identifying emerging issues and in influencing budget and priority setting. Ultimately, monitoring results will be evaluated to help determine if amendments to the Forest Plan are needed.

Environmental Analysis The site-specific projects and activities proposed by this Forest Plan are subject to environmental analysis prior to implementation, as required by NEPA. Environmental analysis is an important part of decision making during Forest Plan implementation. It helps improve resource management decisions while protecting the environment, and assures that the public is involved in the process. Scoping is the first step of any environmental analysis and is used to identify the public issues that are relevant to the decision being made.

Environmental analysis provides an essential source of information for Forest Plan monitoring. First, as project analyses are completed, new or emerging public issues or management concerns may be identified. Second, the management direction designed to achieve Forest-wide and management area goals and objectives is validated by the project analyses. Third, the site-specific data collected for project environmental analyses serve as a check on the correctness of the land assignment. All information included in the project environmental analyses is used in the monitoring process to determine when changes should be made to the Forest Plan.

Environmental impact statements, environmental assessments, or project files for projects will be available for public review at the various offices on the Forest.

Budget The purpose of the Forest Plan is to attempt to resolve the issues facing the Forest in a way that maximizes net public benefit, and the resulting budget is an estimate of the costs necessary to do so. This Forest Plan calls for a 68 percent increase over recent budgets (fiscal years 1988-1991). Increases in funding will be needed in all resource programs. The largest increases will be needed in the soil, water, air, fish and wildlife and range programs.

The Forest Plan's scheduled projects are translated into multiyear program budget proposals that identify needed expenditures. This schedule is used for requesting and allocating the funds needed to carry out this Forest Plan's management direction. Upon approval of a final budget, the Forest finalizes and implements the annual program of work. Accomplishment of the annual program of work is the incremental implementation of the Forest Plan. Outputs and activities for individual years may be significantly different from those shown in Chapter 4, depending upon final budgets.

If reduced funding levels are the result of short term annual budget variations, the Forest may be able to produce the outputs as a result of increased funding later in the planning period while not deviating from long term stated resource output levels. If funding levels consistently fall short of needed levels, the Forest Plan objectives cannot be met and the Plan will need to be amended or revised.

The budget will be monitored annually to determine what action may be necessary if needed funds are not appropriated (see Appendix H for budget submitted for Fiscal Year 1992). If funds are inadequate to properly monitor the Forest Plan goals, objectives, standards, and resulting environmental effects, an analysis will be made to develop a further course of action. This may include Forest Plan amendment or revision, or revising implementation schedules.

The Forest Supervisor has the authority to change the implementation schedules to reflect differences between the proposed annual budget and actual appropriated funds. Such scheduling changes are considered an amendment to the Forest Plan, but are not considered a significant amendment nor require the preparation of an EIS unless the changes significantly alter the long-term relationships between levels of multiple use goods and services as projected in this Forest Plan.

When appropriated funds fall short of the amount needed to fully implement the Forest Plan, the most likely remedy will be to adjust implementation schedules accordingly. Receiving less funding than is needed to fully implement the Forest Plan will not be a reason for not following a Forest Plan Standard.

C. MONITORING AND EVALUATION

Monitoring and evaluation comprise the management control system for the Forest Plan. They will provide information to the decisionmaker and the public about the progress and results of implementing the Forest Plan.

Monitoring and evaluation entail comparing the end results being achieved to those projected in the plan. Costs, outputs, and environmental effects, both experienced and projected, will be considered. To do this, a comparison will be made on a sample basis of overall progress in implementing the plan as well as whether the overall relationships on which the plan is based have changed over time. When changes occur, their significance will be evaluated and appropriate amendments or revisions will be made.

The goals for monitoring and evaluating this Forest Plan are to determine:

1. How well the Forest is meeting its planned goals and objectives;
2. If existing and emerging public issues and management concerns are being adequately addressed;

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3. How closely the Forest Plan's management standards are being followed;
4. If outputs and services are being provided as predicted;
5. If the effects of implementing the Forest Plan are occurring as predicted, including significant changes in the productivity of the land;
6. If the dollar and manpower costs of implementing the Forest Plan are as predicted;
7. How implementing the Forest Plan is affecting the land, resources, and communities adjacent to or near the Forest;
8. If activities on nearby lands managed by Federal or other governmental agencies are affecting management of the Forest;
9. If research is needed to support the management of the Forest, beyond that identified in Chapter II of the Forest Plan; and
10. If there is a need to amend or revise the Forest Plan.

The monitoring requirements for this Forest Plan are shown in Table V-2, Monitoring Actions. These requirements address the items to be monitored, actions/effects monitored, units, variability threshold, data precision and reliability, suggested methods, who will monitor and when, data location and annual cost.

An annual monitoring program, developed in accordance with the monitoring requirements, will be prepared as part of the Forest's annual work program. This program will be based on available funds. If funds are inadequate to properly monitor the Forest Plan goals, objectives, standards, and resulting environmental effects, an analysis will be made to develop a further course of action. This may include Forest Plan amendment or revision, or revising implementation schedules.

Evaluation of data gathered during monitoring will be guided by the Decision Flow Diagram detailed in Figure V-1. As indicated in the diagram, the results of this evaluation lead to the following types of action:

1. Continuing the management practices;
2. Referring the problem to the appropriate line officer for improvement of the application of the management practice;
3. Modifying the management practice as a Forest Plan amendment;
4. Modifying the land management prescription as a Forest Plan amendment;
5. Revising the schedule of outputs;
6. Revising the cost/unit output; or
7. Initiating revision of the Forest Plan.

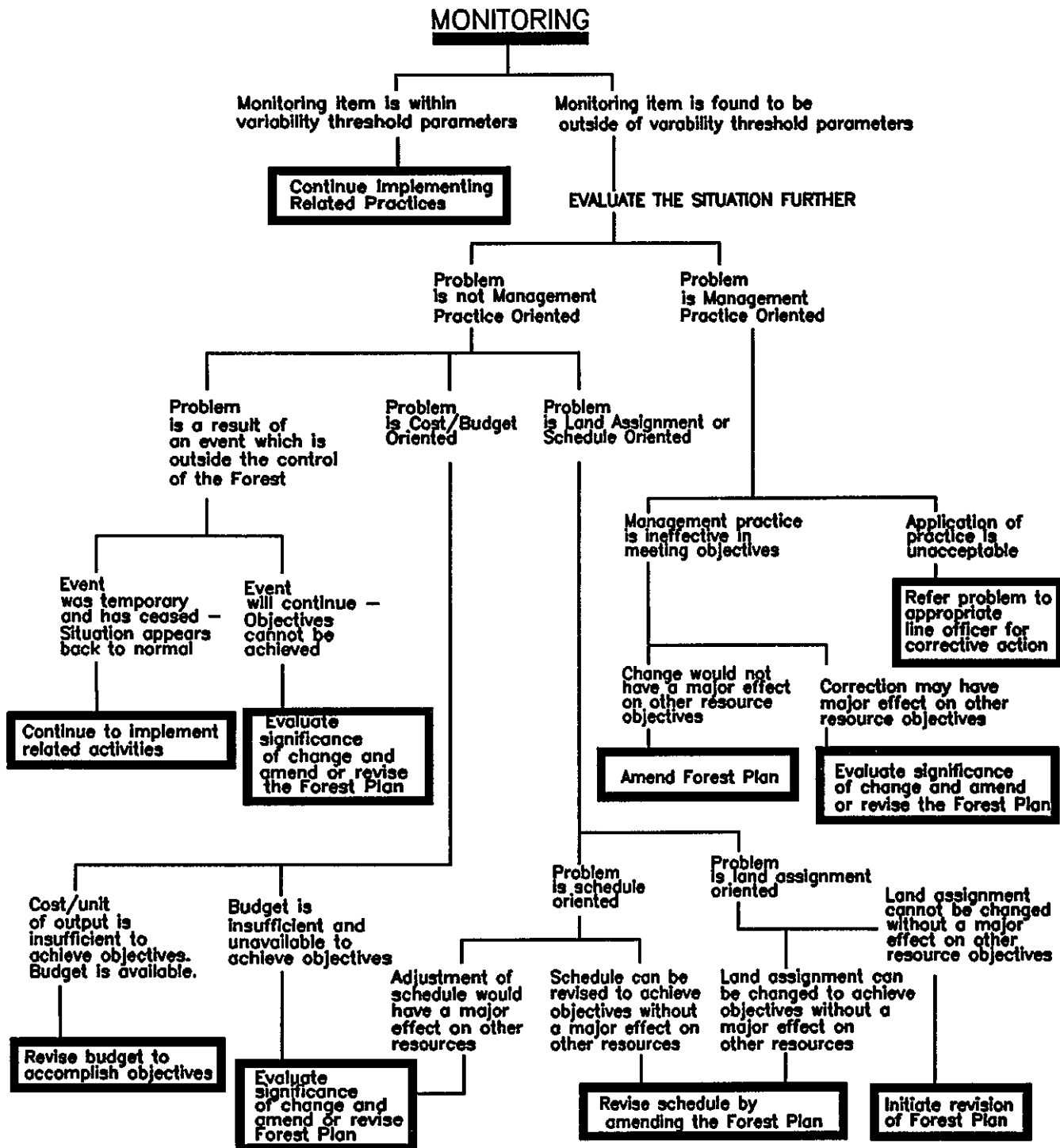
The document resulting from the use of the Decision Flow Diagram constitutes the evaluation report. As applicable, the following items will be included in each evaluation report.

1. A quantitative estimate of performance comparing outputs and services with those projected by the Forest Plan;
2. Documentation of measured effects, including any change in productivity of the land;
3. Unit costs associated with carrying out the planned activities as compared with unit costs estimated during Forest Plan development;
4. Recommendations for changes;
5. A list of needs for continuing evaluation of management systems and for alternative methods of management;
6. A list of additional research needed to support the management of the Forest; and
7. Identification of additional monitoring needs to facilitate achievement of the monitoring goals.

The results and trends of monitoring will be evaluated on a periodic basis and will be made available to other government agencies and to the public.

DECISION FLOW DIAGRAM

FIGURE V-1
Decision Flow
Diagram



D. AMENDMENT OR REVISION

The Forest Supervisor may amend the Forest Plan. Based on an analysis of the goals, objectives, standards, and other contents of the Forest Plan, the Forest Supervisor shall determine whether a proposed amendment would result in a significant change in the plan. If the change resulting from the proposed amendment is determined to be significant, the Forest Supervisor shall follow the same procedure as that required for development and approval of a Forest Plan which requires Regional Forester's signature. If the change resulting from the amendment is determined not to be significant for purposes of the planning process, the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory completion of National Environmental Policy Act procedures

This Forest Plan incorporates legal mandates, professional judgment, and the public's stated concerns into a desired future condition for the Malheur National Forest. It charts a path for achieving the desired future condition by developing management goals and objectives and translating them into management direction in the form of standards for management areas on the Forest. National Forest planning is a dynamic process, and the products, Forest Plans, are similarly dynamic. This Forest Plan can and should be modified if conditions warrant. As management goals are applied on-the-ground or as new information is learned about resources, the Plan's goals and objectives, or activities the goals generate, may no longer be appropriate. In such instances, activities may be tailored to fit the resource, or planning objectives as stated in the Plan may be amended. Plans don't specify direction for site-specific management activities. It would be unrealistic and wrong to try to identify, analyze and schedule the myriad number of projects or activities that may occur as this Forest Plan is implemented. Instead, this type of site-specific planning occurs at the project-level planning stage, such as allotment management planning.

The Forest Plan shall ordinarily be revised on a 10-year cycle or at least every 15 years. It also may be revised whenever the Forest Supervisor determines that conditions or demands in the area covered by the plan have changed significantly or when changes in Resources Planning Act policies, goals, or objectives would have a significant effect on Forest-level programs. In the monitoring and evaluation process, the interdisciplinary team may recommend a revision of the Forest Plan at any time. Revisions are not effective until considered and approved in accordance with requirements for the development and approval of the Forest Plan. The Forest Supervisor shall review conditions on the land covered by the plan at least every 5 years to determine whether conditions or demands of the public have changed significantly.

The following is a list of monitored items and their numerical designations, corresponding with Table V-2.

Monitoring Item	Page	Monitoring Item	Page
1. Developed Recreation Facilities	V-11	21. Noxious Weeds	V-16
2. Recreation Opportunity Spectrum (ROS)	V-11	22. Unsuitable Lands	V-16
3. Semi-Primitive Recreation Setting	V-11	23. Silvicultural Practices	V-16
4. Off Road Vehicle (ORV) Use	V-11	24. Reforestation	V-16
5. Wilderness	V-12	25. Timber Harvest	V-16
6. Wild and Scenic Rivers	V-12	26. Timber Offered	V-17
7. Cultural Resource	V-12	27. Timber Harvest Units	V-17
8. Visual Resources	V-12	28. Insect and Disease Control	V-17
9. Resident Fish Habitat	V-12	29. Water Quality Protection	V-17
10. Anadromous Fish Habitat	V-13	30. Water Cumulative Effects	V-17
11. Dead and Defective Tree Habitat	V-13	31. Air Quality	V-18
12. Elk Habitat	V-13	32. Soil Productivity	V-18
13. Old-Growth	V-14	33. Minerals	V-18
14. Bald Eagle Winter Roost Habitat	V-14	34. Road Mileage	V-18
15. Cooper's Sharp-Shinned Hawks Habitat	V-14	35. Administrative Facilities	V-18
16. Research Natural Areas	V-15	36. Budgets	V-18
17. Range Allotment Status	V-15	37. Plan Implementation Costs	V-18
18. Wildhorses	V-15	38. Local Income	V-19
19. Range Improvements	V-15	39. Local Employment	V-19
20. AUMs	V-15	40. Payments to Counties	V-19
		41. Plan Standards - General	V-19

TABLE V-2

MONITORING ACTIONS

MONITORING ITEM	ACTIONS/EFFECTS MONITORED	UNITS	VARIABILITY THRESHOLD	DATA PREC./REL.1/	SUGGESTED METHODS	WHO WILL MONITOR (& WHEN)	DATA LOCATION	ANNUAL COST
1. Developed Recreation Facilities	Developed recreation capacity and facilities that are responsive to customer expectations and desires.	Developed recreation sites	Use levels reach 60% of the theoretical capacity of a developed site. Customer feedback about the kinds of facilities provided not meeting expectations.	M/M	1) Monitor level of use and conditions of facilities. Compile a report on the capability of facility capacity to meet demand. 2) Ongoing monitoring of trends in recreation equipment and facility needs to accommodate changing customer wants.	District Ranger, Recreation Staff (Annually)	RIM and 2300 Files	\$2,500
2. Recreation Opportunity Spectrum (ROS)	Changes in ROS settings occurring over time as a result of Forest Management practices.	ROS settings	More than a 20% change in predicted acres in each ROS class.	M/M	1) Update the District ROS inventory map by recording changes in settings as a result of management activities. 2) Update the Forest ROS map.	District Ranger, Recreation Staff (Annually)	2300 Files	\$6,000
3. Semi-Primitive Recreation Setting	Semiprimitive social and physical setting showing little to no evidence of human activity and meeting the needs of people seeking a place where there is little interaction with other users.	RVDs and encounters per visitor per day	Failure to meet the M A direction, described in the Standards of this Forest Plan, such as unacceptable damage to soil, vegetation, or visual quality and/or increased encounters with other users that detracts from the natural setting.	M/M	1) Apply LAC standards similar to those for the semiprimitive WROS class as outlined in R-6 Supplement #81 to FSM 2320. 2) Establish permanent photo points in potentially high impacts sites. Take photos from these sites to maintain a photographic record of change. 3) Monitor, through field observation, the effects of change in the semiprimitive areas.	District Ranger, Recreation Staff (Annually)	2300 Files	\$5,000
4. Off Road Vehicle (ORV) Use	ORV use to provide for recreation opportunity in a manner that is consistent with the protection and management of other Forest resources.	On site conditions and public comments	If ORV use conflicts with management direction for a M A, such as unacceptable damage to soil, vegetation or visual quality, the area will be considered for closure or restriction of ORV use.	H/H	On the ground review of ORV use and review of public comments.	District Ranger, Recreation Staff (Annually)	2300 Files	\$4,000

MONITORING ITEM	ACTIONS/EFFECTS MONITORED	UNITS	VARIABILITY THRESHOLD	DATA PREC./REL.1/	SUGGESTED METHODS	WHO WILL MONITOR (& WHEN)	DATA LOCATION	ANNUAL COST
5. Wilderness	WROS (Wilderness Recreation Opportunity Spectrum) Class in accordance with the values specified in the Wilderness Act of 1964 and the Oregon Wilderness Act of 1984.	WROS, On site conditions and public comment.	Limits of acceptable change (LAC) are being met less than 80% of the time during season of use.	H/M	1) Monitor, through field observation, the effects of change in the Wilderness. 2) Establish permanent photo points in potentially high impact sites. Take photos from these sites to maintain a photographic record of change 3) Review public comments	District Ranger (Annually)	2320 files	\$4,000
6. Wild and Scenic Rivers	Physical, social and management elements within the river corridor effects on outstandingly remarkable values.	ROS, on-site conditions and public comment.	Limits of acceptable change are being met less than 80% of the time	M/M	Establish permanent photo points Take photos from these points to maintain a photographic record of change.	District Ranger (Annually)	2300 Files	\$4,000
7. Cultural Resources	Protection of the characteristics of National Register, National Register eligible, and unevaluated cultural resources	Site	Any disturbance to or alteration of a site.	H/M	1) Ongoing monitoring of cultural resource sites by project administrators within project boundaries Cultural Resource Management specialist will review sites within three active project areas per district. 2) Compile report of impacted significant sites and measures taken to repair damages.	Forest Archaeologist, District Ranger (Annually)	Files	\$15,000
8. Visual Resources	Cumulative effects of all resource management activities with a corridor viewshed are meeting the future visual condition, as defined in the Forest Plan	VQO	Existing visual condition varies from desired visual condition by more than 10% in a corridor viewshed.	M/M	1) Interdisciplinary review of 2 projects on the Forest. 2) Ongoing review of how effective the standards are in achieving visual quality objectives. 3) Conduct existing visual condition inventory.	District Ranger, Landscape Architect (Annually)	2380 Files	\$5,000
9. Resident Fish Habitat	Resident fish habitat capability in all subwatersheds on the Forest, using identified management indicator species (bull trout, cutthroat trout, and rainbow trout.	Fish habitat capability	More than 10% decrease in habitat capability in a subwatershed.	H/M	1) Develop base line data and determine changes in fish habitat capability. 2) Monitor macroinvertebrates on two sample streams per District per year.	Fisheries Biologist, District Ranger (Annually)	2600 Files	\$20,000

MONITORING ITEM	ACTIONS/EFFECTS MONITORED	UNITS	VARIABILITY THRESHOLD	DATA PREC./REL.1/	SUGGESTED METHODS	WHO WILL MONITOR (& WHEN)	DATA LOCATION	ANNUAL COST
10. Anadromous Fish Habitat	Habitat capability in all subwatersheds with existing, or potential anadromous fish distribution Forest-wide, increase anadromous fish habitat capability by 50% in the first decade, with a long term goal of increasing habitat capability by 150%.	Habitat capability	1) More than 10% decrease in habitat capability in a subwatershed 2) Forest-wide habitat capability +/- 10% from the projected level.	H/M	Develop base line data and determine changes in fish habitat capability 2) Monitor macroinvertebrates on two sample streams per District per year as long-term indicators	Fisheries Biologist, District Ranger (Annually)	2600 Files	\$20,000
11. Dead and Defective Tree Habitat	Habitat for snag dependent species	Number, size and distribution of trees, snags and logs to meet habitat capability objectives, using primary cavity excavators as MIS	1) More than 10% of the surveyed areas have less than 90% of the prescribed trees, snags and logs 2) Expected primary cavity excavators are absent from more than 10% of the surveyed sites	M/M	1) Examine habitat on 20% of timber sales within one year of sale closure per district Evaluate timber inventory plot data each ten year period Establish and measure transects to measure longevity of snags in areas where fuelwood is gathered 2) Conduct surveys to determine if the expected primary excavators are occupying the habitat.	Wildlife Staff, District Ranger (Annually)	2600 Files	\$10,000
12. Elk Habitat	Habitat capability to support populations identified in this Forest Plan	Elk habitat capability, estimated elk populations	1) Populations are more than 20% below or above the plan objective for a 5 year period 2) No threshold identified at this time Monitoring to record current condition and changes. 3) Habitat capability is more than 20% below the objective (10% on winter range) in any given management unit (3rd order watershed) at any point in time	M/M	1) Annual review of state agency census records 2) Refine information on areas of elk use and levels of use Determine amount and quality of available forage on sample plots Determine amount of use by livestock and big game and calculate forage needs 3) Use habitat relationship modeling for projects affecting habitat capability Track cover, forage, and road density changes on all projects that affect these factors by review of project plans and reports Field check to confirm that activity reporting is adequate	Wildlife Biologist, District Ranger (Annually)	2600 Files	\$12,000

MONITORING ITEM	ACTIONS/EFFECTS MONITORED	UNITS	VARIABILITY THRESHOLD	DATA PREC./ REL.1/	SUGGESTED METHODS	WHO WILL MONITOR (& WHEN)	DATA LOCATION	ANNUAL COST
13. Old-Growth	Old-Growth Habitat	Number, size and distribution of old growth forest stands.	1) All designated sites meet the specifications identified in the plan. 2) The components that provide effective habitat fall below the desired level. 3) MIS populations are more than 10% below plan objective for a five year period. 4) The old growth acreage remaining or the amount being converted in a five year period deviates from the planned amount by more than 10%.	H/M	1) Inventory and evaluate dedicated sites to ensure that they all meet the specifications. 2) Examine 10% of areas to determine habitat effectiveness. Review project activities that may affect the habitat effectiveness of any dedicated site (e.g., feeding habitat that is outside the dedicated old growth site). 3) Survey selected populations on 10% of areas (using random sample of areas). 4) Review all timber harvest areas to determine which stands meet the old growth specifications. Track acres and location of harvested old growth stands. Retain stand exam and cruise data for these stands and any other data describing the structure of the stands. Evaluate Forest inventory data when the new data becomes available.	Wildlife Biologist, District Ranger (Annually)	Files	\$15,000
14. Bald Eagle Winter Roost Habitat	Suitable bald eagle winter roosting sites Meet recovery levels established in the Pacific States Bald Eagle Recovery Plan.4/	Eagle occupancy and population	1) More than 10% of the designated sites are unsuitable for occupancy at any given time. 2) The winter population declines by more than 10% over 5 years 3) Standards are not met by management activities more than 10% of the time.	H/H	1) Evaluate condition of existing and potential roost sites, using descriptions from the Pacific States Bald Eagle Recovery Plan and other appropriate documents. Particularly note any change in conditions from previous surveys. Survey 20% annually. 2) Conduct annual interagency population trend survey, recording use of individual roost sites 3) Review each project plan annually to ensure Management Standards have been met.	Wildlife Biologist, District Ranger (Annually)	Files	\$5,000
15. Cooper's & Sharp-Shinned Hawks Habitat	Habitat areas for at least viable populations of Cooper's and sharp-shinned hawks.2/		1) The components that provide habitat effectiveness fall 10% below the desired level.1/ 2) Populations are more than 10% below the desired level for 5 years 3/		1) Examine 10% of suitable habitat areas each five years to determine habitat effectiveness.1/ 2) Survey populations on 10% of areas in appropriate Forest types (using a random sample) each five years 2/	Wildlife Biologist, District Ranger (Annually)	Files	\$8,500

MONITORING ITEM	ACTIONS/EFFECTS MONITORED	UNITS	VARIABILITY THRESHOLD	DATA PREC./ REL.†/	SUGGESTED METHODS	WHO WILL MONITOR (& WHEN)	DATA LOCATION	ANNUAL COST
16. Research Natural Areas	Manage areas for nonmanipulative research, observation, and study of undisturbed ecosystems.	Provisions and conditions in the establishment report for the Canyon Creek Research Natural Area.	Less than 100%	H/H	Examine Research Natural Area to see if research needs are being met.	Forest Supervisor (Years 3, 6, 9)	Files	\$2,000
17. Range Allotment Status	Monitor to see if Forest Plan objectives are being met.	Allotments, AMPs	At least 90% of 105 allotments meet Forest Plan objectives at end of decade.	H/H	Inspect each allotments prior to, during, and after livestock use. Number of allotments that; 1) have implemented AMPs; 2) approved AMPs not yet implemented; and 3) allotments not managed to fully meet Forest Plan objects.	District Ranger (Annually, during May thru Nov)	2210 Files	\$100,000
18. Wildhorses	Murders Creek Wildhorse population	Numbers of wildhorses.	Maintain a Wildhorse Herd which averages 100 head in size over a 5 year period.	H/H	Annual aerial and ground census (143,140 Ac). Number of wildhorses removed	Bear Valley District Ranger (Annually)	2260 Files	\$21,500 (143,140 x \$ 15)
19. Range Improvements	Range improvements accomplished as planned, to meet IDT objectives in AMP (Table A-10)	Structures, fences or pipelines will be reported as one (1) structure per 1/2 mile, or portion thereof Report others as 1 unit	Improvements funded must be accomplished to standard	H/H	Annually review district accomplishment on Management Attainment Report and conduct sample field inspections	District Ranger and Range Staff (Annually)	2240 Files	\$5,000
20. AUMs	AUMs produced	AUMs	10% below levels stated in the Forest Plan	H/H	Annual Use Report	Range Staff (Annually)	Report file	\$500

MONITORING ITEM	ACTIONS/EFFECTS MONITORED	UNITS	VARIABILITY THRESHOLD	DATA PREC / REL:1/	SUGGESTED METHODS	WHO WILL MONITOR (& WHEN)	DATA LOCATION	ANNUAL COST
21. Noxious Weeds	Area of forest	Acres	Any acres infested with weeds classified by State of Oregon as noxious	H/H	Annually review known noxious weed infestations	District Ranger and Ranger Staff (Annually)	2240 Files	\$4,000
22. Unsuitable Lands	Examine lands to determine with greater resolution, land suitability, giving special emphasis to those areas classified as unsuitable (in the first 10 years). Insure that timber harvests are not occurring on unsuitable lands to meet chargeable harvest volumes	Acres	1) More than a plus/minus 10% change in the unsuitable land base Any activity on unsuitable lands that is designed to meet timber objectives.	H/H	Use current data bases and project files to track activities Review each proposed activity to ensure activity is compatible with timber land classification. Review land classification of each area through standard examinations or other in-place inventory	Forest Silviculturist (Annually)	GIS/ Current Data Base	\$2,000
23. Silvicultural Practices	Silvicultural practices accomplished in each M A and growth of plantations.	Acres of accomplished silvicultural practices for each M.A. and plantation growth rates	1) There is a +/- 10% change in planned silvicultural practice (natural regeneration, reforestation with genetic stock, precommercial thinning, overstory removal, etc) by working group, M A., and watershed. 2) There is a change in growth projection which will have an effect of over plus/minus 2% on the planned ASQ.	H/H	1) Review current data bases and reporting devices to track activities Review records to compare actual work to projected 2) Annually sample units regenerated and/or precommercially thinned which occurred after the implementation of the Forest Plan prescriptions to determine growth rates.	District Ranger, Forest Silviculturist (Annually)	2400 Files	\$5,000
24. Reforestation	Determine if NFMA requirements and plan assumptions for regenerated lands are being met	Harvest unit, number, type and distribution of regeneration	More than 10% of all regenerated stands fail to meet reforestation goals within the desired time frame, stocking level, and silvicultural method The elapsed time from site availability to stocking exceeds {CFR 219 27 (c) (3)}	H/H	Reforestation stocking surveys, post sale reviews of accomplishment reports.	Timber Staff, Forest Silviculturist (Annually)	GIS Timber Reports	\$9,000
25. Timber Harvest	Timber harvest outputs by harvest method and timber working group in each M A.	MCF, MCF/ac, MBF	Actual and projected timber harvest type, working group and M A deviate more than 10% from that predicted in the Plan for the decade or deviate more than 25% on an annual basis	H/H	Use current data bases and report devices to determine significance of deviation.	Forest Silviculturist, Timber Staff (Annually)	STARS/GIS	\$5,000

MONITORING ITEM	ACTIONS/EFFECTS MONITORED	UNITS	VARIABILITY THRESHOLD	DATA PREC./REL.1/	SUGGESTED METHODS	WHO WILL MONITOR (& WHEN)	DATA LOCATION	ANNUAL COST
26. Timber Offered	Volumes of timber sold annually and for the plan period in ASQ, and timber sale program quantity	MCF, MBF	Projection of ten-year program, total and by species group, does not exceed the ASQ or timber sale program quantity. Individual components can vary by plus/minus 10% over the decade and by plus/minus 25% on a year to year basis.	H/H	Use current data bases and/or cut and sold report Compare volume in cubic feet, by total volume and by species group. Determine action required (plan adjustment) based on significance of end-of-decade difference between projection and planned.	Timber Staff, Forest Silviculturist (Annually)	STARS/GIS	\$5,000
27. Timber Harvest Units	Unit sizes and dispersal of units across the Forest meet Standards and Guidelines Were exceptions properly documented and reviewed	Acres	1) Any of the units exceed size standards, without following proper procedures {36CFR 219 12 (k)(5)} 2) There is a 5% increase from the desired dispersion constraint over the decade	H/H	1) Conduct annual review of the Forest planning data base and/or selected timber sale records 2) Review two timber sale Environmental Assessments per District per year	District Ranger, Ranger District Staff (Annually)	1950 NEPA Files	\$3,000
28. Insect and Disease Control	Population levels of insect and disease agents and their effects on tree growth	Acres affected	1) Insect populations and/or infection centers are on the increase 2) When 10% of a M A working group is effected by insect or disease agents	M/M	1) Annual review of current insect and disease survey maps to determine trends. 2) Conduct special surveys to determine effects on growth.	Timber Staff, Forest Silviculturist (Annually)	FPM Survey Report	\$5,000
29. Water Quality Protection	Stream conditions relating to State Water Quality Standards.	Water quality parameters	Whenever State Water Quality Standards are exceeded	M/M	Monitor management activities on selected subwatersheds for effects on key water quality parameters.	Forest Hydrologist, District Staff (Annually)	District, S O Files	\$26,000
30. Water Cumulative Effects	Stream conditions relating to State Water Quality Standards. Risk of significant changes in water and sediment yields.	Water quality parameters. Level of management intensity	Whenever State Water Quality Standards are exceeded when harvesting at the Forest sustained yield	M/M	Review ten year timber sale action plans, EA's harvest records, and aerial photographs Make field observations to document acreages in disturbed condition Review evaluations of assessments, including activities on land in other ownership Use low elevation photographs and/or measure stream channel cross sections with photopoints. Intensely sample all watersheds where this is an issue or concern.	Forest Hydrologist, District Staff (Annually)	2520 Files	\$30,000

MONITORING ITEM	ACTIONS/EFFECTS MONITORED	UNITS	VARIABILITY THRESHOLD	DATA PREC./REL.1/	SUGGESTED METHODS	WHO WILL MONITOR (& WHEN)	DATA LOCATION	ANNUAL COST
31. Air Quality	To determine baseline and detect trends in water chemistry and biology, visibility, flora, and other Air Quality Related Values in wilderness areas. To be used as basis for emission source permit recommendations.	AQRV (air quality related values)	Report on baseline condition and any changes	L/H	Specific to individual AQRVs Units to be the same as used to set limit at acceptable change.	Watershed, S.O. (Annually)	FSM 2580	\$10,000
32. Soil Productivity	Soil disturbing management activities will be monitored to determine if Regional and Forest Soil Protection Standards are being met.	1)% of an activity area 2)% effective ground cover	Minimum of 80% of an activity area left in a fully productive condition (Chapter IV, Sec E, Forest-Wide Standards)	M/M	Guidelines for Sampling Some Physical Conditions of Surface Soils-R6-RWM-146-1983.	Watershed Staff, District Ranger (Annually)	GIS, 2550 files	\$15,000
33. Minerals	Mining activities, effects on resources and rehabilitation.	Operating Plans	More than 30% non-compliance with Standards	M/M	Review and evaluation of 10% of the current development and rehabilitation projects every year	District Ranger (Annually)	2810, 2850 Files	\$5,000
34. Road Mileage	Open road miles by traffic service level and maintenance level	Miles	More than 10% of the projects evaluated don't meet objectives and standards for design and long-term use.	H/M	On the ground field review of project activities, miles constructed, reconstructed, obliterated, and closed.	Forest Engineer, District Ranger (Annually)	Project file, Annual Accomplishment Report.	\$5,000
35. Administrative Facilities	Adequate facilities, quantity and quality, that meet the needs of the Forest workforce and the public	Sq ft.	Office facilities not meeting the minimum standards for offices as established by the Government Services Administration. Facilities not meeting the UBC and OSHA standards for safety Employee and customer feedback about the inadequacy of facilities.	H/H	Review, update and monitor facility management plan and condition of facilities.	Forest Supervisor (5 years)	Files	\$6,000
36. Budgets	Funding of all resource programs and activities Monitoring program is fully operational and financed	Dollars	Plus/minus 10%	H/H	1) Review budgets and programs of work annually in relationship to Forest Plan projections. Evaluate trends in relation to the remaining years of the Forest Plan 2) Review monitoring budgets annually.	Budget & Finance (Annually)	B&F Files	\$1,000

MONITORING ITEM	ACTIONS/EFFECTS MONITORED	UNITS	VARIABILITY THRESHOLD	DATA PREC / REL.1/	SUGGESTED METHODS	WHO WILL MONITOR (& WHEN)	DATA LOCATION	ANNUAL COST
37. Plan Implementation Costs	Projected expenditures compared to actual expenditures to implement the Forest Plan	Dollars	Plus/minus 25% of projected expenditures	H/H	Review Forest financial records and accomplishment reports to determine average annual costs for all major resource activities	Budget & Finance	B&F Files	\$1,000
38. Local Income	Economic and community stability	Population, income	Plus/minus 15% in 3 years (corrected for inflation).	M/M	Review of U.S. Census Reports, State Publications, County, and Local Agency reports	Public Affairs (Annually)	Files	\$1,000
39. Local Employment	Employment	Percent employment	Plus/minus 15% in 3 years	M/M	Review U.S. Census Reports, State Publications, County, and Local Agency reports.	Public Affairs	Files	\$1,000
40. Payments to Counties	Deviation from payment levels projected in the Forest Plan	Dollars	Plus/minus 15% in 3 years (corrected for inflation)	H/H	USDA Forest Service Reports, State Publications, and County Reports	Forest Supervisor (Three years)	Files	\$200
41. Plan Standards (General)	Standards and Guidelines not covered by separate monitoring item	Applicable Standards and Guidelines	More than 10% of projects evaluated do not meet standards. More than 10% deviation from projected outputs and/or accomplishments	M/H	Review selected activities in order to cover those standards that are not already covered by other monitoring items in the Forest Plan. Conduct annual interdisciplinary review of at least one project per District per year	District Ranger, S O Staff (Annually)	Files	\$5,000

489,200

1/Data Precision and Reliability

2/This Forest Plan does not prescribe a level of habitat nor is the amount and distribution of habitat that is required to maintain viable populations of these birds is known at this time. A literature search will have to be done first before any Management Standards can be developed. Additional research will also be required to develop and/or refine and test habitat relationships models for these species.

3/This Forest Plan does not prescribe a population level. It is necessary to determine the population level needed to maintain long-term viability and a target population level to monitor for that will provide for species viability under the habitat conditions expected and account for natural fluctuations in the population. This is a high priority research need for the Forest. In setting a desired population level, the Forest will need to designate a level that exceeds the viable population level by at least the amount designated for the threshold of variability. Additional planning and research is also needed on monitoring methods and sampling design.

4/Interagency population trend surveys are currently coordinated with the Bureau of Land Management and the Oregon Department of Fish and Wildlife.

There are two winter roost sites with established and confirmed eagle use and 13 sites identified as potential roost sites.

The Forest does not have any identified potential nest sites. The Pacific States Bald Eagle Recovery Plan identifies potential for nesting sites on the John Day and Malheur Rivers.



Chapter VI

GLOSSARY



CHAPTER VI GLOSSARY, ACRONYMS, AND ABBREVIATIONS

ABBREVIATIONS AND ACRONYMS

A	Acre
AMP	Allotment Management Plan *
AMS	Analysis of the Management Situation •
ASQ	Allowable Sale Quantity *
AUM	Animal Unit Month *
BLM	Bureau of Land Management
BMP	Best Management Practice *
BTU	British Thermal Unit
CF	Cubic Feet •
CFR	Code of Federal Regulations
CMAI	Culmination of Mean Annual Increment *
DBH	Diameter at Breast Height *
DEIS	Draft Environmental Impact Statement *
EA	Environmental Assessment *
EIS	Environmental Impact Statement *
FEIS	Final Environmental Impact Statement *
FORPLAN	Forest Planning Model *
FSH	Forest Service Handbook •
FSM	Forest Service Manual *
FUD	Fishing User Days
FY	Fiscal Year (Oct 1 to Sept. 30, unless otherwise noted)
GNP	Gross National Product
HEI	Habitat Effectiveness Index *
ICO	Issues, Concerns, and Opportunities
IDT	Interdisciplinary Team *
IMPLAN	Forest Service Input-Output Model
K-V	Knutson-Vandenberg Act of 1924 *
LAC	Limits of Acceptable Change *
LRMP	Land Resource Management Planning
LTSYC	Long-Term Sustained Yield Capacity *
M	Roman Numeral for 1,000
MA	Management Area (also M A) *
MBF	Thousand Board Feet
MCF	Thousand Cubic Feet
MIS	Management Indicator Species *

ACRONYMS

MM	Roman Number for 1,000,000
MMBF	Million Board Feet
MMCF	Million Cubic Feet
MR	Management Requirement *
NEPA	National Environmental Policy Act *
NFMA	National Forest Management Act *
NFS	National Forest System *
NPB	Net Public Benefits *
ORV	Off-Road Vehicle *
PAOT	People at One Time
PCT	Precommercial Thinning *
PNV	Present Net Value *
PP	Ponderosa Pine
RARE II	Roadless Area Review and Evaluation II *
RIM	Recreation Information Management *
RNA	Research Natural Area *
ROG	Recreation Opportunity Guide *
ROS	Recreation Opportunity Spectrum *
RPA	Resources Planning Act *
RVD	Recreation Visitor Day *
SAI	Sale Area Improvement
T&E	Threatened and Endangered Species *
TRI	Total Resource Information System *
TSI	Timber Stand Improvement *
TSL	Traffic Service Levels *
USC	United States Code (also U.S.C.)
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
VQO	Visual Quality Objectives *
WFUD	Wildlife-and-Fish-User-Days *
WIN	Watershed Improvement Needs Inventory *
WROS	Wilderness Recreation Opportunity Spectrum *

*Term defined in Glossary

GLOSSARY

A

Access Management Plan	The development of travel management policies that consider the development, maintenance and protection of all forest resources.
Activity	A measure, course of action, or treatment that is undertaken to directly or indirectly produce, enhance, or maintain Forest and rangeland outputs or achieve administrative or environmental quality objectives
Activity Area	The total area of ground impacted by the activity, and is a feasible unit for sampling and evaluating.
Activity Fuels	Debris generated by a Forest activity that increases fire potential such as firewood gathering, precommercial thinning, timber harvesting, and road construction.
Administrative Facilities	Those facilities, such as Ranger Stations, work centers, and cabins, which are used by the Forest Service in the management of the National Forest.
Aesthetics	Resource uses for which market values (or proxy values) are not or cannot be established.
Airshed	A geographical area that, because of topography, meteorology, and climate, shares the same air.
Allotment	See Range Allotment.
Allotment Management Plan (AMP)	A document that specifies the program of action designated to reach a given set of objectives. It is prepared in consultation with the permittee(s) involved and prescribes the manner in and extent to which the permittee's livestock operations will be conducted in order to meet multiple use, sustained yield, economic, and other needs and objectives as determined for the lands involved. It describes the type, location, ownership, and specifications for the range improvements in place or to be installed and maintained on the lands to meet the livestock grazing and other objectives of land management. It contains such other provisions relating to the permittee's livestock management responsibilities and other objectives as may be prescribed by the Forest Service consistent with applicable law.
Allowable Sale Quantity (ASQ)	The quantity of timber that may be sold from suitable land which has been included in the yield projections for the time period specified by the Plan. This quantity is usually expressed on an annual basis as the average annual allowable sale quantity and is considered chargeable volume.
Alternative	A combination of management prescriptions applied in specific amounts and locations to achieve a desired management emphasis as expressed in goals and objectives. One of several policies, plans, or projects proposed for decision making. An alternative need not substitute for another in all respects

GLOSSARY - A

Amenity	An object, feature, quality, or experience that gives pleasure or is pleasing to the mind or senses. The terms "amenity values" or "amenity resources" are typically used in land management planning to describe those resources for which monetary values are not or cannot be established (such as clean air and water, or scenic quality).																		
Anadromous Fish	Those species of fish that mature in the sea and migrate into streams to spawn, i.e., salmon and steelhead trout.																		
Analysis Area	A delineated area of land subject to analysis of (1) responses to proposed management practices in the production, enhancement, or maintenance of forest and rangeland outputs and environmental quality objectives, and (2) economic and social impacts. (FSM 1905)																		
Analysis of the Management Situation (AMS)	A determination of the ability of the planning area to supply goods and services in response to society's demand for those goods and services.																		
Animal Unit	Considered to be one mature (1,000 lb.) cow or the equivalent based upon average daily forage consumption of 26 lbs. dry matter per day.																		
Animal Unit Month (AUM)	<p>The amount of forage required by one mature (1,000 lb.) cow or its equivalent for one month (based upon average forage consumption of 26 lbs. dry matter per day).</p> <p>Animal Month is one month's use and occupancy of the range by one animal. For grazing fee purposes, it is a month's use and occupancy of range by one weaned or adult cow with or without calf, bull, steer, heifer, horse, burro, or mule, or 5 sheep or goats. Forage consumption by other animals is converted to AUMs from animal months by the following factors:</p> <table><tr><td>mature cow</td><td>=</td><td>1.0 AUM</td><td>mature sheep</td><td>=</td><td>.2 AUM</td></tr><tr><td>one horse</td><td>=</td><td>1 2 AUMs</td><td>cow/calf</td><td>=</td><td>1.32 AUM</td></tr><tr><td>ewe/lamb</td><td>=</td><td>3 AUM</td><td></td><td></td><td></td></tr></table>	mature cow	=	1.0 AUM	mature sheep	=	.2 AUM	one horse	=	1 2 AUMs	cow/calf	=	1.32 AUM	ewe/lamb	=	3 AUM			
mature cow	=	1.0 AUM	mature sheep	=	.2 AUM														
one horse	=	1 2 AUMs	cow/calf	=	1.32 AUM														
ewe/lamb	=	3 AUM																	
Annual Forest Program	The summary or aggregation of all projects for a given year that, for a given level of funding, makes up an integrated (multi-functional) course of action on a Forest planning area.																		
Appropriated Funds	Money made available by Congress for the various activities of the National Forest System and other Federal agencies.																		
Area Transportation Planning	A process for identifying transportation facilities needed for managing Forest lands and resources.																		
Arterial Road	A road that provides service to large land areas and usually connects with public highways or other Forest arterial roads to form an integrated network of primary travel routes. The location and standard are often determined by a demand for maximum mobility and travel efficiency rather than specific resource management service. It is usually developed and operated for long-term land and resource management purposes and constant service.																		

Available Forest Land Land that has not been legislatively or administratively withdrawn from timber production by the Secretary of Agriculture or chief of the Forest Service

B

Background The visible terrain beyond the foreground and middleground where individual trees are not visible, but are blended into the total fabric of the stand

Base Sale Schedule A timber sale schedule formulated on the basis that the quantity of timber planned for sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade and this planned sale and harvest is not greater than the long-term sustained yield capacity. (This definition expresses the principle of nondeclining flow)

Benchmark An analysis of the supply potential of a particular resource, or of a set of resources subject to specific management objectives or constraints. Benchmarks define the limits within which alternatives can be formulated.

Benefit (Value) Inclusive terms to quantify the results of a proposed activity, project, or program expressed in monetary or nonmonetary terms.

Best Management Practices (BMPs) The set of practices in the Forest Plan which, when applied during implementation of a project, ensures that water-related beneficial uses are protected and that State water quality standards are met. Best Management Practices can take several forms. Some are defined by State regulation or memoranda of understanding between the Forest Service and the State. Others are defined by the Forest interdisciplinary planning team for application Forest-wide. Both of these kinds of BMPs are included in the Forest Plan as Forest-wide Standards. A third kind is identified by the interdisciplinary team for application to specific management areas, these are included as Management Area Standards in the appropriate management areas. A fourth kind, project level BMPs, are based on site-specific evaluation and represent the most effective and practicable means of accomplishing the water quality or other goals of the specific area involved in the project.

Big Game Those species of large mammals normally managed as a sport hunting resource, such as deer, elk, antelope, bear, and Bighorn Sheep.

Big-Game Population Objectives Approved game numbers for a specific big-game management unit as set by the Oregon Fish and Wildlife Commission.

Biomass The total quantity at a given time, of living organisms of one or more species per unit of space (species biomass), or of all the species in a biotic community (community biomass).

Board Foot The amount of timber equivalent to a piece 1 foot square and 1 inch thick.

Board Foot/Cubic Foot Conversion The mathematical ratio of the board feet contained in 1 cubic foot of timber. This ratio varies with tree species, diameter, height, and form factors.

GLOSSARY - C

Botanical Area	An area which has been designated by the Forest Service as containing specimens of plants, plant groups, and plant communities which are significant because of form, color, occurrences, habitat, location, life history, arrangement, ecology, environment, rarity, and/or other features.
Broadcast Burn	Allowing a prescribed fire to burn over a designated area within well-defined boundaries, for reduction of fuel hazard or as a silvicultural treatment, or both.
Browse	Twigs, leaves, and young shoots of trees and shrubs on which animals feed; in particular, those shrubs which are utilized by big-game animals for food.
Bulk Density	See Soil Bulk Density.

C

Candidate Species	Those plant and animal species that, in the opinion of the U.S. Fish and Wildlife Service, may become Endangered or Threatened.
Canopy	The more-or-less continuous cover of branches and foliage formed collectively by the crown of adjacent trees and other woody growth.
Capability	The potential of an area of land and/or water to produce resources, supply goods and services, and allow resource uses under a specified set of management practices and at a given level of management intensity. Capability depends upon current conditions and site conditions such as climate, slope, landform, soils, and geology, as well as the application of management practices, such as silviculture or protection from fires, insects, and disease.
Capability Area	A geographic delineation used to describe characteristics of the land and resources in integrated Forest planning. Capability areas may be synonymous with ecological land units, ecosystems, or land response units.
Capital Investment	Investment in facilities such as roads and structures with specially-appropriated funds.
Carrying Capacity	<p>Recreation: The amount of recreation use an area can sustain without deterioration of site quality.</p> <p>Wildlife: The maximum number of animals an area can support during a given period of the year.</p> <p>Range: The maximum stocking rate possible without damaging the vegetation or related resources. Carrying capacity may vary from year to year on the same area due to fluctuating forage production.</p>
Category 1 Species	U.S. Fish and Wildlife Service classification; has information to support proposing plant or animal species as Endangered or Threatened.

Category 2 Species	U.S. Fish and Wildlife Service classification; "needs further information to confirm the appropriateness of proposing the taxon to the list of Endangered or Threatened Species."
Cavity	A hollow excavated in trees by birds or other natural phenomena; used for roosting and reproduction by many birds and mammals
Cavity Excavator	An animal that excavates a cavity in wood for nesting or roosting
Cavity Nester	Wildlife species that nests in cavities.
Chargeable Volume	All timber volume included in the growth and yield projections for the selected management prescriptions used to arrive at the allowable sale quantity, based on Regional utilization standards.
Check Dam	A structure of wood, rock, or brush built across a watercourse to reduce the rate of flow, catch sediment, impound water; thereby reducing the rate of erosion.
Class I Area (Airshed)	One of three classes of areas provided for in the Clean Air Act for the Prevention of Significant Deterioration program Class I areas are the "cleanest" area and receive special visibility protection. They are allowed very limited increases (increments) in sulfur dioxide and particulate matter concentrations in the ambient air over baseline concentrations (See 42 U.S.C 7473 for description of the specific increments).
Class I Wilderness	Refers to airshed management. See Class I Airshed.
Clean Water Act of 1987	Amends the Federal Water Pollution Control Act of July 9, 1956. The purpose of the 1956 act is to enhance the quality and value of the water resource, and to establish a national policy for the prevention, control, and abatement of water pollution. Among the important provisions are authority for the State and Federal Governments to establish water quality standards; provision for water pollution grants for research and development, control programs, construction of treatment works, and comprehensive programs for water pollution control; enforcement measures against pollution from Federal facilities; and provision for the control of pollution by oil, hazardous substances, or sewage from vessels The basic act (Public Law 84-660), is amended by the Federal Water Pollution Control Act/ Amendments of 1961 (Public Law 87-88); Water Quality Act of 1965 (Public Law 89-234); Clean Water Restoration Act of 1966 (Public Law 89-753Z); Title I, Water Quality Improvement Act of 1970 (Public Law 91-224), Title I, National Environmental Policy Act of 1969 (Public Law 91-224); Federal Water Pollution Act of 1969 (Public Law 91-224), Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500); Clean Water Act of 1977 (Public Law 95-217); Clean Water Act of 1987.
Clearcutting	The harvesting in one cut of all trees on an area for the purpose of creating a new, even-aged stand. The area harvested may be patch, strip, or stand large enough to be mapped or recorded as a separate class in planning for sustained yield.

GLOSSARY - C

Closed Road	<p>A road on which motorized traffic has been excluded by regulation, barricade, blockage or by obscuring the entrance. A closed road is still an operating facility on which motorized traffic has been removed (year-long or seasonal) and remains on the Forest Road Transportation System.</p> <p>This definition differs from that used for HEI calculations, which is, a closed road is one where use is not physically evident, no greater than one trip/week</p>
Closure	<p>An administrative order restricting either location, timing, or type of use in a specific area.</p>
Collector Roads	<p>These roads serve smaller land areas than a Forest arterial road, and is usually connected to a Forest arterial road or public highway. Collects traffic from Forest local roads and/or terminal facilities. The location and standard are influenced by both long-term, multi-resource service needs, as well as travel efficiency. May be operated for either constant or intermittent service, depending on land use and resource management objectives for the area served by the facility.</p>
Commercial Forest Land	<p>Forest land that is producing, or is capable of producing, crops of industrial wood and (1) has not been withdrawn by Congress, the Secretary of Agriculture or the Chief of the Forest Service; (2) where existing technology and knowledge is available to ensure timber production without irreversible damage to soil productivity or watershed conditions; and (3) where existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that adequate restocking can be attained within 5 years after final harvest.</p>
Commercial Thinning	<p>Thinning is an intermediate step in even-aged management. It is a cutting made in an immature stand to remove excess merchantable timber in order to accelerate diameter growth and to improve the average form of the trees that remain.</p>
Commodities	<p>Resources with commercial value; all resource products which are articles of commerce, such as timber, range forage, and minerals.</p>
Community Stability	<p>A community's capacity to handle change without major hardships or disruptions to component groups or institutions. Measurement of community stability requires identification of the type and rate of proposed change and an assessment of the community's capacity to accommodate that level of change.</p>
Compaction	<p>See Detrimental Soil Conditions.</p>
Confine	<p>To limit fire spread within a predetermined area, principally by use of natural or preconstructed barriers or environmental conditions. Suppression action may be minimal and limited to surveillance under appropriate conditions.</p>
Consumptive Uses	<p>Uses of a resource that reduce the supply. Examples of some consumptive uses are irrigation, domestic and industrial water use, grazing, and timber harvesting.</p>
Contain	<p>To surround a fire and any spot fires with control line as needed, which can reasonably be expected to check the fire's spread under prevailing and predicted conditions.</p>

Control	To complete the control line around a fire, any spot fires, and any interior islands to be saved; burn out any unburned area adjacent to the fire side of the control line; and cool down all hot spots that are immediate threats to the control line, until the line can reasonably be expected to hold under foreseeable conditions.
Cord	A unit of gross volume measurement for stacked roundwood based on external dimensions, generally implies a stack of 4 feet by 4 feet vertical cross-section and 8 feet long, contains 128 stacked cubic feet
Corridor	A linear strip of land identified for the present or future location of transportation or utility rights-of-way within its boundaries.
Corridor Viewsheds	Mapped areas of the landscape which can be seen from a Forest road or wild and scenic river.
Cost	The negative or adverse effects or expenditures resulting from an action. Costs may be monetary, social, physical, or environmental in nature.
Cost-Efficiency	The usefulness of specified inputs (costs) to produce specified outputs (benefits). In measuring cost efficiency, some outputs including environmental, economic, or social impacts, are not assigned monetary values but are achieved by specified levels in the least-cost manner. Cost efficiency is usually measured using present net value, although use of benefit-cost ratios and rates-of-return may be appropriate
Cover	<p>Four levels of cover are defined for elk as follows:</p> <p><i>Satisfactory Cover</i> - For elk, a stand of coniferous trees 40 or more feet tall with an average canopy closure equal to or more than 50 percent for ponderosa pine, and 60 percent for mixed conifer. Satisfactory cover typically exists as a multi-storied stand and will meet elk hiding cover criteria.</p> <p><i>Marginal Cover</i> - For elk, a stand of coniferous trees 10 or more feet tall, with an average canopy closure equal to or more than 40 percent.</p> <p><i>Hiding Cover</i> - Vegetation capable of hiding 90 percent of a standing adult deer or elk from human view at 200 feet.</p> <p><i>Thermal Cover</i> - Vegetative cover used by animals to lessen effects of weather.</p>
Cover/Forage Ratio	The ratio of tree cover (usually conifer types) to foraging areas (natural openings, clearcuts, etc.).
Created Opening	Created openings are openings in the Forest created by the silvicultural practices of shelterwood regeneration cutting at the final harvest, clearcutting, seed tree cutting, or group selection cutting.
Critical Habitat	Specific areas within the geographical area occupied by the species on which are found those physical and biological features (1) essential to the conservation of the species, and (2) which may require special management considerations or protection. Critical habitat shall not include the entire geographic area which can be occupied by the Threatened and Endangered Species.

GLOSSARY - D

Cubic Foot (CF)	The amount of wood volume equivalent to a cube 1 foot by 1 foot by 1 foot.
Culmination of Mean Annual Increment (CMAI)	The ages at which the average annual growth is greatest for a stand of trees. Mean annual increment is expressed in cubic feet measures and is based on expected growth according to the management intensities and utilization standards assumed in accordance with 36(CFR 219.16{a}{2}{i} and {ii}). Culmination of <i>mean annual increment (CMAI)</i> includes regeneration harvest yields and any additional yields from planned intermediate harvests.
Cultural Resources	The physical remains of human activity (artifacts, ruins, structures, sites, etc. left by prehistoric or historic peoples and the locations of religious or other cultural use held in importance by contemporary Native Americans.
Cutting Cycle	For a crop or stand, the planned interval of time between the beginning of one cutting period and the beginning of the succeeding cutting period.

D

Defective Tree	A tree with a broken top, dead limb, or other defect which makes it suitable for use by cavity nesters.
Deficit Timber Sale	A timber sale in which the costs associated with producing the primary product plus the profit margin are greater than the selling value of the same product.
Demand	The amount of an output that users are willing to take at a specified price, time period, and condition of sale.
Demand Analysis	A study of the factors affecting the schedule of demand for an output, including the price-quantity relationship, if applicable.
Departure	A schedule which deviates from the principle of nondeclining flow by exhibiting a planned decrease in the timber sale and harvest schedule at any time in the future.
Dependent Communities	Communities whose social, economic, or political life would change in important respects if market or nonmarket outputs from the National Forests were substantially decreased.
Detrimental Soil Conditions	<p>Compaction: An increase in soil bulk density of 20 percent or more from the undisturbed level for volcanic ash soils. For all other soils it is an increase in soil bulk density of 15 percent or more from the undisturbed level.</p> <p>Displacement: The removal of more than 50 percent of the topsoil or humus enriched A1 and/or AC horizon from an area of 100 square feet or more which is at least 5 feet in width.</p> <p>Puddling: Tracks where the soil has been molded and the depth of rutting has reached 6 inches or more.</p> <p>Severely Burned: Top layer of mineral soil has been significantly changed in color, usually to red, and the next one-half inch blackened from organic matter charring by heat conducted through the top layer.</p>

Developed Recreation	Recreation that requires facilities that, in turn, result in concentrated use of an area. Examples of recreation areas are campgrounds and ski areas.
Developed Recreation Sites	Relatively small, distinctly defined area where facilities are provided for concentrated public use, (i.e., campgrounds, picnic areas, and swimming areas)
Diameter at Breast Height (DBH)	The diameter of a tree measured 4 1/2 feet above the ground.
Discount Benefits	The present value of future benefits.
Discount Costs	The present value of future costs.
Dispersed Recreation	A general term referring to recreation use outside a developed recreation site; this includes activities such as scenic driving, hunting, backpacking, and recreation in primitive environments.
Displacement	See Detrimental Soil Conditions
District Ranger	The official responsible for administering the National Forest System Lands on a Ranger District.
Diversity	The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan.
Domestic Energy Source	Any energy source not having to be imported but available in the nation, for example geothermal energy, oil deposits, hydroelectric power, and natural gas.
Draft Environmental Impact Statement (DEIS)	The statement of environmental effects required for major Federal actions under Section 102 of the National Environmental Policy Act (NEPA) and released to the public and other agencies for comment and review.

E

Economic Efficiency	See Cost-Efficiency.
Economic Stability	The ability to maintain a viable economic base in order to ensure the existence of historic trades and professions
Ecosystem	An interacting system of organisms considered together with their environment (for example: a marsh, a watershed, or a lake)
Effective Ground Cover	All living or dead herbaceous or woody material and rock fragments greater than 3/4 of an inch in diameter in contact with the ground surface. Includes tree or shrub seedlings, grass, forbs, litter, woody biomass, chips etc.

GLOSSARY - E

Effects	Environmental changes resulting from a proposed action. Included are direct effects, which are caused by the action and occur at the same time and place, and indirect effects, which are caused by the action and are later in time or further removed in distance, but which are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems.
Elk Wallow	A depression, pool of water, or wet area produced or utilized by elk.
Endangered Species	Any species, plant or animal, which is in danger of extinction throughout all or a significant portion of its range. Endangered species are identified by the Secretary of the Interior in accordance with the 1973 Endangered Species Act.
Endemic Infestations	Occurrence of insects or disease contained in population and location to a normal, balance level.
Environmental Analysis	An analysis of alternative actions and their predictable short- and long-term environmental effects, which include physical, biological, economic, and social effects and their interactions.
Environmental Assessment (EA)	The concise public document required by the regulations implementing the National Environmental Policy Act. (40 CFR 1508.9, 2)
Environmental Impact Statement (EIS)	A statement of the environmental effects of a proposed action and the alternatives to achieve it. It is required for major federal actions under Section 102 of the National Environmental Policy Act (NEPA), and released to the public and other agencies for comment and review. It is a formal document that must follow the requirements of NEPA, the Council on Environmental Quality (CEQ) guidelines, and directives of the agency responsible for the project proposal.
Epidemic	A widespread and unusually high incidence of an insect, disease or other pest. The pest organism often builds up rapidly to an epidemic population level.
Erosion	The group of processes whereby earthy or rocky material is worn away by natural sources such as wind, water, or ice, and removed from any part of the earth's surface.
Ethnography	The systematic recording of human cultures.
Even-Aged Management	Application of a combination of actions that results in creation of stands in which trees of essentially the same age grow together. Managed even-aged forests are characterized by a distribution of stands of varying ages (and, therefore, tree sizes) throughout the Forest area. The difference in age between trees forming the main canopy level of the stand usually does not exceed 20 percent of the age of the stand at harvest rotation age. Regeneration in a particular stand is obtained during a short period at or near the time that a stand has reached the desired age or size for regeneration and is harvested. Clearcut, shelterwood, or seed tree cutting methods produce even-aged stands.

F

Featured Species	A species of high public interest and demand.
Fee Site	A Forest Service recreation area in which users must pay a fee. Fee sites must meet certain standards and provide certain facilities as specified in the Forest Service Manual
Final Cut	Removal of the last seed-bearers or shelter trees after regeneration is considered to be established under a shelterwood system
Final Environmental Impact Statement (FEIS)	The final version of the statement of environmental effects required for major federal actions under Section 102 of the National Environmental Policy Act. It is a revision of the draft Environmental Impact Statement to include public and agency responses to the draft.
Fire Management Action Plan	Standards, guidelines, and practices to be used in wildfire suppression on the Malheur National Forest based on management practices presented in the Forest Plan.
Fire Management Analysis System	The fire analysis process which provides input for Forest planning, fire program development, and budgeting.
Floodplain	The lowland and relatively flat area adjoining inland and coastal waters, including, at a minimum, that area subject to a one percent or greater chance of flooding in any given year (100 year recurrence).
Forage	All browse and nonwoody plants that are available to livestock or wildlife and used for grazing or harvested for feed.
Forb	Any herbaceous plant other than true grass, sedges, or rushes
Foreground	A term used in visual management to describe the portions of a view between the observer and up to 1/4 to 1/2 mile distant. (See background, middleground.)
Forest and Rangeland Renewable Resources Planning Act of 1974	An Act of Congress requiring the preparation of a program for the management of the National Forests' renewable resources, and the preparation of land and resource management plans for units of the Nation Forest System. It also requires a continuing inventory of all National Forest System lands and renewable resources.
Forest Land	Land at least 10 percent occupied by forest trees or formerly having had such tree cover and not currently developed for nonforest use. Lands developed for nonforest use include areas for crops, improved pasture, residential, or administrative areas, improved roads of any width, and adjoining road clearing and powerline clearing of any width.
Forest Residue Biomass Potential	That material remaining after management activity that could be used for other uses; that is, fuelwood, particle board, fuel for cogeneration facilities, pulp, etc.
Forest Residues	The residual dead plant biomass remaining on site after a natural occurrence or an forest activity has occurred.

GLOSSARY - F

Forest Service Handbook (FSH)	For Forest Service use, directives that provide detailed instructions on how to proceed with a specialized phase of a program or activity.
Forest Service Manual (FSM)	A system of manuals which provides direction for Forest Service Activities.
Forest Supervisor	The official responsible for administering the National Forest System lands in a Forest Service administrative unit, which may consist of one or more National Forests or all the Forests within a State.
Forest System Road	A road wholly or partly within or adjacent to and serving the National Forest System and which is necessary for the protection, administration, and utilization of the National Forest System and the use and developments of its resources.
FORPLAN	A linear programming system used for developing and analyzing Forest planning alternatives.
Forest Travel Plan	A map of the Forest showing area, road, and trail restrictions and closures, including a key listing dates and reasons for such restriction or closure.
Forest-Wide Standards	An indication or outline of policy or conduct dealing with the basic management of the Forest. Forest-wide management standards apply to all areas of the Forest except when superseded by management area prescriptions.
Free-To-Grow	A term used to indicate that trees are free of growth restraints, the most common of which is competing overtopping vegetation.
Fuel Break	A zone in which fuel quantity has been reduced or altered to provide a position for suppression forces to make a stand against wildfire. Fuel breaks are designated or constructed before the outbreak of a fire. Fuel breaks may consist of one or a combination of the following: Natural barriers, constructed fuel breaks, manmade barriers.
Fuels	Includes living plants; dead, woody vegetative materials; and other vegetative materials which are capable of burning.
Fuels Analysis Process	An analysis process developed by United States Forest Service, Region 6, to analyze the cost effectiveness of fuel treatment alternatives for the purpose of hazard reduction as it relates to wildfire protection.
Fuel Management	Manipulation or reduction of fuels to meet Forest protection and management objectives while preserving and enhancing environmental quality.
Fuels Profile	Synonymous with Residue Profile. Usually refers to activity created fuels, but may also relate to natural fuels.
Fuel Treatment	The rearrangement or disposal of natural or activity fuels (generated by management activity, such as slash left from logging) to reduce fire hazard or meet other management objectives. Fuels are defined as both living and dead vegetative materials consumable by fire.

Full-Service Management The administration, operation, and maintenance of developed recreation sites to established standards with the objective to provide a pleasant recreation experience for the visitor and exceed the minimum health and safety needs of the visitor.

G

Game Species Any species of wildlife or fish for which seasons and bag limits have been prescribed, and which are normally harvested by hunters, trappers, and fishermen under State or Federal laws, codes, and regulations.

Geological Area An area which has been designated by the Forest Service as containing outstanding formations or unique geological features of the earth's development such as caves, fossils, dikes, cliffs, or faults.

Geomorphology A science that deals with the land and submarine relief features of the earth's surface or the comparable relief features of a celestial body (as the moon) and seeks a generic interpretation of them

Goal A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principal basis from which objectives are developed

Goods and Services The various outputs, including on-site uses, produced by forest and rangeland resources.

Grasslike A plant of the Cyperaceae or Juncaceae families which vegetatively resembles a true grass of the Gramineae family

Grazing Allotment See Range Allotment.

Grazing Permits Official, written permission to graze a specific number, kind, and class of livestock for a specific period on a defined range allotment.

Group Selection Cutting Removal of tree groups ranging in size from a fraction of an acre up to about two acres. Area cut is smaller than the minimum feasible under even-aged management for a single stand.

Growing Stock Level A relative stand density measure used to guide a management objective, such as maximizing timber volume yields or optimizing big game thermal cover.

H

Habitat Effectiveness Index (HEI) An index of a Rocky Mountain elk habitat model. Habitat Effectiveness Index is the relative value of habitat conditions based on the potential of the habitat type to provide cover, the quality of existing cover, and the miles of road open to vehicular traffic.

Habitat Type The aggregate of all areas that support or can support the same primary vegetation at climax.

GLOSSARY - I

Hard Snag	A snag composed primarily of sound wood, particularly sound sapwood.
Harvest Cutting Method	A combination of interrelated actions whereby forests are tended, harvested, and replaced. The combination of management practices used to manipulate the vegetation results in forests of distinctive form and character. Harvest cutting methods are classified as even-aged and uneven-aged.
Hiding Cover	See Cover, hiding
Horizontal Diversity	The distribution and abundance of plant and animal communities or successional stages across an area of land; the greater the number of communities, the higher the degree of horizontal diversity. This concept is close to but not exactly the same as even-aged management, although each may influence the other. Application of even-aged management, for example, can be designed to accomplish horizontal diversity objectives. See also Vertical Diversity.
Hunter-Days	A measure of hunter use equal to 6 hours by one person.
I	
ID Team	See Interdisciplinary Team.
Improvement Cutting	Intermediate cutting made in stands past the sapling stage for the purpose of improving the composition and quality by removing trees of undesirable species, form, or condition from the main canopy
Indicator of Response	A facet of an issue that provides a measurable gauge to analyze the responsiveness of alternative management strategies towards resolution of the issue.
Individual Tree Selection Cutting	An uneven-aged cutting method in which selected trees from specified size or age classes are removed over the entire stand area to meet a predetermined goal of size or age distribution and species composition in the remaining stand.
Instream Flows	The minimum water volume (cubic feet per second) in each stream necessary to meet seasonal streamflow requirements for maintaining aquatic ecosystems, visual quality, recreational opportunities, and other uses.
Instream Structures	Boulders, logs, or other artificially placed materials which are used to enhance or improve existing fish habitat by altering stream velocity and depth or to provide physical cover.
Integrated Pest Management	A process for selecting strategies to regulate forest pests in which all aspects of a pest-host system are studied and weighed. The information considered in selecting appropriate strategies includes the impact of the unregulated pest population on various resources values, alternative regulatory tactics and strategies, and benefit/cost estimates for these alternative strategies. Regulatory strategies are based on sound silvicultural practices and ecology of the pest-host system and consist of a combination of tactics such as timber stand improvement plus selective use of pesticides. A basic principle in the choice of strategy is that it be ecologically compatible or acceptable.

Intensive Forest Management	A high investment level of timber management that envisions initial harvest, regeneration with genetically improved stock, control of competing vegetation, fill-in planting, precommercial thinning as needed for stocking control, one or more commercial thinnings, and final harvest.
Interdisciplinary	The integrated use of natural and social sciences and the environmental design arts in planning and decision making.
Interdisciplinary Team (ID Team)	A group of individuals with different training assembled to solve a problem or perform a task. The team is assembled out of recognition that no one scientific discipline is sufficiently broad to adequately solve the problem. Through interaction, participants bring different points of view to bear on the problem.
Intermediate Harvest	Any removal of trees from a stand between the time of its formation and the regeneration cut. Most commonly applied intermediate cuttings are release, thinning, improvement, and salvage
Intermittent Stream	A stream which flows only at certain times of the year when it receives water from springs or from some surface source such as melting snow
Issues	A point, matter, or question of public discussion or interest to be addressed or decided through the planning process. (See also <i>Public issue</i> .)

K

Knutson-Vandenberg Act (K-V)	(46 Stat. 527, 16 U.S.C 576-5766) An Act of Congress as amended by the National Forest Management Act of 1976 (P.L. 94-588) that is the authority for requiring purchasers of National Forest Timber to make deposits to finance the cost of reforestation, timber stand improvements, and other activities needed to protect and improve the future productivity of renewable resources of timber sale areas.
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L

Landform	An area of that is defined by its particular combination of bedrock and soils, erosion processes and climatic influences.
Landing	Any place where cut timber is gathered for further transport.
Landline Location	The legal identification, accurate location, and description of property boundaries.
Landtype	An inventory map unit with relatively uniform potential for a defined set of land uses Properties of soils, landform, natural vegetation and bedrock are commonly components of landtype delineation used to evaluate potentials and limitations for land use.
Large Woody Debris	Large trees, primarily conifers, that accumulate in streams or other water bodies. This material is important for fishery habitat and stream channel stability.
Leasable Minerals	See Minerals, Leasable.

GLOSSARY - M

Level I Fire Analysis	General fire management analysis to provide historical information that assists the interdisciplinary team in the analysis of the management situation and formulation of alternatives for the Forest Plan.
Level II Fire Analysis	An analytical process which guides the implementation of fire management activities of the Forest Plan.
Limits of Acceptable Change	Statements of the maximum amount of change in social and environmental conditions considered to be appropriate to Forest management.
Local Roads	Roads constructed and maintained for, and frequented by, the activities of a given resource element. These roads connect terminal facilities with Forest collector or Forest arterial roads or public highways. The location and standard usually are determined by the requirement of a specific resource activity rather than by travel efficiency.
Locatable Minerals	See Minerals, Locatable.
Long-Term Sustained Yield Capacity (LTSYC)	The highest uniform wood yield from lands being managed for timber production that may be sustained under a specified intensity of management consistent with multiple-use objectives.

M

Management Area	An area with similar management objectives and a common management prescription.
Management Area Standards	Management direction in narrative form in the Forest Plan specific to each management area.
Management Direction	A statement of multiple use and other goals and objectives, the associated management prescriptions, and standards for attaining them.
Management Indicator Species (MIS)	Species identified in a planning process that are used to monitor the effects of planned management activities on viable populations of wildlife and fish, including those that are socially or economically important.
Management Prescription	Management practices and intensities selected and scheduled for application on a specific area to attain multiple use and other goals and objectives.
Management Requirement (MR)	Standards for resource protection, vegetative manipulation, silvicultural practices, even-aged management, riparian areas, soil and water, and diversity, to be met in accomplishing National Forest System goals and objectives (See 36 CFR 219.27) and/or other legal requirements.
Management Standard	An indication or outline of policy or conduct dealing with the basic management of the Forest.
Marginal Cover	See Cover, marginal.

Market Resources	Resources exchanged in actual markets for a monetary price as opposed to nonmarket resources which have no established market. Typical market resources include timber, grazing and mining.
Market Value	The unit price of an output normally exchanged in a market after at least one stage of production, expressed in terms of what people are willing to pay as evidenced by market transactions.
Mass Wasting	A general term for any of the variety of processes by which large masses of earth material are moved downslope either slowly or quickly by gravitational forces.
Mature Timber	Individual trees or stands of trees that in general have passed their maximum rate in terms of the physiological processes, expressed as height, diameter, and volume growth.
Maximum Modification	See <i>Visual Quality Objective</i> .
Mean Annual Increment	The total increment in a tree or stand of trees up to a given age, divided by that age.
Mechanical Treatment	The treatment of forest fuels or residue using mechanized equipment to rearrange, dispose or remove unwanted fuels
Metals, Precious	Any of the less common and highly valuable metals such as gold, silver, and the platinum metals
Metals, Strategic	Those metals vital to the security of the nation which must be procured entirely or to a substantial degree from sources outside the continental limits of the United States because the available production will not be sufficient in quantity or quality to meet requirements in time of national emergency. Included are such metals as chromium, titanium, and platinum.
Middleground	The visible terrain beyond the foreground where individual trees are still visible, but do not stand out distinctly from the stand.
Mineral Entry	The filing of a mining claim on Federal land to obtain the right to mine any locatable minerals it may contain Also the filing for a millsite on Federal land for the purpose of processing off-site locatable minerals.
Mineral Exploration	The search for valuable minerals.
Mineral Production	The extraction of mineral deposits.
Mineral Soil	A soil consisting predominantly of and having its properties determined predominantly by inorganic matter.
Mineral Withdrawal	A formal designation by the Secretary of the Interior which precludes entry or disposal of mineral commodities under the mining and/or mineral leasing laws.

GLOSSARY - M

Minerals, Common Variety	Deposits of sand, stone, gravel, etc. of widespread occurrence and not having distinct or special value. These deposits are used generally for construction and decorative purposes and are disposed of under the Materials Act of 1947.
Minerals, Leasable	Those minerals which are disposed of under authority of the various mineral leasing acts. Minerals include coal, oil, gas, phosphate, sodium, potassium, oil shale, sulfur (in Louisiana and New Mexico), and geothermal steam.
Minerals, Locatable	Those minerals which are disposed of under the general mining laws. Included are minerals such as gold, silver, lead, zinc, and copper, which are not classed as leasable or salable.
Minimum Level Management	A benchmark level used to develop alternatives. Also a management prescription in which the only actions taken are those to assure public safety and meet custodial needs.
Minimum Streamflow	A specified level of flow through a channel that must be maintained by the users of the stream for biological, physical, or other purposes.
Mining Claims	A geographic area of the public lands held under the general mining laws in which the right of exclusive possession is vested in the locator of a valuable mineral deposit. Includes lode claims, placer claims, millsites, and tunnel sites.
Mitigate	To lessen the severity
Mitigation	Avoiding or minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact by preservation and maintenance operations during the life of the action; compensating for the impact by replacing or providing substitute resources of environments. (40 CFR Part 1508.20)
Mixed Conifer	Stand containing a mixture of tree species including, but not limited to, ponderosa pine, western larch, western white pine, white fir, Douglas-fir, subalpine fir, Englemann spruce, and lodgepole pine.
Modification	See Visual Quality Objective (VQO).
Monitoring and Evaluation	The periodic evaluation on a sample basis of Forest Plan management practices to determine how well objectives have been met and how closely management standards have been applied.
Motorized Access	Open to all motorized vehicles.

Multiple Use The management of all the various renewable surface resources of the National Forest System so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some lands will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.

N

National Environmental Policy Act (NEPA) An act which encourages productive and enjoyable harmony between man and his environment, promotes efforts to prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; enriches the understanding of the ecological systems and natural resources important to the Nation; and establishes a Council on Environmental Quality.

National Forest Landscape Management System The planning and design of the visual aspects of multiple use land management in such ways that the visual effects maintain or upgrade man's psychological welfare.

National Forest Management Act (NFMA) A law passed in 1976 as amendments to the Forest and Rangeland Renewable Resources Planning Act that requires the preparation of Regional and Forest plans and the preparation of regulations to guide that development.

National Forest System (NFS) All National Forest lands reserved or withdrawn from the public domain of the United States, all National Forest lands acquired through purchase, exchange, donation, or other means, the National Grasslands and land utilization projects administered under Title III.

National Register of Historic Places A listing maintained by the National Park Service of areas which have been designated as being of historical significance. The Register includes places of local and State significance as well as those of value to the Nation as a whole.

National Wilderness Preservation System All lands covered by the Wilderness Act and subsequent wilderness designations, irrespective of the department or agency having jurisdiction.

Natural Ignition A wildfire started by lightning.

Natural Regeneration Reforestation of a site by natural seeding from the surrounding trees. Natural regeneration may or may not be preceded by site preparation.

Net Public Benefits An expression used to signify the overall long-term value to the Nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not. Net public benefits are measured by both quantitative and qualitative criteria rather than a single measure or index. The maximization of net public benefits to be derived from management of units of the National Forest System is consistent with the principles of multiple use and sustained yield.

GLOSSARY - O

Nonchargeable Volume	All volume not included in the growth and yield projections for the selected management prescriptions used to arrive at the allowable sale quantity.
Nonclassified Forest	Any forest land not designated as wilderness.
Nonconsumptive Use	The use of a resource that does not reduce its supply. For example, nonconsumptive uses of water include hydroelectric power generation, boating, swimming, etc.
Nondeclining Even Flow	A policy governing the volume of timber removed from a National Forest, which states that the volume planned for removal in each succeeding decade will equal or exceed that volume planned for removal in the previous decade.
Nonforested Land	Lands that never have had or that are incapable of having 10 percent or more of the area occupied by forest trees; or lands previously having such cover and currently developed for nonforested use.
Nongame Species	Species of fish or animal which is not managed as a sport hunting or fishing resource; all mammals, birds, reptiles, amphibians and fish, not classified as game species by the Oregon Department of Fish and Wildlife.
Nonmarket Resources	<i>Products derived from National Forest resources that do not have a well-established market value, for example, recreation, wilderness, wildlife.</i>
Nonmotorized Access	Closed to all motorized vehicles.
Nonstocked	A stand of trees or aggregation of stands that have a stocking level below the minimum specified for meeting the prescribed management objectives.
Nonsystem Road	Single-purpose, temporary road built to service one resource such as mining, range, recreation, timber, or fire.
No Surface Occupancy	A mineral lease clause which, if attached to a mineral lease, prohibits the lessee from constructing roads, well pads, or otherwise occupying the land surface unless, upon site-specific review, it is determined by the authorized officer that the requirements of the stipulation can be modified if other less stringent mitigation is determined to be sufficient to protect the other resources.

O

Objective	A concise, time-specific statement of measurable, planned results that respond to preestablished goals. An objective forms the basis for further planning, to define the precise steps to be taken and the resources to be used in achieving identified goals.
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Obliterated Road	A road over which travel has been and will continue to be denied, the entrance obscured, and the wheel tracks or pathway is no longer continuous and suitable for travel. It includes roads obliterated by natural processes such as revegetation or other natural occurrences, and for which the drainage is not in need of further attention. An obliterated road has been returned to the resource management purposes established for that area. Obliteration by natural processes may have to be supplemented by artificial methods to get "vegetative cover within ten years" after the last activity as required by the National Forest Management Act. The obliterated road will be removed from the Forest Road Transportation System.
Ocular Estimate	An estimate based on a visual observation.
Off-Road Vehicle (ORV)	Any vehicle capable of being operated off an established road or trail, e.g., motorbike, four-wheel drive, or snowmobile.
Old Growth Dependent Species	The group of wildlife species that is associated with old growth forest plant communities
Old Growth Indicator Species	Those species of wildlife that are dependent on or that find optimum habitat in old growth stands for at least part of their life cycle. It is assumed that if the requirements of these species are met, the requirements of other old growth-associated species will be satisfied. For the Malheur National Forest, the primary indicator species are pileated woodpecker, pine marten, bald eagle, peregrine falcon, northern three-toed woodpecker, and primary cavity excavators.
Old Growth Stand	For all National Forests in the Pacific Northwest Region, an old growth stand is defined as any stand of trees 10 acres or greater generally containing the following characteristics: <ul style="list-style-type: none"> (a) Stands contain mature and overmature trees in the overstory and are well into the mature growth stage (See Handbook of Terminology, Society of American Foresters) (b) Stands will usually contain a multilayered canopy and trees of several age classes. (c) Standing dead trees and down material are present. (d) Evidence of human activities may be present but may not significantly alter the other characteristics and would be a subordinate factor in a description of such a stand.
Old-Growth Timber	See Overmature Timber.
Opening	See Created Openings.
Oregon State Historic Preservation Officer	The official who is responsible for administering the National Historic Preservation Act of 1966 within the State, or a designated representative authorized to act for the State Historic Preservation Officer.

GLOSSARY - P

Output	A good, service, or on-site use that is produced from Forest and rangeland resources. Forest and rangeland output definitions, codes and unit measures are contained in the Management Information Handbook (FSH 1309.11). Examples are: X06-Softwood Sawtimber Production - MBF; X80-Increased Water Yield - Acre Feet; W01-Primitive Recreation Use - RVDs.
Output, Market	A good, service, or on-site use that can be purchased at a price.
Output, Nonmarket	A good, service, or on-site use not normally exchanged in a market.
Outstandingly Remarkable	Unusual and/or unique qualities which are associated with a stream which determine eligibility for potential designation as a wild and scenic river. These include features such as free flowing water, scenic, geologic, fisheries or wildlife values.
Overmature Timber	The stage at which a tree declines in vigor and soundness; for example, past the period of rapid height growth.
Overstory	That upper-most canopy of the forest when there is more than one level of vegetation.
Overstory Removal	A final removal of mature overstory to release established immature crop trees that were not a result of a prescribed regeneration cut.

P

Pacific States Bald Eagle Recovery Plan	A plan prepared by the Pacific States Bald Eagle Recovery Team, appointed by the U.S. Department of the Interior under authority of the Endangered Species Act of 1973. The plan outlines the steps needed for recovery and maintenance of bald eagle populations in Idaho, Nevada, California, Oregon, Washington, Montana, and Nevada.
Palatable Forage	Forage that is favored for grazing animals.
Partial Retention	See Visual Quality Objectives.
Payments In Lieu of Taxes	Payments to local or state governments based on ownership of Federal land and not directly dependent on production of outputs or receipt sharing. Specifically, they include payments made under the Payments in Lieu of Taxes Act of 1976 by the U.S. Department of the Interior.
Perennial Streams	Streams that flow continuously throughout most years.
Permitted Grazing	Use of a National Forest range allotment under the terms of a grazing permit.
Permittee	One who holds a permit to graze livestock on State, Federal, or certain privately-owned lands
Photo Point	An identified point from which photographs are taken at periodic intervals.
Planned Ignition	A fire started by a scheduled, deliberate management action.
Planning Area	The area of the National Forest System covered by a Regional Guide or Forest Plan.

Planning Horizon	The overall time period considered in the planning process that spans all activities covered in the analysis or plan, and all future conditions and effects of proposed actions which would influence the planning decisions (In the National Forest planning process, this is 150 years)
Planning Period	One decade The time interval within the planning horizon that is used to show incremental changes in yields, costs, effects, and benefits.
Planning Records	Documents and files that contain detailed information and decisions made in developing the Forest Plan and other NEPA documents; available from the responsible official.
Plan of Operations	A document required from any person proposing to conduct mineral-related activities which utilize earth moving equipment and which will cause disturbance to surface resources or involve the cutting of trees. (CFR 228 4)
Plantation	A forest crop or stand established artificially, either by seeding or planting of young trees.
PNV	See Present Net Value.
Poles	Live trees of commercial species at least 6 inches in diameter at breast height but less than 9.0 inches DBH The term is used to describe the general size class of a timber stand and does not define commercial products as determined by timber utilization standards
Policy	A guiding principle upon which is based a specific decision or set of decisions (FSM 1905)
Potentially (Tentatively) Suitable Land	Forest land that is producing or is capable of producing crops of industrial wood and: (a) has not been withdrawn by Congress, the Secretary, or the Chief; (b) existing technology and knowledge are available to ensure timber production without irreversible damage to soil productivity or watershed conditions; (c) existing technology and knowledge, as reflected in current research and experience, provide reasonable assurance that it is possible to restock adequately within 5 years after final harvest, and (d) adequate information is available to project responses to timber management activities.
Precommercial Thinning (PCT)	The selective felling, killing, or removal of trees in a young stand primarily to accelerate diameter increment on the remaining stems, maintain a specific stocking or stand density range, and improve the vigor and quality of the trees that remain.
Preferred Alternative	The alternative recommended for implementation as the Forest Plan.
Preparatory Cut	Removal of trees near the end of a rotation so as to permanently open the canopy and enlarge the crowns of seed bearers, with a view to improving conditions for seed production and natural regeneration. A preparatory cut is typically used in the shelterwood silvicultural system

GLOSSARY - P

Prescribed Fire	A wildland fire burning under specified conditions which will accomplish certain planned objectives. The fire may result from either planned or natural ignitions. Proposals for use of natural ignitions for this purpose must be approved by the Regional Forester.
Present Net Value (PNV)	The difference between the discounted value (benefits) of all outputs to which monetary values or established market prices are assigned and the total discounted costs of managing the planning area.
Preservation	See Visual Quality Objectives.
Presuppression	Activities organized in advance of fire occurrence to ensure effective suppression action.
Priced Outputs	<i>Priced outputs are those that are or can be exchanged in the market place. The dollar values for these outputs fall into two categories: market or nonmarket (assigned values).</i>
Primary Transportation System	Includes Arterial and Collector Roads. See Arterial and Collector Roads.
Primitive Setting	A large area (generally at least 5,000 acres) at least 3 miles from all roads, railroads, or trails with motorized use. The area is essentially a natural environment unmodified by man.
Productivity	See Site Productivity.
Program Development and Budgeting	The process by which activities for the Forest are proposed and funded.
Proposed Action	In terms of the National Environmental Policy Act, the project, activity, or action that a Federal agency intends to undertake or implement and which is the subject of an environmental analysis.
Public Involvement	A Forest Service process designed to broaden the information base upon which agency decisions are made by (1) informing the public about Forest Service activities, plans, and decisions, and (2) encouraging public understanding about and participation in the planning processes which lead to final decision making.
Public Issue	A subject or question of widespread public interest, identified through public participation relating to management of National Forest System lands.
Puddling	See Detrimental Soil Conditions.
Pulpwood	Wood not usable as logs and for species in small demand. Tolerance in size and quality of wood used for pulp permits salvaging the wood fiber in thinnings, tops left in logging, and sawmill leftovers.

R

Range Allotment	A designated area of land available for livestock grazing upon which a specified number and kind of livestock may be grazed under a range allotment management plan. It is the basic land unit used to facilitate management of the range resource on National Forest System and associated lands administered by the Forest Service.
Range Condition	The current productivity of a range relative to what that range is naturally capable of producing. Condition is expressed in terms of satisfactory and unsatisfactory.
Range Improvements, Nonstructural	Enhanced range condition resulting in increased grazing capacity.
Range Improvements, Structural	Any structure or excavation to facilitate management of range or livestock.
Rangeland	Land on which the climax vegetation (potential natural plant community) is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing and browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundra, and certain forb and shrub communities. It also includes areas seeded to native or adapted introduced species that are managed like native vegetation.
Ranger District	Administrative subdivision of the Forest supervised by a District Ranger.
Range, Transitory	See Transitory Range.
Raptors	Predatory birds, such as falcons, hawks, eagles, or owls
RARE II	See Roadless Area Review and Evaluation II.
Record of Decision	A document separate from but associated with an Environmental Impact Statement which states the decision, identifies all alternatives, specifying which were environmentally preferable, and states whether all practicable means to avoid environmental harm from the alternative have been adopted, and if not, why not (40 CFR 1505.2)
Recreation Capacity	The number of people that can take advantage of the recreation opportunity at any one time without substantially diminishing the quality of the experience or the biophysical resources.
Recreation Experience Level	A concept used in recreation management to delineate the range of opportunities for satisfying basic recreation needs of people. A scale of five experience levels ranging from "primitive" to "highly developed" is planned for the National Forest System.
Recreation Information Management (RIM)	The Forest Service system for recording recreation facility condition and use.
Recreation Opportunities	The combination of recreation settings, activities, and experiences provided by the Forest.

GLOSSARY - R

Recreation Opportunity Guide (ROG)

A catalogue describing the recreation activities available on a particular Ranger District.

Recreation Opportunity Spectrum (ROS)

A system for planning and managing recreation resources. Land delineations that identify a variety of recreation experience opportunities categorized into classes on a continuum from primitive to urban. Each class is defined in terms of the degree to which it satisfies certain recreation experience needs, based on the extent to which the natural environment has been modified, the type of facilities provided, the degree of outdoor skills needed to enjoy the area, and the relative density of recreation use.

The five classes are:

1. **Primitive:** Area is characterized by an essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted.
2. **Semiprimitive Nonmotorized:** Area is characterized by a predominantly natural or natural-appearing environment of moderate to large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum onsite controls and restrictions may be present but would be subtle. Motorized recreation use is not permitted, but local roads used for other resource management activities may be present on a limited basis. Use of such roads is restricted to minimize impacts on recreational experience opportunities.
3. **Semiprimitive Motorized:** Area is characterized by a predominantly natural or natural-appearing environment of moderate to large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum onsite controls and restrictions may be present but would be subtle. Motorized recreation use of local primitive or collector roads with predominantly natural surfaces and trails suitable for motor bikes is permitted.
4. **Roaded Natural:** Area is characterized by predominantly natural-appearing environments with moderate evidence of the sights and sounds of humans. Such evidence usually harmonizes with the natural environment. Interaction between users may be moderate to high with evidence of other users prevalent. Resource modification and utilization practices are evident but harmonize with the natural environment. Conventional motorized use is allowed and incorporated into construction standards and design of facilities.
5. **Roaded Modified:** Area is characterized by a natural environment that has been substantially modified by development of structures and vegetative manipulation. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. Facilities are often provided for special activities. Moderate user densities are present away from developed sites. Facilities for intensified motorized use and parking are available.

Recreation Residence

A house or cabin on National Forest land for seasonal recreational use that is not the primary residence of the owner.

Recreation Visitor Day (RVD)	One visitor day equals 12 hours (one person for 12 hours, or 12 people for 1 hour, or any combination thereof).
Reduced Service Management	Management of developed recreation facilities below optimum maintenance standards.
Reforestation	The natural or artificial restocking of an area with forest trees; most commonly used in reference to artificial restocking.
Regeneration	The renewal of a tree crop, whether by natural or artificial means. This term may also refer to the crop itself.
Regeneration Cut	The removal of trees intended for the purpose of assisting regeneration already present or to make a regeneration of the stand possible.
Regional Forester	The official responsible for administering a single Region of the Forest Service.
Regional Guide	A document developed to meet the requirements of the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended, that guides all natural resource management activities and established management standards for National Forest System lands of a given Region to the Forests within a given Region. It also disaggregates the RPA objectives assigned to the Region to the Forests within that Region.
Region	For Regional planning purposes, the standard administrative Region of the Forest Service administered by the responsible official for preparing a Regional plan; the area to be covered by a Regional plan.
Regulated Volume	The commercial forest land that is organized for timber production under the principle of sustained yield. The harvest of timber from this land is regulated to achieve multiple long-range objectives, such as maintaining settings for recreational activities, rotating forage production areas and wildlife habitat, increasing water production yield, and increasing the growth and utilization of timber for the Nation's supply.
Regulations	Refers to the Code of Federal Regulations for implementing the National Forest Management Act, 36 CFR, Part 219.
Release Treatment	An intermediate treatment or cutting designed to free a young stand of desirable trees, not past the sapling stage, from competition of undesirable trees that threaten to suppress them. Cleaning and liberation cutting are types of release.
Renewable Resources	Resources that are possible to use indefinitely, when the use rate does not exceed the ability to renew the supply. However, in the RPA program, the term is used to describe those matters within the scope of responsibilities and authorities of the Forest Service as required by the Forest and Rangeland Renewable Resources Planning Act of 1974. Consequently, the renewable resources include: timber, range, minerals, wildlife and fish, water, recreation, and wilderness.

GLOSSARY - R

Renewable Resources Assessment	An appraisal of the Nation's renewable resources that recognizes their vital importance and the necessity for long-term planning and associated program development. The Assessment meets the requirements of Section 3 of the Forest and Rangeland Renewable Resources Planning Act and includes analyses of present and anticipated uses, demands, and supplies of the renewable resources; a description of Forest Service programs and responsibilities; and a discussion of policy considerations, laws, and regulations.
Renewable Resources Program	The program for management and administration of the National Forest System for Research, for Cooperative State and Private Forest Service programs, and for conduct of other Forest Service activities in accordance with the Forest and Rangeland Renewable Resources Planning Act.
Replacement Trees	Live trees that are retained during harvest to provide future snags and logs for the site until they can be produced from the new crop of trees.
Research Natural Area (RNA)	An area which is as near a natural condition as possible, which exemplifies typical or unique vegetation and associated biotic, soil, geologic, and aquatic features. The area is set aside to preserve a representative sample of an ecological community primarily for scientific and educational purposes.
Reservation Principle	The Forest Reserves, now known as National Forests, were reserved from the Public Domain to improve and protect the Forest within the boundaries for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States. This is often referred to as the reservation principle.
Residue	See Forest Residue.
Residue Profile	See Fuels Profile.
Resident Fish	Species of fish which spend their entire life cycle within a lake or river system. These may be native, or introduced species (compare anadromous fish).
Resources Planning Act (RPA)	See Forest and Rangeland Renewable Resources Planning Act of 1974.
Retention	See Visual Quality Objectives.
Riparian Areas	Areas with distinctive resource values and characteristics that are comprised of an aquatic ecosystem and adjacent upland areas that have direct relationships with the aquatic system. This includes floodplains, wetlands, and all areas within a horizontal distance of approximately 100 feet from the normal high water line of a stream channel, or from the shoreline of a standing body of water.
Right-of-Way	Land authorized to be used or occupied for the construction, operation, maintenance, and termination of a project facility passing over, upon, under, or through such land.

Road	<p>A general term denoting a way for purposes of travel by vehicles greater than 40 inches in width.</p> <p><i>Forest Arterial Road.</i> Provides services to large land areas and usually connects with public highways or other forest arterial roads to form an integrated network of primary travel routes. The location and standard are often determined by a demand for maximum mobility and travel efficiency rather than specific resource management service. It is usually developed and operated for long-term land and resource management purposes and constant service.</p> <p><i>Forest Collector Road.</i> Serves smaller land areas than a forest arterial road and is usually connected to a forest arterial or public highway. Collects traffic from forest local roads and/or terminal facilities. The location and standard are influenced by both long-term multi-resource service needs as well as travel efficiency. May be operated from either constant or intermittent service, depending on land use and resource management objectives for the area served by the facility.</p> <p><i>Forest Local Road.</i> Connects terminal facilities with forest collector or forest arterial roads or public highways. The location and standard are usually controlled by specific resource activity requirements rather than travel efficiency needs.</p>
Road Closure	See Closed Road
Road Construction	Consists of clearing, excavation, drainage, and surfacing of roads in the Forest Transportation System.
Road Maintenance Levels	<p>Road maintenance levels are as follows:</p> <p>Level 1: Basic custodial care as required to protect the road investment and to see that damage to adjacent land and resources is held to a minimum. The road is not open to traffic.</p> <p>Level 2: Same basic maintenance as Level 1 plus logging out, brushing out, and restoring the road prism as necessary to provide passage for high clearance vehicles. Route markers and regulation signs are in place and usable. Road is open for limited passage of traffic, which is usually administrative use, permitted use, and/or specialized traffic.</p> <p>Level 3: Road is maintained for safe and moderately convenient travel suitable for passenger cars. Road is open for public travel, but has low traffic volumes except during short periods of time (e.g., hunting season)</p> <p>Level 4: At this level, more consideration is given to the comfort of the user. Road is usually surfaced with aggregate or is paved and is open for public travel.</p> <p>Level 5: Safety and comfort are important considerations for these roads which are open to public traffic and generally receive fairly heavy use (100 Average Daily Traffic or more). Roads have an aggregate surface or are paved</p>

GLOSSARY - S

Road Management Plan	The document which provides information to determine the proper mix of development, traffic management, and maintenance of the existing road system to best serve resource objectives.
Road Sign Plan	A plan that displays the type and location of all Forest signs.
Roaded Natural	A classification on the Recreation Opportunity Spectrum where timber harvest or other surface use practices are evident. Motorized vehicles are permitted on all or parts of the road system.
Roadless Area	A National Forest area which (1) is larger than 5,000 acres or, if smaller than 5,000 acres, contiguous to a designated wilderness or primitive area; (2) contains no roads; and (3) has been inventoried by the Forest Service for possible inclusion in the Wilderness Preservation System.
Roadless Area Review and Evaluation (RARE) II	A comprehensive process, instituted in June 1977, to identify roadless and undeveloped land areas in the National Forest System and to develop alternatives for both wilderness and other resource management.
Rotation	The planned number of years between establishment of a tree stand which is free to grow, and its final harvest at a specified stage of maturity.
RPA	See Forest and Rangeland Renewable Resources Planning Act of 1974.
Rural Recreation Setting	A classification on the recreation opportunity spectrum that is characterized by substantially modified natural environment. Resource modification and utilization practices are to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high.
S	
Sale Area Improvement Plan	The document which records post-sale resource activities, for protection, mitigation and improvements. The plan shall display all authorized K-V treatments needed within the timber sale area.
Sale Schedule	The quantity of timber planned for sale by time period from an area of suitable land covered by a Forest Plan. The first period, usually a decade, of the selected sale schedule provides the Allowable Sale Quantity. Future periods are shown to establish that long-term sustained yield will be achieved and maintained.
Salvage Cutting	Intermediate cutting made to remove trees that are dead or in imminent danger of being killed by injurious agents.
Sanitation Harvest (Salvage)	The removal of dead, damaged, or susceptible trees, essentially to prevent the spread of pests or pathogens and so promote forest health.
Sapling	See Seedling/Sapling.
Satisfactory Cover	See Cover, satisfactory.

Satisfactory Range Condition	On suitable range, forage condition is at least fair, with stable trend, and allotment is not classified PC (basic resource damage) or PD (other resource damage).
Sawtimber	Trees suitable in size and quality for producing logs that can be processed into lumber.
Scenic Area	An area which has been designated by the Forest Service as containing outstanding natural beauty that requires special management to preserve this beauty.
Scenic River	See Wild and Scenic Rivers.
Scoping Process	An early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to the proposed action. Identifying the significant environmental issues deserving of study and de-emphasizing insignificant issues, narrowing the scope of the environmental impact statement accordingly (CEQ regulations, 40 CFR 1501.7).
Secondary Transportation System	Consists of local roads.
Sedimentation	The action or process of forming or depositing sediments.
Seed Tree Cutting	The removal of most of the mature trees from an area in one cut, except for a small number of desirable trees left singly or in small groups to provide seed for natural regeneration
Seedling/Sapling	A size category for forest stands in which trees less than 5 inches in diameter are the predominant vegetation.
Selection Cutting	The annual or periodic removal of trees as part of an uneven-aged silvicultural system. Cutting will remove individual trees or small groups of trees to meet predetermined goals regarding size and species composition in the remaining stand.
Semiprimitive Motorized	See Recreation Opportunity Spectrum, Semiprimitive Motorized.
Semiprimitive Nonmotorized	See Recreation Opportunity Spectrum, Semiprimitive Nonmotorized.
Seral	A biotic community which is developmental; a transitory stage in an ecologic succession.
Serpentine	A mineral group which, when present, usually results in low soil fertility and reduced plant growth capacity.
Service Levels	See Traffic Service Levels (TSL).
Severely Burned	See Detrimental Soil Conditions.

GLOSSARY - S

Shelterwood Cutting	<i>A mature stand is partially cut, leaving some of the better trees of desired species to grow, cast seed, and provide shade and perhaps other shelter for the new stand. These shelter trees will be harvested after seedlings have become established and no longer need protection.</i>
Shrubland	Any land on which shrubs dominate the vegetation.
Silvicultural Examination	<i>The process used to gather detailed, in-place field data used in part to determine the management opportunities and direction for the resources within a small subdivision of a forest area, such as a stand.</i>
Silvicultural System	A management process whereby forests are tended, harvested, and replaced. It includes all cultural practices performed during the life of the stand such as regeneration cutting, fertilization, thinning, improvement cutting, and use of genetically improved sources of tree seeds and seedlings to achieve multiple resource benefits. Systems are classified according to the method of carrying out the harvests that remove the mature stand and provide for regeneration.
Single Story Stand	A stand of trees that has one canopy layer.
Site Index	An estimate of forest site quality (productivity) based on the height at a specified age, of dominant and co-dominant trees in a stand.
Site Preparation	A general term for a variety of activities that remove competing vegetation, slash, and other debris that may inhibit the reforestation effort.
Site Productivity	Production capability of specific areas of land
Skidding	A loosely used term for the transportation of logs from stumps to a collection point for later removal from the Forest.
Skyline	A cableway stretched tautly between two spars and used as a track for log carriers.
Slash	The residue left on the ground after timber harvest and other silvicultural operations and/or accumulating there as a result of storm, fire, girdling, or poisoning of trees.
Small Game	Birds and small mammals typically hunted or trapped.
Snag	A standing dead tree at least 12 inches DBH and 40 feet in height.
Soft Snag	A snag in advanced state of decay, generally not merchantable. An axe would sink easily into a soft snag.
Soil Bulk Density	The weight of oven-dry soil per unit volume. Commonly expressed in terms of grams per cubic centimeters (g/cc).
Soil Compaction	See Detrimental Soil Condition.
Soil Erosion	See Erosion.

Soil Productivity	The capacity of a soil to produce a specific crop such as fiber and forage, under defined levels of management. It is generally dependent on available soil moisture, nutrients, length of growing season, and the presence or absence of detrimental soil conditions
Special Interest Area	An area managed to make recreation opportunities available for the understanding of the earth and its geological, historical, archaeological, botanical, and memorable features.
Special-Use Permit	A permit issued under established laws and regulations to an individual, organization, or company for occupancy or use of National Forest land for some special purpose
Stand	A community of trees occupying a specific area and sufficiently uniform in composition (species), age, spatial arrangement, and conditions as to be distinguishable from the other growth on adjoining lands, so forming a silvicultural or management entity.
Standard Stipulations	An indication or outline of policy or conduct. Requirements that are part of the terms of a mineral lease. Some stipulations are standard in all Federal leases. Other stipulations may be applied to the lease at the discretion of the surface management agency to protect valuable surface resources and uses.
Stocking	The degree of occupancy of land by trees as measured by basal area or number of trees and as compared to a stocking standard, that is, the basal area or number of trees required to fully use the growth potential of the land.
Stream Class	<p>Classification of streams based on the present and foreseeable uses made of the water, and the potential effects of on-site changes on downstream uses. Four classes are defined:</p> <p>Class I - Perennial streams that: provide a source of water for domestic use; are used by large numbers of fish for spawning, rearing or migration; and/or are major tributaries to other Class I streams.</p> <p>Class II - Perennial streams that: are used by moderate though significant numbers of fish for spawning, rearing or migration; and/or may be tributaries to Class I streams or other Class II streams.</p> <p>Class III - All other perennial streams not meeting higher class criteria.</p> <p>Class IV - All other intermittent streams not meeting higher class criteria.</p>
Streambank Erosion Restoration	A project that stabilizes actively cutting and/or eroding streambanks.
Subclimax	A stage in succession short of the climax community in which further development is inhibited by the influence of one or more factors other than climate.
Suitable	See Timber Classification.

GLOSSARY - T

Suitable Forest Land	Forested lands that are available for timber management because they have not been withdrawn because of Law or Regulation, where irreversible damage would not occur, and where regeneration can be assured.
Suitability	The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the alternative uses foregone. A unit of land may be suitable for a variety of individual or combined management practices. (FSM 1905)
Summer Range	A range, usually at higher elevation, used by deer and elk during the summer. Summer ranges are usually much more extensive than winter ranges.
Supply	The amount of an output that producers are willing to provide at the specified price, time period, and condition of sale.
Suppression (Fire Suppression)	<p>Any act taken to slow, stop, or extinguish a fire. Examples of suppression activities include fireline construction, backfiring, and application of water or chemical fire retardants.</p> <p>Appropriate suppression response will meet management direction and may range from direct control, minimizing acreage burned, to more indirect methods of containment and confinement. Surveillance can be appropriate when the fire is expected to be self confined within a defined area.</p>
Surface Erosion	The detachment and transport of individual soil particles by wind, water, or gravity.
Surface Rights	The rights of the operator or responsible agency to use or manage renewable surface resources. On National Forest System lands the Forest Service manages surface resources without having jurisdiction over subsurface development.
Sustained Yield	The achievement and maintenance in perpetuity of a specified annual or regular periodic output of the various renewable resources of the National Forest without impairing the productivity of the land.

T

Talus	Coarse-textured colluvial deposits, or talus slopes, are formed by fragments of rocks detached from the precipitous outcrops and carried down the slope by gravity. Cliff debris, rock falls, and avalanches are typical examples of rough and droughty talus soils.
Target	A quantifiable output assigned to the Forest.
Temporary Road	Those roads needed only for the purchaser's or permittee's use. The Forest Service and the purchaser or permittee must agree to the location and clearing widths. Temporary roads are used for a single, short-term use, e.g., to haul timber from landings to Forest development roads, access to build water developments, etc.

Tentatively Suitable Forest Land	Forest land that is producing or is capable of producing crops of industrial wood and. (1) has not been withdrawn by Congress, the Secretary, or the Chief; (2) existing technology and knowledge is available to ensure timber production without irreversible damage to soils productivity, or watershed conditions, (3) existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that it is possible to restock adequately within 5 years after final harvest; and (4) adequate information is available to project responses to timber management activities.
Thermal Cover	See Cover, thermal.
Thinning	Cutting made in an immature crop or stand, primarily to accelerate the diameter increment (annual growth) of the residual trees, also by suitable selection to improve the average form of the trees that remain.
Threatened and Endangered Species (T&E)	A species or subspecies of animal or plant whose prospects of survival and reproduction are in immediate jeopardy or likely to become so within the foreseeable future. <i>Threatened species are identified by the Secretary of Interior in accordance with the 1973 Endangered Species Act</i>
Threatened Species	Any species, plant or animal, which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Threatened species are identified by the Secretary of the Interior in accordance with the 1973 Endangered Species Act
Through Road	A road that begins at one road and ends at another road.
Tie-Through Road	See Through Road.
Tiering	Refers to the elimination of repetitive discussions of the same issue by incorporating by reference the general discussion in an environmental impact statement of broader scope. For example, a project environmental assessment could be tiered to the Forest Plan EIS.
Timber	A general term for the major woody growth of trees in a forest area.
Timber Base	The lands within the Forest that are suitable for timber production.
Timber Classification	<p>Forested land is classified under each of the land management alternatives according to how it relates to the management of the timber resource. The following are definitions of timber classifications used for this purpose.</p> <p><i>Nonforest</i> - Land that has never supported forests and land formerly forested where use for timber production is precluded by development or other uses.</p> <p><i>Forest</i> - Land at least 10 percent stocked (based on crown cover) by forest trees of any size, or formerly having had such tree cover and not currently developed for nonforest use.</p>

GLOSSARY - T

Suitable - Land to be managed for timber production on a regulated basis.

Unsuitable - Forest land withdrawn from timber utilization by statute or administrative regulation (for example, wilderness), or identified as not appropriate for timber production in the Forest planning process.

Commercial Forest - Forest land tentatively suitable for the production of continuous crops of timber and that has not been withdrawn.

Timber Production	The purposeful growing, tending, harvesting, and regeneration of regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use other than for fuelwood.
Timber Sale Program Quantity	The timber sale program quantity includes the allowable sale quantity (ASQ) for the first decade and any additional volume planned for sale during the first decade. Volume in addition to the ASQ is nonchargeable and may be harvested from suitable and/or unsuitable land, for example, salvage, firewood and miscellaneous products.
Timber Stand Improvement (TSI)	Measures such as thinning, pruning, release cutting, prescribed fire, girdling, weeding, or poisoning of unwanted trees aimed at improving growing conditions of the remaining trees.
Total Resource Information System (TRI)	Integrated resource data base management system used in the Pacific Northwest Region.
Tractor	A track-laying or rubber-tired vehicle used to drag logs to a landing.
Traffic Service Levels (TSL)	Traffic Service Levels describe a roads significant traffic characteristics and operating conditions. They are identified thru transportation planning activities. The levels (A-D) reflect such factors as speed, travel time, traffic interruptions, safety and others.
Trallhead	The parking, signing, and other facilities available at the terminus of a trail.
Transitory Range	Land that is suitable for grazing use for a period of time. For example, on particular disturbed lands, grass may cover the area for a period of time before being replaced by trees or shrubs not suitable for forage.
Transportation Corridor	See Corridor.
Transportation Network	In USDA Forest Service usage, the transportation network includes all existing and planned roads, trails, bridges, airfields, and other transport facilities wholly or partly within or adjacent to and serving the planning area.
Tree Opening	See Created Openings.
Two-Step Shelterwood	An even-aged silvicultural system in which the old stand (shelter-wood) is removed in two successive cuttings in order to provide a source of seed and/or protection for regeneration.

U

Understory	The trees and other woody species which grow under a more or less continuous cover of branches and foliage formed collectively by the upper portion of adjacent trees and other woody growth.
Uneven-aged Management	<p>The combination of actions needed to simultaneously maintain continuous high-forest cover, recurring regeneration of desirable species and the orderly growth and development of trees through a range of diameter or age classes to provide a sustained yield of forest products. Cutting is usually regulated by specifying the number or proportion of trees of particular sizes to retain within each area, thereby maintaining a planned distribution of size classes. Cutting methods that develop and maintain uneven-aged stands are individual tree selection and group selection.</p> <p>Individual Tree Selection Cutting - Involves the removal of selected trees of all size classes on an individual basis</p> <p>Group Selection Cutting - Involves the removal of selected trees of all size classes in groups of a fraction of an acre up to 2 acres in size.</p>
Ungulate	Hoofed, herbivorous mammals.
Unplanned Ignition	A fire started at random by either natural or human causes, or a deliberate incendiary fire.
Unregulated Volume	This volume is not charged against the allowable sale quantity. It includes occasional volumes removed that were not recognized in calculations of the allowable sale quantity, such as cull or dead material and noncommercial species and products. It also includes all volume removed from unsuitable areas. Harvests from unsuitable areas will be programmed as needed to meet multiple use objectives other than timber production and for improvement of administrative sites.
Unsatisfactory Range Condition	Allotment does not meet criteria for satisfactory condition
Unsuitable	See Timber Classification.
Unsuitable Forest Land (Not Sited)	Forest land not managed for timber production because: (a) Congress, the Secretary, or the Chief has withdrawn it; (b) it is not producing or capable of producing crops of industrial wood; (c) technology is not available to prevent irreversible damage to soils productivity, or watershed conditions, (d) there is no reasonable assurance based on existing technology and knowledge, that it is possible to restock lands within 5 years after final harvest, as reflected in current research and experience; (e) there is, at present, a lack of adequate information about responses to timber management activities; or (f) timber management is inconsistent with or not cost efficient in meeting the management requirements and multiple use objectives specified in the forest plan.

GLOSSARY - V

Uplands	Ground elevated above the lowlands along rivers or between hills.
Utility Corridor	See Corridor.
Utilization Standards (Timber)	Standards guiding the use and removal of timber. They are measured in terms of diameter at breast height (d.b.h.), top of the tree inside the bark (top d.i.b.), and the percentages of "soundness" of the wood.
Utilization Standards (Range)	See Range Condition.

V

Value, Market	The unit price of an output normally exchanged in a market after at least one stage of production, expressed in terms of what people are willing to pay as evidenced by market transactions.
Value, Nonmarket	The unit price of an output not normally exchanged in a market after at least one stage before consumption, and thus must be imputed from other economic information.
Vegetation Treatment	Any activities undertaken to modify the existing condition of the vegetation.
Vegetative Manipulation	Management of plants and shrubs to ensure production of the species desired.
Vertical Diversity	The diversity in a stand that results from the complexity of the above-ground structure of the vegetation; the more tiers of vegetation or the more diverse the species makeup (or both), the higher the degree of vertical diversity. This concept is close to but not exactly the same as "uneven-aged management," although each may influence the other. Application of even-aged management, for example can be designed to accomplish vertical diversity objectives.
Viable Population	The number of individuals of a species required to ensure the long-term existence of the species in natural, self-sustaining populations adequately distributed throughout their region.
Viewshed	The total landscape seen or potentially seen from all or a logical part of a travel route, use area, or water body.
Visual Quality Objective (VQO)	<p>A desired level of management based on physical and sociological characteristics of an area. Refers to the degree of acceptable alteration of the characteristic landscape.</p> <p>Preservation - Allows only ecological changes. Management activities, except for very low visual impact recreation facilities, are prohibited. This objective applies to specially classified areas, including wilderness.</p> <p>Retention - Provides for management activities that are not visually evident. Management activities are permitted, but the results of those activities on the natural landscape must not be evident to the average viewer.</p>

Partial Retention - Management activities may be evident to the viewer but must remain visually subordinate to the surrounding landscape.

Modification - Management activities may visually dominate the natural surrounding landscape but must borrow from naturally established form, line, color, and texture.

Maximum Modification - Land management activities can dominate the natural landscape to greater extent than in the modification objective, except as viewed from background when visual characteristics must be those of natural occurrences within the surrounding area.

Visual Resource The composite of basic terrain, geologic features, water features, vegetative patterns, and land use effects that typify a land unit and influence the visual appeal the unit may have for visitors.

W

Wallow A depression, pool of water, or wet area produced by large mammals and utilized by many forms of wildlife.

Waterbar A structure constructed across roads and skid trails to divert the surface runoff of water.

Watershed The total area above a given point on a stream that contributes water to the flow at that point.

Watershed Condition A description of the health of a watershed or portion thereof, in terms of the factors which affect hydrologic function and soil productivity.

Watershed Improvement Needs (WIN) Inventory An inventory of degraded soil and water sites. These include old burns, depleted ranges, closed timber sales, abandoned stock driveways, abandoned mines, localized erosion problems, natural landslides and unstable streambeds and channels.

Wet Areas Sites, often occurring at the heads of drainages, such as wet sedge meadows, bogs, or seeps. They are often referred to as "moist sites" and are very important components of elk summer range. Sites near water are important because the forage they produce is highly nutritious and heavily utilized by elk.

Wetlands Those areas that are inundated by surface or ground water with a frequency sufficient, under normal circumstances, to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction (Executive Order 11990). Wetlands include marshes, bogs, sloughs, potholes, river overflows, mud flats, wet meadows, seeps, and springs.

Wild and Scenic Rivers

Those rivers or sections of rivers designated as such by congressional actions under the 1968 Wild and Scenic Rivers Act, as wild, scenic, or recreational by an act of the Legislature of the State or States through which they flow. Wild and scenic rivers may be classified and administered under one or more of the following categories:

1. Wild River Areas - Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

2. Scenic River Areas - Those rivers or sections of rivers that are free of impoundments, with watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

3. Recreational River Areas - Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

Wilderness

Federal land retaining its primeval character and influence without permanent improvements or human habitation as defined under the 1964 Wilderness Act. It is protected and managed so as to preserve its natural conditions which (1) generally appear to have been affected primarily by forces of nature with the imprint human activity substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and confined type of recreation; (3) has at least 5,000 acres or is of sufficient size to make practical its preservation, enjoyment, and use in an unimpaired condition, and (4) may contain features of scientific, educational, scenic, or historical value as well as ecologic and geologic interest.

Wilderness Recreation Opportunity Spectrum (WROS)

A further refinement of the primitive portion of the ROS. The following terms deal only with officially designated wilderness:

Primitive: Area is characterized by essentially unmodified natural environment. Concentration of users is low and evidence of human use is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Only essential facilities for resource protection and safety are used and are constructed of native or natural appearing materials. No facilities for comfort or convenience of the user are provided. Visitors are encouraged to disperse to desirable existing sites to minimize contacts with other groups.

Pristine: Area is characterized by an extensive unmodified natural environment. Natural processes and conditions have not and will not be measurably affected by the actions of users. The area is managed to be as free as possible from the influence of human activities. People are only brief visitors. Essentially no facilities are required to protect the Wilderness resource. Terrain and vegetation allow extensive and challenging cross-country travel.

Wilderness Study

An analysis to determine an area's appropriateness, cost, and benefits for addition to the National Wilderness Preservation System.

Wildlife-and-Fish-User-Days (WFUD)	Twelve visitor hours of recreation use oriented to wildlife and fish
Wildlife Habitat Improvements, Nonstructural	Vegetative management for wildlife food, cover, and habitat diversity.
Wildlife Habitat Improvements, Structural	Includes such structures as nesting boxes and platforms, fences, gates, and water catchments
WIN Inventory	See Watershed Improvement Needs (WIN) Inventory.
Winter Range	An area, usually at lower elevation, used by big game such as elk and deer during the winter months; usually better defined and small than summer ranges.
Withdrawal Working Group	An order removing specific land areas from availability for certain uses.

Y

Yarding	The moving of logs from the stump where cut to a central concentration area or landing.
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Z

Zone of Influence	A delineated geographic area within which the present and proposed actions exert an important influence on residents and visitors.
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Appendix A

ACTIVITY SCHEDULES



APPENDIX A ACTIVITY SCHEDULES

This appendix contains activity schedules for various resources and activities. Projects will be added to these activity schedules periodically as they are identified during the continuous project-planning process. Projects may also be deferred or modified if problems are identified during project-level environmental analysis. In some cases, the project list calls for new or revised inventories or resource plans. Completion of these may result in new projects and in new priorities. It is expected that the detailed schedules will require updating annually as a result of these new or revised plans, project-level environmental analysis, and the budget process.

Listed below are the activity schedules included in this Appendix:

<u>Activity Schedule</u>	<u>Page</u>
A-1 RECREATION CONSTRUCTION AND RECONSTRUCTION	A- 2
A-2 TRAIL CONSTRUCTION AND RECONSTRUCTION	A- 4
A-3 VEGETATIVE MANAGEMENT PLANS	A- 8
A-4 CORRIDOR VIEWSHED PLANNING	A- 9
A-5 CULTURAL RESOURCE PROJECTS	A-10
A-6 FISH AND WILDLIFE HABITAT IMPROVEMENTS	A-11
A-7 WATERSHED IMPROVEMENT PROJECTS	A-12
A-8 ROAD AND BRIDGE CONSTRUCTION/RECONSTRUCTION	A-14
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A-10 RANGE ALLOTMENT MANAGEMENT PLANS	A-18
A-11 RANGE IMPROVEMENTS	A-22
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RECREATION

**TABLE A-1
Recreation Construction/Reconstruction, (Activity Code AN22)**

Project Name	Feasibility Study Fiscal Year	Preconstruction Fiscal Year	Construction Fiscal Year	Cost (\$1,000's)	Output (PAOT)	Activity
Magone Lake Complex			90	315	250	Reconstruction
Trout Farm Campground			90/91	100	80	Reconstruction
Sumpter Valley Railroad Interpretive Site			90	30	30	Construction
Yellowjacket Campground		91	92	142	105	Reconstruction
Wickiup Historic Campground	91	92	93	78	60	Reconstruction
Idlewild Campground	91	92	93	145	225	Reconstruction
Multiagency Visitor Info Center	92/93	94	95	400		Construction
Starr Campground	92	93	94	120	95	Reconstruction
North Fork Malheur Campground	92	93	94	71	50	Reconstruction
MF John Day River Campground	92	93	94	159	100	Reconstruction
Austin Bicycle/RV Campground	93	94	95	800	200	Construction
Parish Cabin Campground	93	94	95	189	150	Reconstruction
Strawberry Campground	94	95	96	195	155	Reconstruction
Canyon Meadows Campground	95	96	97	285	200	Reconstruction
Beech Creek Campground	95	96	97	71	50	Reconstruction
Big Creek Campground	96	97	98	95	70	Reconstruction
Dixie Campground	97	98	99	139	110	Reconstruction

PROJECT DESCRIPTION:

Magone Lake Recreation Complex - Reconstruction of the campground and day use facilities. Add group picnicking and group camping facilities. Develop new boat launch facility on the south end of the lake. Reconstruct trail for handicapped accessibility and add interpretive signing.

Trout Farm Campground - Reconstruct the dam and dredge out the lake to create a put and take fishery. Develop as a barrier-free site with handicapped accessible trail around the pond with fishing platforms. Investigate opportunities for interpretive signing.

Sumpter Valley Railroad Interpretive Site - One parking pullout along Highway 26 below Dixie summit will be constructed by the State Highway Department. An interpretive trail will be constructed by the Forest Service. The site will provide information on how the railroad was designed to get its cargo over Dixie Summit. One of the switchbacks will be reconstructed

Logan Valley Interpretive Site - Construct an interpretive/wildlife viewing site and supporting parking lot and trail system in Logan Valley.

Yellowjacket Campground - Reconstruct the campground and develop new water source and system. Construct boat launch and parking facilities.

Wickiup Historic Campground - Reconstruct the campground as historic site. Rehab CCC structures, i.e., fireplaces and amphitheater. Potential interpretive site

Idlewild Campground - Reconstruct the campground and develop a new water supply. Potential interpretive site.

Multiagency Visitor Information Service Center - Construct a one stop shopping center for public land and resource information in John Day. This would be a multiple agency facility with potential participants being Forest Service, Park Service, Oregon Department of Fish and Wildlife, State Parks, State Forestry, and Soil Conservation Service.

Starr Campground - Reconstruct the campground and develop new water supply and distribution system.

North Fork Malheur Campground - Reconstruct the campground and develop water supply.

Austin Bicycle/Recreational Vehicle Campground - Construct a new campground to facilitate RVers and bicyclists along the National Bike Route. Provide RV hookups and showers to travellers along Highways 26 & 7. Provide good access to Phillips and Unity Reservoirs. Possible concessionaire site. Potential interpretive site.

Middle Fork John Day River Campground - Conduct a feasibility study on the Middle Fork John Day River to determine the need for any additional recreation facilities. Reconstruct the campground.

Parish Cabin Campground - Reconstruction of Parish Cabin campground.

Strawberry Campground - Analyze the need for developed recreation facilities between the Forest boundary and Strawberry Trailhead. If needed, determine the best location and level of development. Reconstruct the campground

Canyon Meadows Campground - Review the need for overnight facilities at this location. Determine the level of development needed, and reconstruct accordingly.

Beech Creek Campground - Reconstruction of Beech Creek Campground along Highway 395. This would include activating the water system and development of barrier free parking and restroom facilities. Consider developing a partnership with the State of Oregon to maintain the facility.

Big Creek Campground - Reconstruct the campground and develop a new water system. Potential interpretive site.

Dixie Campground - Reconstruct the campground. Potential interpretive site.

TRAILS

TABLE A-2
Trail Construction/Reconstruction, Fiscal Years 1990-1995 (Activity Code AT22)

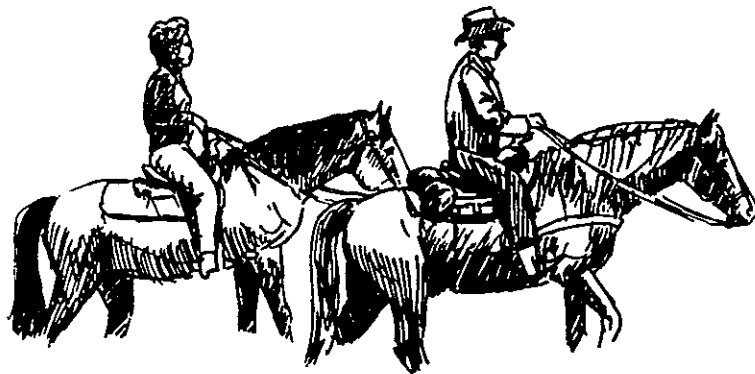
Project Name	Environmental Analysis		Preconstruction		Construction		Activity	Output (Miles)	Management ^{1/}
	FY	Cost (\$1,000's)	FY	Cost (\$1,000's)	FY	Cost (\$1,000's)			
TRAILS									
Big Creek Trail					90	11	Reconstruction	2 0	Non-Motorized
Table Mountain Trail			90	2	91	13	Reconstruction	1 4	Non-Motorized
Davis Creek Trail	90	3	91	4	92	33	Reconstruction	3.0	Motorized
Indian Creek Trail	90	2	91	4	92	30	Reconstruction	4.0	Non-Motorized
Slide Creek Trail	90	3	91	5	92	40	Construction	3 0	Non-Motorized
B V. Nordic Trail	90	3	91	4	92	27	Construction	50	Non-Motorized
Logan Valley Interpretive Trail	90	2	91	15	92	53	Construction	5	Non-Motorized
Glacier (All Terrain Vehicle)	91	15	92	10	93	260	Construction	28 0	Motorized
Pine Creek Trail	91	2	92	3	93	20	Reconstruction	3 9	Non-Motorized
B.V. Mountain Bike Trail	91	3	92	6	93	30	Construction	50	Non-Motorized
B V ATV Trail	91	10	92	8	93	175	Construction	50	Motorized
Magone Interpretive Trail	91	2	92	3	93	44	Reconstruction	1 1	Non-Motorized
Lake Cr /Big Cr Connector	91	4	92	4	93	33	Construction	3 0	Non-Motorized
Sky/Pine Connector Trail	92	2	93	3	94	20	Construction	1.5	Non-Motorized
Riley Creek Trail	92	2	93	2	94	11	Reconstruction	2 8	Non-Motorized
Nipple Butte Trail	92	2	93	3	94	18	Reconstruction	2 2	Motorized
Snowmobile Trail	92	4	93	7	94	180	Construction	110	Motorized
Davis Cr Connector	92	2	93	8	94	37	Construction	3	Motorized
P C. Mtn Bike Trail	93	3	94	5	95	30	Construction	68	Non-Motorized
Deadhorse Mountain Trail	93	6	94	8	95	85	Construction	10	Non-Motorized
Tempest Mine Trail	93	2	94	4	95	30	Reconstruction	2 7	Non-Motorized
Idlewild Interpretive Trail	93	1	94	1	95	12	Construction	6	Non-Motorized
Idlewild Nordic Trail	93	1	94	2	95	10	Construction	1	Non-Motorized
L.C Nordic Trail	93	3	94	4	95	25	Construction	25	Non-Motorized

^{1/}Non-Motorized management of trails allows for trail use by mountain bikes

TABLE A-2 Continued

Trail Construction/Reconstruction, Fiscal Years 1990-1995 (Activity Code AT22)

Project Name	Environmental Analysis		Preconstruction		Construction		Activity	Output (Miles)
	FY	Cost (\$1,000's)	FY	Cost (\$1,000's)	FY	Cost (\$1,000's)		
TRAILHEADS								
Table Mountain	89	2	90	2	91	16	Reconstruction	.1
Indian Creek	90	1	91	2	92	12	Construction	.1
Davis Creek (2 sites)	90	2	91	3	92	20	Construction	2
Starr Sno-Park (2 sites)	90	3	91	4	92	75	Reconstruction/Construction	2
McClellan Mtn	90	1	91	3	92	15	Reconstruction	.1
Pine Creek (2 sites)	91	2	92	4	93	40	Construction	.2
Glacier Mtn (2 sites)	91	3	92	4	93	30	Construction	.2
Indian Rock	92	2	93	4	94	35	Reconstruction	.1
N F Malheur River (2 sites)	92	2	93	3	94	38	Construction	2
Riley Creek	92	3	93	3	94	15	Reconstruction	1
Austin Sno-Park	92	4	93	8	94	93	Construction	1
Blackeye	93	2	94	3	95	14	Reconstruction	1
Tempest Mine	93	2	94	3	95	22	Construction	1
Deadhorse	93	2	94	4	95	28	Construction	1



TRAILS

**TABLE A-2 (Continued)
Additional Trail Projects To Be Planned And Developed In 1996-2000**

Project	Activity	Miles	Management
Clear Creek Trail	Reconstruction	5.5	Motorized
Blackeye Trail	Reconstruction	2.3	Non-Motorized
Lake Creek Nature Trail	Construction	1.0	Non-Motorized
Onion/Indian Trail Connector	Construction	3.0	Non-Motorized
Onion Creek Trail	Reconstruction	1.5	Non-Motorized
Reynolds Creek Trail	Construction	2.5	Non-Motorized
Silvies-Myrtle Creek Trail	Construction	7.0	Non-Motorized
Tiger Mine Trail	Reconstruction	2.5	Non-Motorized
Black Canyon Trail	Construction	4.0	Non-Motorized
F.L. Spring Trail	Construction	1.0	Non-Motorized
Bear Creek Trail	Construction	4.5	Non-Motorized
N.F. Malheur River Trail (Upper)	Construction	12.0	Non-Motorized
Malheur River Trail (Upper)	Construction	5.0	Non-Motorized
Rail Creek Trail	Reconstruction	8.0	Non-Motorized
Bosonberg Snowmobile Bridge	Construction	.1	Motorized
Hines R.R. ATV Trail	Construction	14.0	Motorized
Logan Valley (All Terrain Bridges)	Reconstruction	2	Motorized
Roaring (All Terrain Vehicle) Trail	Construction	2.0	Motorized
Logan Valley ATV Bridge	Construction	.1	Motorized
Old Growth Interpretive Trail	Construction	2.0	Non-Motorized
Summit Nordic Trail	Construction	3.0	Non-Motorized
Sunrise Butte Trailhead	Reconstruction	1	N/A
Cedar Grove Trailhead	Reconstruction	1	N/A
Canyon Mtn Trailhead	Reconstruction	1	N/A
B.V. ATV Trailhead (2 sites)	Construction	2	N/A
B.V. Nordic Trailhead	Construction	.1	N/A
B.V. Mtn. Bike Trailhead (2 sites)	Construction	.2	N/A
Joaquin Miller Trailhead	Reconstruction	1	N/A
Buckhorn Meadow Trailhead	Reconstruction	1	N/A
Summit Prairie Sno-park	Construction	.1	N/A

TABLE A-2 (Continued)
Trail Construction/Reconstruction Summary, Fiscal Years 1990-1999

Project	Construction Miles	Reconstruction Miles
Motorized Trails	3	10.7
Non-Motorized Trails	57.5	31.1
Snowmobile Trails (Motorized)	110.1	0
ATV Trails (Motorized)	94.1	.2
Mtn Bike Trails (Non-Motorized)	118	0
Interpretive Trails (Non-Motorized)	3.1	1.1
Nordic Trails (Non-Motorized)	79	0
TOTALS	464.8	43.1

Project	Construction	Reconstruction
Trailheads	19 Sites	11 Sites



VEGETATIVE MANAGEMENT

TABLE A-3
Vegetative Management Plans for Campgrounds (Completion Schedule and Costs)

Project Name	Cost (1,000's)	Fiscal Year									
		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Starr Campground	1.0	X									
Canyon Meadows Campground	1.5		X								
Magone Lake Complex	4.0		X								
Yellowjacket Campground	2.0		X								
Idlewild Campground	2.0		X								
Strawberry Campground	2.0		X								
Middle Fork John Day Campground	2.0			X							
Big Creek Campground	2.0			X							
Parish Cabin Campground	2.0				X						
Trout Farm Campground	2.5				X						
Beech Creek Campground	2.5				X						
Wickiup Historic Campground	2.5					X					
North Fork Malheur Campground	2.5					X					
Dixie Campground	2.0							X			
Total Cost (1,000's)	30.5	1.0	11.5	4	7	5	0	2	0	0	0

TABLE A-4
Corridor Viewshed Planning, (Activity Code AV)

Corridor Viewshed Plan	Fiscal Year	Cost (\$1,000's)
Magone	1990	10
Wilderness Loop	1991	35
Glacier Loop	91/92	25
So. 1/2 County Road 18	1992	8
Highway 395	1992	25
Highway 26	1993	25
County Road 20	1993	20
Highway 7	1994	10
Yellowjacket	1994	8
Izee	1995	12
Emigrant	1995	8
F.S. Road 16	1995	5
Skyline Trail	1996	8
Canyon Creek	1996	5
Roads End	1996	12
Strawberry	1997	5
Table	1997	8
N. Fk. Malheur River	1998	51/
Malheur River	1999	51/

1/Wild and/or scenic rivers

CULTURAL RESOURCES

**TABLE A-5
Cultural Resource Projects (Units Per Year)**

Activity	Activity Code	Fiscal Year										Decade Totals
		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
Survey (Thousand Acres)	AC111	150	130	110	100	100	90	80	70	60	50	890
Evaluation (Sites)	AC112-1	350	320	300	270	250	230	200	200	200	200	2520
Monitoring (Sites)	AC121	170	200	200	200	200	210	210	220	220	230	2060
National Register Nominations (Properties or districts)	AC122	0	1	1	2	1	2	2	2	2	3	16
Data Recovery (Sites)	AC123	0	1	1	2	2	1	2	1	1	2	13
Other Mitigation (Sites)	AC123	270	300	320	320	320	300	300	270	270	270	2940
Enhancement (Sites)	AC124	1	2	2	1	1	2	2	2	1	2	16
Management Plans (Sites or districts)	AC112	0	1	1	2	2	2	3	3	4	2	20
Overview	AC111-1	0	0	0	1	0	0	0	0	0	0	1

Cultural Resource Costs (estimated)

Survey (per 10,000 acres)	\$18,500
Evaluation (per 10 sites)	\$30,000
Monitoring (per 10 sites)	\$5,000
National Register Nominations (each)	\$3,000
Data Recovery (each)	60,000
Other Mitigation (per 10 sites)	\$15,000
Enhancements (each)	\$35,000
Management Plans (each)	\$5,000
Overview (each)	\$40,000

Definitions:

Survey - Examining areas for the presence of cultural resource sites.
Evaluation - Determining whether sites meet the criteria for the National Register of Historic Places.
Monitoring - Re-examining the condition of recorded cultural resource sites.
Data Recovery - Excavation or other means of obtaining information from a site with scientific values.
Other Mitigation - Lessening expected impacts to cultural resources through project boundary changes, architectural drawings, over snow logging, or other means.
Enhancement - Increasing the public's enjoyment of cultural resources through interpretation, restoration, or other means.
Overview - A document which synthesizes our knowledge about cultural resources on the forest and assists with their management.

TABLE A-6
Fish and Wildlife Habitat Improvements (Average Annual Units for the First Decade)

Activity Improvements	Activity Code	Outputs	Cost (Thousand \$)
Wildlife Habitat Improvements			
Structural, e.g. Water source developed, road access control structure (e.g. gate), created snag fencing, nest box, nest platform, raptor perch, escape ramp (water trough), signs	CW221	300 Structures	37
Non-Structural e.g. Seeding, planting, fertilization, prescribed burn, pruning	CW222	750	110
Maintenance	CW23	N/A	10
Anadromous Fish Habitat Improvements			
Structural, e.g. Weirs, stump and boulder placement, deflectors, cover logs, bank stabilization (rock and vegetative riprap), fencing, fish passage (natural barriers, culverts)	CA221	30 Structures	30
Non-Structural, e.g. Riparian vegetation enhancement (planting, seeding, fertilizing, pruning, prescribed burning)	CA222	20 Acres	6
Maintenance	CA23	N/A	4
Resident Fish Habitat Improvements			
Structural, e.g. Weirs, stump and boulder placement, deflectors, cover logs, bank stabilization (rock and vegetative riprap), fencing, fish passage (natural barriers, culverts)	CI221	50 Structures	45
Non-Structural, e.g. Riparian vegetation enhancement (planting, seeding, fertilizing, pruning, prescribed burning)	CI222	30 Acres	9
Maintenance	CI23	N/A	5
Threatened, Endangered and Sensitive Species Habitat Improvements			
Structural	CT221	2 Structures	2
Non-Structural	CT222	4 Acres	1
Maintenance	CT23	N/A	1

WATERSHEDS

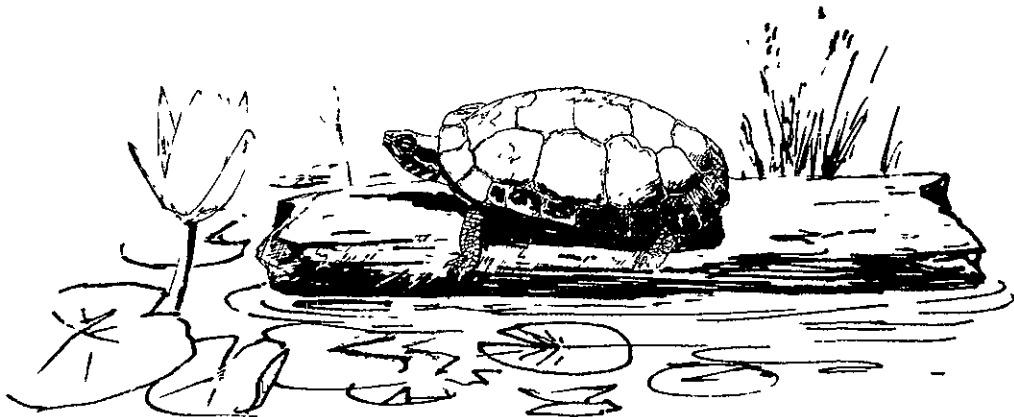
TABLE A-7
Watershed Improvement Projects, (Activity Code FW22)

Project Name	District	Fiscal Year	Cost (\$1,000's)	Output ^{1/} (Acres)
Bear Creek	Bear Valley	1990	20	32
Utley Creek	Burns	1990	5	2
Summit Meadows	Long Creek	1990	24	200
Harpe Meadows	Long Creek	1990	3	2
Camp Creek	Long Creek	1990	15	221
Cress Creek	Long Creek	1990	2	1
Upper Cottonwood Cr.	Prairie City	1990	19.5	30
			88.5	488
Laycock Slide	Burns	1991	50	20
Muddy Creek	Burns	1991	15	5
Sheep Camp	Long Creek	1991	6	10
Whiskey Flat	Long Creek	1991	2	1
Hog Creek	Long Creek	1991	1	30
Keen Salvage Gully Plug	Long Creek	1991	5	3
Hunter Meadow	Long Creek	1991	2	3
Lower Cottonwood Creek	Prairie City	1991	20	12
			101	84
Upper Bear Creek	Bear Valley	1992	20	30
Corral Creek	Burns	1992	108	12
Belshaw Meadows	Long Creek	1992	10	10
Alder Creek	Prairie City	1992	20	16
			158	58
Windfall Creek	Bear Valley	1993	5	10
Sunflower (Rockslide)	Burns	1993	32	38
McClellan Creek	Long Creek	1993	22	12
Bluebucket Creek	Prairie City	1993	25	25
			84	85
Silvies River	Bear Valley	1994	15	3
Sunflower (Mainstem)	Burns	1994	25	10
Flood Meadows	Long Creek	1994	2	5
Elk Flat	Prairie City	1994	8	10
			50	28
Round Creek	Bear Valley	1995	7	350
Spring Valley Meadow	Bear Valley	1995	2	4
Myrtle Creek	Burns	1995	8	20
Tinker Creek	Long Creek	1995	5	5
Spring Creek	Prairie City	1995	5	5
			27	384
Poison Creek	Bear Valley	1996	8	30
Whiskey Flat	Burns	1996	5	4
Road 36 Spring	Long Creek	1996	1	1
Fopian Creek	Prairie City	1996	5	5
			19	40

TABLE A-7 (Continued)
Watershed Improvement Projects, (Activity Code FW22)

Project Name	District	Fiscal Year	Cost (\$1,000's)	Output (Acres)
Pine Springs	Bear Valley	1997	2	260
Venator Creek	Burns	1997	27	14
Smith Creek	Long Creek	1997	5	7
Larch Creek	Prairie City	1997	8	5
			42	286
Antelope Creek	Bear Valley	1998	8	40
Rail Creek	Burns	1998	60	5
Dixie Cabin	Long Creek	1998	3	2
Knox Meadows	Prairie City	1998	15	40
			86	87
Blue Creek	Bear Valley	1999	7	50
Utley Uplands	Burns	1999	100	50
Thompson Creek	Long Creek	1999	6	5
Malheur River	Prairie City	1999	5	6
			118	111

¹This table totals to 1,715 acres. There will be 1,000 acres completed with appropriated funds and the remainder with Knudsen-Vandenberg funds.



ROAD AND BRIDGE

TABLE A-8
Road and Bridge Construction/Reconstruction (Activity Code LT22)
Capital Investment - General Purpose Roads

Project Name	Project Number	Fiscal Year	Cost (\$1,000's)	Output (Miles) ^{1/}	Const./Reconst.
Rattlesnake	28	1990	110	4.5	Reconst.
Logan Valley	16	1990	1,300	7.2	Reconst.
Aldrich	2150	1990	360	7.1	Reconst.
Burns - Izee	47	1990	400	15.8	Reconst.
Indian Rock	45	1990	550	13.7	Reconst.
	4500627	1990	35	2.3	Reconst.
Stalter Mine	4555	1990	20	1.0	Reconst.
Deardorff (1 bridge)	13	1990	445	8.0	Reconst.
500 Flat	31	1991	335	8.0	Reconst.
Camp Creek (L.C.)	36	1991	150	12.6	Reconst.
Deer Creek	24	1991	250	5.0	Reconst.
North Fork Malheur Trailhead Access	1420999	1991	35	1.0	Const.
Monument Rock Wilderness Access	1672	1991	25	0.9	Reconst.
	1672457	1991	75	3.5	Reconst.
Silvies - Van	17	1991	150	8.4	Reconst.
Yellowjacket Campground	1-1	1992	35	1.0	Reconst.
818 Bridge	6200818	1992	70	0.1	Reconst.
Granite Boulder Bridge	4559	1992	70	0.1	Reconst.
Keeney Meadows Projects	3945	1992	40	2.6	Reconst.
	3940-1	1992	105	5.3	Reconst.
	3940-2	1992	35	1.7	Reconst.
	3947	1992	60	3.9	Reconst.
Blue Bucket	14	1992	290	12.6	Reconst.
Vinegar Hill	2010	1992	120	6.0	Reconst.
Pine Creek Trailhead Access	5401811	1992	35	4.0	Reconst.
Canyon - Van	15	1992	400	16.5	Reconst.

TABLE A-8 (Continued)
Road and Bridge Construction/Reconstruction (Activity Code LT22)
Capital Investment - General Purpose Roads

Project Name	Project Number	Fiscal Year	Cost (\$1,000's)	Output (Miles) _v	Const./Reconst.
Wickiup Historic C.G.	1-2	1993	40	6.6	Reconst.
Idlewild Campground	1-3	1993	160	1.3	Const. - .8 Reconst. - .5
Camp Creek Hunter Cabin	37	1993	1,250	21.3	Reconst.
Starr Ridge Campground	1-5	1994	32	0.8	Reconst.
N.F. Maheur Campground	1-6	1994	25	0.5	Reconst.
Camp Creek (L.C.) (3 bridges)	36	1994	1,300	12.6	Reconst.
Middle Fork	1-12	1994	50	0.8	Const. - 0.5 Reconst. - 0.3
Parrish Cabin Campground	1-7	1995	20	0.3	Reconst.
Multiagency Visitor Information Center	1-4	1995	100	0.5	Const.
Austin Bicycle/Recreational Vehicle Campground	1-8	1995	100	1.0	Const.
500 Flat	31	1995	1,230	14.5	Reconst.
Strawberry Campground	1-9	1996	30	0.5	Reconst.
Logan Valley	16	1996	600	6.3	Reconst.
Camp Creek Hunter Cabin	37	1996	600	6.2	Reconst.
Canyon Meadows Camp- ground	1-10	1997	40	0.8	Reconst.
Beech Creek Campground	1-11	1997	40	0.5	Const.
Big Creek	1-13	1998	40	0.8	Reconst.
Dixie	1-14	1999	30	0.4	Reconst.

ROAD AND BRIDGE

TABLE A-8 (Continued)
Road and Bridge Construction/Reconstruction (Activity Code LT22)
Capital Investment - General Purpose Roads

Project Name	Project Number	Fiscal Year	Cost (\$1,000's)	Output (Miles) ^{1/}	Const./Reconst.
500 Flat	31	1997	1,160	11.3	Reconst.
Camp Creek Hunter Cabin	37	1998	1,100	10.0	Reconst.
500 Flat	31	1999	730	7.7	Reconst.
Camp Creek Hunter Cabin	37	1999	550	5.1	Reconst.

^{1/}Local Road Construction does not include timber purchaser road construction which will total 618 miles during the decade.

Road and Bridge Construction/Reconstruction Totals

Road Construction	258.3
Road Reconstruction	4.3
Bridge Construction/Reconstruction	5 Bridges



ACTIVITY SCHEDULE TABLE A-9
Facility Preconstruction (Activity Code LF21)
And Construction (Activity Code LF22), Fiscal Years 1990-1999

Project Name ^{1/}	Facility Preconstruction	Cost (\$1,000's)	Facility Construction	Cost (\$1,000's)
Lookouts				
Fall Mountain Lookout Reconstruction	Completed	N/A	1990	25
Calamity Lookout Replacement	1990	4	1991	54
Sugarloaf and Calamity Lookout Toilet Construction	1990	-	1991	10
Lookout Storage Buildings Construction	1990	2	1990	24
Frazier Lookout Construction	1997	2	1998	100
Table Rock Lookout Reconstruction	1997	3	1998	20
John Day Administrative Site				
Warehouse and Open Storage Reconstruction	1990	35	1991	276
Barn/Corral Reconstruction	1991	2	1992	20
Compound Surfacing	1992	1	1993	15
Inspection Facility Reconstruction	1993	9	1994	85
Water System Reconstruction	1995	8	1996	80
Flammable Storage Construction	1996	2	1997	40
Underground Fuel Tanks Construction	1996	8	1997	90
Prairie City Ranger Station				
Warehouse Roof Reconstruction	Completed	N/A	1990	20
Flammable Storage Construction	1993	4	1994	40
Ranger Station Office	1994	40	1995	870
Bear Valley Work Center				
Water System Reconstruction	1991	2	1992	10
Electrical System Reconstruction	1994	4	1995	20
Barracks Construction	1997	6	1998	110
Crane Prairie Work Center				
Water System Reconstruction	1991	2	1992	10
Electrical System Reconstruction	1994	4	1995	20
Other Administrative Sites				
Crow Flat Barracks	1990	5	1990	192
Sunshine Guard Station Water System Reconstruction	1990	1	1991	10
Bear Valley/Long Creek Ranger Station Office	1991	50	1992	950
John Day Heliport Headquarters Construction	1992	2	1993	70
Burns/Snow Mtn. Ranger Station	1993	N/A ^{2/}	1993	N/A ^{2/}
Keeney Camp Barracks Construction	1997	5	1998	65

^{1/}Project priorities to be determined concurrent with appropriate planning and funding schedules

^{2/}Refer to the Ochoco Plan, A-4/Costs Accounted for thru Ochoco NF

RANGE ALLOTMENTS

TABLE A-10
Range Allotment Management Plans (Prioritized by Allotment Condition)

Allotment and Fiscal Year Scheduled for Update	District	Allotment Condition	Year of Last Analysis
1990 1. Hughet Va. 2. Rainbow 3. Sawtooth 4. Blue Creek 5. Ott 6. Antelope 7. Bluebucket	Burns Burns Burns Burns Prairie City Prairie City Prairie City	QE PCB PCB PCA PCB PCB PCA	1983 1982 1985 1978 1985 1965 1982
1991 8. Van 9. Izee 10. Myrtle 11. Murderers Creek 12. Frenchy 13. Rosebud 14. Poison 15. North Fork 16. Flag Prairie	Burns Burns Burns Bear Valley Bear Valley Bear Valley Bear Valley Prairie City Prairie City	PCA PCA PCA PBP PBP PBP PBP PCA PCB	1981 1979 1980 1982 1950 1978 1950 1972 1978
1992 17. West Malheur 18. Devine 19. Calamity 20. Pine Creek 21. Aldrich 22. Fields Peak 23. McClellan 24. McCullough 25. Mt.Vernon/John Day 26. Justice 27. Spring Creek	Burns Burns Burns Burns Bear Valley Bear Valley Bear Valley Long Creek Long Creek Long Creek Prairie City	PBA PBA PBA PCA PBP PBP PBM PBM PCA PBI PCB	1957 1954 1961 1978 1979 1979 1950 1969 1982 1979 1980
1993 28. Antelope 29. Windy Point 30. Ridge 31. Dixie Creek 32. Hamilton 33. Camp Creek 34. Deardorff 35. Summit Prairie	Bear Valley Bear Valley Long Creek Long Creek Long Creek Long Creek Prairie City Prairie City	PBI QE PBM PBI PBI PBF PBA PBA	1950 1950 1982 1982 1976 1977 1962 1965
1994 36. Trout Creek 37. Snowshoe 38. Flagtail 39. Beech Creek 40. Herberger 41. Keeney Meadows 42. Dollar Basin 43. Star Glade	Burns Bear Valley Bear Valley Long Creek Long Creek Long Creek Prairie City Prairie City	PBM PBI PBP PCB PBM PBM PBA PBM	1950 1980 1980 1977 1950 1983 1961 1962

TABLE A-10 (Continued)
Range Allotment Management Plans (Prioritized by Allotment Condition)

Allotment and Fiscal Year Scheduled for Update	District	Allotment Condition	Year of Last Analysis
1995			
44 Jack Creek	Bear Valley	PB	1981
45 Scotty Creek	Bear Valley	PB	1987
46 Ninety-Six	Bear Valley	PB	1981
47 Donaldson	Long Creek	PBI	1979
48. Fox	Long Creek	PBI	1983
49 Rail Creek	Prairie City	PBM	1963
50 Hot Springs	Prairie City	PBM	1960
51 Allen	Prairie City	PBM	1970
1996			
52 Muddy	Burns	PBI	1978
53 West Myrtle	Burns	PBI	1982
54. Crooked Creek	Burns	PBI	1982
55 Alkali	Burns	PBI	1980
56. Lewis Creek	Bear Valley	PBI	1978
57 Smokey	Bear Valley	PBI	1978
58 Deer Creek	Long Creek	PBI	1979
59 Bear Creek	Long Creek	PBI	1983
60 Balance Creek	Long Creek	PBM	1970
61. Sullens	Prairie City	PBA	1978
1997			
62 Wolf Mtn	Burns	PBI	1961
63. Central Malheur	Burns	PBI	1982
64 Hanscombe	Bear Valley	PB	1979
65 Deadhorse	Bear Valley	PB	1983
66 Lower Middle Fork	Long Creek	PBF	1979
67. Austin	Long Creek	PBM	1950
68 Reynolds Creek	Prairie City	PBM	1961
1998			
69. Story-Fry	Burns	QE	1964
70. Lonesome	Burns	PCB	1963
71 Scatfield	Burns	QE	1959
72 House Creek	Burns	QE	1961
73 Badley	Burns	QE	1950
74. Delles	Burns	QE	1988
75 Bridge Creek	Burns	QE	1980
76 Joaquin	Bear Valley	QE	1950
77 Williams Pasture	Bear Valley	PB	1950
78 Fawn Spring	Bear Valley	PB	1978
79 Upper Middle Fork	Long Creek	PBF	1978
80 War Canyon	Long Creek	PBM	1950
81 King	Long Creek	QE	1976
82 McCoy Creek	Prairie City	PBM	1965
83. Arrowhead	Prairie City	PBM	1968
84 Indian Creek	Prairie City	PBM	1978

RANGE ALLOTMENTS

TABLE A-10 (Continued)
Range Allotment Management Plans (Prioritized by Allotment Condition)

Allotment and Fiscal Year Scheduled for Update	District	Allotment Condition	Year of Last Analysis
1999			
85. Emigrant	Burns	QE	1950
86. Snow Mtn.	Burns	QE	1950
87. Big Sagehen	Burns	QE	1980
88. Camp Creek	Bear Valley	QE	1983
89. Koehler	Bear Valley	QE	1983
90. Slide Creek	Long Creek	QE	1977
91. York (on & off)	Long Creek	PBM	1978
92. Ferg	Long Creek	QE	1976
93. Crane Prairie	Prairie City	PBM	1967
94. Logan Valley	Prairie City	PBM	1967
2000			
95. Slivies	Burns	QI	1980
96. County Road	Bear Valley	QE	1985
97. Seneca	Bear Valley	PBI	1981
98. Round Top	Long Creek	QE	1978
99. Long Creek	Long Creek	QE	1983
100. Lake Creek	Prairie City	PA	1966
2001			
101. Sugarloaf	Bear Valley	PBI	1985
102. Pearson	Bear Valley	QE	1950
103. Highway	Long Creek	QE	1980
104. Blue Mtn	Long Creek	QI	1978

ALLOTMENT CLASSIFICATION

QI (Intensive Management) - An Allotment Management Plan Approved by the Forest Supervisor has been implemented on the allotment with specific resource use and protection goals being met. Resource damage is not occurring. Techniques and systems are used to optimize forage production and employed to the extent possible considering multiple use constraints. National Forest Service grazing may be coordinated with grazing on associated public and private lands.

QE (Extensive Management) - An Allotment Management Plan approved by the Forest Supervisor has been implemented on the allotment with specific resource use and protection goals being met. Resource damage is not occurring. It is not economically efficient or physically feasible to optimize forage use at the present time. Extensive management can be either an intermediate step, prior to implementation of intensive management, or it may be the ultimate goal for the allotment.

PA (Vacant) - Allotments where forage is available, but which have no obligation as the result of administrative actions such as confirmation of a waiver to the United States, cancellation of obligations, etc.

PB (Underdeveloped) - Allotments which may or may not have an approved Allotment Management Plan, but have the potential to be managed under a quality management strategy. Forage utilization is less than the maximum allowable due to one or more of the following:

- 7 PBP - Lack of Permittee interest/participation.
- PBI - Lack of total AMP implementation, i.e., range improvements.
- PBT - Poor coordination with timber management activities
- PBA - Lack of reliable range analysis data.
- 17 PBM - Lack of approved Allotment Management Plan (AMP)
- PBF - Lack of funding to implement quality management.

PC (Basic Resource Damage) - These allotments may or may not have an approved AMP; however, basic resource damage is occurring. Allotment will be classified as PC when analysis or evaluation indicate that one or more of the following conditions exist and livestock use on the allotment is or has been a major factor contributing to this condition

- (a) Maximum summer water temperatures are elevated above State Standards or other approved criteria on SMU Class I or II streams (FSM 25256) and this is largely due to the loss of shade-producing vegetation in the allotment.
- (b) Less than 80 percent of the total miles of SMU Class I and II streams are in a stable condition (60 percent for Class III and 50 percent for Class IV streams) where this is largely due to the loss of stabilizing streambank vegetation.
- (c) Gully development of sufficient size to lower the seasonally saturated zone and change the plant community type is occurring.
- (d) Soil condition rating on 25 percent or more of Key Areas is rated poor or very poor

Basic resource damage allotment can be classified as either.

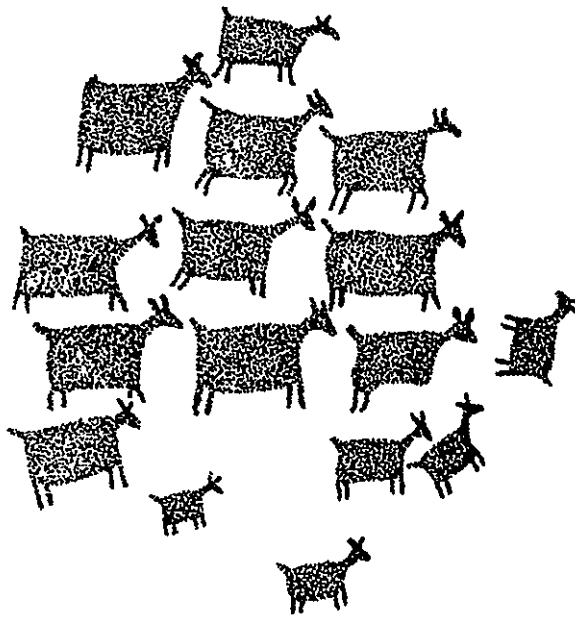
- 7 PCA - Allotment has an AMP, but basic resource damage is occurring
- 8 PCB - Allotment does not have an AMP, and basic resource damage is occurring

PD (Other Resource Damage) - These allotments may or may not have approved AMPs, but adverse impacts on resources other than the basic soil and water resources are occurring. These impacts are the result of resource management objectives not being met. An allotment will be classified as PD when 10 percent or more of its area meets these criteria. Damage to vegetation is based on use in excess of that planned.

RANGE IMPROVEMENTS

TABLE A-11
Range Improvements (Units Per Year)

	Activity	Fiscal Year									
Activity	Code	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Nonstructural Improvements Seeding (Thousand Acres) Revegetation & Burning (Acres)	DN222	3.5	3.5	4	4	5	5	6	6	6	6
	DN222	50	50	150	200	100	100	200	100	100	100
Structural Improvements Fences (Structures/Miles) Water Developments (Structures)	DN221	160	160	180	180	180	180	200	200	200	200
	DN221	50	60	60	70	70	80	90	100	100	100



TEN-YEAR TIMBER
SALE SCHEDULE

The following table (Table A-12) displays the 10-year timber sale schedule as proposed by this Forest Plan. The 10-year timber sale schedule is based on current conditions and information available at this time. The timber sale schedule may be changed during the life of the Forest Plan if conditions change or new information becomes available. Such changes shall be considered an amendment of the Forest Plan but shall not be considered a significant amendment, or require the preparation of an Environmental Impact Statement, unless the changes significantly alter the long-term levels of multiple use goods and services projected under this Forest Plan.

The volumes shown include both chargeable and nonchargeable volumes from suitable lands. The nonchargeable component of the volumes are estimates at this time and should not be viewed as fixed outputs that cannot be changed during the Plan period to reflect unforeseeable events or conditions. Fluctuations in the pulpwood market is one example of events that can have significant impacts on the volume of nonchargeable material sold. Another is the demand for Forest residue material for use as a fuel source in cogeneration plants. Most of the nonchargeable volume estimate appears under the heading of small sales in the 10-year sale program. Depending on pulpwood market conditions and/or needs of the cogeneration plants, some of this volume may actually come from the other timber sales that are scheduled.

TABLE A-12
Ten-Year Timber Sale Schedule, Fiscal Year 1990

Abbreviations Used:

Timber Working Groups

PP = Ponderosa Pine
MC = Mixed Conifer
LP = Lodgepole Pine

Roads

C = Road Construction
R = Road Reconstruction

Watersheds

FXCT = Fox/Cottonwood
MFJD = Middle Fork
John Day
UPJD = Upper John Day
SFJD = South Fork
John Day
SILV = Silvies River
MLHR = Malheur River
NFMH = North Fork Malheur
River

Harvest Methods

CCC = Clearcut, even-aged regeneration method.
HSH = Shelterwood seed cut, even-aged
regeneration method.
HSL = Selection cut, uneven-aged
regeneration method
HOR = Overstory removal cut (A final removal of
mature overstory to release established
immature crop trees that were not a
result of a prescribed regeneration cut).
HPR = Partial removal cut. (A partial overstory
removal, usually occurring in even-aged
stands exhibiting a layered condition).

Other

GBS = Ground Based System (Tractor)

TIMBER ACTIVITY SCHEDULE
FY 1990

TEN-YEAR TIMBER SALE SCHEDULE, FISCAL YEAR: 1990

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
District: Bear Valley Watershed: MLHR 0106 Tony II	T16S,R33E,S22,23,26,27,34-36 T17S,R33E,S1-3,10,11	1	Acres: 99.0 MMBF: 0.9	Const: 1.0 Reconst: 0.4	MC TYPE: HOR-99
Watershed: SFJD 0102 Bunton II	T16S,R28E,S25,36 T17S,R28E,S1 T16S,R29E,S29-31	1	Acres: 320.0 MMBF: 2.1	Const: 0.7 Reconst: 2.1	MC TYPE HOR-320
0104 Thorn	T14S,R28E,S21,22,26-28,34-35 T15S,R28E,S2,3,10	1 3B	Acres: 888.0 MMBF: 6.8 Acres: 13.0 MMBF: 0.1	Const: 2.2 Reconst: 0.0 Const: 0.0 Reconst: 0.0	PP TYPE HOR-262, HSH-16 MC TYPE HOR-152, HSH-343, HSL-115 MC TYPE HSL-13
0105 Corral II	T16S,R28E,S9,10,15,16,21, 22,27-29,32,33	1 3B	Acres: 904.0 MMBF: 5.9 Acres: 22.0 MMBF: 0.1	Const: 4.6 Reconst: 2.9 Const: 0.0 Reconst: 0.0	PP TYPE HOR-581; HSH-130 MC TYPE HOR-179; HSL-14 MC TYPE HSL-22
0107 Shake	T15S,R27E,S26,27,34,35 T15S,R28E,S15,16,20-22,28-33 T16S,R27E,S1-3,10,11 T16S,R28E,S4-9	3B 4A	Acres: 24.0 MMBF: 0.2 Acres: 1,686.0 MMBF: 5.0	Const: 0.0 Reconst: 1.0 Const: 4.2 Reconst: 15.1	PP TYPE HSH-24 PP TYPE HOR-1485, HSL20-43, HSL24-23 MC TYPE HOR-135
0110 Jym II	T15S,R28E,S22,23,26-28,33-35 T16S,R28E,S1-4,9-11,14,15	1 3B 4A	Acres: 1,111.0 MMBF: 5.2 Acres: 21.0 MMBF: 0.1 Acres: 132.0 MMBF: 0.6	Const: 3.4 Reconst: 7.2 Const: 0.0 Reconst: 0.0 Const: 0.0 Reconst: 0.0	PP TYPE HOR-1035, HSL20-49, HSL24-27 PP TYPE HSL24-21 PP TYPE HOR-132
Watershed: SILV 0106 Tony II	T16S,R33E,S22,23,26,27,34-36 T17S,R33E,S1-3,10,11	1	Acres: 421.0 MMBF: 2.3	Const: 0.0 Reconst: 0.0	PP TYPE HTH-28, HOR-54 MC TYPE HOR-202; HCC-77; HSL-43 LP TYPE HSL-17
0108 Potholes II	T17S,R29E,S1-3,9-14	1 3A	Acres: 390.0 MMBF: 2.2 Acres: 10.0 MMBF: 0.1	Const: 0.0 Reconst: 0.7 Const: 0.0 Reconst: 0.0	PP TYPE HOR-149 MC TYPE HOR-216; HCC-25 MC TYPE HSL-10
0109 Dark Bear II	T15S,R33E,S25,26,35,36 T15S,R34E,S31 T16S,R33E,S1,12,13,24 T16S,R33 1/2E,S5-8,18	1 14	Acres: 59.0 MMBF: 0.4 Acres: 213.0 MMBF: 0.90	Const: 0.0 Reconst: 1.2 Const: 0.0 Reconst: 2.1	MC TYPE HOR-29; HCC-30 MC TYPE HOR-173, HCC-40
0111 Camp II	T17S,R30E,S23,24-26,35,36 T17S,R31E,S20,21,28-33 T18S,R30E,S1	1 3A	Acres: 1,860.0 MMBF: 7.9 Acres: 20.0 MMBF: 0.1	Const: 2.5 Reconst: 1.5 Const: 0.0 Reconst: 0.0	PP TYPE HOR-425, HSH-17, HSL20-665; HSL24-358 MC TYPE HOR-238, HCC-55; HSL-102 PP TYPE HSL24-20
0112 Cave II	T17S,R32E,S3-10,15-18,21,22 T16S,R32E,S31-33	1	Acres: 745.0 MMBF: 3.7	Const: 0.2 Reconst: 2.2	PP TYPE HOR-592 MC TYPE HOR-144; HCC-9
0113 Sweet II	T15S,R30E,S4,5,8,9,17-20	1 3A	Acres: 411.0 MMBF: 3.3 Acres: 10.0 MMBF: 0.0	Const: 0.8 Reconst: 0.5 Const: 0.0 Reconst: 0.0	PP TYPE HSH-154 MC TYPE HOR-117; HCC-106; HSL-34 MC TYPE HSL-10

TIMBER ACTIVITY SCHEDULE
FY 1990

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
0114 Bull	T16S,R32E,S24-26,33-36 T16S,R33E,S19-21,28-33 T17S,R32E,S1-3,10-12,14,15 T17S,R33E,S4-6	1 14 13 3A	Acres. 2,032 0 MMBF. 9 4 Acres 125 0 MMBF. 0.8 Acres. 30 0 MMBF 0 1 Acres 15 0 MMBF 0 0	Const 2 9 Reconst 7 6 Const 0 0 Reconst 0 0 Const 0 0 Reconst 0 0 Const 0 0 Reconst 1 5	PP TYPE HOR-1251 MC TYPE HOR-677, HCC-74 LP TYPE HOR-30 PP TYPE HOR-125 PP TYPE. HOR-20, HSH-10 MC TYPE HSL-15
0115 Small Sales		1	Acres 0 0 MMBF. 0 4	Const 0 0 Reconst 0 0	
Watershed UPJD 0101 Hancock II	T14S,R30E,S25-27,34-36 T15S,R30E,S1-3,10-12 T15S,R31E,S5-7	1 3B	Acres 734 0 MMBF 4 2 Acres 14 0 MMBF 0 0	Const. 3 4 Reconst 3 1 Const 0 0 Reconst 0 0	PP TYPE HOR-120; HCC-20, HSH-34, HSL20-27, HSL24-14 MC TYPE HOR-16, HCC-325, HSH-129, HSL-49 MC TYPE HSL-14
0103 Wave II	T15S,R31E,S2-11,13-17, 21-24,26,27	1 14 3B 4A	Acres 672 0 MMBF 2 1 Acres 70 0 MMBF 0 4 Acres 26 0 MMBF 0 1 Acres 240 0 MMBF 0 4	Const 0 0 Reconst 0 1 Const 0 0 Reconst 0 0 Const 0 0 Reconst 0 0 Const 0 8 Reconst 0 0	PP TYPE HOR-211 MC TYPE HTH-17, HOR-190, HCC-220, HSL-34 MC TYPE HCC-70 MC TYPE HSL-26 MC TYPE HCC-240
District Totals	Bear Valley , 1990		Acres 13,317.0 MMBF: 65.7	Const. 26.7 Reconst 49.2	
District: Burns Watershed MLHR 0202 Frost	T17,R33 1/2,S21,22,27,28,33-35 T18,R33 1/2,S1-4	1	Acres 336 0 MMBF 4 3	Const 1 0 Reconst 7 8	PP TYPE HTH-297 MC TYPE HCC-27, HSH-12
0203 Elk	T17,R33,S1,2,11-14,23-24 T17,R33 1/2,S5-9,17-20,29,30	1	Acres 1,067 0 MMBF 14 6	Const 4 3 Reconst 13 8	PP TYPE HOR-104 MC TYPE HOR-619, HCC-270, HSH-74,
0206 Widow	T20,R33,S1-3,11-14, 9-16,22-24	4A	Acres 243 0 MMBF 2 0	Const 2 7 Reconst 2 3	PP TYPE HOR-243
Watershed SILV 0201 Mosier	T20,R28,S3-11,14-18 T20,R28,S14-22,27-30	1 4A	Acres. 732 0 MMBF 5 3 Acres 141.0 MMBF 0 5	Const 2 0 Reconst 0 0 Const 0 0 Reconst 0 0	PP TYPE HOR-492, HSH-40, HSL24-200 PP TYPE HOR-24, HSL24-117
0204 DIA	T19,R27,S1-3,10-13,24,25 T19,R28,S7,18,19,30	1	Acres 2,108 0 MMBF 9 0	Const 0 3 Reconst 13 8	PP TYPE HOR-475 MC TYPE HOR-1633
0205 Perry-Rattler	T20,R33,S31-35 T20,R32,S35,36 T21,R32,S1-3,10-12,14 T21,R32,S13,14,23,24 T21,R32 1/2,S2-11,14-23	1 4A	Acres. 468 0 MMBF 4 3 Acres 504 0 MMBF. 3 6	Const 0 1 Reconst 4 5 Const 0 6 Reconst 4 6	MC TYPE HOR-384; HCC-17, HSH-57, HSL-10 PP TYPE HOR-212 MC TYPE HOR-292
0207 West Myrtle	T19,R30,S4-9 T19,R29,S1,12,13 T18,R30,S31,32 T19,R30,S8-10,16,17	1 4A	Acres 228.0 MMBF 2 0 Acres 194 0 MMBF. 0 8	Const 0 5 Reconst 0 0 Const 0 0 Reconst 0 0	MC TYPE HOR-96, HCC-42, HSL-90 MC TYPE HOR-194

TIMBER ACTIVITY SCHEDULE
FY 1990

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol. in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
0208 Silvies/Sagehen	T19,R30,S10-15,22-25 T19,R31,S7,8,17-20,30 T19,R30,S15,22-27,34,36 T19,R31,S17,20,29,30 T20,R30,S3,4	1 4A	Acres: 685.0 MMBF: 3.5 Acres: 533.0 MMBF: 3.1	Const: 0.0 Reconst: 0.0 Const: 1.0 Reconst: 6.6	PP TYPE: HTH-151; HOR-192; HSL24-230 MC TYPE: HCC-37; HSH-75 PP TYPE: HTH-32; HOR-441 MC TYPE: HSH-60
Watershed: Varies 0209 Misc Sales		1	Acres: 367.0 MMBF: 1.5	Const: 0.0 Reconst: 0.0	PP TYPE: HSL24-227 MC TYPE: HSL-140
0210 Misc Products			Acres: 0.0 MMBF: 3.2	Const: 0.0 Reconst: 0.0	
District Totals	Burns , 1990		Acres: 7,606.0 MMBF: 57.7	Const: 12.5 Reconst: 53.4	
District: Long Creek Watershed FXCT 0304 Boulder Flat	T11S,R28E,S13-15,22-27,34 T11S,R28E,S13-15,22-27,34	4A 1	Acres: 816.0 MMBF: 5.5 Acres: 121.0 MMBF: 1.0	Const: 7.0 Reconst: 2.0 Const: 1.0 Reconst: 1.0	PP TYPE: HTH-212; HOR-200; HSH-53 MC TYPE: HCC-161; HSH-190 PP TYPE: HOR-121
Watershed: MFJD 0303 Moon	T11S,R33E,S9,10,14-46, 21,23,27	1 3A	Acres: 772.0 MMBF: 7.7 Acres: 20.0 MMBF: 0.0	Const: 11.0 Reconst: 21.0 Const: 0.0 Reconst: 0.0	PP TYPE: HSH-130 MC TYPE: HCC-162; HSH-480 MC TYPE: HSH-20
0305 Rag	T11S,R33E,S1,12,13 T11S,R34E,S6-8,17-20	4A 14 3A	Acres: 566.0 MMBF: 4.2 Acres: 97.0 MMBF: 0.8 Acres: 20.0 MMBF: 0.0	Const: 5.0 Reconst: 12.5 Const: 0.0 Reconst: 0.0 Const: 0.0 Reconst: 0.0	PP TYPE: HSH-11 MC TYPE: HCC-222, HSH-333 PP TYPE: HOR-44 MC TYPE: HCC-25, HSH-28 MC TYPE: HSH-20
0306 Lance	T10S,R33E,S27-35 T11S,R33E,S4-6,8,9	3A 14 4A	Acres: 20.0 MMBF: 0.0 Acres: 146.0 MMBF: 1.2 Acres: 906.0 MMBF: 5.0	Const: 0.0 Reconst: 0.0 Const: 0.0 Reconst: 0.0 Const: 3.5 Reconst: 12.0	MC TYPE: HSH-20 PP TYPE: HSH-146 PP TYPE: HTH-198; HOR-526 MC TYPE: HCC-62; HSH-120
0307 Small Sales			Acres: 0.0 MMBF: 9.5	Const: 0.0 Reconst: 0.0	
0308 Misc. Sales			Acres: 0.0 MMBF: 7.8	Const: 0.0 Reconst: 0.0	
Watershed UPJD 0301 Hog	T11S,R30E,S23-26,35,36 T11S,R31E,S19,20,29-32 T12S,R31E,S5,6 T12S,R30E,S1,2,12	1 14 3A	Acres: 1,212.0 MMBF: 8.6 Acres: 165.0 MMBF: 0.5 Acres: 30.0 MMBF: 0.0	Const: 3.4 Reconst: 10.0 Const: 1.0 Reconst: 3.5 Const: 0.0 Reconst: 0.0	PP TYPE: HTH-122; HOR-40 MC TYPE: HCC-241, HSH-809 PP TYPE: HTH-86; HOR-26 MC TYPE: HSH-53 MC TYPE: HSH-30
0302 Dry	T11S,R30E,S4-9 T12S,R29E,S13,23,24 T12S,R29E,S13,23,24	1 3A	Acres: 932.0 MMBF: 9.2 Acres: 30.0 MMBF: 0.0	Const: 7.7 Reconst: 4.1 Const: 0.0 Reconst: 0.0	MC TYPE: HCC-80; HSH-852 MC TYPE: HSH-30

TIMBER ACTIVITY SCHEDULE
FY 1990

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol In MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
0303 Moon	T11S,R33E,S22,23,27	1	Acres: 66.0 MMBF: 0.3	Const: 0.0 Reconst: 0.0	MC TYPE HCC-66
0304 Boulder Flat	T11S,R28E,S13-15,22-27,34	3A	Acres: 20.0 MMBF: 0.0	Const: 0.0 Reconst: 0.0	MC TYPE HSH-20
0309 Lay	T12S,R30E,S2,3,10-15,21,22 T12S,R30E,S21-23,26-28 T12S,R30E,S2,3,10-15,21,22	1 4A 3A	Acres: 383.0 MMBF: 2.2 Acres: 276.0 MMBF: 1.6 Acres: 50.0 MMBF: 0.0	Const: 5.0 Reconst: 1.0 Const: 2.0 Reconst: 3.0 Const: 0.0 Reconst: 0.0	PP TYPE HTH-133, HSH-10 MC TYPE HCC-81, HSH-159 PP TYPE HTH-17, HOR-43, HSH-85 MC TYPE HCC-20, HSH-111 MC TYPE HSL-50
District Totals	Long Creek , 1990		Acres: 6,648.0 MMBF: 65.2	Const: 46.6 Reconst: 70.1	
District: Prairie City Watershed MFJD 0401 Steamboat	T12S,R35E,S11-4 T12S,R35 1/2E,S9,15,16,21,22,27,28,33-35 T13S,R35 1/2E,S2,3,10-12,14,15,22-26,35,36	1 3B	Acres: 1,314.0 MMBF: 10.2 Acres: 3.0 MMBF: 0.1	Const: 3.7 Reconst: 21.8 Const: 0.0 Reconst: 0.0	PP TYPE HOR-117 MC TYPE HOR-248, HCC-910, HSH-39, MC TYPE HCC-3
0407 Grouse	T12S,R35E,S2,3,10-14,20-28,33-36 T13S,R35E,S1 T13S,R35 1/2E,S4 T12S,R35 1/2E,S21,28,33	1	Acres: 1,112.0 MMBF: 14.7	Const: 5.5 Reconst: 2.5	PP TYPE HOR-301, HSH-20 MC TYPE HCC-791
Watershed MLHR 0403 Hut	T17S,R35E,S31-33 T18S,R35E,S4-7,17,18	1 4A	Acres: 257.0 MMBF: 0.9 Acres: 751.0 MMBF: 4.1	Const: 0.0 Reconst: 0.0 Const: 0.0 Reconst: 0.3	PP TYPE HTH-126, HOR-117, HSL24-14 PP TYPE HTH-618, HOR-50, HSH-19, HSL24-64
0405 Ledge	T17S,R34E,S5-10,15-18,20-23,27,28,34,35 T17S,R33 1/2E,S11-14,23-24	1	Acres: 1,241.0 MMBF: 10.0	Const: 0.9 Reconst: 2.8	PP TYPE HOR-222, HSL24-100 MC TYPE HOR-700; HCC-219
0408 Stand92	T18S,R35E,S8	4A	Acres: 159.0 MMBF: 0.6	Const: 0.0 Reconst: 0.0	PP TYPE HTH-159
0409 Alder Ed	T17S,R35E,S15 T17S,R35E,S15	1 4A	Acres: 21.0 MMBF: 1.7 Acres: 90.0 MMBF: 0.3	Const: 1.0 Reconst: 0.5 Const: 0.0 Reconst: 0.0	PP TYPE HOR-21, PP TYPE HOR-90
0410 Small Sales	T14S,R34-36E T15S,R34-36E T16S,R34-36E T17S,R34-36E	1 14 3A	Acres: 95.0 MMBF: 0.5 Acres: 90.0 MMBF: 0.6 Acres: 60.0 MMBF: 0.3	Const: 0.0 Reconst: 0.0 Const: 0.0 Reconst: 0.0 Const: 0.0 Reconst: 0.0	PP TYPE HOR-40 MC TYPE HOR-15, HCC-40 PP TYPE HSL24-50 MC TYPE HSL-40 PP TYPE HSH-10, HSL24-20 MC TYPE HSH-5, HSL-25
Watershed NFMR 0402 Short	T15S,R35 1/2E,S9,10,15,16,21,22,27	1	Acres: 432.0 MMBF: 5.5	Const: 2.8 Reconst: 1.5	MC TYPE HOR-229, HCC-144, HSH-59,

**TIMBER ACTIVITY SCHEDULE
FY 1991**

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol. in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
0404 Onion	T14S,R35 1/2E,S25-27,34-36	1 14	Acres 360 0 MMBF 4 4 Acres 31 0 MMBF 0 4	Const. 0.2 Reconst 3 2 Const. 0 0 Reconst 0 0	PP TYPE: HOR-89, HSL24-16 MC TYPE: HCC-186; HSH-69 PP TYPE: HSH-6, HSL24-15 MC TYPE: HSH-10
0410 Small Sales	T14S,R34-36E T15S,R34-36E T16S,R34-36E T17S,R34-36E	1 14 3A	Acres 95 0 MMBF 0 5 Acres 90 0 MMBF 0.6 Acres 60 0 MMBF 0 3	Const 0 0 Reconst. 0 0 Const. 0 0 Reconst 0 0 Const 0.0 Reconst 0 0	PP TYPE HOR-15 MC TYPE HOR-15, HCC-65 PP TYPE: HSL24-50 MC TYPE: HSL-40 PP TYPE HSH-10, HSL24-20 MC TYPE: HSH-5; HSL-25
Watershed UPJD 0406 Glacier	T14S,R35E,S10-15	1 14	Acres 850 0 MMBF 6 4 Acres 100 0 MMBF 0 6	Const. 8.0 Reconst 1 5 Const 0 0 Reconst. 1.0	MC TYPE HOR-150, HCC-700 MC TYPE: HCC-100
District Totals	Prairie City , 1990		Acres: 7,211.0 MMBF: 62.7	Const: 22.1 Reconst: 35 1	
1990 Yearly Totals:			Acres: 34,782.0 MMBF: 251.3	Const: 107.9 Recon: 207.8	

TEN-YEAR TIMBER SALE SCHEDULE, FISCAL YEAR: 1991

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
District: Bear Valley Watershed SFJD 1101 Beaver II	T14S,R29E,S31,32 T15S,R29E,S4-9,16-20	1 3B	Acres 838 0 MMBF 5 1 Acres 16 0 MMBF 0 1	Const 4 2 Reconst. 1.5 Const: 0 0 Reconst. 0.0	PP TYPE: HOR-575; HSL20-59; HSL24-30 MC TYPE HOR-151, HCC-23 PP TYPE HSL24-16
1106 Lemon II	T15S,R29E,S13-16,20-24,26-29 T15S,R30E,S18,19	1 3B	Acres 540.0 MMBF 4 2 Acres 20 0 MMBF 0 1	Const 4 0 Reconst 3 0 Const 0 0 Reconst. 0 0	PP TYPE HOR-50, HSL20-50 MC TYPE HOR-300, HCC-140 MC TYPE HSL-20
1107 Vest	T16S,R27E,S10-15,22-25 T16S,R28E,S7-9,16-20,29,30	1 3B 4A	Acres 585 0 MMBF: 3 5 Acres 15.0 MMBF: 0 0 Acres 175 0 MMBF: 1 1	Const 3 0 Reconst 21 0 Const 0 0 Reconst 0 5 Const 0 0 Reconst 0 5	PP TYPE: HTH-25; HOR-100; HSL20-185, HSL24-50 MC TYPE HTH-25, HOR-100, HCC-25, HSH-25, HSL-50 MC TYPE: HSL-15 PP TYPE: HOR-50, HSL20-50, HSL24-25 MC TYPE HOR-50
1108 Sand II	T17S,R29E,S22,23,26-28,33-35 T18S,R29E,S1	1 3B	Acres 320.0 MMBF: 2 0 Acres 5.0 MMBF: 0 0	Const 1 0 Reconst 1 5 Const 0 0 Reconst. 0.5	PP TYPE: HTH-10; HOR-50, HSL20-80, HSL24-20 MC TYPE: HTH-10, HOR-60; HCC-40; HSL-50 MC TYPE: HSL-5
1110 Alkali II	T15S,R29E,S9-17,23 T15S,R30E,S7,18	1 13	Acres 815.0 MMBF: 4 8 Acres 40.0 MMBF: 0 2	Const 2 0 Reconst 5 0 Const 0 0 Reconst 0 0	PP TYPE: HTH-20; HOR-150, HSH-80, HSL20-100, HSL24-20 MC TYPE: HTH-20; HOR-250; HCC-175 MC TYPE: HSL-40

TIMBER ACTIVITY SCHEDULE
FY 1991

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
Watershed SILV 1103 Elkhorn II	T17S,R29E,S23-26,35,36 T17S,R30E,S19,29-32 T18S,R30E,S5,6 T18S,R29E,S1	1	Acres 900 0 MMBF 6 6	Const. 0 2 Reconst. 12 8	PP TYPE HTH-30, HOR-400, HSL20-50, HSL24-50 MC TYPE HOR-200, HCC-70, HSL-100 PP TYPE HSL24-25 MC TYPE HSL-25
		3A	Acres. 50 0 MMBF 0 1	Const 0 0 Reconst 1 5	
1105 Bend	T15S,R33E,S26,27,34,35 T16S,R33E,S1-3,9-12,14-16,23	1	Acres 720.0 MMBF 5 4	Const 2 0 Reconst 3 0	PP TYPE HOR-240, HSL20-120, HSL24-20 MC TYPE HOR-170, HCC-170 PP TYPE HSL20-30 MC TYPE HSL-70
		14	Acres. 100 0 MMBF 0 6	Const 0 0 Reconst 0 0	
		3A	Acres 20 0 MMBF 0 1	Const 0 0 Reconst 1 0	
1109 Glade II	T16S,R32E,S11-16,22-24 T16S,R33E,S16-21	1	Acres. 525 0 MMBF 3 0	Const 1 0 Reconst 2 0	PP TYPE HTH-25, HOR-100, HSL20-175, HSL24-75 MC TYPE HTH-25, HOR-60, HCC-40 LP TYPE HCC-25 PP TYPE HSL20-50, HSL24-20 MC TYPE HSL-30
		14	Acres 100 0 MMBF 0 5	Const 0 0 Reconst 0 0	
		3A	Acres. 10 0 MMBF 0 0	Const 0 0 Reconst 0 0	
Watershed UPJD 1102 Riley II	T14S,R29E,S35,36 T15S,R29E,S1,2,11,12 T15S,R30E,S5-8	1	Acres 274 0 MMBF 1 5	Const 1 1 Reconst 2 6	PP TYPE HOR-50 MC TYPE HTH-52, HOR-82, HCC-64; HSH-26
		3B	Acres 8 0 MMBF 0 0	Const 0 0 Reconst 0 0	
1104 Can	T15S,R32E,S24-29,34,36S T15S,R33E,S17-22,27-34 T16S,R32E,S1,2	1	Acres 440 0 MMBF 3 5	Const 2 0 Reconst 3 0	PP TYPE HOR-100 MC TYPE HOR-300, HCC-40 MC TYPE HSL-50 MC TYPE HSL-5 PP TYPE HOR-30
		14	Acres 50 0 MMBF 0 2	Const 0 0 Reconst 2 0	
		3B	Acres 5 0 MMBF 0 0	Const 0 0 Reconst 1 0	
		4A	Acres 30 0 MMBF 0 2	Const 0 0 Reconst 0 0	
1111 Small Sales		1	Acres 0 0 MMBF 1 6	Const 0 0 Reconst 0 0	
		14	Acres. 0 0 MMBF 0 3	Const 0 0 Reconst 0 0	
1112 Misc Products		1	Acres 0 0 MMBF 3 3	Const 0 0 Reconst 0 0	
		14	Acres 0 0 MMBF 1 0	Const 0 0 Reconst 0 0	
District Totals	Bear Valley , 1991		Acres: 6,601 0 MMBF: 48.7	Const: 20.5 Reconst: 62 4	
District: Burns Watershed MLHR 1201 Driveway	T19,R33,S15,16,21-23, 25-29,32-35 T20,R33,S1-4 T19,R33,S15,16,23,24	1	Acres 672 0	Const 0 8	PP TYPE HOR-142; HSL20-385, HSL24-45 MC TYPE HSL-100 PP TYPE HSL20-100
		4A	MMBF 2 6 Acres 100 0 MMBF. 0 2	Reconst 5 6 Const 0 0 Reconst 0 0	
1204 Forks	T17,R34,S29-32 T17,R33,S25,26,34,36 T08,R34,S5-9,17,18 T18,R33,S1-3,10-12,13,14,23	1	Acres 765 0 MMBF. 9 9	Const. 2 5 Reconst 3 5	PP TYPE HOR-150, HSL20-185 MC TYPE HCC-180, HSH-150, HSL-100 PP TYPE HSL20-150 MC TYPE HSH-40, HSL-200
		4A	Acres 390 0 MMBF 3 2	Const 1 3 Reconst 0 0	

**TIMBER ACTIVITY SCHEDULE
FY 1991**

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol. in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
Watershed. SFJD 1207 Bear	T18,R29,S28-30,31-34 T19,R28,S1 T19S,R29E,S4-6 T18,R29,S19-21,28-30	1	Acres. 203.0 MMBF. 1.0	Const. 1.5 Reconst. 0.8	PP TYPE. HOR-95; HSL20-38 MC TYPE. HSH-70
		4A	Acres. 105.0 MMBF. 0.4	Const. 0.3 Reconst. 0.0	PP TYPE. HOR-15; HSL20-73 MC TYPE. HSH-17
1208 Sallys	T19,R29,S1-5,8-12,14-17,22,23	1 3A	Acres: 1,371.0 MMBF: 5.7 Acres: 45.0 MMBF: 0.1	Const. 5.0 Reconst. 6.8 Const. 0.0 Reconst. 0.0	PP TYPE. HTH-190, HOR-191; HSL24-760 MC TYPE. HSH-230 PP TYPE. HSL24-45
1209 Locust	T18,R29,S1-5,8-12,14,17 T18,R28,S1,12 T18,R29,S6,7	1	Acres: 500.0 MMBF. 1.1	Const. 0.8 Reconst. 0.0	PP TYPE. HOR-90; HSL20-350 MC TYPE. HSH-60
		4A	Acres: 20.0 MMBF. 0.3	Const. 0.2 Reconst. 0.0	MC TYPE. HSH-20
		3A	Acres. 45.0 MMBF. 0.1	Const. 0.0 Reconst. 0.0	PP TYPE. HSL24-45
Watershed: SILV 1202 Micro	T20,R31,S25,26,34-36 T21,R31,S1-3 T21,R31,S1	1 4A	Acres. 732.0 MMBF. 3.3 Acres: 38.0 MMBF: 0.2	Const. 0.5 Reconst. 0.0 Const. 0.0 Reconst. 0.0	PP TYPE. HOR-279; HSL20-453 PP TYPE. HSL20-38
1203 Joaquin	T20,R31,S1-3,9-12,13-17,21-24	1	Acres: 540.0 MMBF. 1.1	Const. 0.0 Reconst. 0.0	PP TYPE. HTH-440, HSL20-100
1205 Lems/Ideal	T20,R32,S11-15,22,27 T20,R32 1/2,S5 T20,R33,S7-9,16-21,28-33	1	Acres. 1,300.0 MMBF. 7.2	Const. 3.2 Reconst. 7.6	PP TYPE. HOR-100, HSL24-800 MC TYPE. HSH-400
1206 Gold	T18,R30,S24,35,36 T18,R31,S18-20,30,31 T19,R30,S1,12 T19,R31,S5-8 T18,R31,S29,32	1	Acres: 1,096.0 MMBF: 6.4	Const. 4.2 Reconst. 26.5	PP TYPE. HSL24-614 MC TYPE. HCC-142; HSH-340
		14	Acres: 35.0 MMBF. 0.2	Const. 0.7 Reconst. 0.5	MC TYPE: HSH-35
Watershed. Varies 1210 Misc. Sales		1	Acres. 200.0 MMBF: 0.5	Const. 0.0 Reconst. 0.0	PP TYPE. HSL24-150 MC TYPE. HSL-50
1211 Misc. Prod			Acres: 0.0 MMBF. 2.5	Const. 0.0 Reconst. 0.0	
District Totals	Burns , 1991		Acres: 8,157.0 MMBF: 46.0	Const: 21.0 Reconst: 51.3	
District: Long Creek Watershed. FXCT 1301 Due	T11S,R30E,S15,16,21-23, 26-29,33,34 T11S,R30E,S15,16,21-23, 26-29,33,34	1	Acres: 165.0 MMBF: 1.2	Const. 0.5 Reconst. 2.0	PP TYPE. HTH-25; HOR-50; HSL24-80 MC TYPE. HSH-10
		14	Acres. 62.0 MMBF: 0.2	Const. 0.0 Reconst. 0.0	MC TYPE. HTH-50; HCC-12
Watershed. MFJD 1302 Sulphur	T10S,R32E,S32-35 T11S,R32E,S3-5,8-10,16,17, 20,21,28,29	4A	Acres: 360.0 MMBF: 2.5	Const. 3.0 Reconst. 6.0	PP TYPE. HTH-80; HOR-30 MC TYPE. HCC-100, HSH-150

TIMBER ACTIVITY SCHEDULE
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District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
1303 Top	T10S,R33E,S3,4,9,10,15,16, 17,20,21	1 4A 3A	Acres: 347.0 MMBF: 5.4 Acres: 400.0 MMBF: 3.7 Acres: 25.0 MMBF: 0.0	Const: 2.3 Reconst: 9.3 Const: 2.0 Reconst: 8.0 Const: 0.0 Reconst: 0.0	MC TYPE: HCC-22; HSH-325 MC TYPE: HCC-23; HSH-377 MC TYPE: HSH-25
1306 Twinbench	T11S,R32E,S1,12,13,24,25 T11S,R33E,S6-8,16-21,28-30	1 4A 3A	Acres: 200.0 MMBF: 1.6 Acres: 484.0 MMBF: 3.9 Acres: 30.0 MMBF: 0.0	Const: 3.0 Reconst: 4.0 Const: 3.0 Reconst: 4.0 Const: 0.0 Reconst: 0.0	MC TYPE: HCC-50, HSH-150 PP TYPE: HOR-84, HSH-100 MC TYPE: HCC-100; HSH-200 MC TYPE: HSH-30
1307 Boggy	T10S,R31E,S23-26 T10S,R32E,S29,32 T11S,R31E,S1 T11S,R32E,S5,6	1	Acres: 300.0 MMBF: 2.0	Const: 3.0 Reconst: 4.0	PP TYPE: HTH-50; HOR-50 MC TYPE: HCC-50; HSH-150
1308 Bumwar	T9S,R31E,S15,21,22,27, 27,28,33,34 T10S,R31E,S3,4,9-11, 14,15,22,23	4A	Acres: 550.0 MMBF: 1.0	Const: 0.0 Reconst: 3.0	MC TYPE: HCC-50, HSL-500
1309 Jungle	T10S,R32E,S2,3,10,11, 13-17,21-24	4A	Acres: 794.0 MMBF: 4.5	Const: 3.0 Reconst: 2.0	PP TYPE: HTH-475; HOR-36 MC TYPE: HCC-133; HSH-150
1310 Rave	T10S,R34E,S15-17,19-22,28-32	1 4A 3A	Acres: 350.0 MMBF: 3.5 Acres: 150.0 MMBF: 0.4 Acres: 30.0 MMBF: 0.0	Const: 3.0 Reconst: 4.0 Const: 0.0 Reconst: 0.0 Const: 0.0 Reconst: 0.0	MC TYPE: HCC-150; HSH-200 PP TYPE: HTH-150 MC TYPE: HSH-30
1312 Small Sales			Acres: 0.0 MMBF: 8.8	Const: 0.0 Reconst: 0.0	
1313 Pizer	T9S,R32E,S11-14,24 T9S,R33E,S18,19 T9S,R32E,S11,13,14,23,24 T9S,R33E,S18,19	1 4A	Acres: 500.0 MMBF: 4.2 Acres: 350.0 MMBF: 4.2	Const: 1.0 Reconst: 2.0 Const: 1.0 Reconst: 2.0	PP TYPE: HTH-50, HOR-50, HSH-100 MC TYPE: HCC-100, HSH-100 LP TYPE: HSL-100 PP TYPE: HTH-50, HOR-50, HSH-100 MC TYPE: HCC-50; HSH-100
Watershed, UPJD 1305 Shaw	T12S,R28E,S1-3,10-13 T12S,R29E,S7-9 T12S,R28E,S1-3,10-13 T12S,R29E,S7-9	1 3A	Acres: 350.0 MMBF: 3.5 Acres: 40.0 MMBF: 0.0	Const: 4.0 Reconst: 4.0 Const: 0.0 Reconst: 0.0	PP TYPE: HOR-50, HSH-100 MC TYPE: HCC-80; HSH-120 MC TYPE: HSL-40
1311 Burr	T12S,R29E,S8-15,22,23 T12S,R29E,S10,14,15,22,23 T12S,R29E,S8-15,22,23	1 4A 3A	Acres: 320.0 MMBF: 2.3 Acres: 200.0 MMBF: 2.0 Acres: 50.0 MMBF: 0.0	Const: 1.0 Reconst: 3.0 Const: 0.0 Reconst: 0.0 Const: 0.0 Reconst: 0.0	PP TYPE: HSH-100 MC TYPE: HCC-100, HSH-120 MC TYPE: HCC-80, HSH-120 MC TYPE: HSL-50
District Totals	Long Creek, 1991		Acres: 6,057.0 MMBF: 55.0	Const: 29.8 Reconst: 57.3	

TIMBER ACTIVITY SCHEDULE
FY 1992

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
District: Prairie City Watershed: MFJD 1407 Punch	T12S,R35E,S13,14,25,17-20, 29,30,32,33 T12S,R35E,S13,14,25,17-20, 29,30,32,33	1 14	Acres: 650 0 MMBF: 5 4 Acres: 150.0 MMBF: 1 0	Const: 4.0 Reconst: 1 0 Const: 0 0 Reconst: 0 0	MC TYPE: HCC-200, HSH-350 LP TYPE: HCC-100 MC TYPE: HSL-150
1402 Hungry	T15S,R35E,S21,22,33,34 T16S,R34E,S1,2,11,12 T15S,R35E,S21,22,33,34 T16S,R34E,S1,2,11,12	1 3A	Acres: 593 0 MMBF: 7 7 Acres: 7.0 MMBF: 0 1	Const: 2 6 Reconst: 5.5 Const: 0 0 Reconst: 0 0	MC TYPE: HOR-276; HCC-210; HSH-94; LP TYPE: HCC-13 MC TYPE: HSH-7
1406 Lion	T17S,R35E,S7-10,15-22,25,29 T17S,R34E,S11-13 T17S,R35E,S7-10,15-22,25,29 T17S,R34E,S11-13	1 4A	Acres: 1,511 0 MMBF: 8 7 Acres: 272.0 MMBF: 1 3	Const: 1.0 Reconst: 1.5 Const: 0.0 Reconst: 0.0	PP TYPE: HOR-87; HSH-64, HSL24-100 MC TYPE: HOR-959; HCC-101; HSH-200; PP TYPE: HSH-37; HSL24-235
1408 Wayrot	T16S,R33 1/2E,S5-9,17-20 T16S,R33 1/2E,S5-9,17-20	1 14	Acres: 375 0 MMBF: 2 3 Acres: 100.0 MMBF: 0 7	Const: 1.0 Reconst: 3 0 Const: 0 0 Reconst: 0 0	MC TYPE: HOR-261; HCC-97; HSH-4 LP TYPE: HCC-13 MC TYPE: HCC-100
Watershed: NFMR 1403 Winegar	T16S,R35E,S9-11,14-16, 19-23,27-30 T16S,R35E,S9-11,14-16, 19-23,27-30	1 3A	Acres: 729 0 MMBF: 7 9 Acres: 9.0 MMBF: 0 6	Const: 2 0 Reconst: 3.0 Const: 0.0 Reconst: 0.0	PP TYPE: HOR-317 MC TYPE: HOR-300, HCC-112 PP TYPE: HSH-6; HSL24-3
1404 Tramp	T15S,R36E,S12,13,23-26 T15S,R37E,S6-8,17-19 T15S,R36E,S12,13,23-26 T15S,R37E,S6-8,17-19	1 4A	Acres: 241.0 MMBF: 3 0 Acres: 249 0 MMBF: 0 9	Const: 2 0 Reconst: 1 5 Const: 1 0 Reconst: 0 5	PP TYPE: HTH-64; HOR-156, HCC-21 PP TYPE: HTH-31, HOR-192, HCC-26
1405 Keg	T16S,R35E,S4,5,7-9,16-20,30	1	Acres: 467 0 MMBF: 2 2	Const: 0 0 Reconst: 0 8	PP TYPE: HOR-56; HSH-179 MC TYPE: HOR-55, HCC-100; HSH-77
1409 Found	T16S,R35E,S7,9,14,15,19,20	1	Acres: 575 0 MMBF: 3 2	Const: 1 0 Reconst: 2 0	MC TYPE: HOR-390; HCC-42; HSH-128; LP TYPE: HCC-15
Watershed: UPJD 1401 Meow	T13S,R35E,S14,15,21-24	1	Acres: 352.0 MMBF: 3 0	Const: 0 0 Reconst: 0 0	PP TYPE: HOR-32 MC TYPE: HCC-277, HSH-43
1410 Small Sales	T13s,R32-36E,S1-36 T14S,R32-36E,S1-36 T15S,R32-36E,S1-36 T16S,R32-36E,S1-36	1	Acres: 360 0 MMBF: 8 1	Const: 0 0 Reconst: 0 0	PP TYPE: HTH-30; HOR-50, HSH-50; HSL24-30 MC TYPE: HOR-100, HCC-80; HSH-20
District Totals	Prairie City, 1991		Acres: 6,640.0 MMBF: 56.1	Const: 14.6 Reconst: 18.8	
1991 Yearly Totals:			Acres: 27,455 0 MMBF: 205.8	Const: 85.9 Recon: 189.8	

TEN-YEAR TIMBER SALE SCHEDULE, FISCAL YEAR: 1992

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
District: Bear Valley Watershed SFJD 2107 Fields II	T14S,R28E,S13,24,25 T14S,R29E,S17-20,28-35 T15S,R29E,S2-4,9-11	1	Acres 410 0 MMBF 27	Const 10 Reconst 90	PP TYPE HTH-20; HOR-75, HSH-25, HSL20-25, HSL24-25 MC TYPE HTH-20, HOR-150, HCC-35, HSL-35
2107 Fields II		3B	Acres 50 MMBF 00	Const 00 Reconst 00	MC TYPE HSL-5
2109 Loop II	T15S,R30E,S7,8,17-19 T15S,R29E,S13	1	Acres 300.0 MMBF 20	Const 05 Reconst 10	PP TYPE HTH-20, HOR-75, HSH-25, HSL20-50 MC TYPE HTH-20, HOR-50, HCC-40, HSL-20
2110 Small Sales		1 4A	Acres 00 MMBF 10 Acres 00 MMBF 02	Const 00 Reconst 00 Const 00 Reconst 00	
2111 Misc. Products		1 4A	Acres 00 MMBF 27 Acres 00 MMBF 03	Const 00 Reconst 00 Const 00 Reconst 00	
Watershed SILV 2101 Flag II	T15S,R29E,S28,29,32,33 T16S,R29E,S3-5,8-10,15-17, 19-22,28-30	1 14 3A	Acres 1,140 0 MMBF 68 Acres 700 MMBF 04 Acres 200 MMBF 01	Const 20 Reconst 35 Const 00 Reconst 05 Const 00 Reconst 10	PP TYPE HTH-50, HOR-100, HSH-50, HSL20-150, HSL24-70 MC TYPE HTH-50, HOR-295, HCC-75, HSH-50, HSL-150 LP TYPE HCC-100 PP TYPE HSL20-30 MC TYPE HOR-20 LP TYPE HCC-20 MC TYPE HSL-20
2102 Snow II	T16S,R29E,S22,23-28,33-35 T17S,R29E,S3,4	1 14 3A	Acres 825 0 MMBF 49 Acres 300 MMBF 02 Acres 100 MMBF 00	Const 20 Reconst 20 Const 00 Reconst 05 Const 00 Reconst 10	PP TYPE HTH-50, HOR-100, HSH-50, HSL20-150, HSL24-50 MC TYPE HTH-25, HOR-200, HCC-25, HSH-50, HSL-100 LP TYPE HCC-25 PP TYPE HSL20-20 LP TYPE HCC-10 MC TYPE HSL-10
2103 End II	T16S,R29E,S35,36 T16S,R30E,S31-33 T17S,R29E,S1-3,13,14 T17S,R30E,S5-8,18	1 3A	Acres 800 0 MMBF 51 Acres 100 MMBF 00	Const 20 Reconst 20 Const 00 Reconst 10	PP TYPE HTH-50, HOR-50, HSH-100, HSL20-150, HSL24-50 MC TYPE HOR-200, HCC-100, HSH-50, HSL-50 MC TYPE HSL-10
2104 D-C	T15S,R29E,S24-28,33-35 T15S,R30E,S19,20,29,30 T16S,R29E,S1-3,10-12,14,15,23	1 14 3A	Acres 1,175 0 MMBF 7.4 Acres 750 MMBF 04 Acres 100 MMBF 00	Const 30 Reconst 50 Const 00 Reconst 05 Const 00 Reconst 05	PP TYPE HTH-100, HOR-150, HSH-100, HSL20-100, HSL24-50 MC TYPE HTH-50, HOR-200, HCC-100, HSH-100, HSL-20 LP TYPE HCC-25 PP TYPE HSL20-25 MC TYPE HSL-30 LP TYPE HCC-20 PP TYPE HSL24-10

**TIMBER ACTIVITY SCHEDULE
FY 1992**

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
2105 Geary II	T15S,R30E,S4,9-15,22-24	1 14	Acres. 400.0 MMBF. 2.2 Acres: 300.0 MMBF: 1.5	Const: 1.0 Reconst: 1.0 Const: 1.0 Reconst: 1.0	PP TYPE. HTH-75, HSH-50, HSL20-50, HSL24-25 MC TYPE HTH-20, HOR-50, HCC-50, HSH-30, HSL-30 LP TYPE HCC-20 PP TYPE. HTH-100; HSL20-50 MC TYPE: HOR-50; HSL-100
Watershed: UPJD 2106 Dry Gulch II	T15S,R32E,S33,34 T16S,R32E,S1-4,10-12	1 14 3B 13	Acres: 475.0 MMBF: 2.7 Acres: 25.0 MMBF: 0.2 Acres: 10.0 MMBF: 0.0 Acres: 40.0 MMBF: 0.2	Const. 0.5 Reconst: 1.0 Const. 0.0 Reconst: 0.0 Const: 0.0 Reconst: 0.0 Const: 0.0 Reconst: 0.0	PP TYPE: HTH-50; HOR-30; HSH-20, HSL20-75; HSL24-25 MC TYPE: HTH-30, HOR-100, HCC-25, HSH-50, HSL-45 LP TYPE: HCC-25 MC TYPE. HSL-25 MC TYPE. HSL-10 PP TYPE HSL24-10 MC TYPE. HSL-30
2107 Fields II	T14S,R28E,S13,24,25 T14S,R29E,S17-20,28-35 T15S,R29E,S2-4,9-11	1 3B	Acres: 455.0 MMBF 2.9 Acres 10.0 MMBF: 0.0	Const. 1.0 Reconst: 1.0 Const: 0.0 Reconst: 0.0	PP TYPE: HTH-50, HSH-20, HSL20-70, HSL24-30 MC TYPE: HTH-20, HOR-150, HCC-25; HSH-50, HSL-40 MC TYPE HSL-10
2108 Fawn	T15S,R31E,S1,12,13 T15S,R32E,S4-9,16-21	14 3B 4A 13	Acres. 225.0 MMBF: 1.2 Acres 20.0 MMBF: 0.0 Acres: 350.0 MMBF: 2.3 Acres: 40.0 MMBF: 0.2	Const: 1.5 Reconst. 1.0 Const: 0.0 Reconst: 0.5 Const 1.5 Reconst 1.5 Const 0.0 Reconst: 0.0	PP TYPE. HSL20-75, HSL24-25 MC TYPE: HOR-50; HSH-25; HSL-50 MC TYPE. HSL-20 PP TYPE: HOR-40; HSH-20; HSL20-20, HSL24-20 MC TYPE. HOR-100; HCC-20; HSH-30; HSL-100 PP TYPE: HSL24-20 MC TYPE HSL-20
District Totals	Bear Valley , 1992		Acres: 7,230.0 MMBF: 47.6	Const: 17.0 Reconst: 34.5	
District: Burns Watershed. MLHR 2203 Round	T17,R32,S1,12 T17,R33,S5-10,14-17, 20-23,26-28	1 3A	Acres: 480.0 MMBF: 7.1 Acres: 31.0 MMBF: 0.1	Const 1.0 Reconst: 4.5 Const: 0.0 Reconst: 0.0	MC TYPE. HCC-80; HSH-400 PP TYPE. HSL24-31
2203 Muddy	T17,R32	3A	Acres. 45.0 MMBF: 0.1	Const: 0.0 Reconst: 0.0	PP TYPE. HSL24-45
2207 Snow Park Trail	T20,R31 T20,R32 T20,R32 1/2 T19,R32	1	Acres. 50.0 MMBF: 0.1	Const: 0.0 Reconst. 0.0	PP TYPE. HSL24-50
Watershed: SFJD 2204 Muddy	T18,R28,S25,26,34-36 T19,R28,S1-5,8-11,15-17 T18,R28,S25,26,35,36 T19,R28,S3-5,9,10	1 4A	Acres. 1,891.0 MMBF. 8.0 Acres. 187.0 MMBF: 1.0	Const 1.5 Reconst: 2.5 Const: 0.0 Reconst: 0.0	PP TYPE. HTH-240, HOR-170; HSH-400; HSL20-300, HSL24-300 MC TYPE HOR-50, HCC-81; HSH-350 PP TYPE. HTH-60; HOR-40; HSH-30 MC TYPE. HOR-27; HSH-30

TIMBER ACTIVITY SCHEDULE
FY 1992

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
Watershed, SILV 2201 Hornet	T19,R,S1-2,11-14,23-25 T19,R29,S7,8,16-21,29-32 T19,R29,S5-8 T20,R31,S24,25,36 T20,R32,S19,27-34 T21,R32,S3-10	1 4A 3A 1	Acres 1,170.0 MMBF 5.9 Acres 70.0 MMBF 0.4 Acres 50.0 MMBF 0.1 Acres 1,344.0 MMBF 9.4	Const 2.0 Reconst 2.5 Const 0.0 Reconst 0.0 Const 0.0 Reconst 0.0 Const 3.8 Reconst 15.0	PP TYPE HTH-340; HSH-200, HSL20-300, HSL24-200 MC TYPE HSH-130 PP TYPE HTH-70 PP TYPE HSL24-50 PP TYPE HSH-50, HSL20-450; HSL24-450 MC TYPE HCC-94, HSH-300
2205 Parasol	T17,R32,S18-22,26-28,33-35 T18,R32,S2,3,10,11 T17,R32,S19,20,28-30,32-34 T18,R32,S2,3	1 14	Acres 565.0 MMBF 1.7 Acres 75.0 MMBF 0.2	Const 0.0 Reconst 3.3 Const 0.0 Reconst 0.0	PP TYPE HTH-410HSL24-155 PP TYPE HSL24-75
2206 Bonde	T17,R32,S12-14,22-26,35,36 T17,R33,S17-19,30,31 T18,R32,S1	1	Acres 1,585.0 MMBF 8.2	Const 3.2 Reconst 4.3	PP TYPE HTH-500, HSH-125, HSL20-330, HSL24-330 MC TYPE HSH-300
Watershed Varied 2208 Misc Sales		1	Acres 200.0 MMBF 0.2	Const 0.0 Reconst 0.0	PP TYPE HSL24-150 MC TYPE HSL-50
2209 Misc Products			Acres 0.0 MMBF 2.5	Const 0.0 Reconst 0.0	
District Totals	Burns , 1992		Acres: 7,743.0 MMBF: 45.0	Const. 11.5 Reconst: 32.1	
District Long Creek Watershed FXCT 2302 Dunning	T10S,R30E,S25-27,34,35 T11S,R30E,S1,2,11,12 T11S,R31E,S6,7,	1 13	Acres 730.0 MMBF 7.0 Acres 160.0 MMBF 0.3	Const 5.0 Reconst 6.0 Const 0.0 Reconst 0.0	MC TYPE HOR-100, HCC-370, HSH-260; PP TYPE HOR-100 MC TYPE HOR-60
2303 Day	T11S,R30E,S10,11,13-15,24 T11S,R31E,S7,8,17-20 T11S,R30E,S14	1 14 3B	Acres 740.0 MMBF 5.3 Acres 100.0 MMBF 1.0 Acres 50.0 MMBF 0.0	Const 5.0 Reconst 8.0 Const 3.0 Reconst 2.0 Const 0.0 Reconst 0.0	PP TYPE HOR-50, HSH-50 MC TYPE HCC-320, HSH-320 MC TYPE HCC-100 PP TYPE HSH-20 MC TYPE HSH-30
Watershed MFJD 2301 Rant	T10S,R33E,S13 24 T10S,R34E,S7,8,17-19 T10S,R33E,S24,25 T10S,R34E,S19,30	1 4A	Acres 400.0 MMBF 4.0 Acres 350.0 MMBF 1.5	Const 2.0 Reconst 6.0 Const 1.0 Reconst 3.0	MC TYPE HCC-150, HSH-250 PP TYPE HTH-250 MC TYPE HCC-50, HSH-50
2304 Flat	T10S,R31E,S12,13,23,24 T10S,R32E,S17-20 T10S,R31E,S11-14	1 4A	Acres 350.0 MMBF 3.5 Acres 80.0 MMBF 0.6	Const 3.0 Reconst 5.0 Const 0.0 Reconst 0.0	PP TYPE HOR-50; HSH-50 MC TYPE HCC-100, HSH-150 MC TYPE HSH-80
2305 Horn	T11S,R34E,S5,4,9-11 T11S,R34E,S8-10,14-16,21,22	4A 14 1	Acres 100.0 MMBF 0.1 Acres 0.0 MMBF 0.1 Acres 720.0 MMBF 5.6	Const 0.0 Reconst 0.0 Const 0.0 Reconst 0.0 Const 11.0 Reconst 10.0	MC TYPE HSL-100 PP TYPE HTH-100; HOR-60; HSH-60 MC TYPE HCC-200, HSH-300
2306 Dad	T12S,R34E,S4,7-10,16	14	Acres 350.0 MMBF 1.5	Const 2.0 Reconst 8.0	PP TYPE HTH-100 MC TYPE HCC-50, HSH-100; HSL-100

**TIMBER ACTIVITY SCHEDULE
FY 1992**

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
2307 Coy	T11S,R32E,S7,8,17-20,29,32,33 T12S,R32E,S3,4	1	Acres: 400.0 MMBF: 3.2	Const: 3 0 Reconst: 5 0	PP TYPE: HTH-100, HOR-50 MC TYPE: HOR-100, HSH-150
2309 Beam	T11S,R33E,S1 T11S,R33E,S2,11-13	14 4A	Acres: 150 0 MMBF: 0.1 Acres: 360 0 MMBF: 3 0	Const: 0 0 Reconst: 0 0 Const: 1 0 Reconst: 5 0	PP TYPE: HTH-50 MC TYPE: HCC-100 PP TYPE: HTH-80; HOR-30 MC TYPE: HCC-100, HSH-150
2310 Huck	T10S,R31E,S30-33 T11S,R31E,S4-6,8,9,16	1	Acres: 450 0 MMBF: 4.5	Const: 5 0 Reconst: 4 0	MC TYPE: HCC-200, HSH-250
2311 Small Sales			Acres: 0 0 MMBF: 6.8	Const: 0 0 Reconst: 0 0	
2312 Wallow	T10S,R32E,S20,21,28,29,33,34 T10S,R32E,S21,22,25,26, 27,28,33	1 4A 3A	Acres: 200 0 MMBF: 2 0 Acres: 700.0 MMBF: 2 0 Acres: 50 0 MMBF: 0.0	Const: 2.0 Reconst: 3.0 Const: 0 0 Reconst: 3 0 Const: 0 0 Reconst: 0 0	MC TYPE: HCC-80; HSH-120 PP TYPE: HTH-500 MC TYPE: HCC-80, HSH-120 MC TYPE: HSH-50
2313 Vinegar	T10S,R35E,S32 T11S,R35E,S4-9,17,18	1 14	Acres: 500 0 MMBF: 3.6 Acres: 600.0 MMBF: 0 4	Const: 2 0 Reconst: 5 0 Const: 0 0 Reconst: 0 0	PP TYPE: HTH-200 MC TYPE: HCC-100, HSH-200 PP TYPE: HTH-600
Watershed: UPJD 2303 Day		3A	Acres: 25 0 MMBF: 0 0	Const: 0 0 Reconst: 0 0	MC TYPE: HCC-25
2307 Coy		3A	Acres: 50 0 MMBF: 0 0	Const: 0 0 Reconst: 0 0	MC TYPE: HCC-50
District Totals	Long Creek , 1992		Acres: 7,615.0 MMBF: 56.1	Const: 45.0 Reconst: 73.0	
District: Prairie City Watershed: MFJD 2406 Scraps	T11S,R35E,S34-36 T11S,R35 1/2E,S31-34 T12S,R35E,S1-3 T12S,R35 1/2E,S4-6	14	Acres: 1,750 0 MMBF: 6.5	Const: 0 0 Reconst: 4 8	MC TYPE: HTH-1750
2401 Gusher	T15S,R35 1/2E,S1-3,11-13 T15S,R36E,S5-8	1	Acres: 500 0 MMBF: 4 0	Const: 0.0 Reconst: 0 0	MC TYPE: HOR-210, HCC-80; HSH-210,
2402 Pale	T17S,R35E,S13-15,22-27,34-36 T18S,R35E,S1-3,10-14 T17S,R35E,S13-15,22-27,34-36 T18S,R35E,S1-3,10-14	1 4A	Acres: 429 0 MMBF: 1.5 Acres: 453 0 MMBF: 1.5	Const: 0 0 Reconst: 2 0 Const: 0 0 Reconst: 0 0	PP TYPE: HOR-129 MC TYPE: HOR-300 PP TYPE: HTH-53, HSH-400
2404 Awake	T17S,R36E,S27,26,34,35 T16S,R36E,S2-4,9-11,14,15,23 T17S,R36E,S27,26,34,35 T16S,R36E,S2-4,9-11,14,15,23 T17S,R36E,S27,26,34,35 T16S,R36E,S2-4,9-11,14,15,23	1 4A 3A	Acres: 665 0 MMBF: 4 7 Acres: 350 0 MMBF: 1 6 Acres: 30 0 MMBF: 0 2	Const: 2 0 Reconst: 3 0 Const: 0 0 Reconst: 1 0 Const: 0 0 Reconst: 1 0	PP TYPE: HOR-400, HSH-75 MC TYPE: HSH-190 PP TYPE: HTH-250 MC TYPE: HSH-100 PP TYPE: HSL24-15 MC TYPE: HSH-15
Watershed: UPJD 2403 Crescent	T14S,R34E,S22,26,34,36 T14S,R35E,S30,32 T15S,R35E,S6,8,16,18,20,21 T14S,R34E,S22,26,34,36 T14S,R35E,S30,32 T15S,R35E,S6,8,16,18,20,21	1 14	Acres: 241 0 MMBF: 2 8 Acres: 728 0 MMBF: 9.2	Const: 3 0 Reconst: 1 7 Const: 9.1 Reconst: 16 2	PP TYPE: HTH-20, HOR-40 MC TYPE: HCC-71, HSH-110 PP TYPE: HOR-162 MC TYPE: HCC-380; HSH-186

TIMBER ACTIVITY SCHEDULE
FY 1993

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol. in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
2405 Mossy	T12S,R34E,S23-26,35,36 T12S,R35E,S31-33 T13S,R34E,S1,2,12 T13S,R35E,S3-11,13-15, 17,18,20	1	Acres. 1,500 0 MMBF 15.0	Const 3 0 Reconst 10.7	PP TYPE HOR-40 MC TYPE HCC-600; HSH-860
2407 Small Sales	T13S,R32-36E,S1-36 T14S,R32-36E,S1-36 T15S,R32-36,S1-36 T16S,R32-36E,S1-36 T13S,R32-36E,S1-36 T14S,R32-36E,S1-36 T15S,R32-36,S1-36 T16S,R32-36E,S1-36	1 14	Acres 300 0 MMBF 6 0 Acres 190 0 MMBF 1 5	Const 0 0 Reconst 0 0 Const 0 0 Reconst 0 0	PP TYPE HTH-20, HOR-40, HSH-40, HSL24-20 MC TYPE HCC-80, HSH-20 LP TYPE HCC-80 PP TYPE HTH-70 MC TYPE HSH-50, HSL-20 LP TYPE HTH-30, HCC-20
District Totals	Prairie City , 1992		Acres: 7,136.0 MMBF: 54.5	Const: 17.1 Reconst: 40.4	
1992 Yearly Totals:			Acres: 29,724.0 MMBF: 203.2	Const: 90.6 Reconst: 180.0	

TEN-YEAR TIMBER SALE SCHEDULE, FISCAL YEAR: 1993

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
District. Bear Valley Watershed. SFJD 3104 Dan's	T15S,R28E,S24,25,36 T15S,R29E,S19,20,29-32	1 3B	Acres 600 0 MMBF 4 0 Acres. 10 0 MMBF 0 0	Const 0 0 Reconst 1 5 Const: 0 0 Reconst 0 5	PP TYPE HOR-150, HSH-30, HSL20-50; HSL24-20 MC TYPE HOR-250, HCC-50, HSL-50 MC TYPE HSL-10
3105 SF Deer II	T16S,R28E,S14,15,22-27,34,35	1 3B	Acres 890 0 MMBF 6 3 Acres 10 0 MMBF 0 0	Const 2 0 Reconst 2 0 Const 0 0 Reconst 1 0	PP TYPE HTH-40, HOR-200; HSH-60, HSL20-70, HSL24-30 MC TYPE HTH-50, HOR-300, HCC-100, HSL-40 MC TYPE. HSL-10
3108 Johnnie II	T16S,R29E,S29-32 T17S,R29E,S4,5,8-10,14-17, 20,23	1 14 4A	Acres. 550 0 MMBF. 3 2 Acres 30 0 MMBF 0 1 Acres. 125 0 MMBF 0 7	Const 1 0 Reconst 1 0 Const 0 0 Reconst 0 0 Const: 0 0 Reconst 1 0	PP TYPE HTH-50; HOR-200, HSH-50, HSL20-100, HSL24-50 MC TYPE HOR-40, HSL-60 PP TYPE HSL24-20 MC TYPE HSL-10 PP TYPE HOR-25; HSL20-25, HSL24-25 MC TYPE HOR-25, HSL-25
Watershed SILV 3101 Smith II	T16S,R30E,S33-35 T17S,R30E,S1-5,8-12,14-18	1 3A	Acres 1,290 0 MMBF 7 8 Acres 10 0 MMBF 0 0	Const 2 0 Reconst 2 0 Const 0 0 Reconst 1 0	PP TYPE HTH-75; HOR-200, HSH-100; HSL20-75, HSL24-50 MC TYPE. HTH-40, HOR-400, HCC-100, HSH-100, HSL-15 MC TYPE. HSL-10
3102 Rail II	T17S,R30E,S1,11-15,22-24 T17S,R31E,S1,2,10,15-21,29,30	1 14 3A	Acres 800 0 MMBF 5 4 Acres 400 0 MMBF 2 1 Acres 20 0 MMBF 0 0	Const 1 0 Reconst 2 0 Const 1 0 Reconst 1 0 Const 0 0 Reconst 1 0	PP TYPE. HTH-50, HOR-100, HSH-100, HSL20-200, HSL24-50 MC TYPE HOR-150, HCC-50, HSH-50, HSL-50 PP TYPE HTH-100, HOR-50, HSL20-50, HSL24-100 MC TYPE HOR-50, HSL-50 MC TYPE HSL-20

TIMBER ACTIVITY SCHEDULE
FY 1993

District Sale Number/Name by Watershed	Legal Description	MA	Area In Acres Vol In MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
3106 Jack II	T16S,R29E,S24-26,35,36 T16S,R30E,S19,20,28-32	1	Acres. 550 0 MMBF 3 5	Const 0 5 Reconst 2 0	PP TYPE. HTH-25; HOR-100, HSH-50; HSL20-50, HSL24-50 MC TYPE HOR-125, HCC-75; HSH-45; HSL-30
3107 Hail II	T17S,R30E,S28,29,32-35 T18S,R30E,S3-5	1	Acres. 450.0 MMBF. 3 0	Const 0 0 Reconst. 8.0	PP TYPE HTH-30, HOR-130, HSH-40; HSL20-50 MC TYPE HOR-100, HCC-30; HSH-50, HSL-20
3108 Johnnie II	T16S,R29E,S29-32 T17S,R229E,S4,5,8-10,14-17, 20,23	1	Acres. 300 0 MMBF 2 2	Const. 1.0 Reconst 0 0	PP TYPE HOR-70, HSH-20; HSL20-50; HSL24-10 MC TYPE. HOR-100, HCC-30; HSH-10, HSL-10
3109 Small Sales		1 14	Acres: 0.0 MMBF 1 4 Acres. 0 0 MMBF: 0.1	Const: 0.0 Reconst 0 0 Const. 0.0 Reconst 0 0	
3110 Misc Products		1	Acres 0 0 MMBF. 0 5 Acres: 0.0 MMBF. 3 0	Const 0 0 Reconst. 0.0 Const 0 0 Reconst. 0.0	
Watershed: UPJD 3103 Aldrich	T14S,R27E,S1,12 T14S,R28E,S3-10	1 3B 4A	Acres. 350 0 MMBF. 1.9 Acres 5 0 MMBF: 0 0 Acres. 350 0 MMBF: 2.4	Const: 2.0 Reconst: 3.0 Const 0 0 Reconst 0 0 Const. 2.5 Reconst 3 0	PP TYPE HTH-30; HOR-50, HSL20-40; HSL24-30 MC TYPE HOR-100; HCC-40, HSH-60 MC TYPE HSL-5 PP TYPE HOR-50; HSL20-50 MC TYPE: HOR-100; HCC-70; HSH-30; HSL-50
District Totals	Bear Valley , 1993		Acres: 6,740.0 MMBF: 47.6	Const: 13.0 Reconst: 30.0	
District: Burns Watershed: MLHR 3201 Holdout	T18,R33,S7-9,17,18,20,21,28,29 T18,R33,S9-11,14,17,21-23, 26-28,33	1 4A 3A	Acres 225 0 MMBF 1 0 Acres. 380 0 MMBF. 2.0 Acres: 31.0 MMBF. 0.1	Const 1 1 Reconst. 1 6 Const 0 0 Reconst 0 0 Const 0 0 Reconst 0 0	PP TYPE. HTH-120; HSH-40; HSL20-65 PP TYPE HTH-90; HSH-120; HSL20-60; HSL24-110 PP TYPE. HSL24-31
3202 Lupis	T17,R33,S20,27-34 T18,R33,S3-8 T18,R33,S4,5	1 4A	Acres 300 0 MMBF 2 6 Acres: 60.0 MMBF 0 3	Const. 1 5 Reconst: 5.0 Const 0 0 Reconst: 0 0	PP TYPE: HTH-170; HSH-60 MC TYPE: HCC-25; HSH-45 PP TYPE. HTH-10; HSH-14; HSL20-26 MC TYPE: HSL-10
3206 Hog	T17,R33 1/2,S24-27,35,36 T17,R35,S19,29-32 T18,R33 1/2,S1,2,12,13 T18,R35,S4-9,17,18 T18,R35,S17,18	1 4A 3A	Acres 1,067 0 MMBF 9.4 Acres. 146 0 MMBF 0 8 Acres. 31.0 MMBF 0 1	Const. 4 5 Reconst 6 5 Const 0 0 Reconst. 0 0 Const 0 0 Reconst 0 0	PP TYPE: HTH-270, HSH-92; HSL20-34; HSL24-33 MC TYPE. HTH-99; HOR-336; HCC-85; HSH-118 PP TYPE. HTH-16; HSH-20; HSL24-37 MC TYPE HOR-13; HSH-17; HSL-43 PP TYPE: HSL24-31

TIMBER ACTIVITY SCHEDULE
FY 1993

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
3207 Cove	T18,R32,S1-3,10-15,23 T18,R33,S6,7,18-20 T18,R32,S10,11,14,15	1 14	Acres: 660.0 MMBF: 4.2 Acres: 166.0 MMBF: 0.3	Const: 2.0 Reconst: 2.5 Const: 0.0 Reconst: 0.0	PP TYPE: HTH-328, HSH-112; HSL20-65, HSL24-65 MC TYPE: HTH-14; HOR-46, HCC-14; HSH-16 PP TYPE: HSL24-156 MC TYPE: HSL-10
Watershed SILV 3203 Twisted li	T18,R30,S1-3,10-15 T18,R31,S5-7,18	1	Acres: 1,240.0 MMBF: 5.6	Const: 2.0 Reconst: 6.5	PP TYPE: HTH-485, HSH-140, HSL20-308; HSL24-307
3204 Dry Well	T19,R28,S15-22,27-33 T20,R28,S5-6 T19,R28,S30,31 T20,R28,S6	1 14	Acres: 1,649.0 MMBF: 9.8 Acres: 110.0 MMBF: 0.3	Const: 3.0 Reconst: 4.0 Const: 0.0 Reconst: 0.0	PP TYPE: HTH-400, HSH-100; HSL20-273, HSL24-272 MC TYPE: HTH-275, HOR-200, HCC-69, HSH-60, PP TYPE: HSL24-110
3205 Alder Spg	T19,R28,S7,18,19,30 T19,R27,S12,13,24,25 T19,R27,S25	1 14	Acres: 959.0 MMBF: 5.2 Acres: 100.0 MMBF: 0.1	Const: 1.5 Reconst: 2.0 Const: 0.0 Reconst: 0.0	PP TYPE: HTH-260, HSH-60; HSL20-118, HSL24-117 MC TYPE: HTH-220, HOR-100, HCC-44, HSH-40; PP TYPE: HSL24-100
Watershed, Varies 3208 Misc Sales		1	Acres: 150.0 MMBF: 0.7	Const: 0.0 Reconst: 0.0	PP TYPE: HSL24-150
3209 Misc Products		1	Acres: 0.0 MMBF: 2.5	Const: 0.0 Reconst: 0.0	
District Totals	Burns, 1993		Acres: 7,274.0 MMBF: 45.0	Const: 15.6 Reconst: 28.1	
District: Long Creek Watershed: FXCT 3312 Long	T10S,R29E,S14,15,22-24 T10S,R30E,S19-21,26-30	1 14	Acres: 550.0 MMBF: 3.0 Acres: 300.0 MMBF: 1.0	Const: 0.0 Reconst: 0.0 Const: 0.0 Reconst: 0.0	PP TYPE: HSH-100, HSL24-50 MC TYPE: HCC-100, HSH-200; HSL-100 PP TYPE: HTH-50 HSL24-50 MC TYPE: HSH-100; HSL-100
Watershed MFJD 3301 Pix	T11S,R34E,S33-36 T11S,R35E,S28-33 T12S,R34E,S1-3,10,12 T12S,R35E,S5-7	1 14 3A	Acres: 755.0 MMBF: 3.0 Acres: 160.0 MMBF: 3.0 Acres: 50.0 MMBF: 0.2	Const: 1.5 Reconst: 2.0 Const: 1.0 Reconst: 1.0 Const: 0.0 Reconst: 0.0	PP TYPE: HSL24-260 MC TYPE: HCC-82, HSH-79, HSL-334 MC TYPE: HCC-50, HSH-110 MC TYPE: HSL-50
3302 Leek	T9S,R32E,S23-26,34,35,36 T9S,R33E,S10,20,33	1 4A 14 3B 3A	Acres: 510.0 MMBF: 3.4 Acres: 412.0 MMBF: 1.0 Acres: 300.0 MMBF: 1.0 Acres: 20.0 MMBF: 0.0 Acres: 130.0 MMBF: 0.0	Const: 1.0 Reconst: 3.0 Const: 1.0 Reconst: 1.0 Const: 0.0 Reconst: 1.0 Const: 0.0 Reconst: 0.0 Const: 0.0 Reconst: 0.0	PP TYPE: HOR-150, HSH-200 MC TYPE: HOR-80; HCC-80 PP TYPE: HOR-40, HSH-40 MC TYPE: HCC-100; HSH-232 MC TYPE: HCC-100, HSH-200 MC TYPE: HSH-20 PP TYPE: HSH-10, HSL20-30 MC TYPE: HSH-40; HSL-50
3303 Cycle	T10S,R31E,S25-27,33-36 T11S,R31E,S1-3,10-12,14,15	1 3A	Acres: 800.0 MMBF: 5.0 Acres: 50.0 MMBF: 0.0	Const: 1.5 Reconst: 5.0 Const: 0.0 Reconst: 0.0	PP TYPE: HOR-150, HSH-150 MC TYPE: HCC-150, HSH-150; HSL-200 MC TYPE: HSL-50

TIMBER ACTIVITY SCHEDULE
FY 1993

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
3304 Shine	T10S,R33E,S34,35 T11S,R33E,S	1 4A 14 3A	Acres: 450.0 MMBF 3.0 Acres: 200.0 MMBF: 2.0 Acres 100.0 MMBF. 0.1 Acres: 50.0 MMBF 0.0	Const 0.0 Reconst 0.0 Const: 0.0 Reconst: 0.0 Const. 0.0 Reconst. 0.0 Const: 0.0 Reconst 0.0	PP TYPE HSL20-50 MC TYPE. HOR-100; HCC-100, HSH-200, MC TYPE HCC-100, HSH-100 MC TYPE: HSL-100 MC TYPE. HSL-50
3305 Luna	T11S,R33E,S9,10,14-16, 21-23,27	1 3A	Acres: 400.0 MMBF 4.0 Acres. 50.0 MMBF: 0.0	Const: 2.0 Reconst 2.0 Const: 0.0 Reconst 0.0	MC TYPE. HCC-100, HSH-200, HSL-100 MC TYPE. HSL-50
3306 Cow	T11S,R34E,S13,14,23-25 T11S,R35E,S19,30 T11S,R34E,S13,23-26 T11S,R35E,S19	1 14 13	Acres 300.0 MMBF: 2.0 Acres. 100.0 MMBF. 1.0 Acres 275.0 MMBF 1.0	Const. 3.0 Reconst: 0.0 Const. 2.0 Reconst 5.0 Const: 0.0 Reconst. 0.0	MC TYPE HCC-100; HSH-200 MC TYPE: HSH-100 PP TYPE: HOR-275
3309 Croc	T10S,R31E,S1,2 T10S,R32E,S3-10,17,18 T9S,R32E,S32-34	1 4A 14 3A	Acres 650.0 MMBF 3.0 Acres. 300.0 MMBF 1.0 Acres 180.0 MMBF. 1.0 Acres. 50.0 MMBF 0.0	Const. 1.0 Reconst 2.0 Const. 1.0 Reconst 1.0 Const 0.0 Reconst 0.0 Const 0.0 Reconst 0.0	PP TYPE: HTH-50; HSH-100 MC TYPE. HCC-100; HSH-200; HSL-200 MC TYPE: HCC-100; HSH-200 PP TYPE HTH-50 MC TYPE: HSH-30, HSL-100 MC TYPE. HSL-50
3310 Mac	T9S,R32E,S32,33 T10S,R31E,S1,2 T10S,R32E,S4-10,15-18 T10S,R33E,S10-15,22,26,27	1 4A 14 3A	Acres. 600.0 MMBF 3.0 Acres 400.0 MMBF. 1.7 Acres: 50.0 MMBF: 0.3 Acres 50.0 MMBF. 0.0	Const: 2.0 Reconst 5.0 Const 0.0 Reconst. 0.0 Const: 0.0 Reconst 0.0 Const 0.0 Reconst 0.0	MC TYPE. HCC-100, HSH-200, HSL-300 MC TYPE HCC-100, HSH-200, HSL-100 MC TYPE HSL-50 MC TYPE: HSL-50
3311 Small Sales			Acres. 1,900.0 MMBF: 8.4	Const. 0.0 Reconst: 0.0	MC TYPE HCC-300, HSH-600, HSL-1000
3313 Kett	T10S,R33E,S3,4,9,10,15-17, 20,21	1 4A 3B 14	Acres 395.0 MMBF 2.0 Acres 195.0 MMBF 1.0 Acres 30.0 MMBF 0.0 Acres: 115.0 MMBF: 1.0	Const 1.0 Reconst 2.0 Const 0.0 Reconst. 2.0 Const 0.0 Reconst. 0.0 Const: 0.0 Reconst 0.0	PP TYPE. HOR-75 MC TYPE HCC-40, HSH-80, HSL-200 PP TYPE HSL20-70 MC TYPE HCC-125 MC TYPE: HSH-30 PP TYPE: HSL24-50 MC TYPE HSH-65
District Totals	Long Creek, 1993		Acres: 10,877.0 MMBF: 56.2	Const: 18.0 Reconst: 32.0	
District: Prairie City Watershed. MFJD 3402 Dry	T12S,R35E,S35,36 T12S,R35 1/2E,S28,33 T13S,R35E,S1,2 T13S,R35 1/2E,S3,4	1	Acres 400.0 MMBF 3.0	Const 1.0 Reconst. 4.0	MC TYPE HOR-50, HCC-200, HSH-150

TIMBER ACTIVITY SCHEDULE
FY 1993

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
3407 Bridge	T12S,R35E,S3-5,7-10,15-17	1	Acres 733 0 MMBF 6 6	Const 1.0 Reconst 5 0	MC TYPE HOR-150, HCC-275, HSH-200, LP TYPE HCC-108 PP TYPE HSL24-35 MC TYPE HSL-35 LP TYPE HCC-12
	T12S,R35E,S3-5,7-10,15-17	14	Acres 70 0 MMBF 0 2	Const 0 0 Reconst 0 0	
	T12S,R35E,S3-5,7-10,15-17	3B	Acres 12 0 MMBF 0 2	Const 0 0 Reconst 0 0	
3409 Ship	T12S,R35E,S12,13	1	Acres 980.0 MMBF 8 5	Const 2 0 Reconst 6 0	MC TYPE HCC-675, HSH-305 MC TYPE HSL-115 MC TYPE HSL-10
	T12S,R35 1/2E,S9,15,16,21, 22,26,28,33-35	14	Acres 115.0 MMBF 1 0	Const 0 0 Reconst 0 0	
	T13S,R35 1/2E,S1-3	14	Acres 115.0 MMBF 1 0	Const 0 0 Reconst 0 0	
	T12S,R35 1/2E,S9,15,16,21, 22,26,28,33-35	3B	Acres 10 0 MMBF 0 5	Const 0 0 Reconst 0 0	
Watershed MLHR 3404 French	T16S,R34E,S17-19,30,31	1	Acres 515 0 MMBF 1 9	Const 0 0 Reconst 0 0	MC TYPE HTH-475 LP TYPE HCC-40 MC TYPE HSL-18
	T16S,R34E,S17-19,30,31	3A	Acres 18 0 MMBF 0 1	Const 0 0 Reconst 0 0	
3406 Tureman	T16S,R33 1/2E,S19,20,28-33	1	Acres 1,125 0 MMBF 7 9	Const 5 0 Reconst 8 0	MC TYPE HTH-100, HOR-305; HCC-240, HSH-380, LP TYPE HCC-100 MC TYPE HSL-50 LP TYPE HCC-10
	T17S,R33 1/2E,S3-5,8-11, 14-16,22,23	3A	Acres 60 0 MMBF 0 2	Const 0 0 Reconst 0 0	
Watershed NFMR 3403 Halfway	T15S,R35E,S25,26,35,36	1	Acres 1,590 0 MMBF 6 9	Const 2 9 Reconst 4 6	MC TYPE HTH-460; HOR-300, HCC-130, HSH-500, LP TYPE HCC-200 PP TYPE HSL24-50 MC TYPE HSL-50
	T16S,R35E,S4-8 T16S,R34E,S1 T15S,R35E,S25,26,35,36 T16S,R35E,S4-8 T16S,R34E,S1	14	Acres 100 0 MMBF 0 5	Const 0 0 Reconst 0 0	
3405 Anderson	T15S,R36E,S19-23,26-34	1	Acres 670 0 MMBF 5 5	Const 3 5 Reconst 7 3	PP TYPE HSH-200 MC TYPE HTH-50, HOR-260, HCC-160 MC TYPE HSL-75
	T16S,R36E,S4-6 T15S,R36E,S19-23,26-34 T16S,R36E,S4-6	3A	Acres 75 0 MMBF 0 5	Const 0 0 Reconst 0 0	
Watershed UPJD 3401 Over	T14S,R33E,S14,13,23,24,19,15	14	Acres 260 0 MMBF 2 4	Const 3 0 Reconst 4 0	PP TYPE HTH-70 MC TYPE HCC-190 MC TYPE HSH-10
	T14S,R33E,S14,13,23,24,19,15	3B	Acres 10 0 MMBF 0 1	Const 0 0 Reconst 0 0	
3408 Pogue	T13S,R35E,S31-36	1	Acres 725 0 MMBF 2 5	Const 5 0 Reconst 8 0	MC TYPE HOR-150, HCC-575 LP TYPE MC TYPE HSL-100
	T14S,R35E,S1-4,9-16 T14S,R35 1/2E,S5,6 T13S,R35E,S31-36 T14S,R35E,S1-4,9-16 T14S,R35 1/2E,S5,6	14	Acres 100 0 MMBF 0 5	Const 0 0 Reconst 0 0	

**TIMBER ACTIVITY SCHEDULE
FY 1994**

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
3410 Small Sales	T13S,R32-36E,S1-36 T14S,R32-36E,S1-36 T15S,R32-36E,S1-36 T16S,R32-36E,S1-36	1	Acres: 160.0 MMBF: 4.0	Const: 0.0 Reconst: 0.0	PP TYPE: HSL24-20 MC TYPE: HSH-40 LP TYPE: HCC-100
	T13S,R32-36E,S1-36 T14S,R32-36E,S1-36 T15S,R32-36E,S1-36 T16S,R32-36E,S1-36	14	Acres: 110.0 MMBF: 1.0	Const: 0.0 Reconst: 0.0	PP TYPE: HTH-50 MC TYPE: HTH-30; HCC-30
	T13S,R32-36E,S1-36 T14S,R32-36E,S1-36 T15S,R32-36E,S1-36 T16S,R32-36E,S1-36	13	Acres: 100.0 MMBF: 1.0	Const: 0.0 Reconst: 0.0	MC TYPE: HOR-100
District Totals	Prairie City, 1993		Acres: 7,938.0 MMBF: 55.0	Const: 23.4 Reconst: 46.9	
1993 Yearly Totals:			Acres: 32,829.0 MMBF: 203.8	Const: 70.0 Reconst: 137.0	

TEN-YEAR TIMBER SALE SCHEDULE, FISCAL YEAR: 1994

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol. in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
District: Bear Valley Watershed: MLHR 4105 Blowfly II	T16S,R33E,S14,15,21-24,27, 28,33,34 T17S,R33E,S2-4,9,10	1	Acres: 200.0 MMBF: 1.3	Const: 0.0 Reconst: 0.0	PP TYPE: HSL20-30 MC TYPE: HOR-120; HCC-30; HSH-20,
Watershed: SFJD 4102 Rosebud II	T16S,R27E,S25 T16S,R28E,S29-36 T17S,R27E,S1,12 T17S,R28E,S1-8	1	Acres: 460.0 MMBF: 3.0	Const: 0.5 Reconst: 1.0	PP TYPE: HTH-30; HOR-30; HSH-100; HSL20-70; HSL24-30 MC TYPE: HOR-100; HCC-50; HSH-20; HSL-30 PP TYPE: HSL24-10
		3B 4A	Acres: 10.0 MMBF: 0.0 Acres: 170.0 MMBF: 0.6	Const: 0.0 Reconst: 0.5 Const: 0.5 Reconst: 1.0	PP TYPE: HTH-30; HSL20-40; HSL24-50 MC TYPE: HSL-50
4103 Smoky II	T17S,R28E,S25 T17S,R29E,S19-21,27-33 T18S,R29E,S1 T18S,R29E,S6	1	Acres: 500.0 MMBF: 3.0	Const: 1.0 Reconst: 2.0	PP TYPE: HTH-40; HOR-110; HSH-50; HSL20-70; HSL24-30 MC TYPE: HTH-40; HOR-90; HCC-25; HSH-20, HSL-25
		4A	Acres: 265.0 MMBF: 1.0	Const: 1.0 Reconst: 1.0	PP TYPE: HTH-25; HOR-50; HSH-15; HSL20-40; HSL24-40 MC TYPE: HOR-20; HCC-15; HSH-30; HSL-30
		3B	Acres: 10.0 MMBF: 0.0	Const: 0.0 Reconst: 0.0	MC TYPE: HSL-10
4106 Todd	T14S,R27E,S10-15,22-27 T14S,R28E,S16-22,28-33 T15S,R27E,S1 T15S,R28E,S3-6,9,10	20A	Acres: 1,950.0 MMBF: 15.0	Const: 11.0 Reconst: 3.0	PP TYPE: HTH-100; HOR-400; HSH-50, HSL20-250; HSL24-300 MC TYPE: HOR-400; HCC-50; HSH-50; HSL-350
		3B 13	Acres: 50.0 MMBF: 0.1 Acres: 80.0 MMBF: 0.5	Const: 0.5 Reconst: 0.5 Const: 0.5 Reconst: 0.0	PP TYPE: HSL24-10 MC TYPE: HSL-40 PP TYPE: HSL24-40 MC TYPE: HSL-40

TIMBER ACTIVITY SCHEDULE
FY 1994

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
Watershed SILV 4104 Zapata II	T18S,R29E,S1,12,13,24 T18S,R30E,S4-9,15-19,21,22	1 3A 13	Acres. 1,100 0 MMBF 6 9 Acres. 15.0 MMBF 0 0 Acres 40 0 MMBF 0.2	Const. 1 0 Reconst 9 5 Const 0.0 Reconst 0 5 Const 0 0 Reconst 0 0	PP TYPE HTH-50, HOR-150; HSH-50, HSL20-150, HSL24-50 MC TYPE HTH-30, HOR-300, HCC-70, HSH-100, HSL-150 MC TYPE HSL-15 MC TYPE HSL-40
4105 Blowfly II	T16S,R33E,S14,15,21-24,27, 28,33,34 T17S,R33E,S2-4,9,10	1 14 13	Acres. 600 0 MMBF. 4.0 Acres 150.0 MMBF 0 6 Acres 40 0 MMBF 0 2	Const. 1 0 Reconst 10 0 Const 0 0 Reconst 0 0 Const 0 0 Reconst 0 0	PP TYPE HOR-80, HSH-30, HSL20-60, HSL24-20 MC TYPE HOR-270, HCC-40, HSH-50, HSL-50 PP TYPE HSL20-25; HSL24-25 MC TYPE HSL-100 MC TYPE HSL-40
4107 Windfall III	T15S,R30E,S12,13,24,25,26 T15S,R31E,S7,8,17-20,29,30	1 14 3A	Acres. 500 0 MMBF 3 2 Acres 240 0 MMBF 0 7 Acres 10 0 MMBF 0 0	Const 0 0 Reconst. 1 8 Const 0 0 Reconst. 1 8 Const 0 0 Reconst 0 0	PP TYPE HTH-30; HOR-50, HSH-20, HSL20-40, HSL24-10 MC TYPE HTH-20, HOR-180; HCC-50, HSH-50, HSL-50 PP TYPE HTH-130, HSL20-15; HSL24-15 MC TYPE HTH-20; HOR-20, HSL-40 MC TYPE HSL-10
Watershed UPJD 4101 Sloan II	T15S,R31E,S24-26,36 T15S,R32E,S28-33 T16S,R32E,S4-6	1 14 4A	Acres. 150 0 MMBF. 1 1 Acres 100 0 MMBF 0 4 Acres 385 0 MMBF 2 3	Const 0.0 Reconst 2 0 Const 0 0 Reconst 0 0 Const 1 0 Reconst 1 0	PP TYPE HOR-30, HSL20-20 MC TYPE HOR-70; HCC-30 PP TYPE HSL24-50 MC TYPE HSL-50 PP TYPE HTH-30, HOR-50, HSH-30, HSL20-35, HSL24-30 MC TYPE HOR-140; HCC-30, HSH-20, HSL-20
4108 Small Sales		1	Acres 0 0 MMBF. 1 0	Const 0 0 Reconst 0 0	
4109 Misc Products		1	Acres: 0 0 MMBF 2 5	Const. 0 0 Reconst 0 0	
District Totals	Bear Valley , 1994		Acres: 7,025.0 MMBF: 47 6	Const: 18.0 Reconst 35.6	
District: Burns Watershed MLHR 4202 Blade	T19,R32,S13,23-26,35-36 T19,R33,S17-20,29-32 T20,R32,S1-2,11,12 T20,R33,S4-9	1	Acres 1,051 0 MMBF. 6 5	Const 4 4 Reconst. 10 2	PP TYPE HTH-400, HSH-136; HSL20-105, HSL24-104 MC TYPE HTH-49; HOR-166, HCC-32, HSH-59
4203 Glass	T17,R33,S11-14,23-25 T17,R33 1/2,S6-8,16-21,29,30	1 3A	Acres 1,910 0 MMBF 16 1 Acres 31 0 MMBF. 0 1	Const 5 5 Reconst 7.0 Const 0 0 Reconst 0 0	PP TYPE HTH-430, HSH-164, HSL20-148, HSL24-148 MC TYPE HTH-170, HOR-580, HCC-165, HSH-105 PP TYPE HSL24-31
4204 Beaverdam	T18,R32,S13-15,22-27,34,35 T18,R33,S18-20,29,30	1	Acres 731 0 MMBF 5 1	Const 1 0 Reconst 3 5	PP TYPE HTH-324; HSH-111, HSL20-63, HSL24-63 MC TYPE HTH-29, HOR-97, HCC-10, HSH-34,

**TIMBER ACTIVITY SCHEDULE
FY 1994**

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol. in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
Watershed. SILV 4201 Coffeepot	T20,R32,S34 T21,R32,S9-12,14 T21,R32 1/2,S18,19 T21,R32,S13-15,23,24	1 4A 3A	Acres: 580.0 MMBF 2.8 Acres 610.0 MMBF 3.0 Acres 50.0 MMBF. 0.1	Const: 0.0 Reconst. 3.0 Const: 0.0 Reconst 0.0 Const: 0.0 Reconst 0.0	PP TYPE: HTH-235, HSH-48, HSL20-197 MC TYPE: HSH-100 PP TYPE: HTH-450; HSH-60 MC TYPE: HSH-100 PP TYPE: HSL24-50
4205 Quartz	T19,R28,S27,28,33-36 T19,R29,S31,32 T20,R28,S1-3 T20,R29,S5,6 T19,R28,S25-27,35,36 T19,R29,S30-32 T20,R28,S1,2,12	1 14	Acres. 964.0 MMBF 4.0 Acres: 660.0 MMBF 1.8	Const. 1.0 Reconst: 3.0 Const 0.0 Reconst 0.0	PP TYPE: HTH-280; HSH-69; HSL20-190, HSL24-197 MC TYPE: HTH-180; HCC-31, HSH-17, PP TYPE: HSL24-495 MC TYPE: HSL-165
4206 Prater	T21,R31,S12 T21,R32,S5-9,15-23	4A 3A 13	Acres. 410.0 MMBF 0.7 Acres 50.0 MMBF. 0.1 Acres. 346.0 MMBF. 0.7	Const 0.0 Reconst 0.3 Const 0.0 Reconst. 0.3 Const: 0.0 Reconst. 0.4	PP TYPE: HTH-350 MC TYPE: HSH-60 PP TYPE: HSL24-50 PP TYPE: HOR-346
Watershed. Varies 4207 Misc Sales		1	Acres. 450.0 MMBF 1.6	Const 0.0 Reconst 0.0	PP TYPE: HSL20-450
4208 Misc Products		1	Acres: 0.0 MMBF: 2.5	Const 0.0 Reconst. 0.0	
District Totals	Burns , 1994		Acres: 7,843.0 MMBF: 45.0	Const: 11.9 Reconst: 27.7	
District: Long Creek Watershed: MFJD 4301 Balou	T10S,R35E,S17-21,28-32	1 3A	Acres: 700.0 MMBF. 5.0 Acres. 50.0 MMBF: 0.0	Const: 2.0 Reconst 5.0 Const. 0.0 Reconst: 0.0	PP TYPE: HSH-100 MC TYPE: HCC-100, HSH-200, HSL-300 MC TYPE: HSL-50
4302 Squaw	T10S,R35E,S33-36 T11S,R35E,S1-4	1 14 3A	Acres: 580.0 MMBF 3.0 Acres 180.0 MMBF 1.0 Acres. 50.0 MMBF: 0.0	Const: 3.0 Reconst 5.0 Const: 1.0 Reconst 3.0 Const 0.0 Reconst 0.0	PP TYPE: HSH-80 MC TYPE: HCC-100, HSH-200; HSL-200 MC TYPE: HCC-80, HSH-100, MC TYPE: HSL-50
4307 Dix	T11S,R33E,S1,11-13 T11S,R34E,S5-8,17-20	1 14	Acres 532.0 MMBF: 3.0 Acres. 479.0 MMBF: 2.0	Const 2.0 Reconst. 2.0 Const: 0.0 Reconst. 3.0	PP TYPE: HSH-50, HSL24-50 MC TYPE: HCC-82; HSH-150, HSL-200 PP TYPE: HSH-100 MC TYPE: HCC-100; HSH-79; HSL-200
4308 Taylor	T11S,R35E,S1,11-15,22-24 T11S,R35 1/2E,S4	1 4A 14 3B	Acres. 400.0 MMBF: 2.0 Acres. 450.0 MMBF: 1.0 Acres 150.0 MMBF. 1.0 Acres: 60.0 MMBF 0.0	Const 2.0 Reconst 4.0 Const: 1.0 Reconst. 1.0 Const 0.0 Reconst 0.0 Const 0.0 Reconst: 0.0	PP TYPE: HSH-50; HSL24-50 MC TYPE: HCC-100, HSH-100; HSL-100 PP TYPE: HSH-50 MC TYPE: HCC-200, HSH-200; PP TYPE: HSH-50 MC TYPE: HSH-100 PP TYPE: HSL20-10 MC TYPE: HSL-50
4310 Craw	T11S,R35 1/2E,S1-4,9-12	1	Acres 850.0 MMBF. 5.0	Const: 2.0 Reconst 3.0	PP TYPE: HOR-50 MC TYPE: HTH-100; HCC-200, HSH-300; HSL-200

TIMBER ACTIVITY SCHEDULE
FY 1994

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
4311 Zip	T11S,R31E,S23-27	1	Acres 300 0 MMBF 3 0	Const 4 0 Reconst 0 0	MC TYPE. HCC-100; HSH-200;
Watershed UPJD 4303 Mine	T11S,R29E,S33-35 T12S,R29S,S1-3,11,12 T12S,R30E,S6	1 4A 14	Acres 560 0 MMBF 3 5 Acres 100 0 MMBF. 0.5 Acres 200.0 MMBF. 1.0	Const. 2 0 Reconst. 3 0 Const. 0.0 Reconst 0 0 Const. 0.0 Reconst. 0 0	PP TYPE HSH-80 MC TYPE. HCC-80, HSH-200, HSL-200 PP TYPE HTH-100 MC TYPE HCC-40, HSH-80, HSL-80
4305 Wolf	T12S,R29E,S13,24 T12S,R30E,S4-9,16,18-21,28-30	1 4A 14 3A	Acres. 450.0 MMBF. 4 0 Acres. 200.0 MMBF: 1.0 Acres. 150 0 MMBF 1 0 Acres 50 0 MMBF 0 0	Const. 2 0 Reconst 2 0 Const 0 0 Reconst. 1 0 Const 0 0 Reconst. 0 0 Const 0 0 Reconst. 0 0	PP TYPE. HTH-100 MC TYPE HCC-100, HSH-250, MC TYPE. HCC-100, HSL-100 PP TYPE HSL24-50 MC TYPE HSH-50; HSL-50 MC TYPE. HSL-50
4309 Pot	T12S,R32E,S1,3-5,8-11,14-24	1 4A 14 13	Acres 200 0 MMBF 2 0 Acres 200 0 MMBF 2 0 Acres. 50 0 MMBF 1.0 Acres 300 0 MMBF 1 0	Const 1 0 Reconst 1 0 Const. 0 0 Reconst 1 0 Const 0 0 Reconst 0 0 Const 0 0 Reconst 0 0	MC TYPE HCC-50, HSH-100; HSL-50 MC TYPE HCC-50, HSH-100, HSL-50 MC TYPE HSL-50 PP TYPE HOR-100 MC TYPE HOR-200
4311 Zip	T12S,R31E,S1-4 T11S,R31E,S25-28,33-36	1 3A	Acres 500 0 MMBF 5 0 Acres 25 0 MMBF 0 0	Const. 4 0 Reconst 1 0 Const 0 0 Reconst 0 0	PP TYPE HOR-100, HSH-100 MC TYPE. HCC-100, HSH-200, MC TYPE HCC-25
Watershed. VARIED 4312 Small Sales			Acres 0 0 MMBF 7 5	Const 0 0 Reconst 0 0	
District Totals	Long Creek , 1994		Acres: 7,766.0 MMBF: 55.6	Const: 26.0 Reconst: 35.0	
District: Prairie City Watershed MLHR 4402 Leopard	T17S,R34E,S10-15,23-26,36 T17S,R35E,S19,20,30-32	1	Acres 1,515 0 MMBF. 12 2	Const 5 0 Reconst 10 0	PP TYPE HSL24-100 MC TYPE. HTH-450; HOR-570, HCC-80, HSH-240, LP TYPE. HCC-75
4404 Corral	T15S,R35E,S9-27,34-36,30,31 T16S,R34E,S4-9,17,18 T16S,R33 1/2E,S1,2 T15S,R35E,S9-27,34-36,30,31 T16S,R34E,S4-9,17,18 T16S,R33 1/2E,S1,2	14 3A	Acres. 1,815 0 MMBF. 8 7 Acres 100 0 MMBF 0 3	Const 3 0 Reconst 1 0 Const 0 0 Reconst. 0 0	PP TYPE HTH-120, HSL24-270 MC TYPE HTH-400; HOR-300, HCC-125, HSH-475; LP TYPE. HCC-125 PP TYPE. HTH-50, HSL24-50
4406 Small Sales	T14s,R34-36E,S1-36 T15S,R34-36E,S1-36 T16S,R34-36E,S1-36 T17S,R34-36E,S1-36	1	Acres. 510 0 MMBF 6 0	Const. 0 0 Reconst 0 0	PP TYPE HSL24-100 MC TYPE HTH-100, HOR-25; HCC-160, HSH-25, LP TYPE HCC-100

**TIMBER ACTIVITY SCHEDULE
FY 1995**

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
Watershed NFMR 4401 Phone/Stink	T15S,R35 1/2E,S14,23-26,36 T16S,R35E,S1,2,11-14,23,24	1	Acres. 1,580.0 MMBF 10.5	Const 4.5 Reconst 7.1	PP TYPE HTH-100 MC TYPE HTH-100, HOR-650; HCC-230; HSH-500, PP TYPE HSL24-80 PP TYPE: HOR-50 MC TYPE: HOR-100
	T15S,R35 1/2E,S14,23-26,36 T16S,R35E,S1,2,11-14,23,24	14	Acres 80.0 MMBF 0.5	Const. 0.0 Reconst 0.0	
	T15S,R35 1/2E,S14,23-26,36 T16S,R35E,S1,2,11-14,23,24	13	Acres 150.0 MMBF 1.0	Const. 0.0 Reconst 0.0	
4403 Wine	T16S,R35E,S9-11,14-16, 19-23,27-30	1	Acres: 1,415.0 MMBF: 8.0	Const 2.0 Reconst 5.0	PP TYPE HTH-100; HOR-550; HSH-60 MC TYPE. HOR-250; HCC-260; HSH-120, HSL-50 LP TYPE HCC-25 PP TYPE. HSL24-100 MC TYPE HSH-25 PP TYPE HTH-100 MC TYPE. HSL-50
	T16S,R35E,S9-11,14-16, 19-23,27-30	14	Acres: 125.0 MMBF 0.5	Const: 0.0 Reconst 0.0	
	T16S,R35E,S9-11,14-16, 19-23,27-30	4A	Acres. 150.0 MMBF: 0.3	Const 0.0 Reconst. 0.0	
	T16S,R35E,S9-11,14-16, 19-23,27-30	3A	Acres 0.0 MMBF: 0.2	Const 0.0 Reconst. 0.0	
4405 Nofo	T15S,R35 1/2E,S26-28,33-35 T16S,R35E,S2-4,9-11	1	Acres. 710.0 MMBF 5.0	Const 1.0 Reconst 5.0	PP TYPE HOR-120 MC TYPE HTH-200, HOR-390 PP TYPE HSL24-50 LP TYPE HCC-50 MC TYPE HOR-100
	T15S,R35 1/2E,S26-28,33-35 T16S,R35E,S2-4,9-11	14	Acres 100.0 MMBF 0.2	Const 0.0 Reconst 0.0	
	T15S,R35 1/2E,S26-28,33-35 T16S,R35E,S2-4,9-11	13	Acres. 100.0 MMBF 0.8	Const. 0.0 Reconst 0.0	
Watershed. UPJD 4406 Small Sales	T12s,R32-36E,S1-36 T13S,R32-36E,S1-36 T14S,R32-36E,S1-36 T15S,R32-36E,S1-36	14	Acres 160.0 MMBF: 0.8	Const 0.0 Reconst. 0.0	PP TYPE HOR-50; HSL24-60 MC TYPE HSH-50
District Totals	Prairie City , 1994		Acres: 8,510.0 MMBF: 55.0	Const: 15.5 Reconst 28.1	
1994 Yearly Totals:			Acres: 31,144.0 MMBF: 203.2	Const: 71.4 Reconst: 126.4	

TEN-YEAR TIMBER SALE SCHEDULE, FISCAL YEAR: 1995

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
District Bear Valley Watershed SFJD 5101 Oregon II	T15S,R28E,S1-3,10-15,24	1	Acres 735.0	Const 0.0	PP TYPE HTH-10, HOR-150; HSH-25; HSL20-50 MC TYPE HTH-20, HOR-350; HCC-80; HSH-25; HSL-25 MC TYPE HSL-10 PP TYPE HSL20-25, HSL24-20 MC TYPE HSL-25
	T15S,R29E,S6,7,18,19		MMBF 5.3	Reconst. 2.0	
	T14S,R29E,S31	3B	Acres 10.0 MMBF 0.0	Const 0.0 Reconst 0.5	
		4A	Acres 70.0 MMBF 0.3	Const. 0.0 Reconst 0.5	
5102 Roba	T16S,R28E,S1,11-14,24,25	1	Acres 885.0	Const 0.5	PP TYPE HTH-20, HOR-150; HSH-80; HSL20-120, HSL24-30 MC TYPE HOR-400, HCC-50; HSL-35 MC TYPE HSL-20 PP TYPE: HSL24-10 MC TYPE: HSL-30
	T16S,R29E,S5-8,18,19	3B	MMBF 6.0 Acres 20.0 MMBF 0.0	Reconst. 1.5 Const 0.0	
		13	Acres 40.0 MMBF: 0.1	Reconst 0.5 Const 0.0	

TIMBER ACTIVITY SCHEDULE
FY 1995

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
5108 Beaverdam II	T15S,R28E,S14,15,22-26,35,36 T15S,R29E,S31 T16S,R28E,S1,11,12 T16S,R29E,S5,6	1	Acres 710.0 MMBF 4.9	Const 0.5 Reconst 1.0	PP TYPE HTH-10, HOR-145, HSH-50, HSL20-40, HSL24-20 MC TYPE HTH-20, HOR-325; HCC-75; HSL-25 MC TYPE HSL-10 PP TYPE HSL24-10 MC TYPE HSL-30
		3B	Acres 10.0 MMBF 0.0	Const 0.0 Reconst 0.0	
		13	Acres 40.0 MMBF 0.2	Const 0.0 Reconst 0.0	
5109 Small Sales		1	Acres 0.0 MMBF 1.5	Const 0.0 Reconst 0.0	
5110 Misc Products		1	Acres 0.0 MMBF 3.5	Const 0.0 Reconst 0.0	
		4A	Acres 0.0 MMBF 0.3	Const 0.0 Reconst 0.0	
Watershed SILV 5104 C-C	T15S,R33E,S31-33 T16S,R32E,S1,12 T16S,R33E,S3-9,16-18	1	Acres 255.0 MMBF 1.6	Const 0.5 Reconst 2.0	PP TYPE HTH-15; HOR-50, HSL20-25 MC TYPE HTH-15, HOR-110, HSH-25, HSL-15 PP TYPE HOR-50, HSL20-25, HSL24-25 MC TYPE HOR-75, HSL-75 MC TYPE HSL-5 MC TYPE HSL-20
		14	Acres 250.0 MMBF 1.3	Const 0.0 Reconst 0.5	
		3A	Acres 5.0 MMBF 0.0	Const 0.0 Reconst 0.5	
		13	Acres 20.0 MMBF 0.1	Const 0.0 Reconst 0.0	
5105 Pearson II	T15S,R31E,S20,21,25-36 T16S,R31E,S1-4,11 T16S,R32E,S6	1	Acres 640.0 MMBF 4.3	Const 0.5 Reconst 0.0	PP TYPE HTH-30, HOR-50, HSH-30, HSL20-40, HSL24-10 MC TYPE HTH-10, HOR-250, HCC-130, HSH-50, HSL-40 PP TYPE HTH-200, HSL24-25 MC TYPE HTH-50, HOR-25, HSL-50 MC TYPE HSL-40
		14	Acres 350.0 MMBF 0.9	Const 0.0 Reconst 2.0	
		13	Acres 40.0 MMBF 0.2	Const 0.0 Reconst 0.0	
5106 Burnt II	T17S,R30E,S15-17,19-23, 26-29,32-35 T18S,R30E,S3-5	1	Acres 1,030.0 MMBF 6.8	Const 0.0 Reconst 0.5	PP TYPE HTH-25, HOR-150; HSH-50, HSL20-50, HSL24-50 MC TYPE HTH-25, HOR-500, HCC-60, HSH-75, HSL-45 MC TYPE HSL-10 MC TYPE HSL-40
		3A	Acres 10.0 MMBF 0.0	Const 0.0 Reconst 0.5	
		13	Acres 40.0 MMBF 0.2	Const 0.0 Reconst 0.0	
5107 96 III	T16S,R29E,S12-14,23,24 T16S,R30E,S7,8,17-20	1	Acres 540.0 MMBF 3.5	Const 0.0 Reconst 0.0	PP TYPE HTH-30, HOR-65, HSH-20, HSL20-50, HSL24-10 MC TYPE HTH-20, HOR-245; HCC-25, HSH-50, HSL-25 PP TYPE HSL24-20 MC TYPE HOR-40, HSL-40 MC TYPE HSL-10
		14	Acres 100.0 MMBF 0.5	Const 0.0 Reconst 0.0	
		3A	Acres 10.0 MMBF 0.0	Const 0.0 Reconst 0.0	
Watershed UPJD 5103 Chrome	T14S,R28E,S1-3,10-15,23,24	1	Acres 125.0 MMBF 0.9	Const 0.5 Reconst 1.0	PP TYPE HOR-25 MC TYPE HOR-75, HSL-25 PP TYPE HOR-50, HSL20-40; HSL24-40 MC TYPE HOR-50, HCC-25, HSH-30, HSL-30 MC TYPE HSL-10
		4A	Acres 265.0 MMBF 1.6	Const 0.5 Reconst 1.0	
		3B	Acres 10.0 MMBF 0.0	Const 0.0 Reconst 0.0	

**TIMBER ACTIVITY SCHEDULE
FY 1995**

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
5104 C-C	T15S,R33E,S31-33 T16S,R32E,S1,12 T16S,R33E,S3-9,16-18	1 14 3B 13	Acres: 390.0 MMBF: 3.0 Acres: 100.0 MMBF: 0.4 Acres: 5.0 MMBF: 0.0 Acres: 20.0 MMBF: 0.1	Const: 0.5 Reconst: 1.0 Const: 0.0 Reconst: 1.0 Const: 0.0 Reconst: 0.0 Const: 0.0 Reconst: 0.0	PP TYPE: HOR-70, HSL20-25 MC TYPE: HOR-200, HCC-45, HSH-50; PP TYPE: HSL24-30 MC TYPE: HOR-20; HSL-50 MC TYPE: HSL-5 MC TYPE: HSL-20
District Totals	Bear Valley , 1995		Acres: 6,725.0 MMBF: 47.6	Const: 3.5 Reconst: 16.0	
District: Burns Watershed: MLHR 5203 Tin Can	T18,R32,S25,34-36 T18,R33,S29,30,31,32 T19,R33,S5-8,16-21 T19,R32,S1-3,10-15,23,24 T18,R33,S32,33 T19,R33,S4-9,16,17	1 4A	Acres: 830.0 MMBF: 6.3 Acres: 80.0 MMBF: 0.4	Const: 3.2 Reconst: 3.1 Const: 0.0 Reconst: 0.0	PP TYPE: HTH-312; HSH-106; HSL20-56, HSL24-56 MC TYPE: HTH-48; HOR-163, HCC-31; HSH-58 PP TYPE: HTH-17; HSH-22; HSL24-41
Watershed: SFJD 5201 Spoon Crk	T18,R27,S23 T18,R27,S15,21,22,26,28	1 20B	Acres: 100.0 MMBF: 1.2 Acres: 1,464.0 MMBF: 11.4	Const: 0.0 Reconst: 5.0 Const: 10.0 Reconst: 0.0	MC TYPE: HSL-100 MC TYPE: HTH-50, HOR-1348; HSL-66
Watershed: SILV 5202 West Hay II	T19,R29,S20-29,32-35 T20,R29,S2-5,8-10	1	Acres: 1,304.0 MMBF: 5.9	Const: 0.0 Reconst: 4.3	PP TYPE: HTH-500, HSH-150, HSL20-327, HSL24-327
5204 Crystal Spr	T19,R28,S10,11,14,15, 21-23,25-27	1	Acres: 701.0 MMBF: 3.3	Const: 1.5 Reconst: 2.0	PP TYPE: HTH-230; HSH-45; HSL20-186 MC TYPE: HTH-180; HCC-42, HSH-18;
5205 Myrtle Park	T18,R30,S14,15,20-30,31-36 T19,R30,S2-4,10	1	Acres: 1,824.0 MMBF: 12.3	Const: 5.1 Reconst: 7.0	PP TYPE: HTH-320, HSH-200; HSL20-190; HSL24-240 MC TYPE: HTH-175, HCC-99, HSH-600,
Watershed: Varies 5206 Misc. Sales		1	Acres: 500.0 MMBF: 1.7	Const: 0.0 Reconst: 0.0	PP TYPE: HSL20-400; HSL24-100
5207 Misc Products		1	Acres: 0.0 MMBF: 2.5	Const: 0.0 Reconst: 0.0	
District Totals	Burns , 1995		Acres: 6,903.0 MMBF: 45.0	Const: 19.8 Reconst: 21.4	
District: Long Creek Watershed. MFJD 5302 Par	T10S,R33E,S27-35 T11S,R33E,S4-6,8,9	1 4A 14	Acres: 600.0 MMBF: 4.0 Acres: 600.0 MMBF: 2.0 Acres: 250.0 MMBF: 1.0	Const: 1.0 Reconst: 3.0 Const: 0.0 Reconst: 2.0 Const: 0.0 Reconst: 1.0	PP TYPE: HOR-50; HSH-50 MC TYPE: HCC-200; HSH-100, HSL-200 MC TYPE: HCC-200, HSH-200, HSL-200 PP TYPE: HSH-50; HSL24-50 MC TYPE: HSH-100, HSL-50
5303 Cougar	T10S,R32E,S35,36 T11S,R32E,S1,2,10-15,23-26	1 4A	Acres: 770.0 MMBF: 5.0 Acres: 495.0 MMBF: 3.0	Const: 2.5 Reconst: 1.0 Const: 1.0 Reconst: 3.0	PP TYPE: HTH-50, HSH-100, HSL20-50 MC TYPE: HCC-200; HSH-300; HSL-70 PP TYPE: HSH-75; HSL24-70 MC TYPE: HOR-50, HCC-100, HSH-200,

TIMBER ACTIVITY SCHEDULE
FY 1995

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol. in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
5306 Mod	T11S,R33E,S7,8,16-21,28-30	1 4A	Acres 650.0 MMBF 4.0 Acres 650.0 MMBF 3.0	Const 1.0 Reconst 3.0 Const 1.0 Reconst. 3.0	PP TYPE: HOR-50; HSH-100 MC TYPE: HCC-200; HSH-200; HSL-100 PP TYPE: HOR-50 MC TYPE: HCC-200; HSH-300; HSL-100
Watershed UPJD 5301 Swamp	T9S,R33E,S1K9-21,28-30,32,33	1	Acres 700.0 MMBF 5.0	Const. 4.0 Reconst 10.0	PP TYPE: HSH-50 MC TYPE: HTH-50, HCC-300, HSH-300,
5304 Hen	T13S,R30E,S10-16,21-23,26,27	1 3A 4A 14	Acres 430.0 MMBF 3.0 Acres. 40.0 MMBF 0.0 Acres. 400.0 MMBF 3.0 Acres 250.0 MMBF 1.0	Const 1.5 Reconst 3.0 Const 0.0 Reconst 0.0 Const 0.0 Reconst. 3.0 Const 0.0 Reconst. 0.0	PP TYPE: HSL24-30 MC TYPE: HCC-200, HSH-200, PP TYPE: HSL20-20 MC TYPE: HSH-20 PP TYPE: HTH-200 MC TYPE: HCC-200 PP TYPE: HSH-100, HSL24-50 MC TYPE: HCC-100
5305 Mire	T12S,R28E,S1-3,10-12 T12S,R29E,S6-9	1 4A	Acres 550.0 MMBF 4.0 Acres 500.0 MMBF 3.0	Const 1.5 Reconst 2.0 Const 0.0 Reconst 2.0	PP TYPE: HSH-50 MC TYPE: HOR-200, HCC-200, HSH-100, PP TYPE: HSH-50 MC TYPE: HOR-150, HCC-200, HSH-100,
5307 Hall	T11S,R32E,S34-36 T12S,R32E,S1-3,11-13 T12S,R33E,S4-6,10,17-19 30	1 4A 14	Acres 530.0 MMBF 4.5 Acres 200.0 MMBF 1.5 Acres. 50.0 MMBF 2.0	Const 2.0 Reconst 3.0 Const 0.0 Reconst 3.0 Const 0.0 Reconst 1.0	PP TYPE: HTH-100; HOR-30; HSL20-50 MC TYPE: HCC-100, HSH-200, HSL-50 PP TYPE: HTH-100 MC TYPE: HCC-100 MC TYPE: HSH-50
Watershed. VARIED 5308 Small Sales			Acres 0.0 MMBF 6.6	Const 0.0 Reconst 0.0	
District Totals	Long Creek , 1995		Acres: 7,665.0 MMBF: 55.6	Const: 15.5 Reconst: 43.0	
District: Prairie City Watershed MFJD 5405 Papoose	T11S,R35 1/2E,S28,33-36 T12S,R35 1/2E,S1-4,9-16, 21-27,34-36 T13S,R35 1/2E,S1,2 T11S,R35 1/2E,S28,33-36 T12S,R35 1/2E,S1-4,9-16, 21-27,34-36 T13S,R35 1/2E,S1,2	1 14	Acres. 650.0 MMBF: 5.0 Acres 30.0 MMBF 1.0	Const 1.0 Reconst 6.0 Const 0.0 Reconst 0.0	MC TYPE: HTH-300, HCC-200, HSH-80, LP TYPE: HCC-70 PP TYPE: HSL24-30
5406 Quail	T11S,R35E,S33,34 T12S,R35E,S3,4,9-11,14-16, 20-28,33-36 T13S,R35E,S1-4,10-13 T13S,R35 1/2E,S4,9,16	1	Acres 640.0 MMBF 7.0	Const 3.0 Reconst 7.0	MC TYPE: HOR-100, HCC-200, HSH-140, LP TYPE: HCC-200
5408 Small Sales	T11S,R32-36E,S1-36 T12S,R32-36E,S1-36 T13S,R32-36E,S1-36 T11S,R32-36,S1-36 T12S,R32-36E,S1-36 T13S,R32-36E,S1-36	1 14	Acres. 0.0 MMBF 5.0 Acres 400.0 MMBF 0.5	Const 0.0 Reconst 0.0 Const 0.0 Reconst 0.0	MC TYPE: HCC-200 LP TYPE: HCC-200
Watershed. MLHR 5402 Hatfield	T15S,R34E,S17-21,28-34 T15S,R33E,S12,13,25 T16S,R33 1/2E,S2-5,8-11, 14-18,20-23	14	Acres 1,550.0 MMBF 8.0	Const 1.0 Reconst 7.2	PP TYPE: HTH-300, HSL24-50 MC TYPE: HTH-300; HOR-400; HCC-200; HSH-200 LP TYPE: HCC-100

**TIMBER ACTIVITY SCHEDULE
FY 1995**

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol. in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
5403 Conroy	T16S,R34E,S15-17,19-22,26-35 T17S,R34E,S2-8	1	Acres: 1,925.0 MMBF: 14.8	Const: 1.0 Reconst: 9.0	PP TYPE: HTH-200; HSL24-200 MC TYPE: HTH-400, HOR-500, HCC-200, HSH-325, LP TYPE: HCC-100 MC TYPE: HSL-100
	T17S,R33 1/2E,S1,12,13 T16S,R34E,S15-17,19-22,26-35 T17S,R34E,S2-8 T17S,R33 1/2E,S1,12,13	3A	Acres: 100.0 MMBF: 0.2	Const: 0.0 Reconst: 0.0	
5407 Dollar	T17S,R34E,S2-5,7-21,28,29	1	Acres: 1,070.0 MMBF: 3.3	Const: 1.0 Reconst: 2.8	PP TYPE: HTH-240; HSL24-100 MC TYPE: HTH-200, HOR-330; HSH-200, PP TYPE: HSL24-40
	T17S,R34E,S2-5,7-21,28,29	14	Acres: 40.0 MMBF: 0.2	Const: 0.0 Reconst: 0.0	
5408 Small Sales	T15S,R32-36E,S1-36 T16S,R32-36E,S1-36 T17S,R32-36E,S1-36 T18S,R32-36E,S1-36	1	Acres: 430.0 MMBF: 1.0	Const: 0.0 Reconst: 0.0	PP TYPE: HTH-25; HSL24-125 MC TYPE: HSH-100, HSL-100 LP TYPE: HCC-80
Watershed NFMF 5401 Katie	T16S,R36E,S15-23,26-34 T17S,R36E,S4-9,18,21	1	Acres: 620.0 MMBF: 3.5	Const: 2.1 Reconst: 3.1	PP TYPE: HTH-400; HCC-220 PP TYPE: HOR-100, HSH-40 PP TYPE: HOR-50 MC TYPE: HOR-50
	T16S,R36E,S15-23,26-34 T17S,R36E,S4-9,18,21	4A	Acres: 140.0 MMBF: 1.0	Const: 0.0 Reconst: 0.0	
	T16S,R36E,S15-23,26-34 T17S,R36E,S4-9,18,21	13	Acres: 100.0 MMBF: 0.5	Const: 0.0 Reconst: 0.0	
5404 Tears	T14S,R35E,S24-26,35,36 T15S,R35E,S1-3,10-15,23-25 T14S,R35 1/2E,S16,17,20, 21,28,29,32-34	1	Acres: 395.0 MMBF: 2.3	Const: 1.0 Reconst: 5.0	MC TYPE: HTH-50; HOR-100; HCC-125; LP TYPE: HCC-120 MC TYPE: HOR-50 MC TYPE: HSL-37
	T15S,R35 1/2E,S3-5,8-10, 14-17,20-23,26-29,33	13	Acres: 50.0 MMBF: 0.2	Const: 0.0 Reconst: 0.0	
	T14S,R35E,S24-26,35,36 T15S,R35E,S1-3,10-15,23-25 T14S,R35 1/2E,S16,17,20, 21,28,29,32-34				
	T15S,R35 1/2E,S3-5,8-10, 14-17,20-23,26-29,33	3A	Acres: 37.0 MMBF: 0.5	Const: 0.0 Reconst: 0.0	
	T14S,R35E,S24-26,35,36 T15S,R35E,S1-3,10-15,23-25 T14S,R35 1/2E,S16,17,20, 21,28,29,32-34				
	T15S,R35 1/2E,S3-5,8-10, 14-17,20-23,26-29,33				
5408 Small Sales	T14S,R32-36E,S1-36 T15S,R32-36E,S1-36 T16S,R32-36E,S1-36 T17S,R32-36,S1-36	1	Acres: 200.0 MMBF: 0.5	Const: 0.0 Reconst: 0.0	LP TYPE: HCC-200 PP TYPE: HSL24-50 LP TYPE: HCC-25
	T14S,R32-36E,S1-36 T15S,R32-36E,S1-36 T16S,R32-36E,S1-36 T17S,R32-36,S1-36	14	Acres: 75.0 MMBF: 0.5	Const: 0.0 Reconst: 0.0	
District Totals	Prairie City, 1995		Acres: 8,452.0 MMBF: 55.0	Const: 10.1 Reconst: 40.1	
1995 Yearly Totals:			Acres: 29,645.0 MMBF: 203.2	Const: 48.9 Recon: 120.5	

TEN-YEAR TIMBER SALE SCHEDULE, FISCAL YEAR 1996

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
District: Bear Valley Watershed: MLHR 6109 Tony III	T16S,R33E,S22,23,26,27,34-36 T17S,R33E,S1-3,10,11	1	Acres 200 0 MMBF 1 2	Const 0 0 Reconst 0 0	PP TYPE HSL20-25 MC TYPE HTH-75, HOR-25, HCC-25, HSH-25 LP TYPE HCC-25
Watershed: SFJD 6102 Bunton III	T16S,R28E,S25,26 T17S,R28E,S1 T16S,R29E,S29-31	1 14 3B	Acres 390 0 MMBF 2 6 Acres 75 0 MMBF 0 3 Acres 5 0 MMBF 0 0	Const 0 0 Reconst 1 0 Const 0 0 Reconst 0 0 Const 0 0 Reconst 0 0	PP TYPE HTH-30, HOR-25, HSH-25; HSL20-25 MC TYPE HTH-20, HOR-200, HCC-40; HSL-25 PP TYPE HSL24-25 MC TYPE HOR-20, HSL-30 MC TYPE HSL-5
6104 Thorn II	T14S,R28E,S21,22,26-28,34,35 T15S,R28E,S2,3,10	1 3B 13	Acres 695 0 MMBF 4 8 Acres 15 0 MMBF 0 0 Acres 40 0 MMBF 0 2	Const 1 0 Reconst 1 0 Const 0 0 Reconst 0 5 Const 0 0 Reconst 0 0	PP TYPE HOR-150, HSH-25, HSL20-50; HSL24-25 MC TYPE HOR-375, HCC-25, HSH-25, HSL-20 MC TYPE HSL-15 MC TYPE HSL-40
6105 Corral II	T16S,R28E,S9,10,15,16,21, 22,27-29,32,33	1 3B	Acres 650 0 MMBF 4 5 Acres 10 0 MMBF 0 0	Const 0 0 Reconst 1 5 Const 0 0 Reconst 0 5	PP TYPE HOR-90, HSH-30, HSL20-60, HSL24-20 MC TYPE HTH-25, HOR-310, HCC-50, HSH-25, HSL-40 MC TYPE HSL-10
6106 Shake II	T15S,R27E,S26,27,34,35 T15S,R28E,S15,16,20-22,28-33 T16S,R27E,S1-3,10,11 T16S,R28E,S4-9	1 3B 4A 13	Acres 190 0 MMBF 1 1 Acres 20 0 MMBF 0 0 Acres 620 0 MMBF 3 2 Acres 40 0 MMBF 0 1	Const 0 0 Reconst 0 5 Const 0 0 Reconst 0 5 Const 0 0 Reconst 1 0 Const 0 0 Reconst 0 0	PP TYPE HOR-45, HSL20-25; HSL24-10 MC TYPE HTH-30, HOR-80 MC TYPE HSL-20 PP TYPE HTH-25, HOR-50, HSH-50, HSL20-100, HSL24-50 MC TYPE HOR-200, HCC-25, HSL-120 PP TYPE HSL24-20 MC TYPE HSL-20
Watershed: SILV 6107 Potholes III	T17S,R29E,S1-3,9-14	1	Acres 590 0 MMBF 3 8	Const 0 0 Reconst 1 0	PP TYPE HTH-20, HOR-100; HSH-25; HSL20-50, HSL24-25 MC TYPE HTH-20; HOR-250; HCC-25, HSH-50, HSL-25
6108 Cave III	T16S,R32E,S31-33 T17S,R32E,S3-10,15-18,21,22	1 14 3A 13	Acres 965 0 MMBF 6 2 Acres 125 0 MMBF 0 6 Acres 15 0 MMBF 0 0 Acres 40 0 MMBF 0 2	Const 0 0 Reconst 1 0 Const 0 0 Reconst 0 5 Const 0 0 Reconst 0 5 Const 0 0 Reconst 0 5	PP TYPE HTH-40; HOR-125; HSH-40, HSL20-60, HSL24-40 MC TYPE HTH-40, HOR-470, HCC-25, HSH-75, HSL-50 PP TYPE HOR-25, HSL20-25, HSL24-25 MC TYPE HOR-25, HSL-25 PP TYPE HSL24-5 MC TYPE HSL-10 PP TYPE HSL24-10 MC TYPE HSL-30
6109 Tony III	T16S,R33E,S22,23,26,27,34-36 T17S,R33E,S1-3,10,11	1	Acres 315 0 MMBF 2 0	Const 0 0 Reconst 1 0	PP TYPE HOR-50, HSH-25 MC TYPE HTH-30, HOR-115, HCC-20, HSH-50, LP TYPE HCC-25

TIMBER ACTIVITY SCHEDULE
FY 1996

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol. in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
6110 Small Sales		1 14	Acres 00 MMBF 1.3 Acres 00 MMBF 02	Const 00 Reconst 00 Const 00 Reconst 00	
6111 Misc Products		1 14	Acres 00 MMBF 24 Acres 00 MMBF 06	Const 00 Reconst 0.0 Const 00 Reconst 00	
Watershed UPJD 6101 Hancock III	T14S,R30E,S25-27,34-36 T15S,R30E,S1-3,10-12 T15S,R31E,S5-7	1 3B 13	Acres 845 0 MMBF 6 0 Acres 10 0 MMBF Acres 40.0 MMBF 02	Const 00 Reconst 2.0 Const 00 00 Reconst 0.0 Const 00 Reconst 0.0	PP TYPE HTH-50; HOR-150; HSL20-50, HSL24-20 MC TYPE HTH-20; HOR-400, HCC-60; HSH-50; HSL-45 MC TYPE HSL-10 MC TYPE HSL-40
6103 Wave III	T15S,R31E,S2-11,13-17, 21-24,26,27	1 14 4A 13 3B	Acres 405.0 MMBF 28 Acres 250 0 MMBF 10 Acres 365 0 MMBF 20 Acres 40 0 MMBF 02 Acres 10.0 MMBF 00	Const 00 Reconst 10 Const 00 Reconst 00 Const 00 Reconst 10 Const 00 Reconst 00 Const 00 Reconst 00	PP TYPE HTH-30, HOR-50, HSH-25, HSL20-25 MC TYPE HTH-20, HOR-190, HCC-25; HSH-25, HSL-15 PP TYPE HTH-25, HOR-50, HSL20-20; HSL24-55 MC TYPE HOR-25, HSL-75 PP TYPE HTH-50, HOR-65, HSL20-30, HSL24-35 MC TYPE HOR-80, HCC-20, HSH-25, HSL-60 MC TYPE HSL-40 MC TYPE HSL-10
District Totals	Bear Valley , 1996		Acres: 6,965.0 MMBF: 47.6	Const: 1.0 Reconst: 15.0	
District: Burns Watershed MLHR 6204 Wolf Creek	T17,R33,S25-27,34-36 T17,R34,S29-32 T18,R33,S1,2,12,13 T18,R34,S5-9,17,18	1 4A 3A	Acres 545 0 MMBF 53 Acres 115 0 MMBF 12 Acres 31 0 MMBF 01	Const 15 Reconst 0.0 Const 06 Reconst 00 Const 0.0 Reconst 00	PP TYPE HOR-135; HSL20-60 MC TYPE HCC-150, HSH-200 PP TYPE HSL20-90 MC TYPE HSH-25 PP TYPE HSL24-31
Watershed SFJD 6201 Bearcat		1 4A 13 3A	Acres 1,623 0 MMBF 13 6 Acres 274.0 MMBF 09 Acres 25 0 MMBF 01 Acres 45.0 MMBF 01	Const 00 Reconst 0.0 Const 00 Reconst 0.0 Const 00 Reconst 0.0 Const 00 Reconst 0.0	PP TYPE HOR-600, HSH-1023 PP TYPE HTH-187, HSH-87 PP TYPE HOR-25 PP TYPE HSL24-45
Watershed SILV 6202 Gribble	T18,R29,S13-15,17,21-28,34-36 T18,R30,S19-20,29-31 T19,R29,S1-3 T19,R30,S6	1	Acres 1,984 0 MMBF 13 6	Const 7.1 Reconst 7.8	PP TYPE HTH-480, HSH-100, HSL20-300, HSL24-300 MC TYPE HTH-330, HOR-300, HCC-94, HSH-80,

TIMBER ACTIVITY SCHEDULE
FY 1996

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
6203 Blue Foundation	T20,R28,S3-11,14-18	1 3A	Acres 920 0 MMBF 5 6 Acres 50 0 MMBF 0 1	Const 0 5 Reconst 0 0 Const 0 0 Reconst 0 0	PP TYPE HOR-420, HSL20-500 PP TYPE HSL24-50
Watershed Varies 6205 Misc Sales		1	Acres 475 0 MMBF 1 9	Const 0 0 Reconst 0 0	PP TYPE HSL20-475
6206 Misc Products		1	Acres 0 0 MMBF 2 5	Const 0 0 Reconst 0 0	
District Totals	Burns , 1996		Acres 6,087.0 MMBF: 45 0	Const 9 7 Reconst: 7 8	
District Long Creek Watershed MFJD 6301 Axe	T10S,R33E,S13,24,25 T10S,R34E,S7,8,17-19,30,31	1 4A 14	Acres 470 0 MMBF 3 5 Acres 420 0 MMBF 2 0 Acres 150 0 MMBF 2 0	Const 1 0 Reconst 2 0 Const 0 0 Reconst 2 0 Const 0 0 Reconst 1 0	PP TYPE HSH-50 MC TYPE HCC-100, HSH-300, HSL-20 PP TYPE HSL20-20 MC TYPE HCC-100, HSH-300 PP TYPE HSH-100, HSL24-50
6302 Weap	T10S,R34E,S35,36 T11S,R34E,S1-2,10-12	1 4A 14	Acres 475 0 MMBF 3 5 Acres 420 0 MMBF 3 5 Acres 260 0 MMBF 1 0	Const 1 0 Reconst 3 0 Const 1 0 Reconst 2 0 Const 0 0 Reconst 2 0	PP TYPE HSH-75 MC TYPE HCC-100, HSH-300 PP TYPE HSL20-20 MC TYPE HCC-100, HSH-300 PP TYPE HSH-50 MC TYPE HSH-200, HSL-10
6304 Eagle	T11S,R32E,S10,15,16,21, 22,25-28,34-36	1 14	Acres 810 0 MMBF 6 5 Acres 400 0 MMBF 2 5	Const 2 0 Reconst 2 5 Const 1 0 Reconst 2 0	PP TYPE HSH-80, HSL20-30 MC TYPE HCC-200, HSH-400, HSL-100 PP TYPE HSH-100, HSL20-50 MC TYPE HSH-200, HSL-50
6305 Big	T9S,R32E,S11-14,23,24 T9S,R33E,S7,15-20	1 4A	Acres 780 0 MMBF 5 0 Acres 610 0 MMBF 4 0	Const 2 0 Reconst 4 0 Const 2 0 Reconst 3 0	PP TYPE HOR-100, HSH-100, HSL24-50 MC TYPE HCC-200, HSH-300, HSL-30 PP TYPE HOR-50, HSL20-30 MC TYPE HOR-80, HCC-100, HSH-250; HSL-100
6306 Hunt	T10S,R34E,S26-28,32-35 T11S,R34E,S3-5,10	1	Acres 550 0 MMBF 3 5	Const 2 0 Reconst 2 0	PP TYPE HSH-100, HSL24-50 MC TYPE HCC-100; HSH-300
6306 Hunt		4A 14	Acres 600 0 MMBF 3 5 Acres 250 0 MMBF 1 5	Const 1 0 Reconst 1 0 Const 0 0 Reconst 1 0	PP TYPE HTH-200 MC TYPE HCC-100, HSH-200, HSL-100 PP TYPE HSL20-50 MC TYPE HSH-200
6307 Small Sales			Acres 0 0 MMBF 8 0	Const 0 0 Reconst 0 0	
Watershed UPJD 6303 Tam	T12S,R29E,S8-15,22	1 4A 14 3A	Acres 570 0 MMBF 3 0 Acres 550 0 MMBF 2 5 Acres 300 0 MMBF 1 5 Acres 100 0 MMBF 0 0	Const 2 0 Reconst 2 0 Const 1 0 Reconst 2 0 Const 0 0 Reconst 2 0 Const 0 0 Reconst 0 0	PP TYPE HOR-100, HSH-50, HSL24-20 MC TYPE HCC-100, HSH-200, HSL-100 PP TYPE HOR-50, HSH-50 MC TYPE HCC-100, HSH-250, HSL-100 PP TYPE HTH-50, HSH-50, HSL24-50 MC TYPE HSH-150 PP TYPE HSH-50 MC TYPE HSH-50
District Totals	Long Creek , 1996		Acres 7,715.0 MMBF: 57.0	Const: 16.0 Reconst: 33.5	

**TIMBER ACTIVITY SCHEDULE
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District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol. in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
District: Prairie City Watershed. MFJD 6409 Small Sales	T11S,R33E,S1-36 T12S,R33E,S1-36	1	Acres: 400.0 MMBF: 6.0	Const. 0.0 Reconst: 0.0	PP TYPE: HTH-50HSL24-100 MC TYPE: HSH-50 LP TYPE: HCC-200
Watershed MLHR 6401 Westfall	T17S,R34E,S36 T17S,R35E,S29-33 T18S,R34E,S1,11-15 T18S,R35E,S3-10,15,17,18	1	Acres: 750.0 MMBF: 4.0	Const: 0.0 Reconst: 2.5	PP TYPE: HSH-230, HSL24-120 MC TYPE: HTH-400
6401 Westfall	T17S,R34E,S36 T17S,R35E,S29-33 T18S,R34E,S1,11-15 T18S,R35E,S3-10,15,17,18	4A	Acres: 320.0 MMBF: 3.0	Const: 0.0 Reconst: 2.5	PP TYPE: HSH-150, HSL24-170
6403 Diet	T15S,R34E,S2-17,20-28,33-36 T15S,R35E,S30,31	14	Acres: 1,010.0 MMBF: 6.0	Const: 0.0 Reconst: 3.0	PP TYPE: HTH-50, HSH-150; HSL24-185 MC TYPE: HTH-200; HCC-275; HSH-100; LP TYPE: HCC-50
6405 Black	T17S,R34E,S13-16,21-28,33-36 T18S,R34E,S1-4,9-11,15	1	Acres: 915.0 MMBF: 6.0	Const: 2.0 Reconst: 10.5	PP TYPE: HSL24-170 MC TYPE: HTH-350; HOR-160; HSH-200; LP TYPE: HCC-35
6409 Small Sales	T16S,R33E,S1-36 T17S,R33E,S1-36	1	Acres: 200.0 MMBF: 1.0	Const: 0.0 Reconst: 0.0	PP TYPE: HTH-20; HOR-40; HSH-20; HSL24-40 MC TYPE: HOR-20, HCC-40, HSH-20
Watershed: NFMR 6402 Burke	T16S,R35E,S23,26-29,31-36 T17S,R35E,S1-5,10-14	1	Acres: 565.0 MMBF: 3.0	Const: 0.0 Reconst: 1.0	PP TYPE: HOR-160 MC TYPE: HTH-200, HOR-125, HCC-30 LP TYPE: HCC-50
6404 Knox	T16S,R35E,S32-34 T17S,R35E,S7-30,32-35 T17S,R34E,S13,24 T16S,R35E,S32-34 T17S,R35E,S7-30,32-35 T17S,R34E,S13,24 T16S,R35E,S32-34 T17S,R35E,S7-30,32-35 T17S,R34E,S13,24 T16S,R35E,S32-34 T17S,R35E,S7-30,32-35 T17S,R34E,S13,24 T16S,R35E,S32-34 T17S,R35E,S7-30,32-35 T17S,R34E,S13,24	1	Acres: 850.0 MMBF: 4.3	Const: 0.5 Reconst: 2.5	PP TYPE: HSH-175 MC TYPE: HTH-400, HOR-225 LP TYPE: HCC-50 PP TYPE: HOR-175 MC TYPE: HOR-25 PP TYPE: HOR-100; HSL24-80 MC TYPE: HSL-70
		4A	Acres: 200.0 MMBF: 4.3	Const: 0.5 Reconst: 2.5	
		13	Acres: 180.0 MMBF: 0.3	Const: 0.5 Reconst: 2.5	
		3A	Acres: 70.0 MMBF: 0.1	Const: 0.5 Reconst: 2.5	
6406 Hamm	T15S,R36E,S1,2,11-15,19-31 T15S,R37E,S5-8,17-19 T15S,R35 1/2E,S24,25,36 T15S,R36E,S1,2,11-15,19-31 T15S,R37E,S5-8,17-19 T15S,R35 1/2E,S24,25,36 T15S,R36E,S1,2,11-15,19-31 T15S,R37E,S5-8,17-19 T15S,R35 1/2E,S24,25,36	1	Acres: 715.0 MMBF: 4.8	Const: 0.0 Reconst: 0.0	PP TYPE: HOR-200, HSH-40 MC TYPE: HOR-400 LP TYPE: HCC-75 PP TYPE: HSH-100 MC TYPE: HOR-25; HSH-50 MC TYPE: HSL-60 LP TYPE: HCC-55
		4A	Acres: 175.0 MMBF: 2.0	Const: 0.0 Reconst: 0.0	
		3A	Acres: 115.0 MMBF: 0.2	Const: 0.0 Reconst: 0.0	
Watershed: UPJD 6407 Poke	T12S,R35E,S30-33 T13S,R35E,S3-5,8-11, 13-16,21-25 T13S,R35 1/2E,S16,21,28	1	Acres: 600.0 MMBF: 5.0	Const: 0.0 Reconst: 3.5	MC TYPE: HTH-250; HOR-300 LP TYPE: HCC-50

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FY 1997

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
6408 Moon	T14S,R34E,S24,25 T14S,R35E,S18-23,26-35 T15S,R35E,S2-10,15-17,21,22 T14S,R34E,S24,25 T14S,R35E,S18-23,26-35 T15S,R35E,S2-10,15-17,21,22	1	Acres 485.0 MMBF 4.5	Const 2.0 Reconst 4.0	MC TYPE HOR-60; HCC-200; HSL-125 LP TYPE HCC-100 MC TYPE HSL-50
		3B	Acres 50.0 MMBF 0.5	Const 0.0 Reconst 0.0	
District Totals	Prairie City, 1996		Acres 7,600.0 MMBF 55.0	Const: 6.0 Reconst: 37.0	
1996 Yearly Totals:			Acres 28,367.0 MMBF 204.6	Const: 32.7 Reconst: 93.3	

TEN-YEAR TIMBER SALE SCHEDULE, FISCAL YEAR 1997

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
District Bear Valley Watershed SFJD 7102 Jym III	T15S,R28E,S22,23,26-28,33-35 T16S,R28E,S1-4,9-11,14,15	1	Acres 750.0 MMBF 5.0	Const 1.0 Reconst 1.0	PP TYPE HTH-20, HOR-150, HSH-50, HSL20-60, HSL24-20 MC TYPE HTH-40, HOR-285, HCC-35, HSH-50, HSL-40 MC TYPE HSL-20 PP TYPE HSL24-10 MC TYPE HSL-30
		3B	Acres 20.0 MMBF 0.0	Const 0.0 Reconst 0.5	
		13	Acres 40.0 MMBF 0.2	Const 0.0 Reconst 0.0	
7106 Beaver III	T14S,R29E,S31,32 T15S,R29E,S4-9,16-20	1	Acres 325.0 MMBF 1.4	Const 0.0 Reconst 1.0	PP TYPE HTH-150 MC TYPE HTH-25, HOR-75; HSL-75
		3B	Acres 10.0 MMBF 0.0	Const 0.0 Reconst 0.0	
Watershed SILV 7101 Dark Bear III	T15S,R33E,S25,26,35,36 T15S,R334E,S31 T16S,R33E,S1,12,13,24 T16S,R33 1/2E,S5-8,18	1	Acres 430.0 MMBF 2.7	Const 0.0 Reconst 0.0	PP TYPE HTH-20, HOR-50; HSH-25, HSL20-25 MC TYPE HTH-20, HOR-150, HCC-40, HSH-40, HSL-40 LP TYPE HCC-20 PP TYPE HOR-30, HSL20-20, HSL24-25 MC TYPE HOR-100; HSL-105 LP TYPE HCC-10 MC TYPE HSL-10 MC TYPE HSL-40
		14	Acres 290.0 MMBF 1.4	Const 0.0 Reconst 0.0	
		3A	Acres 10.0 MMBF 0.0	Const 0.0 Reconst 0.0	
		13	Acres 40.0 MMBF 0.2	Const 0.0 Reconst 0.0	
7103 Camp III	T17S,R30E,S23-26,35,36 T17S,R31E,S20,21,28-33 T18S,R30E,S1	1	Acres 800.0 MMBF 5.2	Const 0.0 Reconst 1.0	PP TYPE HTH-40, HOR-170, HSH-25; HSL20-50; HSL24-25 MC TYPE HTH-40, HOR-330; HCC-40; HSH-50, HSL-30 MC TYPE HSL-20 PP TYPE HSL24-10 MC TYPE HSL-30
		3A	Acres 20.0 MMBF 0.0	Const 0.0 Reconst 0.5	
		13	Acres 40.0 MMBF 0.2	Const 0.0 Reconst 0.0	
7104 Sweet III	T15S,R30E,S4,5,8,9,17-20	1	Acres 310.0 MMBF 2.1	Const 0.0 Reconst 5.0	PP TYPE HTH-20; HOR-50; HSL20-30, HSL24-10 MC TYPE HOR-150, HCC-25, HSH-25

TIMBER ACTIVITY SCHEDULE
FY 1997

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
7105 Bull II	T16S,R32E,S24-26,33-36 T16S,R33E,S19-21,28-33 T17S,R32E,S1-3,10-12,14,15 T17S,R33E,S4-6	1	Acres 1,130 0 MMBF 7 2	Const 0 0 Reconst 2.0	PP TYPE. HTH-50; HOR-170; HSH-50; HSL20-30; HSL24-20 MC TYPE. HTH-50; HOR-525; HCC-60; HSH-60, HSL-75 LP TYPE. HCC-40 PP TYPE. HOR-50; HSL20-10, HSL24-30 MC TYPE. HOR-50, HSL-50 LP TYPE. HCC-10 MC TYPE. HSL-20 MC TYPE. HSL-40
		14	Acres 200 0 MMBF 1 1	Const 0 0 Reconst. 1.0	
		3A	Acres: 20.0 MMBF 0 0	Const. 0.0 Reconst. 0.5	
		13	Acres. 40 0 MMBF 0 2	Const. 0 0 Reconst. 0.5	
7108 Bend II	T15S,R33E,S26,27,34,35 T16S,R33E,S1-3,9-16	1	Acres: 570 0 MMBF 3 6	Const 0 5 Reconst. 0.5	PP TYPE. HTH-30; HOR-75; HSH-25; HSL20-30, HSL24-20 MC TYPE. HTH-20; HOR-200; HCC-40; HSH-50; HSL-50 LP TYPE. HCC-30 PP TYPE. HOR-50; HSL20-25; HSL24-50 MC TYPE. HOR-75; HSL-50 LP TYPE. HCC-10 MC TYPE. HSL-15 MC TYPE. HSL-40
		14	Acres: 260.0 MMBF 1 4	Const: 0 5 Reconst: 0.5	
		3A	Acres. 15 0 MMBF 0 0	Const 0 0 Reconst. 0.0	
		13	Acres: 40 0 MMBF 0 2	Const 0 0 Reconst: 0.0	
7109 Glade III	T16S,R32E,S11-16,22-24 T16S,R33E,S16-21	1	Acres 705 0 MMBF 4 1	Const 0 0 Reconst. 1 0	PP TYPE: HTH-40; HOR-80; HSH-30; HSL20-50; HSL24-20 MC TYPE. HTH-60, HOR-250, HCC-25; HSH-50; HSL-50 LP TYPE. HCC-50 PP TYPE. HOR-70; HSH-20; HSL20-30; HSL24-50 MC TYPE: HOR-90, HSH-20, HSL-80 LP TYPE: HCC-10 PP TYPE. HSL24-20 MC TYPE. HSL-20
		14	Acres. 370 0 MMBF. 2 0	Const 0 0 Reconst 1 0	
		13	Acres 40 0 MMBF: 0 2	Const 0 0 Reconst 0 0	
Watershed. UPJD 7107 Riley III	T14S,R29E,S35,36 T15S,R29E,S1,2,11,12 T15S,R30E,S5-8	1	Acres. 365 0 MMBF 2.5	Const 1 0 Reconst: 1.0	PP TYPE. HTH-20; HOR-50; HSL20-30; HSL24-10 MC TYPE: HTH-30, HOR-175, HSL-50 MC TYPE HSL-10 MC TYPE HSL-40
		3B	Acres 10 0 MMBF. 0 0	Const 0 0 Reconst 0 0	
		13	Acres: 40.0 MMBF 0 2	Const: 0 0 Reconst 0 0	
7110 Small Sales		1	Acres 0 0 MMBF. 1 9	Const 0 0 Reconst 0 0	
		14	Acres: 0 0 MMBF 0 1	Const: 0.0 Reconst: 0.0	
7111 Misc. Products		1	Acres. 0 0 MMBF 4 2	Const 0 0 Reconst. 0 0	
		14	Acres 0 0 MMBF. 0 3	Const 0 0 Reconst 0 0	
District Totals	Bear Valley , 1997		Acres: 6,890.0 MMBF: 47.6	Const: 3.0 Reconst: 17.0	

TIMBER ACTIVITY SCHEDULE
FY 1997

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
District: Burns Watershed SILV 7201 Kendall	T20,R33,S31-35 T20,R32,S35,36	1	Acres 314.0 MMBF 1.9	Const 0.5 Reconst 0.0	MC TYPE HOR-170, HCC-74; HSH-30, HSL-40 PP TYPE HSL24-50
	T21,R32,S1-3,10-12,14	3A	Acres 50.0 MMBF 0.1	Const 0.0 Reconst 0.0	
7202 Gunther	T20,R28,S2,11-14,23-25	1	Acres 1,025.0	Const 2.5	PP TYPE HTH-320, HSH-90, HSL20-185; HSL24-190 MC TYPE HTH-180; HCC-42, HSH-18 PP TYPE HTH-280 MC TYPE HSH-50 PP TYPE HSL24-110 MC TYPE HSL-30 PP TYPE HSL24-50
	T20,R29,S5-8,17-19,29,30 T20,R28,S14,22-27	4A	MMBF 7.7 Acres 330.0 MMBF 1.4	Reconst 8.0 Const 0.0 Reconst 0.0	
	T20,R28,S1-2,11-14,24,25 T20,R29,S30	14	Acres 140.0 MMBF 0.7	Const 0.0 Reconst 0.0	
		3A	Acres 50.0 MMBF 0.1	Const 0.0 Reconst 0.0	
7203 Link	T19,R29,S13,24,25 T19,R30,S17-20 T19,R29,S24,25 T19,R30,S17,19-21,28-32	1	Acres 155.0 MMBF 1.3	Const 0.5 Reconst 0.0	PP TYPE HSL20-80 MC TYPE HSL-75 MC TYPE HSH-50 PP TYPE HSL24-50
		4A	Acres 50.0 MMBF 0.1	Const 0.3 Reconst 0.0	
		3A	Acres 50.0 MMBF 0.1	Const 0.0 Reconst 0.0	
7204 Fawn	T19,R31,S	3A	Acres 50.0 MMBF 0.1	Const 0.0 Reconst 0.0	PP TYPE HSL24-50 PP TYPE HTH-275, HSH-67, HSL20-138; HSL24-140 MC TYPE HTH-160, HCC-24, HSH-10 PP TYPE HTH-225 MC TYPE HSH-45
	T19,R31,S33-35	1	Acres 814.0	Const 2.4	
	T20,R31,S2-10 T19,R31,S29,31-35 T20,R31,S4-7	4A	MMBF 5.0 Acres 270.0 MMBF 1.0	Reconst 2.0 Const 0.0 Reconst 0.0	
7205 Curry Spring	T19,R31,S15,16 T19,R31,S15,16,21-23,26-28,36	1	Acres 60.0 MMBF 0.3	Const 0.2 Reconst 0.0	PP TYPE HSL20-60 PP TYPE HSL24-50 PP TYPE HTH-250 MC TYPE HTH-150, HSH-400 PP TYPE HSL24-103
		3A	Acres 50.0 MMBF 0.1	Const 0.0 Reconst 0.0	
		4A	Acres 800.0 MMBF 6.6	Const 3.2 Reconst 1.0	
		14	Acres 103.0 MMBF 0.2	Const 0.4 Reconst 0.0	
7206 W Myrtle Butte	T18,R30,S31-33 T19,R29,S1,11-14	1	Acres 825.0 MMBF 4.2	Const 0.5 Reconst 0.0	PP TYPE HTH-190; HOR-50, HSL20-50 MC TYPE HTH-240, HOR-120, HSH-40; HSL-135 PP TYPE HSL24-50
	T19,R30,S4-9	3A	Acres 50.0 MMBF 0.1	Const 0.0 Reconst 0.0	
7207 Divine	T20,R31,S25,26,34-36 T21,R31,S1-3 T20,R31,S	1	Acres 1,015.0 MMBF 5.4	Const 0.0 Reconst 0.0	PP TYPE HTH-300, HOR-200, HSL20-515 PP TYPE HSL20-50 PP TYPE HTH-56, HCC-12, HSL24-360
		3A	Acres 50.0 MMBF 0.1	Const 0.0 Reconst 0.0	
	T21,R31,S33-34	14	Acres 428.0 MMBF 1.2	Const 0.0 Reconst 0.0	
7208 Sagehen	T19,R30,S15,22-27,34-36 T19,R31,S17,20,29,30 T20,R30,S3,4	4A	Acres 177.0 MMBF 2.1	Const 0.5 Reconst 0.0	PP TYPE HTH-150 MC TYPE HSH-27 PP TYPE HTH-215; HSL20-110 MC TYPE HCC-42, HSH-35 PP TYPE HSL24-50
	T19,R30,S10-15,22-25 T19,R31,S7,8,17-20,30	1 3A	Acres 402.0 MMBF 1.6 Acres 50.0 MMBF 0.1	Const 0.5 Reconst 0.0 Const 0.0 Reconst 0.0	
Watershed Varies 7209 Misc Sales		1	Acres 240.0 MMBF 1.0	Const 0.0 Reconst 0.0	PP TYPE HSL20-240

**TIMBER ACTIVITY SCHEDULE
FY 1997**

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
7210 Misc Products			Acres 0 0 MMBF 2 5	Const 0 0 Reconst 0 0	
District Totals	Burns , 1997		Acres: 7,548.0 MMBF: 45.0	Const: 11.5 Reconst: 11.0	
District: Long Creek Watershed: FXCT 7305 Ube	T11S,R28E,S34-36 T11S,R29E,S31-33	1	Acres 700 0 MMBF 4 0	Const 2 0 Reconst 2 0	PP TYPE: HTH-200 MC TYPE: HTH-100, HCC-100; HSH-200, HSL-100
	T12S,R28E,S1,2 T12S,R29E,S4-6,8	4A	Acres 140 0 MMBF 3 0	Const 0 0 Reconst 2 0	PP TYPE: HSL20-40 MC TYPE: HCC-50, HSH-50
7306 Small Sales			Acres 0.0 MMBF 8 0	Const 0 0 Reconst 0 0	
Watershed: MFJD 7302 Pog	T11S,R35 1/2E,S11-14, 23-26,35,36 T11S,R36E,S7,17-20,29-32	1	Acres 450 0	Const 3 0	PP TYPE: HSH-100
		14	MMBF 4 5 Acres 430 0 MMBF 2 5	Reconst 2 0 Const 1 0 Reconst 2 0	MC TYPE: HCC-100; HSH-200, HSL-50 PP TYPE: HSH-100, HSL24-30 MC TYPE: HSH-300
7303 Svr	T11S,R35E,S1-4,9-11,15-17, 20,21	1	Acres 475 0	Const 2 0	PP TYPE: HTH-100; HSH-50
		14	MMBF 4 5 Acres 300 0 MMBF 2 0	Reconst 1 5 Const 0 5 Reconst 1 5	MC TYPE: HCC-100, HSH-225 PP TYPE: HTH-100, HSL20-50 MC TYPE: HSH-100, HSL-50
7304 Peck	T10S,R34E,S15-17,19-22, 28-30,31,32	1	Acres 425 0 MMBF 3.5	Const 2 0 Reconst 1.0	MC TYPE: HTH-50; HCC-100, HSH-200, HSL-75
		4A	Acres 250 0 MMBF 2.0	Const 0 5 Reconst 2.0	PP TYPE: HSL20-50
		14	Acres 150 0 MMBF 1 0	Const 0 0 Reconst 0 0	MC TYPE: HCC-100, HSH-100
		3B	Acres 0.0 MMBF 0 0	Const 0 0 Reconst 0 0	PP TYPE: HTH-100, HSL20-50
7307 Gal	T9S,R32E,S1 T10S,R33E,S4-9,17,18	1	Acres 275 0 MMBF 2 0	Const 0 0 Reconst 0 0	MC TYPE: HCC-200, HSH-75
		4A	Acres 350 0 MMBF 2 5	Const 0 0 Reconst 0 0	MC TYPE: HTH-50; HCC-100; HSH-200;
		14	Acres 230 0 MMBF 1 5	Const 0 0 Reconst 0 0	PP TYPE: HTH-100, HSL20-50 MC TYPE: HSL-80
Watershed: UPJD 7301 Mead	T11S,R33E,S25-36 T12S,R33E,S3	1	Acres 550 0 MMBF 4 0	Const 1.5 Reconst 3 0	PP TYPE: HOR-50, HSH-50 MC TYPE: HCC-150, HSH-300
		4A	Acres 450 0 MMBF 3 0	Const 1 5 Reconst 1 0	MC TYPE: HCC-150, HSH-200; HSL-100
7306 Nip	T11S,R31E,S23-28,32-36 T11S,R32E,S19,30-32 T12S,R32E,S5-7 T12S,R31E,S1-4	1	Acres 575.0 MMBF 5 0	Const 1.7 Reconst 1 0	PP TYPE: HTH-75, HSH-50, HSL24-50 MC TYPE: HCC-200, HSH-200
		4A	Acres 500 0 MMBF 3.0	Const 1 7 Reconst 1.0	PP TYPE: HTH-100 MC TYPE: HCC-200, HSH-200
District Totals	Long Creek , 1997		Acres: 6,250.0 MMBF: 56.0	Const: 17.4 Reconst: 20.0	

TIMBER ACTIVITY SCHEDULE
FY 1997

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
District: Prairie City Watershed MFJD 7402 Ragged	T11S,R35E,S32,33 T12S,R35E,S4,5,7-9,18,19 T12S,R34E,S10-15,23,24	1	Acres. 430 0 MMBF 3 9	Const 0 0 Reconst 1 5	MC TYPE HOR-290, HCC-40, HSH-100,
	T11S,R35E,S32,33 T12S,R35E,S4,5,7-9,18,19 T12S,R34E,S10-15,23,24	3B	Acres 40 0 MMBF 0 1	Const 0 0 Reconst 0 0	MC TYPE HSL-40
7410 Small Sales	T12S,R32-36E,S1-36 T13S,R32-36E,S1-36	1	Acres 450 0 MMBF 8 0	Const 0.0 Reconst 0 0	PP TYPE HTH-100HSL24-75 MC TYPE HOR-25, HCC-50 LP TYPE HCC-200
Watershed. MLHR 7406 Polka	T16S,R33 1/2E,S33-35 T17S,R33 1/2E,S1-4,9-16, 22-27	1	Acres 190 0 MMBF 1 0	Const 1 0 Reconst 2 0	MC TYPE HOR-150, HCC-40
	T17S,R34E,S7,18,19 T16S,R33 1/2E,S33-35 T17S,R33 1/2E,S1-4,9-16, 22-27	14	Acres 500 0 MMBF 3 5	Const 0 0 Reconst 0 0	MC TYPE HTH-400, HOR-100
	T17S,R34E,S7,18,19 T16S,R33 1/2E,S33-35 T17S,R33 1/2E,S1-4,9-16, 22-27 T17S,R34E,S7,18,19	3A	Acres 129 0 MMBF 0 5	Const 0 0 Reconst 0 0	MC TYPE HSL-100 LP TYPE HCC-29
7408 Drip	T15S,R34E,S35,36 T15S,R35E,S31,32 T16S,R33 1/2E,S1,2,11-14, 23-27,35,36 T16S,R34E,S4-8,18,19,30,31	14	Acres 700 0 MMBF 6 0	Const 2 0 Reconst 1 0	PP TYPE HSL24-350 MC TYPE HTH-250, HCC-100
7410 Small Sales	T11S,R32-36E,S1-36 T12S,R32-36E,S1-36	1	Acres 300 0 MMBF 2 0	Const 0 0 Reconst 0 0	PP TYPE HTH-100; HSH-50, HSL24-50 MC TYPE HOR-50, HCC-50
Watershed NFMR 7403 Dribble	T14S,R35 1/2E,S9,10,15,16, 21-23,26-28,34-36	1	Acres 615 0 MMBF 3 2	Const 0 5 Reconst 2 0	PP TYPE HTH-100, HOR-25 MC TYPE HTH-100, HOR-300; HCC-40 LP TYPE HCC-50
	T14S,R35 1/2E,S9,10,15,16, 21-23,26-28,34-36	14	Acres 150 0 MMBF 0 3	Const 0 0 Reconst 0 0	PP TYPE HTH-100HSL24-50
	T14S,R35 1/2E,S9,10,15,16, 21-23,26-28,34-36	3A	Acres 200 0 MMBF 0 5	Const 0 0 Reconst 0 0	PP TYPE HTH-100 MC TYPE HSL-100
7404 Puppel	T15S,R36E,S31-33 T15S,R35 1/2E,S36 T16S,R36E,S3-11,14-17,22,23	1	Acres 760 0 MMBF 4 0	Const 0 5 Reconst 3 0	PP TYPE HOR-110 MC TYPE HTH-200, HOR-450
	T15S,R36E,S31-33 T15S,R35 1/2E,S36 T16S,R36E,S3-11,14-17,22,23	4A	Acres 255 0 MMBF 2 5	Const 0 5 Reconst 3 0	PP TYPE HTH-150, HSH-80 MC TYPE HOR-25
	T15S,R36E,S31-33 T15S,R35 1/2E,S36 T16S,R36E,S3-11,14-17,22,23	3A	Acres 30 0 MMBF 0 5	Const 0 0 Reconst 0 0	MC TYPE HSL-30
7405 Cruiser	T16S,R34E,S12-15,22-27,35,36 T17S,R34E,S1,2,611-13 T16S,R35E,S6-8,16-21,28-32 T17S,R35E,S5-8	1	Acres 825 0 MMBF 4 5	Const 1 0 Reconst 3 0	PP TYPE HOR-150 MC TYPE HTH-250; HOR-375, HCC-50
	T16S,R34E,S12-15,22-27,35,36 T17S,R34E,S1,2,611-13 T16S,R35E,S6-8,16-21,28-32 T17S,R35E,S5-8	14	Acres 100 0 MMBF 0 5	Const 0 0 Reconst 0 0	PP TYPE HSL24-50 MC TYPE HSL-50

**TIMBER ACTIVITY SCHEDULE
FY 1998**

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
7409 Cant	T15S,R36E,S21,22,26-35 T16S,R36E,S2-4,11,14 T15S,R36E,S21,22,26-35 T16S,R36E,S2-4,11,14	1 4A	Acres 750.0 MMBF: 4.0 Acres 250 0 MMBF: 1.0	Const. 1 0 Reconst. 3.0 Const: 1 0 Reconst. 3.0	PP TYPE: HTH-400, HOR-150, HCC-100, HSH-100 PP TYPE HTH-100, HOR-50, HSH-100
Watershed. UPJD 7401 Cracker	T14S,R35E,S5-9,16-18	1	Acres. 225 0 MMBF 3 0	Const. 0 0 Reconst 2 0	PP TYPE HTH-25 MC TYPE HOR-100, HCC-75, HSH-25
7407 Bumble	T12S,R34E,S10,14,15, 22-24,25,26 T12S,R35E,S30,31 T13S,R35E,S6,7	14	Acres: 860 0 MMBF: 6 0	Const: 2 0 Reconst: 3 0	PP TYPE: HTH-100, HOR-150, HSL24-75 MC TYPE: HTH-100; HOR-235; HCC-200;
District Totals	Prairie City , 1997		Acres: 7,759.0 MMBF: 55 0	Const: 9.5 Reconst: 26.5	
1997 Yearly Totals:			Acres: 28,447.0 MMBF: 203.6	Const. 39.9 Reconst: 74 5	

TEN-YEAR TIMBER SALE SCHEDULE, FISCAL YEAR: 1998

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
District: Bear Valley Watershed. SFJD 8103 Vest II	T16S,R27E,S10-15,22-25 T16S,R28E,S7-9,16-20,29,30	1 4A 3B 13	Acres 435.0 MMBF 2 8 Acres: 265 0 MMBF: 1 3 Acres: 20 0 MMBF: 0 1 Acres. 40.0 MMBF: 0 2	Const. 1 0 Reconst. 2.5 Const 0 0 Reconst. 0.5 Const: 0 0 Reconst 0 0 Const. 0.0 Reconst: 0 0	PP TYPE. HTH-25, HOR-90, HSH-30, HSL20-30, HSL24-20 MC TYPE. HTH-25, HOR-140, HCC-30, HSH-25, HSL-20 PP TYPE HOR-85, HSL20-20, HSL24-30 MC TYPE HSH-30, HSL-70 PP TYPE. HSL24-20 MC TYPE: HSL-20
8104 Alkali III	T15S,R29E,S9-17,23 T15S,R30E,S7,18	1 3B	Acres: 600 0 MMBF: 4.0 Acres 10 0 MMBF 0 0	Const: 0 0 Reconst: 0 0 Const. 0.0 Reconst 0 0	PP TYPE: HTH-25, HOR-75; HSH-25; HSL20-50, HSL24-25 MC TYPE HTH-25; HOR-275; HCC-50, HSL-50 MC TYPE: HSL-10
8109 Small Sales		1	Acres. 0 0 MMBF: 1.5	Const. 0 0 Reconst: 0 0	
8110 Misc. Products		1 4A	Acres: 0 0 MMBF 2 8 Acres. 0.0 MMBF: 0.2	Const: 0 0 Reconst. 0 0 Const. 0.0 Reconst: 0.0	
Watershed. SILV 8102 Elkhorn III	T17S,R29E,S23-26,35,36 T17S,R30E,S19,29-32 T18S,R30E,S5,6 T18S,R29E,S1	1 3A 13	Acres: 850 0 MMBF: 6.0 Acres. 20.0 MMBF: 0 0 Acres 40 0 MMBF: 0 2	Const: 0 0 Reconst. 1.0 Const: 0 0 Reconst 0 0 Const. 0.0 Reconst 0 0	PP TYPE HOR-150, HSL20-60, HSL24-40 MC TYPE. HOR-400; HCC-50; HSH-50; HSL-100 MC TYPE HSL-20 MC TYPE HSL-40

TIMBER ACTIVITY SCHEDULE
FY 1998

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
8105 Flag III	T15S,R29E,S28,29,32,33 T16S,R29E,S3-5,8-10,15-17, 19-22,28-30	1	Acres 920 0 MMBF 5 8	Const 0 0 Reconst 1 0	PP TYPE. HTH-50; HOR-200, HSH-50; HSL20-70, HSL24-30 MC TYPE HTH-50, HOR-340, HCC-30, HSH-50, HSL-25 LP TYPE HCC-25 PP TYPE. HOR-20HSL24-30 MC TYPE HOR-20, HSL-30 MC TYPE HSL-10 MC TYPE HSL-40
		14	Acres 100 0 MMBF 0 5	Const 0 0 Reconst 0 0	
		3A	Acres 10 0 MMBF 0 0	Const 0 0 Reconst 0 5	
		13	Acres 40 0 MMBF 0 2	Const 0 0 Reconst 0 0	
8106 Snow III	T16S,R29E,S22-28,33-35 T17S,R29E,S3,4	1	Acres 705 0 MMBF 4 5	Const. 0 0 Reconst 1 0	PP TYPE HTH-25, HOR-80, HSH-25, HSL20-50, HSL24-20 MC TYPE HTH-50, HOR-330, HCC-50; HSH-25, HSL-50 PP TYPE HOR-20HSL24-30 MC TYPE. HOR-20, HSL-30 PP TYPE. HSL24-10 MC TYPE. HSL-30
		14	Acres 100 0 MMBF 0 5	Const 0 0 Reconst 0 0	
		13	Acres 40 0 MMBF 0 2	Const 0 0 Reconst 0 0	
8107 End III	T16S,R29E,S35,36 T16S,R30E,S31-33 T17S,R29E,S1-3,13,14 T17S,R30E,S5-8,18	1	Acres 825 0 MMBF 5 4	Const 0 0 Reconst 1 0	PP TYPE. HTH-25, HOR-100, HSH-25, HSL20-50 MC TYPE HTH-50; HOR-450, HCC-50, HSH-50, HSL-25 MC TYPE HSL-40
		13	Acres 40 0 MMBF 0 2	Const 0 0 Reconst 0 0	
8108 Smith III	T16S,R30E,S33-35 T17S,R30E,S1-5,8-12,14-18	1	Acres 890 0 MMBF 5 5	Const 0 0 Reconst 1 0	PP TYPE HTH-75, HOR-125, HSH-25, HSL20-50, HSL24-20 MC TYPE HTH-75, HOR-400, HCC-25, HSH-50, HSL-45 PP TYPE HSL24-5 MC TYPE HSL-5 MC TYPE HOR-10; HSL-30
		3A	Acres 10 0 MMBF 0 0	Const. 0 0 Reconst 0 0	
		13	Acres. 40 0 MMBF 0 2	Const 0 0 Reconst 0 0	
Watershed. UPJD 8101 Can II	T15S,R32E,S24-29,34,36 T15S,R33E,S17-22,27-34, T16S,R32E,S1,2	1	Acres 425 0 MMBF 2 7	Const 0 5 Reconst 0 5	PP TYPE HTH-70, HOR-30, HSH-25, HSL20-25 MC TYPE HTH-30, HOR-175; HCC-25, HSH-25, HSL-20 PP TYPE HTH-50, HOR-50, HSL20-20, HSL24-30 MC TYPE HOR-90, HSH-20, HSL-150 LP TYPE HCC-20 MC TYPE HSL-20 PP TYPE HTH-30HSL20-20 MC TYPE HOR-30, HSL-25 MC TYPE HSL-40
		14	Acres 430 0 MMBF: 2 2	Const 0 5 Reconst 0 5	
		3B	Acres. 20 0 MMBF 0 0	Const 0 0 Reconst 0 0	
		4A	Acres 105 0 MMBF 0 5	Const 0 5 Reconst 0 0	
		13	Acres 40 0 MMBF 0 2	Const 0 0 Reconst. 0 0	
District Totals	Bear Valley , 1998		Acres: 7,020.0 MMBF: 47 6	Const: 2.5 Reconst: 9.5	
District. Burns Watershed MLHR 8204 Gabe	T18,R33,S7-9,17,18,20,21,28,29 T18,R33,S9-11,14,17,21-23, 26-28,33	1	Acres 270 0 MMBF 1 8	Const 0 4 Reconst 0 0	PP TYPE HTH-200, HSH-70
		3A	Acres. 31 0 MMBF 0 1	Const 0 0 Reconst 0 0	PP TYPE HSL24-31
		4A	Acres 625 0 MMBF 3 8	Const. 0 0 Reconst 0 0	PP TYPE HTH-75, HSH-230; HSL20-110; HSL24-210

**TIMBER ACTIVITY SCHEDULE
FY 1998**

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
8205 Jackknife	T19,R32,S13,23-26,35,36 T19,R33,S17-20,29-32 T20,R32,S1,2,11,12 T20,R33,S4-9	1	Acres 795 0 MMBF. 5 2	Const. 1 3 Reconst. 4 0	PP TYPE. HTH-320; HSH-110, HSL20-60, HSL24-60 MC TYPE HTH-40; HOR-135, HCC-20; HSH-50
8207 Miller Flat	T17,R33 1/2,S24-27,35,36 T17,R35,S19,29-32 T18,R33 1/2,S1,2,12,13 T18,R35,S4-9,17,18 T18,R35,S17,18	1 3A 4A 13	Acres 780.0 MMBF 4 6 Acres: 31 0 MMBF. 0 1 Acres 90 0 MMBF. 0 5 Acres: 300 0 MMBF. 1 0	Const. 1 5 Reconst. 2 0 Const. 0.0 Reconst. 0 0 Const. 0 0 Reconst. 0 0 Const. 0.0 Reconst. 0.0	PP TYPE. HTH-165; HSH-55, HSL20-90; HSL24-90 MC TYPE. HTH-60; HOR-205, HCC-45, HSH-70 PP TYPE HSL24-31 PP TYPE: HTH-10; HSH-15, HSL24-20 MC TYPE. HOR-10, HSH-10, HSL-25 PP TYPE. HOR-300
Watershed. SILV 8201 Idol	T20,R31,S24,25,36 T20,R32,S19,27-34 T21,R32,S3-10	1	Acres 987 0 MMBF. 6.6	Const. 1.5 Reconst. 0 0	PP TYPE. HSH-36; HSL20-340, HSL24-340 MC TYPE: HCC-71, HSH-200
8202 Yellowjacket	T19,R28,S1,2,11-14,23-25 T19,R29,S7,8,16-21,29-32 T19,R29,S5-8	1 4A 3A	Acres 1,020 0 MMBF. 4 6 Acres 100 0 MMBF: 0 5 Acres: 50 0 MMBF 0.1	Const. 0 8 Reconst. 0 0 Const: 0 0 Reconst. 0.0 Const. 0 0 Reconst. 0 0	PP TYPE. HTH-300, HSH-215; HSL20-240; HSL24-165 MC TYPE. HSH-100 PP TYPE: HTH-100 PP TYPE. HSL24-50
8203 Carson	T17,R32,S12-14,22-26,35,36 T17,R33,S17-19,30,31 T18,R32,S1	1	Acres 1,445 0 MMBF. 7 1	Const. 1 2 Reconst. 2 0	PP TYPE. HTH-440; HSH-120, HSL20-310; HSL24-315 MC TYPE: HSH-240 LP TYPE: HCC-20
8206 Hunter	T19,R28,S27,28,33-36 T19,R29,S31,32 T20,R28,S1-3 T20,R29,S5,6 T19,R28,S25-27,35,36 T19,R29,S30-32 T20,R28,S1,2,12	1 14	Acres: 939 0 MMBF. 3 8 Acres: 395 0 MMBF 1 0	Const. 0 5 Reconst. 0 0 Const. 0 0 Reconst. 0 0	PP TYPE: HTH-270; HSH-65; HSL20-180, HSL24-190 MC TYPE. HTH-180; HCC-34; HSH-20 PP TYPE: HSL24-310 MC TYPE. HSL-85
Watershed. Varies 8208 Misc. Sales		1	Acres. 715 0 MMBF. 1.7	Const. 0 0 Reconst. 0 0	PP TYPE: HTH-140HSL20-575
8209 Misc Products			Acres 0 0 MMBF 2 5	Const. 0 0 Reconst. 0 0	
District Totals	Burns , 1998		Acres: 8,573.0 MMBF: 45.0	Const: 7.2 Reconst: 8.0	
District: Long Creek Watershed FXCT 8301 Hint	T11S,R28E,S13-15,22-27,34	1 4A	Acres: 300.0 MMBF. 2.5 Acres: 310 0 MMBF 1 5	Const. 0.0 Reconst. 2 0 Const. 0.0 Reconst. 2 0	MC TYPE: HCC-100, HSH-200 PP TYPE. HTH-100HSL20-60 MC TYPE: HSH-100, HSL-50
8302 Table	T10S,R28E,S14,15,23,24-26 T10S,R29E,S7,8,17,18,20,21	4A 1	Acres. 730.0 MMBF: 6.0 Acres: 450 0 MMBF. 2.0	Const. 2 0 Reconst. 4.0 Const: 0 0 Reconst. 0.0	PP TYPE: HTH-100HSL20-100 MC TYPE. HCC-250; HSH-250, HSL-30 PP TYPE: HTH-200HSL20-50 MC TYPE. HCC-100; HSH-100

TIMBER ACTIVITY SCHEDULE
FY 1998

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
8304 Mill	T11S,R30E,S10,11,13-15,24 T11S,R31E,S7,8,17-20	1 14	Acres 530 0 MMBF 2 0 Acres 380 0 MMBF 2 0	Const 0 0 Reconst 0 0 Const 0 0 Reconst 0 0	PP TYPE HTH-100HSL20-100 MC TYPE HCC-150, HSH-150, HSL-30 PP TYPE HSH-120, HSL24-60 MC TYPE HSH-100, HSL-100
Watershed. MFJD 8305 Hoot	T11S,R34S,S34-36 T11S,R35E,S28-33 T12S,R34E,S1-3,11,12 T12S,R35E,S5-7	1 4A 14	Acres 800 0 MMBF 3 0 Acres 570 0 MMBF 2 0 Acres 375 0 MMBF 2 0	Const 1 5 Reconst 2 0 Const 1 5 Reconst 2 0 Const 0 0 Reconst 1 0	PP TYPE HTH-100HSL20-100 MC TYPE HTH-100, HCC-200; HSH-300, PP TYPE HSH-70 MC TYPE HTH-100, HCC-100, HSH-200; HSL-100 PP TYPE HTH-100, HOR-50, HSL20-50 MC TYPE HSH-175
8306 Pooch	T11S,R32E,S1,12,13,24,25 T11S,R33E,S6,7,18,19,30	1 4A 13	Acres 600 0 MMBF 3.5 Acres 330 0 MMBF 1 5 Acres 150 0 MMBF 0 5	Const 0 0 Reconst 3 5 Const 1 0 Reconst 3.0 Const 0 0 Reconst 0 0	PP TYPE HTH-50, HSH-100; HSL20-70 MC TYPE HCC-150; HSH-200, HSL-30 PP TYPE HTH-50 HSL24-30 MC TYPE HCC-100, HSH-100, HSL-50 PP TYPE HOR-150
8307 Jalapeno	T10S,R32E,S32-35 T11S,R32E,S3-5,8-10,16,17, 20,21,28,29	1 4A	Acres 650 0 MMBF 3 0 Acres 400 0 MMBF 1 5	Const 1 5 Reconst 4 0 Const 0 0 Reconst 3 0	PP TYPE HTH-100HSL20-50, HSL24-50 MC TYPE HCC-150, HSH-200, HSL-100 MC TYPE HOR-50, HCC-150, HSH-200
8308 Slip	T10S,R32E,S17-20 T10S,R31E,S11-14,23,24	1	Acres 790 0 MMBF 6 0	Const 2 0 Reconst 5 0	PP TYPE HTH-50, HOR-100, HSL20-40 MC TYPE HCC-200, HSH-300, HSL-100
8309 Kokanee	T9S,R31E,S15,21,22,27,28, 33,34 T10S,R31E,S3,4,9-11,14,15, 22,23	1 4A	Acres 450 0 MMBF 1 0 Acres 450 0 MMBF 1 0	Const 2 0 Reconst 0 0 Const 2 0 Reconst 0 0	MC TYPE HCC-150, HSH-200, HSL-100 MC TYPE HCC-150; HSH-200, HSL-100
8310 Small Sales			Acres 0 0 MMBF 8 0	Const 0 0 Reconst 0 0	
Watershed. UPJD 8303 Cub	T11S,R31E,S25-28,32-36 T11S,R32E,S30-32 T12S,R31E,S1-4,8-17,23 T12S,R32E,S5-8	1 4A 14	Acres 450 0 MMBF 3 0 Acres 450 0 MMBF 2 5 Acres 200 0 MMBF 1 5	Const 2 5 Reconst 3.0 Const 0 0 Reconst 2 0 Const 0 0 Reconst 0.0	PP TYPE HOR-50, HSL20-50 MC TYPE HOR-100; HCC-100; HSH-150, PP TYPE HSL20-50 MC TYPE HOR-100, HCC-100, HSH-200; PP TYPE HTH-50HSL20-50 MC TYPE HSL-100
District Totals	Long Creek, 1998		Acres: 9,365 0 MMBF: 56 0	Const: 16.0 Reconst: 36 5	
District: Prairie City Watershed. MFJD 8401 Easy	T12S,R34E,S24,25 T12S,R35E,S7-9,17-20,28-30, 31-33	1	Acres 600 0 MMBF 5.0	Const 2 0 Reconst 4 0	PP TYPE HTH-100 MC TYPE HTH-100, HOR-50, HCC-200, HSH-150,

TIMBER ACTIVITY SCHEDULE
FY 1998

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
8408 Ice	T11S,R35E,S34,35 T12S,R35E,S1-3,10-14,23-26,35,36 T12S,R35 1/2E,S9,16,21,22,27,28,33,34 T13S,R35 1/2E,S2-4,9-11 T11S,R35E,S34,35 T12S,R35E,S1-3,10-14,23-26,35,36 T12S,R35 1/2E,S9,16,21,22,27,28,33,34 T13S,R35 1/2E,S2-4,9-11	1	Acres. 300 0 MMBF 3.0	Const 2 0 Reconst 9 0	MC TYPE. HOR-200, HCC-100
	T11S,R35E,S34,35 T12S,R35E,S1-3,10-14,23-26,35,36 T12S,R35 1/2E,S9,16,21,22,27,28,33,34 T13S,R35 1/2E,S2-4,9-11	14	Acres 300 0 MMBF 2 5	Const 0 0 Reconst 0 0	MC TYPE HOR-300
	T11S,R35E,S34,35 T12S,R35E,S1-3,10-14,23-26,35,36 T12S,R35 1/2E,S9,16,21,22,27,28,33,34 T13S,R35 1/2E,S2-4,9-11	3B	Acres. 60 0 MMBF 0 5	Const 0 0 Reconst 0 0	MC TYPE HSL-60
8410 Small Sales	T12S,R32-36E,S1-36 T13S,R32-36E,S1-36 T14S,R32-36E,S1-36 T15S,R32-36E,S1-36	1	Acres. 400 0 MMBF 3 0	Const 0 0 Reconst. 0 0	PP TYPE. HTH-100 HSL24-50 MC TYPE HOR-50; HSH-100 LP TYPE. HCC-100
Watershed MLHR 8405 Junction	T15S,R35E,S15,21-23,26-35 T16S,R34E,S1-5,8-12,14-20 T15S,R35E,S15,21-23,26-35 T16S,R34E,S1-5,8-12,14-20	1	Acres. 57 0 MMBF 0 5	Const 1.0 Reconst 4 0	PP TYPE. HOR-7 MC TYPE. HOR-50
	T15S,R35E,S15,21-23,26-35 T16S,R34E,S1-5,8-12,14-20	14	Acres 500 0 MMBF. 4 5	Const 0.0 Reconst 0.0	PP TYPE. HSL24-200 MC TYPE. HOR-100, HCC-100, HSH-100;
8409 Merit	T16S,R33E,S13,23-26,36 T16S,R33 1/2E,S17-20,27-35 T17S,R33 1/2E,S5,6,8 T16S,R33E,S13,23-26,36 T16S,R33 1/2E,S17-20,27-35 T17S,R33 1/2E,S5,6,8 T16S,R33E,S13,23-26,36 T16S,R33 1/2E,S17-20,27-35 T17S,R33 1/2E,S5,6,8	1	Acres. 525 0 MMBF. 1.8	Const 0 0 Reconst 0 0	PP TYPE. HTH-100; HSH-75, HSL24-100 MC TYPE. HTH-250
	T16S,R33E,S13,23-26,36 T16S,R33 1/2E,S17-20,27-35 T17S,R33 1/2E,S5,6,8	14	Acres 24 0 MMBF 0 1	Const 0 0 Reconst. 0.0	MC TYPE HSL-24
	T16S,R33E,S13,23-26,36 T16S,R33 1/2E,S17-20,27-35 T17S,R33 1/2E,S5,6,8	3A	Acres. 60 0 MMBF 0 1	Const 0 0 Reconst 0 0	MC TYPE. HSL-60
8410 Small Sales	T14S,R32-36E,S1-36 T15S,R32-36E,S1-36 T16S,R32-36E,S1-36 T17S,R32-36E,S1-36	1	Acres 550.0 MMBF 6.0	Const 0 0 Reconst 0 0	PP TYPE. HTH-200 HSL24-50 MC TYPE. HTH-150, HOR-100, HSH-50
	T14S,R32-36E,S1-36 T15S,R32-36E,S1-36 T16S,R32-36E,S1-36 T17S,R32-36E,S1-36	14	Acres 320 0 MMBF. 2 0	Const. 0 0 Reconst 0.0	PP TYPE. HTH-100 HSL24-200 MC TYPE. HSH-20
Watershed NFMR 8406 Swamp	T15S,R35E,S23,25,26,35,36 T15S,R35 1/2E,S29,32,33 T16S,R34E,S1 T16S,R35E,S3-10,15-17,21-23,26-28 T15S,R35E,S23,25,26,35,36 T15S,R35 1/2E,S29,32,33 T16S,R34E,S1 T16S,R35E,S3-10,15-17,21-23,26-28	1	Acres 1,700 0 MMBF 9 5	Const 2 0 Reconst 8 0	PP TYPE. HTH-300; HOR-150 MC TYPE HTH-350, HOR-300, HCC-250, HSH-200
	T15S,R35E,S23,25,26,35,36 T15S,R35 1/2E,S29,32,33 T16S,R34E,S1 T16S,R35E,S3-10,15-17,21-23,26-28	13	Acres 100.0 MMBF: 0 5	Const 0 0 Reconst 0 0	LP TYPE. HCC-150 MC TYPE. HOR-100

TIMBER ACTIVITY SCHEDULE
FY 1999

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
Watershed UPJD 8402 Litter	T13S,R35E,S28-36 T14S,R35E,S1-6,9-16,23,24	1	Acres 400 0 MMBF 3 0	Const 2 0 Reconst 2 0	PP TYPE HTH-50 MC TYPE HOR-50, HCC-100; HSH-50, HSL-50 LP TYPE HCC-100
	T13S,R35 1/2E,S33 T14S,R35 1/2E,S3-5,8-10,16,17 T13S,R35E,S28-36 T14S,R35E,S1-6,9-16,23,24 T13S,R35 1/2E,S33 T14S,R35 1/2E,S3-5,8-10,16,17	14	Acres 130 0 MMBF 2 0	Const 0 0 Reconst 0 0	PP TYPE HTH-100 HSL24-30
8403 Recall	T14S,R34E,S21-27,35,36 T14S,R35E,S30,31 T15S,R34E,S1	1	Acres 125 0 MMBF 1 0	Const 2 0 Reconst 6 0	MC TYPE HOR-25 LP TYPE HCC-100
	T15S,R35E,S6-8,17-21,28-30 T14S,R34E,S21-27,35,36 T14S,R35E,S30,31	14	Acres 445 0 MMBF 3 5	Const 0 0 Reconst 0 0	MC TYPE HOR-100, HCC-270, HSL-75
	T15S,R34E,S1 T15S,R35E,S6-8,17-21,28-30 T14S,R34E,S21-27,35,36 T14S,R35E,S30,31 T15S,R34E,S1 T15S,R35E,S6-8,17-21,28-30	3B	Acres 125 0 MMBF 0 5	Const 0 0 Reconst 0 0	PP TYPE HSL24-100 MC TYPE HSL-25
8404 Tough	T12S,R35E,S31,32 T13S,R35E,S5-8,17-20,29,30	1	Acres 580 0 MMBF 3 5	Const 2 0 Reconst 3 0	MC TYPE HTH-100, HOR-230, HCC-100; HSH-150, PP TYPE HCC-20 MC TYPE HTH-50; HOR-50, HCC-50, HSH-50
	T12S,R35E,S31,32 T13S,R35E,S5-8,17-20,29,30	4A	Acres 220 0 MMBF 0 5	Const 0 0 Reconst 2 0	
8407 Nam	T14S,R33E,S13-36	14	Acres 260 0 MMBF 1 9	Const 2 0 Reconst 9 0	PP TYPE HTH-60 MC TYPE HOR-200
	T14S,R33E,S13-36	3B	Acres 50 0 MMBF 0 1	Const 0 0 Reconst 0 0	MC TYPE HSL-50
District Totals	Prairie City , 1998		Acres* 7,831.0 MMBF: 55.0	Const: 15.0 Reconst 47.0	
1998 Yearly Totals:			Acres: 32,789 0 MMBF. 203 6	Const* 40 7 Reconst. 101.	

TEN-YEAR TIMBER SALE SCHEDULE, FISCAL YEAR: 1999

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
District: Bear Valley Watershed SFJD 9103 Fields III	T14S, R28E, S13,24,25	1	Acres 445 0	Const 0 0	PP TYPE HTH-15, HOR-50, HSH-50, HSL20-40, HSL24-10
	T14S, R29E, S17-20,28-35 T15S, R29E, S2-4,9-11	3B	MMBF 3 0 Acres 10 0 MMBF 0 0	Reconst 0 0 Const 0 0 Reconst 0 0	MC TYPE HTH-15, HOR-200, HCC-40, HSL-25 MC TYPE HSL-10
9106 Dan's II	T15S, R28E, S24,25,36	1	Acres 435 0	Const 0 0	PP TYPE HTH-20, HOR-50; HSH-50, HSL20-40, HSL24-10
	T15S, R29E, S19,20,29-32	3B	MMBF 2 9 Acres 10 0 MMBF 0 0	Reconst 0 0 Const 0 0 Reconst 0 0	MC TYPE HTH-20; HOR-170; HCC-25, HSH-25, HSL-25 MC TYPE HSL-10
		13	Acres 40 0 MMBF 0 2	Const 0 0 Reconst 0 0	PP TYPE HSL24-10 MC TYPE HSL-30

TIMBER ACTIVITY SCHEDULE
FY 1999

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
9107 SF Deer III	T16S,R28E,S14,15,22-27,34,35	1 3B 13	Acres: 540 0 MMBF: 3 7 Acres: 20.0 MMBF: 0 0 Acres: 40.0 MMBF: 0 2	Const: 0 0 Reconst: 1.0 Const: 0 0 Reconst: 0.0 Const: 0 0 Reconst: 0.0	PP TYPE: HTH-20; HOR-75; HSH-50; HSL20-40; HSL24-10 MC TYPE: HTH-20, HOR-235, HCC-25; HSH-25; HSL-40 MC TYPE: HSL-20 PP TYPE: HSL24-10 MC TYPE: HOR-10, HSL-20
9109 Johnnie III	T16S, R29E, S29-32 T17S,R29E,S4,5,8,9,10,14-17, 20,23	1 14 4A 3B 13	Acres: 450.0 MMBF: 3 0 Acres: 65.0 MMBF: 0.3 Acres: 80 0 MMBF: 0.4 Acres: 20 0 MMBF: 0.0 Acres: 40 0 MMBF: 0 2	Const: 0.0 Reconst: 1.0 Const: 0.0 Reconst: 0 0 Const: 0.0 Reconst: 0 0 Const: 0 0 Reconst: 0 0 Const: 0 0 Reconst: 0 0	PP TYPE: HTH-25; HOR-75, HSH-25, HSL20-25 MC TYPE: HTH-25; HOR-225, HCC-25; HSL-25 PP TYPE: HSL20-15, HSL24-15 MC TYPE: HOR-15, HSL-20 PP TYPE: HOR-20; HSL20-20 MC TYPE: HOR-20, HSL-20 PP TYPE: HSL24-5 MC TYPE: HSL-15 MC TYPE: HSL-40
Watershed. SILV 9101 D-C II	T15S, R29E, S24-28,33-35 T15S, R30E, S19,20,29,30 T16S,R29E,S1-3,10-12,14,15,23	1 14 3A 13	Acres: 1,085 0 MMBF: 7 0 Acres: 120 0 MMBF: 0 6 Acres: 10.0 MMBF: 0 0 Acres: 40.0 MMBF: 0 2	Const: 0.5 Reconst: 1 0 Const: 0 0 Reconst: 0 0 Const: 0 0 Reconst: 0 0 Const: 0 0 Reconst: 0 0	PP TYPE: HTH-75; HOR-150; HSH-25, HSL20-60, HSL24-25 MC TYPE: HTH-50, HOR-525, HCC-30; HSH-100, HSL-45 PP TYPE: HOR-20, HSL20-30 MC TYPE: HOR-30; HSL-40 PP TYPE: HSL24-5 MC TYPE: HSL-5 PP TYPE: HSL24-10 MC TYPE: HOR-10, HSL-20
9102 Geary III	T15S, R30E, S4,9-15,22-24	1 14	Acres: 275.0 MMBF: 1.7 Acres: 100 0 MMBF: 0.6	Const: 0 0 Reconst: 0.0 Const: 0 0 Reconst: 0 0	PP TYPE: HTH-25, HOR-50, HSL20-30 MC TYPE: HTH-25; HOR-105, HCC-10, HSH-30; PP TYPE: HOR-25 MC TYPE: HOR-50, HSL-25
9105 Rail III	T17S, R30E, S1,11-15,22-24 T17S,R31E,S1,2,10,11,15-21, 29,30	1 14 3A 13	Acres: 615.0 MMBF: 3 9 Acres: 400 0 MMBF: 2 2 Acres: 10.0 MMBF: 0 0 Acres: 40 0 MMBF: 0 2	Const: 0.0 Reconst: 0.5 Const: 0 0 Reconst: 0 0 Const: 0 0 Reconst: 0 0 Const: 0.0 Reconst: 0 0	PP TYPE: HTH-40, HOR-90; HSH-25; HSL20-35, HSL24-15 MC TYPE: HTH-40; HOR-250; HCC-25; HSH-70; HSL-25 PP TYPE: HTH-25; HOR-75, HSL20-30; HSL24-30 MC TYPE: HOR-150; HSH-25; HSL-65 MC TYPE: HSL-10 PP TYPE: HSL24-10 MC TYPE: HSL-30
9108 Jack III	T16S, R29E, S24-26,35,36 T16S, R30E, S19,20,28-32	1 3A	Acres: 395 0 MMBF: 2 5 Acres: 5.0 MMBF: 0 0	Const: 0 0 Reconst: 1 0 Const: 0 0 Reconst: 0 0	PP TYPE: HTH-50; HOR-75; HSL20-25 MC TYPE: HTH-20; HOR-150, HSH-50, HSL-25 MC TYPE: HSL-5
9109 Johnnie III	T16S, R29E, S29-32 T17S,R29E,S4,5,8-10,14-17, 20,23	1	Acres: 300.0 MMBF: 2 0	Const: 0.0 Reconst: 1 0	PP TYPE: HTH-25; HOR-75 MC TYPE: HOR-150; HSH-25; HSL-25
9110 Hail III	T17S, R30E, S29,32-35 T18S, R30E, S3-5	1	Acres: 300 0 MMBF: 2 0	Const: 0 0 Reconst: 0.0	PP TYPE: HTH-20; HOR-75; HSH-25 MC TYPE: HTH-20, HOR-110; HSH-50
9111 Small Sales		1	Acres: 0 0 MMBF: 2.0	Const: 0.0 Reconst: 0 0	

TIMBER ACTIVITY SCHEDULE
FY 1999

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
9112 Misc Products		1	Acres 00 MMBF 31	Const 00 Reconst 00	
Watershed, UPJD 9103 sields III	T14S, R28E, S13,24,25 T14S, R29E, S17-20,28-35 T15S, R29E, S2-4,9-11	1 3B 13	Acres 390 0 MMBF 29 Acres 20 0 MMBF 00 Acres 40 0 MMBF 02	Const 05 Reconst. 7 5 Const 00 Reconst 00 Const 00 Reconst 00	PP TYPE. HTH-25, HOR-60, HSH-25, HSL20-40, HSL24-15 MC TYPE HTH-25, HOR-150, HCC-25; HSH-25 MC TYPE HSL-20 PP TYPE HSL24-10 MC TYPE HSL-30
9104 Fawn II	T15S, R31E, S1,12,13 T15S, R32E, S4-9,16-21	14 4A 3B	Acres 360 0 MMBF 1 8 Acres 170 0 MMBF 0 8 Acres 10 0 MMBF 0 0	Const. 0.5 Reconst 00 Const 05 Reconst 00 Const 00 Reconst 00	PP TYPE. HOR-25, HSL20-40, HSL24-45 MC TYPE HOR-100, HSL-150 PP TYPE HTH-20, HOR-20, HSL20-20, HSL24-20 MC TYPE HTH-20, HOR-25, HSH-20; HSL-25 MC TYPE HSL-10
District Totals	Bear Valley , 1999		Acres: 6,880.0 MMBF 47 6	Const: 2.0 Reconst 13.0	
District: Burns Watershed MLHR 9201 Sunshine	T18, R32, S13-15,22-27,34,35 T18, R33, S18-20,29,30	1 3A	Acres 673 0 MMBF 2 3 Acres 31 0 MMBF 0 1	Const 00 Reconst 00 Const 00 Reconst 00	PP TYPE HTH-438, HSH-55, HSL20-85 MC TYPE HTH-20, HOR-45, HCC-15; HSH-15 PP TYPE HSL24-31
9202 Calamity	T18, R32, S25,34-36 T18, R33, S29-32 T19, R33, S5-8,16-21 T19, R32, S1-3,10-15,23,24 T18, R33, S32,33 T19, R33, S4-9,16,17	1 3A 4A	Acres 1,055 0 MMBF 7 5 Acres 31 0 MMBF 0 1 Acres 160 0 MMBF 1 0	Const 15 Reconst 2 0 Const 00 Reconst 00 Const 00 Reconst 00	PP TYPE HTH-375; HSH-130, HSL20-90, HSL24-90 MC TYPE HTH-60, HOR-200, HCC-40, HSH-70 PP TYPE HSL24-31 PP TYPE HSH-30, HSL24-50 MC TYPE HOR-20, HSL-60
9203 Ridge	T18, R33, S20,21,28,29 T18, R33, S13-16,21-23,26-28	1 3A 4A 13	Acres 100 0 MMBF 0 1 Acres 31 0 MMBF 0 1 Acres 100 0 MMBF 0 1 Acres 300 0 MMBF 0 7	Const 00 Reconst 00 Const 00 Reconst 00 Const 00 Reconst 00 Const 00 Reconst. 00	PP TYPE. HTH-50 MC TYPE HTH-50 PP TYPE HSL24-31 PP TYPE. HTH-100 PP TYPE HOR-300
9205 Alkali	T19,R33,S15,16,21-23, 25-29,32-35 T20, R33, S1-4 T19, R33, S15,16,23,24	1 4A	Acres 955 0 MMBF 8 7 Acres 250 0 MMBF 0 5	Const 20 Reconst 00 Const 03 Reconst 00	PP TYPE HTH-75, HOR-280, HSL20-400 MC TYPE HSL-200 PP TYPE HTH-100, HSL20-150
9206 Kent	T17, R32, S1,12 T17,R33,S5-10,14-17, 20-23,26-28	1	Acres 530 0 MMBF 3 6	Const 10 Reconst 21	MC TYPE HCC-80, HSH-450
9207 West Wolf	T17, R33, S20,27-34 T18, R33, S3-8 T18, R33, S4,5	1 4A	Acres 875 0 MMBF 5 7 Acres 105 0 MMBF 0 5	Const 10 Reconst 20 Const 00 Reconst 00	PP TYPE. HTH-365; HSH-130, HSL20-100, HSL24-100 MC TYPE HCC-80, HSH-100 PP TYPE. HTH-20, HSH-25, HSL20-45 MC TYPE HSL-15

**TIMBER ACTIVITY SCHEDULE
FY 1999**

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol. in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
9208 Pine Creek	T20, R33, S9-16,22-24 T20, R33, S1-3,11-14	4A 1	Acres 450 0 MMBF 2 4 Acres. 160 0 MMBF: 0.5	Const: 1 0 Reconst. 0.0 Const: 0 0 Reconst: 0.0	PP TYPE: HTH-200, HOR-100; HSH-75; HSL20-75 PP TYPE: HTH-100, HSL20-60
9209 Dead Horse	T17, R33, S11-14,23-25 T17, R33 1/2, S6-8,16-21,29,30	1	Acres: 465 0 MMBF: 3 3	Const: 1 0 Reconst. 0.0	PP TYPE: HTH-100, HSH-35; HSL20-55; HSL24-55 MC TYPE: HTH-35; HOR-120, HCC-20; HSH-45;
Watershed SILV 9204 Jack Andy	T18, R30, S24,25,36 T18, R31, S18-20,30,31 T19, R30, S1,12 T19, R31, S5-8	1	Acres: 734 0 MMBF 4.7	Const: 1.0 Reconst. 1.5	PP TYPE: HSL24-400 MC TYPE: HCC-94; HSH-240
Watershed. Varies 9210 Misc. Sales		1	Acres: 637 0 MMBF 0 6	Const. 0.0 Reconst: 0 0	PP TYPE: HTH-140; HSL20-497
9211 Misc. Products			Acres: 0 0 MMBF 2 5	Const 0.0 Reconst: 0 0	
District Totals	Burns , 1999		Acres: 7,642.0 MMBF: 45.0	Const: 8.8 Reconst: 7 6	
District: Long Creek Watershed: FXCT 9301 Fox	T10S, R30E, S25-27,34 35 T11S, R30E, S1,2,11,12 T11S, R31E, S6,7	1 14	Acres. 475 0 MMBF 3 5 Acres 320 0 MMBF. 1.5	Const: 1 5 Reconst: 3 0 Const 0 0 Reconst. 1.0	PP TYPE: HTH-50; HOR-75, HSH-50 MC TYPE: HCC-100; HSH-200 PP TYPE: HSH-50, HSL20-100 MC TYPE: HCC-20; HSH-100, HSL-50
Watershed MFJD 9302 Jagged	T11S, R33E, S1-2,11-14	1 13 4A 14	Acres. 450 0 MMBF: 3 0 Acres 300 0 MMBF. 1.0 Acres: 400 0 MMBF: 1 5 Acres. 340 0 MMBF: 1 5	Const. 2.5 Reconst: 0 0 Const: 0 0 Reconst. 0.0 Const. 1.0 Reconst: 3 0 Const 0 0 Reconst 3 0	MC TYPE: HCC-150; HSH-200; HSL-100 PP TYPE: HOR-225 MC TYPE: HOR-75 PP TYPE: HTH-100 MC TYPE: HCC-75, HSH-225 MC TYPE: HSH-300, HSL-40
9303 Leaverite	T11S, R32E, S7,8,17-20,29,30,34 T12S, R32E, S3,4,10 T11S, R31E, S12	1 4A 14	Acres. 650 0 MMBF 3 0 Acres 550 0 MMBF. 2 0 Acres: 300 0 MMBF. 1.5	Const 1.5 Reconst 1 0 Const: 0 0 Reconst. 3.0 Const 0 0 Reconst. 0.0	PP TYPE: HTH-100; HSH-50, HSL20-50 MC TYPE: HCC-150, HSH-300 PP TYPE: HTH-100; HSL20-50 MC TYPE: HCC-100; HSH-300 PP TYPE: HTH-50, HSH-100 MC TYPE: HSH-100; HSL-50
9304 Leopard	T10S, R32E, S2,3,10,11,13-17, 21-24	1 4A 14	Acres: 725 0 MMBF: 3 5 Acres: 500 0 MMBF 2.0 Acres. 300 0 MMBF 1.5	Const: 2 0 Reconst. 0.0 Const. 1.5 Reconst: 3 0 Const 0 0 Reconst: 1 0	PP TYPE: HOR-125, HSL20-100 MC TYPE: HCC-200; HSH-300 PP TYPE: HTH-100; HSL24-100 MC TYPE: HSH-200, HSL-100 PP TYPE: HTH-100 MC TYPE: HSH-200
9305 Oil	T10S, R35E, S32,33 T11S, R35E, S4-9,16-18 T11S, R34E, S1,12,13	1 14	Acres: 650 0 MMBF. 4.0 Acres. 300 0 MMBF: 2 0	Const: 1 5 Reconst. 2.0 Const. 0.0 Reconst: 2 0	PP TYPE: HTH-200 MC TYPE: HCC-150, HSH-200; HSL-100 PP TYPE: HTH-200 MC TYPE: HSH-100

TIMBER ACTIVITY SCHEDULE
FY 1999

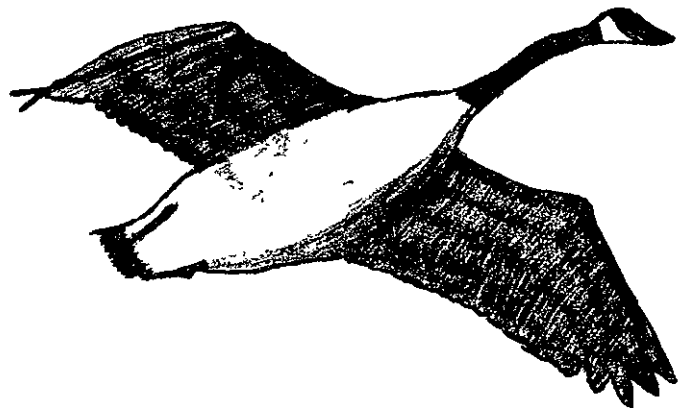
District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
9306 Jack	T10S, R32E, S20-29,32-34	1 4A	Acres 650 0 MMBF 3 5 Acres 420 0 MMBF 3 0	Const 0 0 Reconst 0 0 Const 0 0 Reconst 0 0	PP TYPE. HTH-100 MC TYPE HCC-200, HSH-350 PP TYPE HTH-100, HOR-50 MC TYPE. HSH-200, HSL-70
9307 Marsh	T10S, R31E, S23-25,36 T10S, R32E, S29,32 T11S, R31E, S1 T11S, R32E, S5,6	1	Acres 600 0 MMBF 4 0	Const 0 0 Reconst 0 0	PP TYPE HTH-100, HOR-100 MC TYPE HCC-150, HSH-250
9308 Jordan	T10S, R31E, S30-33 T11S, R31E, S3-6,8,9,16,17	1	Acres 775 0 MMBF 6 0	Const 2 0 Reconst 0 0	PP TYPE HTH-100, HOR-75, HSL20-50 MC TYPE HCC-150, HSH-300, HSL-100
Watershed VARIED 9310 Small Sales			Acres 0 0 MMBF 8 0	Const 0 0 Reconst 0 0	
District Totals	Long Creek , 1999		Acres: 8,705 0 MMBF: 56.0	Const: 13.5 Reconst 22.0	
District. Prairie City Watershed MFJD 9404 Rock	T11S,R35 1/2E,S28,33-36 T12S,R35 1/2E,S1-4,9-16, 21-27,34-36 T13S, R35 1/2E, S1,2	1	Acres 597 0 MMBF 5 0	Const 0 0 Reconst 6 5	PP TYPE HTH-100 MC TYPE HTH-122, HOR-75, HCC-100, HSH-50, LP TYPE HCC-150
9405 Clear	T11S, R35E, S33,34 T12S,R35E,S3,4,9-16,20-23, 26-28,33-36 T13S, R35E, S1-4,10-13 T13S, R35 1/2E, S4,9,16	1	Acres 250 0 MMBF 2 0	Const 0 0 Reconst 3 1	PP TYPE HTH-50 MC TYPE HTH-25, HCC-100, HSH-75
Watershed MLHR 9406 White	T17S,R34E,S13-16,21-28, 33-36 T18S, R34E, S1-4,9-11,15	1	Acres 670 0 MMBF 5 0	Const 0 0 Reconst 6 5	PP TYPE HTH-250, HSH-25, HSL24-120 MC TYPE HTH-100, HOR-75, HSH-100,
9407 Eastfall	T17S, R34E, S36 T17S, R35E, S29-33 T18S, R34E, S1,11-15 T18S, R35E, S3-10,15,17,18 T17S, R34E, S36 T17S, R35E, S29-33 T18S, R34E, S1,11-15 T18S, R35E, S3-10,15,17,18	1 3A	Acres 505 0 MMBF 3 5 Acres 100 0 MMBF 0 5	Const 0 0 Reconst 4 0 Const 0 0 Reconst 0 0	PP TYPE HTH-100, HSH-50, HSL24-180 MC TYPE HOR-175 PP TYPE HSL24-100
9409 Con	T16S,R34E,S15-17,19-22,26-35 T17S, R34E, S2-8 T17S, R33 1/2E, S1,12,13	1	Acres 900 0 MMBF 6 0	Const 0 0 Reconst 8 0	PP TYPE HSH-100, HSL24-300 MC TYPE HTH-325, HOR-25, HCC-100, HSH-50,
Watershed NFMR 9401 Tamarack	T17S, R35E, S33-35 T18S, R35E, S1-4,10-15 T17S, R35E, S33-35 T18S, R35E, S1-4,10-15	1 4A	Acres 450 0 MMBF 2 0 Acres 600 0 MMBF 2 0	Const 0 0 Reconst 1 5 Const 0 0 Reconst 2 0	PP TYPE HTH-200, HSH-50 MC TYPE HTH-100, HOR-100 PP TYPE HTH-550, HSH-50
9402 Dutch	T16S, R35E, S23-26,35,36 T16S, R36E, S19,30,31 T17S, R35E, S1,12,13,24,25 T17S, R36E, S6-8,16-21 T16S, R35E, S23-26,35,36 T16S, R36E, S19,30,31 T17S, R35E, S1,12,13,24,25 T17S, R36E, S6-8,16-21	4A 13	Acres 750 0 MMBF 1 5 Acres 50 0 MMBF 0 5	Const 0 0 Reconst 3 0 Const 0 0 Reconst 0 0	PP TYPE HTH-400, HSH-150 MC TYPE HTH-200 MC TYPE HOR-50

**TIMBER ACTIVITY SCHEDULE
FY 1999**

District Sale Number/Name by Watershed	Legal Description	MA	Area in Acres Vol in MMBF	Roads C Roads R	Probable Harvest Methods by Forest Type and Comments
9403 Sheep	T14S, R35E, S24-26,35,36 T15S, R35E, S1-3,10-15,23-25 T14S,R35 1/2E, S16, 17, 20, 21,28,29,32-34 T15S,R35 1/2E, S3-5, 8-10, 14-17,20-23,26-29,33	1	Acres 800 0 MMBF 2 5	Const 0 0 Reconst 4 0	PP TYPE: HTH-100 MC TYPE: HTH-350, HOR-100, HSH-50 LP TYPE HCC-200
	T14S, R35E, S24-26,35,36 T15S, R35E, S1-3,10-15,23-25 T14S,R35 1/2E, S16, 17, 20,21,28,29,32-34 T15S,R35 1/2E, S3-5, 8-10, 14-17,20-23,26-29,33	14	Acres 50 0 MMBF 0 5	Const 0 0 Reconst. 0 0	PP TYPE HSL24-50
9408 Phink	T15S, R35 1/2E, S25-28,33-36 T16S, R35E, S1-4,9-15,22-25 T16S, R36E, S6 T15S, R36E, S31	1	Acres 1,700 0 MMBF. 13 0	Const 4 2 Reconst. 8.5	PP TYPE: HTH-400, HOR-50, HSH-200 MC TYPE: HTH-400; HOR-450, HCC-100; HSH-100
	T15S, R35 1/2E, S25-28,33-36 T16S, R35E, S1-4,9-15,22-25 T16S, R36E, S6 T15S, R36E, S31	14	Acres. 150 0 MMBF 0 5	Const 0 0 Reconst 0 0	PP TYPE HSL24-100 MC TYPE. HSL-50
	T15S, R35 1/2E, S25-28,33-36 T16S, R35E, S1-4,9-15,22-25 T16S, R36E, S6 T15S, R36E, S31	13	Acres 120 0 MMBF 0 5	Const 0 0 Reconst 0.0	PP TYPE: HOR-50 MC TYPE HOR-70
Watershed UPJD 9410 Small Sales	T11S, R32-36E, S1-36 T12S, R32-36E, S1-36 T13S, R32-36E, S1-36 T14S, R32-36E, S1-36	1	Acres 500.0 MMBF 7 0	Const 0 0 Reconst. 0 0	PP TYPE: HSL24-50 MC TYPE. HOR-200; HSH-75, HSL-175
	T11S, R32-36E, S1-36 T12S, R32-36E, S1-36 T13S, R32-36E, S1-36 T14S, R32-36E, S1-36	14	Acres. 100.0 MMBF 2 5	Const 0 0 Reconst 0 0	PP TYPE: HOR-40 MC TYPE. HSH-60
	T11S, R32-36E, S1-36 T12S, R32-36E, S1-36 T13S, R32-36E, S1-36 T14S, R32-36E, S1-36	3B	Acres 50 0 MMBF 0 5	Const. 0.0 Reconst 0 0	PP TYPE. HOR-25; HCC-25
District Totals:	Prairie City , 1999		Acres: 8,342.0 MMBF: 55.0	Const: 4.2 Reconst: 47.1	
1999 Yearly Totals:			Acres: 31,569 0 MMBF: 203.6	Const: 28.5 Reconst: 89.7	

Appendix B

LAND CLASSIFICATION



APPENDIX B LAND CLASSIFICATION SUMMARY

To meet the objectives of this Forest Plan, 835,970 acres of tentatively suitable lands have been classified as suitable for timber production. A total of 203,898 acres have been identified as not suitable for timber production; 29,090 acres are inefficient lands primarily due to a combination of species present, steep slopes, and/or volume available; 38,090 acres are due to Management Requirements, and 136,718 acres are designated for no harvest due to other multiple use restriction.

A summary of the land classification for the Forest is shown in Table B-1.

**TABLE B-1
Land Classification Summary**

	Classification	Acres
1.	Nonforest Land (includes water)	284,544
2.	Forest Land	1,174,878
3.	Forest Land Withdrawn from Timber Production ^{1/}	68,373
4.	Forest Land Not Capable of Producing Crops of Industrial Wood	0
5.	Forest Land Physically Unsuitable a. Irreversible Damage Likely b. Not Restockable in 5 Years	66,637 0 66,637
6.	Tentatively Suitable Forest Land (Item 2 minus Items 3, 4, and 5 a and b)	1,039,868
7.	Forest Land Not Appropriate for Timber Production a. Due to Management Requirements b. To Meet Multiple Use Objectives ^{2/} c. Cost Efficiency ^{3/}	203,898 38,090 136,718 29,090
8.	Unsuitable Forest Land (Items 3, 4, 5, and 7 a, b, c)	338,908
9.	Total Suitable Forest Land (Item 6 minus Item 7 a, b, c)	835,970
10.	Total National Forest Land ^{4/}	1,459,422

^{1/}Forested acres under Wilderness and Wild and Scenic River designation.

^{2/}96,627 acres are constrained from scheduled harvest in the FORPLAN model, the remainder are not constrained

^{3/}Tentatively suitable acres not in solution in the FORPLAN model

^{4/}Total as of 12/31/85

LAND CLASSIFICATION SUMMARY

Table B-2 shows how the suitable land base is distributed by management area for this plan. Scheduled timber harvest will come only from suitable acres. All of the management area assignments with suitable lands contribute to the 10-year timber sale program in the first decade.

TABLE B-2
Acres Suitable For Timber Management By Management Area

	Management Area	Total	Suitable	Unsuitable
1	General Forest	553,053	526,811	26,242
2	Rangeland	99,203	0	99,203
3A	Non-Anadromous Riparian	19,268	10,169	9,099
3B	Anadromous Riparian	28,092	9,891	18,201
4A	Big-Game Winter Range Maintenance	177,406	115,164	62,242
5	Bald Eagle Winter Roosts	4,040	0	4,040
6A	Strawberry Mountain Wilderness	68,700	0	68,700
6B	Monument Rock Wilderness	12,620	0	12,620
7	Scenic Area	13,322	0	13,322
8	Special Interest Areas	246	0	246
9	Research Natural Areas	750	0	750
10	Semi-Primitive Non-Motorized Recreation Areas	48,888	0	48,888
11	Semi-Primitive Motorized Recreation Areas	14,578	0	14,578
12	Developed Recreation Sites	484	0	484
13	Old Growth	72,690	22,800	49,890
14	Visual Corridors	186,682	131,667	55,015
16	Minimum Level Management	74,668	0	74,668
17	Byram Gulch Municipal Supply Watershed	300	0	300
18	Long Creek Municipal Supply Watershed	224	224	0
19	Administrative Sites	1,369	0	1,369
20A	Wildlife Emphasis / Scheduled Harvest Dry Cabin	14,629	7,402	7,227
20B	Wildlife Emphasis / Scheduled Harvest Utley	9,045	4,652	4,393
21	Wildlife Emphasis With Non-Scheduled Harvest	22,076	0	22,076
22	Wild and Scenic River	10,256	7,190	3,066
	Roads and Water	26,833	0	26,833
	Total	1,459,422	835,970	623,452

Appendix C

**VEGETATION MANAGEMENT
PRACTICES**



APPENDIX C VEGETATION MANAGEMENT PRACTICES

All vegetative management practices on forested lands will be preceded by a silvicultural examination, an on-the-ground analysis of the area, and a site-specific prescription written or reviewed by a certified silviculturist. The prescription process considers direction and objectives set forth in this Forest Plan, site-specific factors, and a review of the applicable technical and scientific literature, as well as practical experience. The prescription will detail the actual vegetative manipulation to be implemented on a case-by-case basis. The standards for all silvicultural systems in the Pacific Northwest Regional Guide will also be used in determining the silvicultural system to be implemented.

The silvicultural prescription process is a concurrent activity with the interdisciplinary team process in preparing projects. Prescriptions are formulated within Forest Plan guidance to achieve specific objectives of management areas. The full range of silvicultural systems (individual tree selection to clearcut) are available for use on the Malheur National Forest. The selected vegetative management practices for individual sites will comply with management requirements listed in 36 CFR 219.27(b).

Refer to Chapters II and IV of the Final Environmental Impact Statement for complete discussions of silvicultural systems and environmental effects.

Clearcutting

Clearcutting as a silvicultural system will be employed to harvest timber under this Plan. This method is selected on the basis of physical and biological site factors and existing timber types, as well as overall economics. Clearcutting will be selected only when it is determined to be the optimal silvicultural system. Appropriate numbers of wildlife trees will be retained.

Clearcutting allows considerable flexibility in determining the character and composition of future timber stands. The species, degree of stocking, etc., can be controlled with various silvicultural techniques. This is especially useful in situations where existing stands are occupied by less valuable and undesirable species, or the current species composition is at high risk for losses due to insects or disease.

The clearcutting method, in general, is the most economical harvest system to employ. Since all merchantable timber is removed, the volume and value per acre treated and accessed is maximized.

Clearcutting can be detrimental if applied to sites where physical conditions will change to extremes of heat and cold if the Forest cover is totally removed. In these cases, regeneration efforts can be difficult and costly. However, clearcutting may be the most effective harvest method to achieve the desired multiple use objective of a stand. An example is a big-game winter range where clearcutting on appropriate sites is the most successful system for maximizing growth of suitable browse vegetation.

VEGETATION MANAGEMENT PRACTICES

Following are general descriptions of sites and situations when clearcutting may be selected as the optimal harvesting method. Not all possible sites and situations are listed, however, since site-specific, on-the-ground analysis may identify situations where clearcutting may be the optimal method and where it is probable that clearcutting may not be the optimal method for all the lands that fit these broad descriptions.

1. The moisture and temperature regimes of the site, following clearing, will be favorable for regenerating the desired species. In general, north and east aspects fit this category, but conditions can vary by geographic location.
2. The existing stand is stocked with species that are not desired in the regenerated stand because of disease or insect susceptibility, or the physiological condition of the existing overstory is such that natural regeneration is unlikely to occur.
3. The change in forested appearance created by the harvest opening does not conflict with objectives for visual management.
4. Management objectives for the area can be better achieved by clearing all of the trees in one operation (e.g., increasing browse and forage for wildlife or livestock).

Clearcutting is most likely to be prescribed for habitat types in the Douglas-fir (*Pseudotsuga menziesii*) series, on the cool/moist habitat types of the grand fir (*Abies grandis*) series, and the subalpine fir (*Abies lasiocarpa*) series. It will also be the predominant silvicultural system for regenerating lodgepole pine stands.

Seed Trees

The seed tree system is normally used for the same reasons and on the same sites as clearcutting with the additional potential for achieving natural regeneration from the seed trees.

Shelterwood

The shelterwood silvicultural system will also be used to harvest timber under this Plan. In a shelterwood system, the basic objective is to have the second crop of trees started on a site before all of the standing timber is removed.

Shelterwood systems are used in situations where the physical site conditions created by clearcutting would be too harsh for tree regeneration or would not be favorable to the establishment and growth of the desired species. The residual stand provides protection from temperature extremes on the site and modifies the climatic factors in general. The shelterwood system also offers the opportunity to reduce regeneration costs if factors are suitable for establishing natural regeneration from the seed source provided by the residual stand.

Shelterwood systems can also be the most effective means of achieving multiple use objectives in some instances. One example is those cases where visual quality objectives are retention or partial retention. In many cases the larger, more commercially valuable trees are left standing after the initial harvest entry. This reduces the volume and value per acre removed in the initial harvest entry, thereby increasing the unit costs of access and harvesting in many cases.

Once regeneration is established, removal of the residual stand requires careful harvest planning and implementation to protect the new crop of trees.

Following is a list of general factors that will be considered when determining whether or not the shelterwood system will be applied to a specific site. A site-specific silvicultural prescription may consider additional factors and timber sale conditions.

1. The existing stand is stocked with species that are desired in the regenerated stand and the physiological condition of the trees is such that seed production and successful regeneration are likely to occur. The wind firmness of the stand will also be a consideration
2. The moisture regimes and temperatures on the site are such that without some shading and cover, conditions will become too harsh for tree regeneration. South and west aspects generally fit into this category, but conditions can vary by location.
3. Management objectives for the area can best be achieved by maintaining some tree cover on the site until regeneration is established.

Shelterwood harvesting is most likely to be prescribed on the warmer/drier habitat types of the grand fir series, the Douglas-fir habitat types, and ponderosa pine habitat types.

In prescribing shelterwood harvest methods, consideration will be given to future harvests required, the feasibility of removing the residual overstory from an established stand of seedlings, and the effectiveness of site preparation and slash treatment

Selection Harvests

Individual tree and group selection harvest methods may be applicable to certain combinations of timber management and other resource objectives identified by the land assignments in this Plan. The most probable situations for implementing these silvicultural systems would be in riparian areas and in areas with visual quality objectives of retention or partial retention, and in the general forest condition where ponderosa pine is to be emphasized. Selection harvest methods should be evaluated when harvesting is scheduled in areas with these resource objectives

The existing timber types, stand conditions, and site characteristics are also critical factors that will be evaluated when considering the applicability of uneven-aged systems. Stands with high percentages of low-vigor trees with little seed-producing potential and species highly susceptible to disease and insect damage are examples of situations where uneven-aged management may not meet overall objectives.

Overstory Removals

Typical management activities will consist of the complete removal of existing overstory trees and thinning of the remaining understory in a one-step operation, to meet full stocking level control objectives. This method is selected on the basis of physical and biological site factors, existing timber types as well as overall economics.

Following is a list of general factors that will be considered when determining whether or not the overstory removal cutting harvest method will be applied to a specific site. A site-specific silvicultural prescription may consider additional factors and timber sale conditions

VEGETATION MANAGEMENT PRACTICES

1. The existing stand has a two storied appearance; the understory is stocked with species that are desired and the physiological condition of the trees is such that they will respond favorably to release.
2. Management objectives for this area can be better achieved by removing the existing overstory trees and managing the understory crop trees to maturity.
3. Overstory removals will be considered for use on ponderosa pine habitat types, Douglas-fir habitat types, white fir habitat types, and lodgepole pine habitat types.

Intermediate Harvests

Intermediate harvests such as commercial thinnings will generally be prescribed only in stands that have not reached the culmination of mean annual increment. *Salvage or sanitation harvests may be considered as intermediate treatments in stands that have already culminated in growth, but cannot be harvested and regenerated because of multiple use constraints on scheduling such as maintaining wildlife cover. This treatment may be considered in lodgepole pine stands that are considered high risk for mountain pine beetle infestation.*

Timber Stand Improvement

Precommercial thinning, cleaning, and weeding treatments will be used on sapling-sized stands where stocking exceeds the level necessary to meet the future stand objectives. Thinnings will be designed to promote within-stand diversity while maintaining stand growth and yield projections at levels prescribed in the management prescriptions.

Reforestation

All cutover sites will be planned for regeneration. Hand planting will generally be prescribed for areas that have been clearcut. Hand planting may also be prescribed in shelterwood units when natural regeneration is unlikely, or expected to be inadequate to meet required stocking levels, a species change is needed or to achieve genetic improvement. Natural regeneration may be prescribed, primarily in shelterwood units where regeneration is likely to occur within five years.

For more specific criteria on silvicultural system selection, refer to the Pacific Northwest Regional Guide, Management Standards and Guidelines, pages 3-1 to 3-9.

TABLE C-1
Vegetation Management Practices (Average Annual in Decade 1)

Practice	Acres
Regeneration harvest	
Clearcut	3,330
Shelterwood and seed tree	
Preparatory cut	1,583
Seed cut	2,989
Removal cut	512
Selection	6,424
Intermediate harvest	
Overstory removal of existing stands	6,301
Commercial thinning	6,778
Salvage/sanitation ^{1/}	3,956
Timber stand improvement	10,842
Reforestation ^{2/}	12,672

^{1/}Estimate

^{2/}7,211 acres natural regeneration and 5,461 acres planted

Prescribed Fire

Prescribed fire is a useful tool for managing vegetation, particularly when maintaining or improving wildlife habitat and rangeland. Prescribed fire is used when the palatability of forage decreases and the removal of old, dead material is necessary to increase utilization by grazing animals. It will also be used to release plant nutrients in the soil and litter in order to promote greater leader growth and sprouting. When undesirable plant species are taking over a site, the manager will utilize fire to increase the coverage of desirable species. Areas where livestock or wildlife movement is restricted or nonexistent, fire will be used to open them up allowing greater movement, resulting in better utilization. This technique is especially important for wildlife when migration corridors are no longer used because they are closed off by dense vegetation. Prescribed fire is generally used to increase the diversity of wildlife species as well as animal population densities in all vegetative types. In addition to being ecologically desirable, prescribed fire is also a cost-efficient management tool.

Herbicide Use

The use of pesticides and herbicides in the management of vegetation will be considered in the analysis of alternatives which evaluate cultural, mechanical, manual, prescribed fire, biological, chemical, and regulatory methods. The analysis will evaluate the effectiveness, specificity, environmental impacts, and benefit cost of the alternative in meeting management goals.

Possible Modifications to Timber Harvest Scheduling

In response to Regional and Washington Office direction, an analysis was completed which examined opportunities to increase the allowable sale quantity if certain economic conditions changed (e.g., rising demand or prices). Opportunities to increase the allowable sale quantity do exist in two distinct categories: 1) harvesting timber from tentatively suitable acres that were not selected as cost-efficient in FORPLAN modeling; and 2) increasing timber management intensities beyond the levels which FORPLAN chose as most cost-efficient;

VEGETATION MANAGEMENT PRACTICES

The first opportunity to increase allowable sale quantity involves the acres of tentatively suitable land which was not selected as cost-efficient under this Forest Plan. If these acres (29,090 total acres) are forced into timber production, allowable sale quantity would be increased by 1.2 million cubic feet per year (7 MMBF). Currently a portion of these lands are decadent, low value, mixed conifer species which have the potential of being productive in the next stand rotation. Under this Plan, these acres may be brought into timber management (based on site-specific analysis), as market condition change, new technology is developed or the budget allows. There would be some change in environmental effects if these production increases were made; however, these changes are not expected to be significant. Clearcut harvest as well as selection harvest would increase under this scenario, ponderosa pine volumes available for harvest in future decades would be less and long-term sustained yield would be reduced from 40.7 MMCF to 39.5 MMCF.

The second opportunity to increase allowable sale quantity is to intensify timber management activities above the level identified in this Forest Plan. Application of intensive timber management practices on these acres would produce a first decade allowable sale quantity of 35.6 million cubic feet per year (205 MMBF) and a long-term sustained yield capacity of 37.8 million cubic feet per year. The harvest levels are generated from acres in General Forest and several specific management areas, i.e., visual corridors, elk winter range, riparian areas, wildlife emphasis with scheduled timber harvest. Specific timber prescriptions were applied to these acres to produce the first decade allowable sale quantity while meeting nondeclining flow and ending inventory requirements.

In Decades 1 and 2, harvest methods primarily include overstory removals followed by management of the remaining understory. To increase the allowable sale quantity by intensifying timber management, more reliance is placed on regeneration harvest methods; as well as commercial thinnings. If timber management intensities are increased, there would be some changes in environmental effects, primarily on wildlife habitat and water quality.

Production is not limited by cost considerations and all suitable forested acres were sent to timber management prescriptions. Increasing the management intensity (i.e., a FORPLAN objective function of maximum timber production) on all suitable acres (835,216 acres) results in an increase in first decade allowable sale quantity of 0.8 million cubic feet per year (5 MMBF).

TABLE C-2
Evaluation of Land for Timber Production

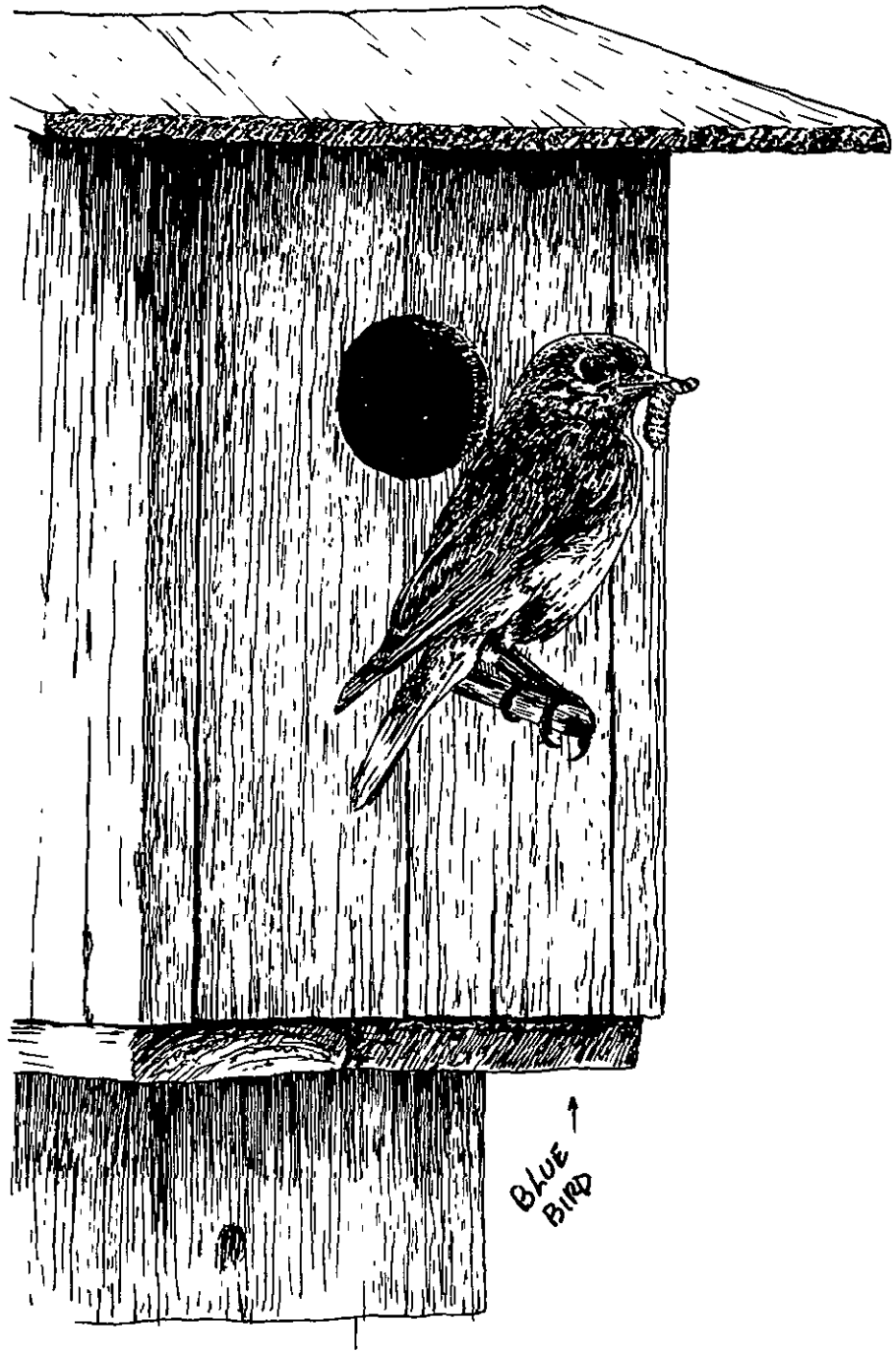
Tentatively suitable for timber production under different objective functions	Acres	Average Annual ASQ		LTSYC ^{1/}
		MMBF	MMCF	MMCF
1. Suitable - land & intensities cost efficient to meet Plan objectives and design for Timber Management (max PNV objective function) ^{2/}	835,970	200	34.8	40.7
2. Maximum Suitable Land and intensities selected under max. Timber Management Objective (max Timber objective function) ^{3/}	865,060	207	36.0	39.5
3. Economically Inefficient Difference between 1 & 2 = land and intensities not cost efficient to meet Plan objectives, direct costs exceed direct benefits	29,090	7	1.2	-1.20
4. Suitable (constrained) Max Timber objective function & cost inefficient constrained to "no harvest" ^{4/}	835,216	205	35.6	37.8
5. Economically Inefficient Difference between 2 & 4 = intensities not cost efficient	29,844	2	0.4	1.70
6. Unsuitable - designated for non-timber objectives, regardless of cost efficiency.	175,000			

^{1/}Long-Term Sustained Yield Capacity

^{2/}The acres and volumes shown are those from this Forest Plan (or Alternative I in FEIS)

^{3/}Results of this FORPLAN run show the acres and volume that would be available if cost efficiency were not a criterion, and less than cost efficient acres and intensities were included

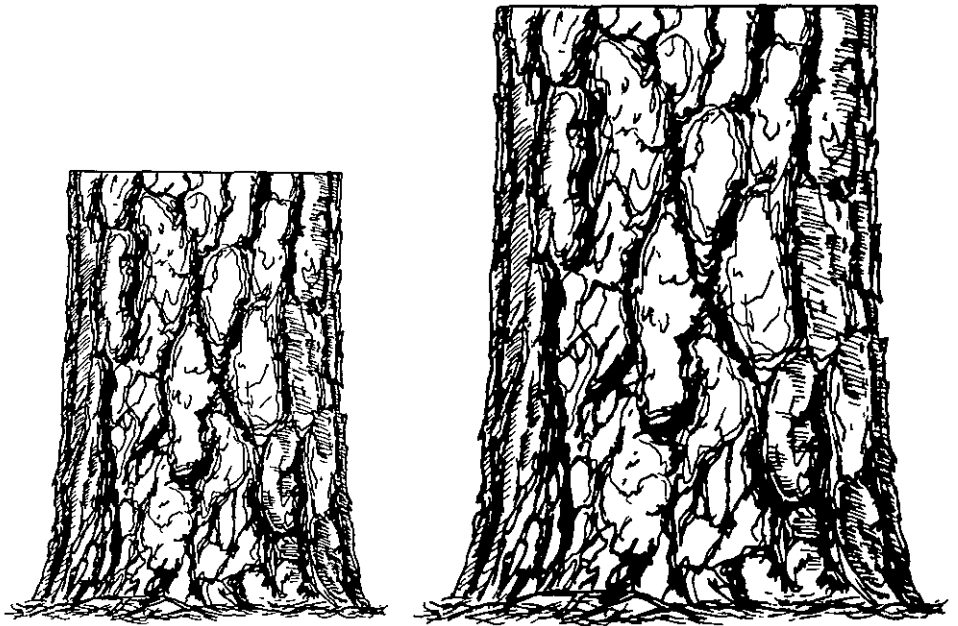
^{4/}Results of this FORPLAN run show the acres and volume that would be available for timber harvest if cost efficiency were a criterion for acres, but not management intensity.



BLUE
BIRD ↑

Appendix D

TIMBER PRODUCTIVITY CLASSIFICATION



APPENDIX D TIMBER PRODUCTIVITY CLASSIFICATION

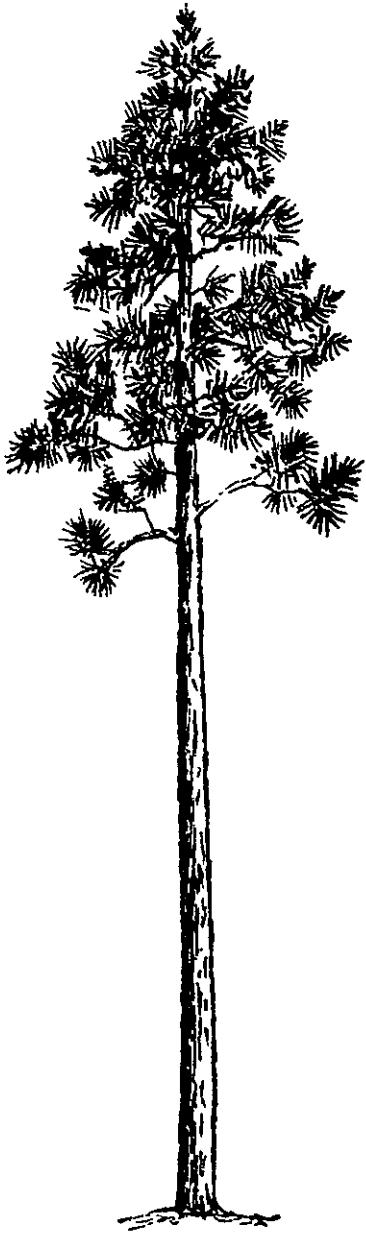
An approximation of timber productivity classification is shown in Table D-1.

**TABLE D-1
Timber Productivity Classification**

Potential Growth Rate (cubic feet/acre/year)	Suitable Lands Thousand Acres	Unsuitable Lands ¹ / Thousand Acres
Less than 20	12	86
20 - 49	394	142
50 - 84	339	88
85 - 119	87	22
120 - 164	4	1
165 - 224	0	0
225 Plus	0	0
Total	836	339

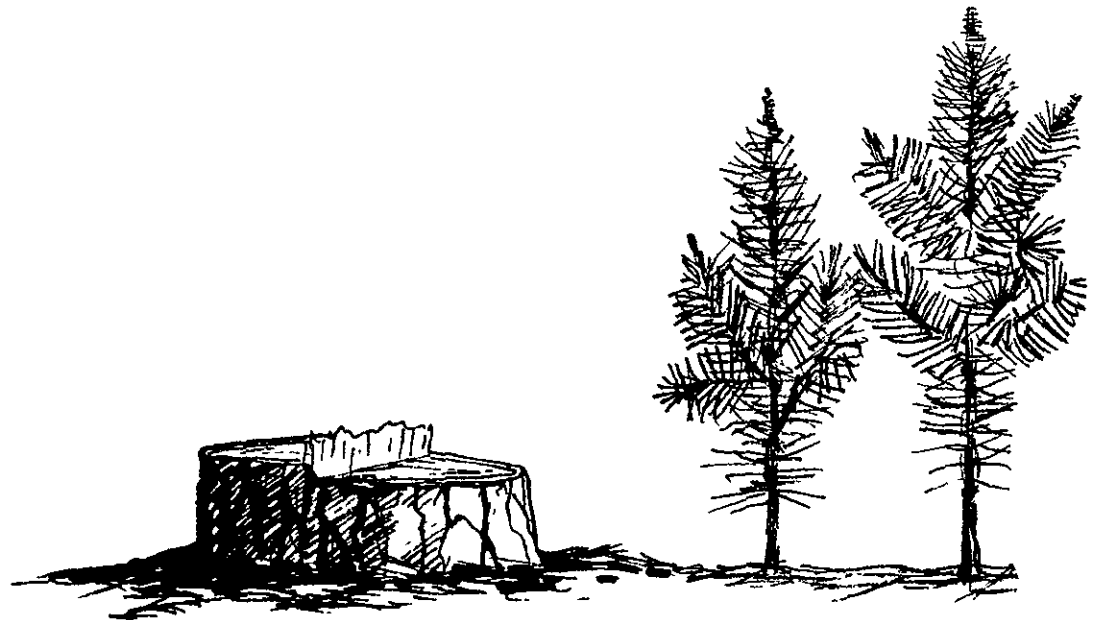
¹Estimated productivity for lands, such as wilderness, where data are not available

The average growth potential of trees measured during the 1980 inventory was Site Index 67 for ponderosa pine, Site Index 73 for mixed conifer, and Site Index 36 for lodgepole pine. Site Index is a measure of height of dominant (largest) trees at age 100 (age 50 for lodgepole pine) in the stand. This correlates to an average potential production of 38 cubic feet per acre per year on the ponderosa pine sites, 59 cubic feet per acre per year on the mixed conifer sites, and 41 cubic feet per acre per year on the lodgepole pine sites provided intensive management. Actual growth rates may be significantly less.



Appendix E

**ALLOWABLE SALE
QUANTITY**



**APPENDIX E ALLOWABLE SALE QUANTITY
AND TIMBER SALE PROGRAM QUANTITY**

Under this Forest Plan the average annual allowable sale quantity of timber in the first decade, calculated from the suitable acres, is 34.8 million cubic feet or 200 million board feet. In addition, 3.6 million cubic feet of timber are expected to be removed from down or defective trees, or trees too small to be included in the allowable sale quantity. This represents a total timber sale program quantity of 38.4 million cubic feet or 211 million board feet (see Table E-1)

As shown in Figure E-1, the long-term sustained yield capacity of 40.7 million cubic feet per year will be reached in decade 12.

**TABLE E-1
Average Annual Allowable Sale Quantity And Timber Sale Program Quantity,
First Decade**

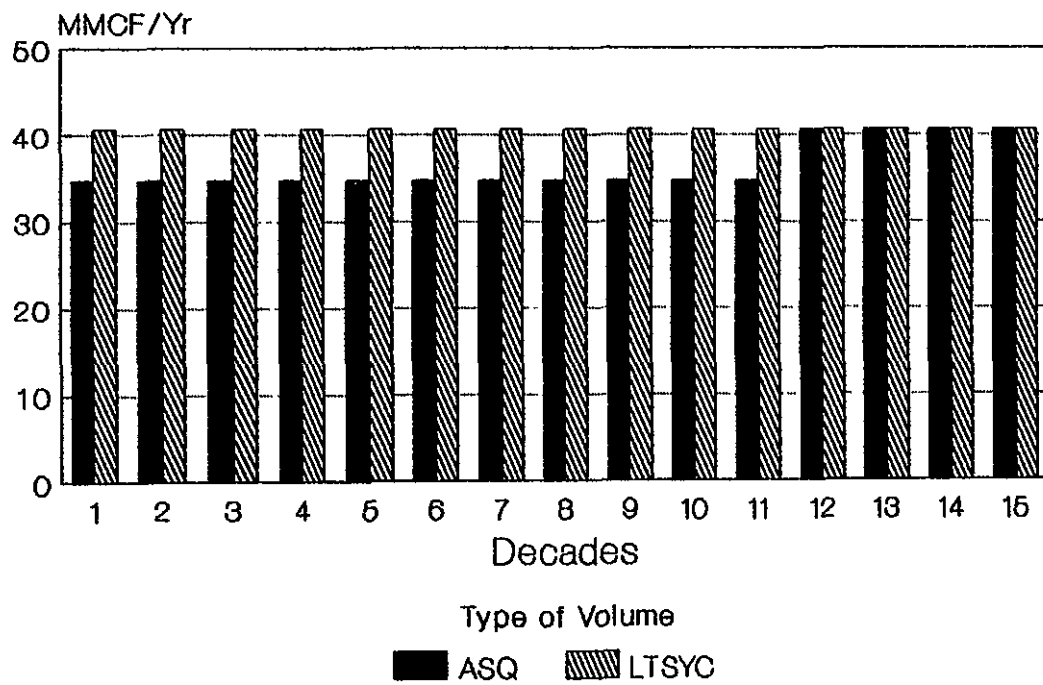
Harvest Method	ALLOWABLE SALE QUANTITY ^{1/}				TIMBER SALE PROGRAM QUANTITY	
	Sawtimber		Other Products		MMCF	MMBF
	MMCF	MMBF	MMCF	MMBF	MMCF	MMBF
Regeneration Harvest						
Clearcut	6.4	36.8	0	0		
Shelterwood and seed tree						
- Preparatory cut	2.3	13.4	0	0		
- Seed cut	2.8	16.2	0	0		
- Removal cut	0.2	1.4	0	0		
Selection Harvest	5.0	28.8	0	0		
Intermediate Harvest						
Overstory removal of existing stands	13.0	74.2	0	0		
Commercial thinning	5.1	29.2	0	0		
Salvage/sanitation	0	0	0	0		
Total Allowable Sale Quantity	34.8	200.0	0	0	34.8	200.0
Additional Sales ^{2/}	1.4	4.3	2.2	6.7	3.6	11.0
TOTAL					38.4	211.0

^{1/}Includes only chargeable volumes from suitable lands

^{2/}Includes only nonchargeable volumes from both suitable and unsuitable lands

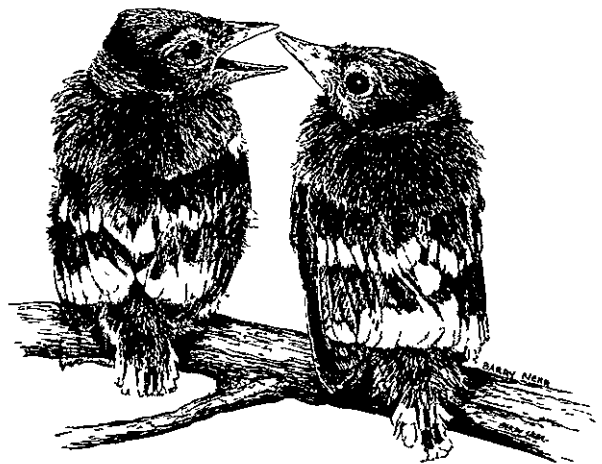
FIGURE E-1
Allowable Sale Quantity And Long-Term Sustained Yield Capacity

Comparison of the Allowable Sale Quantity and Long-Term Sustained Yield Capacity.



Appendix F

PRESENT AND FUTURE CONDITIONS



PRESENT AND FUTURE FOREST CONDITIONS

APPENDIX F PRESENT AND FUTURE FOREST CONDITIONS

Table F-1 shows the present and future Forest growing stock. Standing volumes will decrease, but annual net growth will increase as more acres of managed stands are created. Table F-2 shows the present and future age-class distribution for the Forest and representative diameters for each age-class.

**TABLE F-1
Present (1980) And Future (2039) Forest Conditions**

	Unit of Measure	Suitable Land	Unsuitable Land	Total
Present Forest (1980)^{1/}				
Growing stock	MMCF	1,541.880	182,413	1,724 293
	MMBF	9,333.914	595.257	9,929.171
Live cull	MMCF	22 279	1.421	23 700
	MMBF	114.082	7 275	121 357
Salvageable dead	MMCF	131 398	8 380	139.778
	MMBF	394.065	25.131	419 196
Annual net growth				
	MMCF	20.476	1.306	21.782
	MMBF	122 323	7.801	130.124
Annual mortality				
	MMCF	6.867	0.436	7.303
	MMBF	40.262	2.579	43.011
Future Forest (2039)^{2/}				
Growing stock	MMCF	1,359 536		
Annual net growth	MMCF	32 71		
Rotation age ^{3/}	Years	70 to 120		

^{1/}Based on 1980 timber inventory statistics

^{2/}Based on FORPLAN acres by age class, FORPLAN Report "Timber Inventory Report Alternative I."

^{3/}Average rotation age for regeneration stands on lands with timber emphasis by major forest types
Rotation ages vary by land management objectives

PRESENT AND FUTURE FOREST CONDITIONS

TABLE F-2
1980 Conditions And Future (2039) Age Class Distribution For Suitable Lands

Age Class ^{1/}	Present M Acres	Future M Acres
0-10	23	161
11-20	-	121
21-30	-	69
31-40	-	78
41-50	3	79
51-60	-	23
61-70	-	-
71-80	60	-
81-90	736	-
91-100	-	3

Age Class ^{1/}	Present M Acres	Future M Acres
101-110	-	-
111-120	-	-
121-130	-	45
131-140	-	252 ^{2/}
141-150	-	-
151-160	14	-
161-170	-	-
171-180	-	-
181-190	-	-
191+	-	5

^{1/}Two-story stand age based on understory age

^{2/}Many of these old age class stands will be under uneven-aged management regimes



Appendix G

FIRE MANAGEMENT DIRECTION



APPENDIX G FIRE MANAGEMENT DIRECTION**A. Introduction**

The Malheur National Forest will provide for resource protection and fire use necessary to protect, maintain, and enhance resource values and attain land management goals and objectives.

Fire management is a support function integrated with and responsive to the land and resource management direction established in the Forest Plan.

The National Fire Management Analysis System is the formal process used to integrate fire management planning with land and resource management planning. The fire management direction established here will be used to guide the preparation of the fire management analysis. The fire management analysis culminates with preparation of the fire management action plan, which establishes and documents fire programs to achieve the fire management direction established in this Appendix of the Forest Plan in the most cost-effective manner.

Because all forest resources can be affected by fire, managers should carefully consider these basic concepts when forming plans, decisions, and actions:

1. Fire and the exclusion of fire have played a major role in development of the ecosystems on the Malheur National Forest. The exclusion of prescribed fire along with effective fire suppression has complicated resource management in some areas by: (a) allowing residues to accumulate to unacceptable levels; (b) increasing the probability of high intensity wildfires; (c) increasing the threat of insect infestations; (d) decreasing available forage, and (e) changing timber stand composition by increasing fir and associated tree species.
2. Prescribed fire from both planned and natural ignitions can be used to achieve land management objectives
3. Project planning must consider the ecological effects of fire when developing options for effective land and resource management.
4. Aesthetic, visual, soil, air, and water quality concerns will dictate fire management direction in some areas.

B. Fire Management Direction

The following direction is to ensure that fire use programs are cost-effective, compatible with the role of fire in forest ecosystems, and responsive to resource management objectives.

1. Utilize prescribed fire to maintain healthy, dynamic ecosystems that meet land management objectives
2. Maintain an adequate organization of well-qualified prescribed-fire experts. Apply both technical knowledge and field experience in accomplishing prescribed fire needs.

FIRE MANAGEMENT DIRECTION

3. Emphasize fire ecology implications when applying prescribed fire.
 - (a) Use fire ecology and fire management reference documents to guide project development, execution, and evaluation.
 - (b) Integrate an understanding of the role fire plays in regulating stand structure into the development of silvicultural prescriptions
 - (c) Emphasize the use of prescribed fire in range and wildlife habitat improvement projects.
 - (d) Fire will be permitted in wilderness to the extent possible within prescriptions that provide for protection of life, property, and adjacent resources, after approval of wilderness fire management plan
 - (e) Prescribed fire programs will be responsive to national, state, and local air quality regulations and agreements
 - (f) An active inform-and-involve program is necessary to ensure public involvement, understanding, and approval of prescribed fire programs.

The following direction is to ensure that fire presuppression and suppression programs are cost-effective and responsive to the Forest Plan

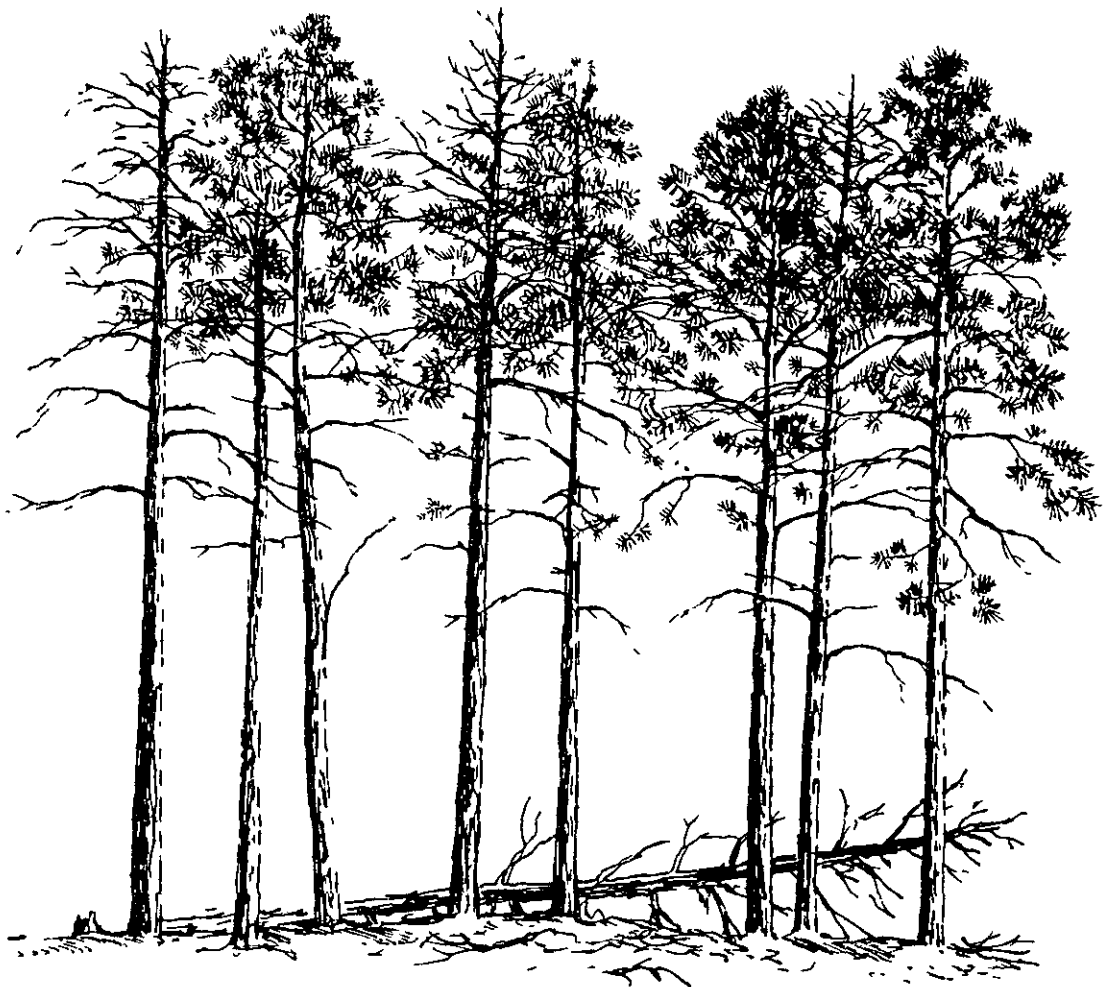
1. From May 15 through October 15, staff engines, fire crews and lookouts, as dictated by weather, fuel conditions, and budget constraints
2. Each wildfire will receive an appropriate suppression response.
3. Natural ignitions may be managed as prescribed fires in predetermined areas under conditions that meet established prescriptions, when approved by the Regional Forester (FSM 5140).
4. The responsible line officers can require a control suppression response in any Forest Plan management area at any time.

C. Fire Management Analysis

The National Fire Management Analysis System provides analytical methods to determine the most cost-effective fire program to accomplish fire management objectives established by the Forest Plan. This process provides input for land and resource management planning and forest and regional program development and budgeting.

1. Forest Analysis - The Forest process has three components which integrate with forest planning.
 - (a) Level I - The analysis of the Forest's fire management program under the current management situation.
 - (b) Level II - The formulation and analysis of fire management program options, functional mixes, and/or budgets to identify the most efficient program meeting the Forest Plan management direction.

- (c) Level III - Procedures for developing and implementing the annual National Forest fire management program, including preparation of the fire management action plan.
- 2. Regional and National Analysis - The regional and national process determines the kind, amount, and location of fire suppression forces and resources which are considered regional or national in scope and are used but not planned or controlled by the Forest analysis (i.e , retardant planes, smoke-jumpers, etc.).
- 3. Budget Analysis - The budget analysis process identifies the most efficient unit distribution of fire protection funds at any given national or regional budget level and documents the consequences in terms of expected annual forest firefighting (FFF) cost and net resource value changes.





Appendix H

BUDGET



APPENDIX H PROJECTED BUDGET - FISCAL YEAR 1992

The following table, B-1, depict the activities and projects (capital investments) necessary to provide the level of outputs and services identified in the Forest Plan.

Table B-1 displays information included in the budget proposal submitted for the Fiscal Year 1992. Final approval of the budget proposal is pending; some changes are likely to occur due to the requested level differing from approved funding.

TABLE H-1
Budget Proposal Submitted for Fiscal Year 1992

Activity Name	Activity Code	Fund Code	Measure	Unit	M \$
Cultural Resource Activities	AC	NFCR	-	-	112
Recreation Resource Operations	AN1	NFRN	-	371	332
Recreation Resource Improvements	AN22	CNRF	PAOT	285	303
Recreation Resource Improvements Maintenance	AN23	NFRN	PAOT	2,125	81
Trail Operations	AT1	NFTR	-	-	33
Trail Construction	AT22	CNTR	MILES	35	93
Trail Construction	AT22	CWKV	MILES	2	15
Trail Maintenance	AT23	NFTR	MILES	306	132
Visual Resource Activities	AV	NFVR	-	-	50
Wilderness Resource Activities	AW	NFRN	-	-	60
Anadromous Fish Operations	CA1	NFWF	-	-	137
Anadromous Fish Habitat Structural Improvement	CA221	CWKV	STRUC	80	87
Anadromous Fish Habitat Structural Improvement	CA221	NFWF	STRUC	6	12
Anadromous Fish Habitat Non-Structural Improvement	CA222	CWKV	ACRES	70	37
Anadromous Fish Habitat Non-Structural Improvement	CA222	NFWF	ACRES	6	6
Anadromous Fish Habitat Improvement Maintenance	CA23	NFWF	-	-	9
Inland Fish Operations	CI1	NFWF	-	-	145
Inland Fish Habitat Structural Improvement	CI221	CWKV	STRUC	30	27
Inland Fish Habitat Structural Improvement	CI221	NFWF	STRUC	16	11
Inland Fish Habitat Non-Structural Improvement	CI222	CWKV	ACRES	50	29
Inland Fish Habitat Non-Structural Improvement	CI222	NFWF	ACRES	3	7
Inland Fish Habitat Improvement Maintenance	CI23	NFWF	-	-	11
Threatened and Endangered Operations	CT1	NFWF	-	-	119
Threatened and Endangered Structural Habitat Improvement	CT221	CWKV	STRUC	1	1
Threatened and Endangered Non-Structural Habitat Improvement	CT222	CWKV	ACRES	1	1
Threatened and Endangered Habitat Improvement Maintenance	CT23	NFWF	-	-	1
Wildlife Operations	CW1	NFWF	-	-	185
Wildlife Habitat Structural Improvement	CW221	CWKV	STRUC	200	34
Wildlife Habitat Structural Improvement	CW221	NFWF	STRUC	50	29
Wildlife Habitat Non-Structural Improvement	CW222	CWKV	ACRES	500	42
Wildlife Habitat Structural Improvement	CW222	NFWF	ACRES	100	26
Wildlife Habitat Improvement Maintenance	CW23	NFWF	-	-	9
Range Resource Operations	DN1	NFRG	AUM	108	672
Range Resource Structural Improvement	DN221	CWKV	STRUC	107	99
Range Resource Structural Improvement	DN221	NFRG	STRUC	20	20
Range Resource Structural Improvement	DN221	RBRB	STRUC	42	58
Range Resource Non-Structural Improvement	DN222	CWKV	ACRES	4,180	144
Range Resource Non-Structural Improvement	DN222	NFRG	ACRES	613	22
Range Resource Non-Structural Improvement	DN222	RBRB	ACRES	375	9
Range Resource Improvement Maintenance	DN23	NFRG	-	-	17

PROJECTED BUDGET - FY 1992

TABLE H-1 (CONTINUED)
Budget Proposal Submitted for Fiscal Year 1992

Activity Name	Activity Code	Fund Code	Measure	Unit	M \$
Noxious Farm Weeds	DN24	CWKV	ACRES	33	7
Noxious Farm Weeds	DN24	NFRG	ACRES	95	38
Noxious Farm Weeds	DN24	FBRB	ACRES	70	8
Wild Hores and Burros Activities	DW	NFRG	-	-	45
Silvicultural Exam and Prescriptions	ET111-2	NFTM	ACRES	125,000	905
Silvicultural Exam and Prescriptions	ET111-2	SSSS	ACRES	20,000	130
Timber Resource Planning	ET112	NFTM	-	1	70
Timber Resource Coordination	ET113	NFAF	-	-	248
Timber Resource Coordination	ET113	NFCR	-	-	365
Timber Resource Coordination	ET113	NFGE	-	-	54
Timber Resource Coordination	ET113	NFRG	-	-	83
Timber Resource Coordination	ET113	NFSW	-	-	195
Timber Resource Coordination	ET113	NFVR	-	-	70
Timber Resource Coordination	ET113	NFWF	-	-	350
Timber Resource Coordination	ET113	SSSS	-	-	215
Timber Sale Preparation	ET114	NFTM	MMBF	129	1,864
Timber Sale Preparation	ET114	NFTM	MMBF	26	530
Timber Sale Preparation	ET114	SSSS	MMBF	40	789
Timber Harvest Administration	ET12	NFTM	MMBF	225	1,029
Timber Harvest Administration	ET12	SSSS	MMBF	30	426
Reforestation	ET24	CWKV	ACRES	5,345	4,121
Reforestation	ET24	NFRI	ACRES	346	230
Timber Stand Improvement	ET25	CWKV	ACRES	10,737	1,512
Timber Stand Improvement	ET25	NFRI	ACRES	413	60
Genetic Tree Activities	ET27	NFRI	-	-	350
Class I Area Inventory	FA111-1	NFSW	-	81,320	16
Air Resource Planning	FA112	NFSW	-	-	14
Soil Inventory	FW111-1	NFSW	ACRES	50,000	63
Water Inventory	FW111-2	NFSW	-	-	19
Watershed Resources Planning	FW112	NFSW	-	-	27
Watershed Resources Administration	FW12	NFSW	-	-	91
Watershed Resources Improvement Construction	FW22	CWKV	-	150	107
Watershed Resources Improvement Construction	FW22	NFSW	-	137	102
Watershed Resources Improvement Maintenance	FW23	NFSW	-	-	40
Minerals and Geology Activities	GM	NFMC	-	10	10
Minerals and Geology Activities	GM	NFME	-	10	28
Minerals and Geology Activities	GM	NFML	-	72	141
Lands Status Inventory	JL111	NFLA	-	-	54
Special Use Administration (Non-Recreation)	JL122	NFLA	CASES	150	120
Land Ownership Administration	JL123	NFLA	CASES	4	5
Lands Activity Maintenance	JL23	NFLL	-	-	33
Landline Location	JL24	NFLL	MILES	25	104
Landline Location Associated with Timber	JL24	NFLL	MILES	20	84
Rights-of-Way	JL25	CNTM	MILES	3	6
Land Exchange	JL263	NFLA	ACRES	2,000	92
Facility Operations	LF1	NFFA	-	-	39
Facility Improvement Preparation	LF21	CNFA	-	-	101
Facility Construction	LF22	CNFA	-	-	1,507
Facility Maintenance	LF23	NFFA	-	-	143
Transportation Administration	LT12	NFRD	-	-	68
Road and Bridge Administration	LT122	CNGP	-	-	5
Road and Bridge Administration	LT122	CNRN	-	-	10
Road and Bridge Administration	LT122	CNTM	-	-	50

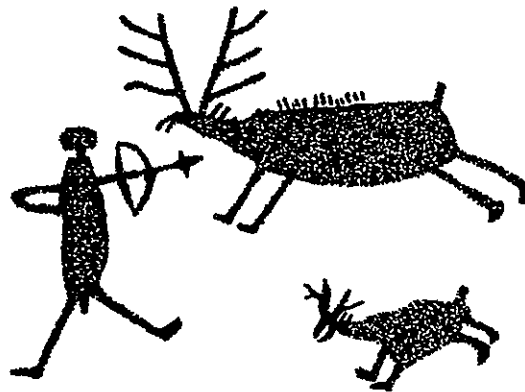
TABLE H-1 (CONTINUED)
Budget Proposal Submitted for Fiscal Year 1992

Activity Name	Activity Code	Fund Code	Measure	Unit	M \$
Road and Bridge Administration	LT122	SSSS	-	-	5
Road and Bridge Administration Support	LT123	CNGP	-	-	8
Road and Bridge Administration Support	LT123	CNRN	-	-	20
Road and Bridge Administration Support	LT123	CNTM	-	-	300
Road and Bridge Administration Support	LT123	SSSS	-	-	30
Road Construction/Preconstruction Engineering	LT2141	CNRN	-	-	5
Road Construction/Preconstruction Engineering	LT2141	CNTM	-	-	700
Road Construction/Preconstruction Engineering	LT2141	SSSS	-	-	80
Road Reconstruction/Preconstruction Engineering	LT2142	CNRN	-	-	25
Road Reconstruction/Preconstruction Engineering	LT2142	CNTM	-	-	900
Road Reconstruction/Preconstruction Engineering	LT2142	SSSS	-	-	80
Road and Bridge Construction Engineering	LT2211	CNRN	MILES	-	8
Road and Bridge Construction Engineering	LT2211	CNTM	MILES	-	350
Road and Bridge Construction Engineering	LT2211	SSSS	MILES	-	35
Road and Bridge Reconstruction Engineering	LT2212	CNRN	MILES	-	30
Road and Bridge Reconstruction Engineering	LT2212	CNTM	MILES	-	450
Road and Bridge Reconstruction Engineering	LT2212	CWFS	MILES	2	35
Road and Bridge Reconstruction Engineering	LT2212	SSSS	MILES	-	45
Road Construction	LT222	CNRN	MILES	1	40
Road Reconstruction	LT223	CNRN	MILES	5	200
Road Reconstruction	LT223	CNTM	MILES	30	1,500
Road Reconstruction	LT223	CWFS	MILES	2	400
Road Maintenance Level 1	LT231	NFRD	MILES	399	41
Road Maintenance Level 2	LT232	NFRD	MILES	5,780	597
Road Maintenance Level 3,4, and 5	LT233	CWFS	MILES	-	500
Road Maintenance Level 3,4, and 5	LT233	NFRD	MILES	1,205	637
Land Management Planning	ML	CNGP	-	-	81
Land Management Planning	ML	NFAF	-	-	39
Land Management Planning	ML	NFML	-	-	21
Land Management Planning	ML	NFRG	-	-	55
Land Management Planning	ML	NFRN	-	-	50
Land Management Planning	ML	NFSW	-	-	55
Land Management Planning	ML	NFTM	-	-	240
Land Management Planning	ML	NFWF	-	-	66
Fire Management Preparation	PF11	NFAF	-	-	1,428
Fuels Improvements	PF2	BDBD	ACRES	2,200	762
Law Enforcement Activities	PL121	NFCL	-	-	25
Law Enforcement Activities	PL122	NFCL	-	-	10
Law Enforcement Activities	PL131	NFCL	-	-	10
Law Enforcement Activities	PL132	CNGP	-	-	23
Law Enforcement Activities	PL132	NFAF	-	-	27
Law Enforcement Activities	PL132	NFGA	-	-	30
Law Enforcement Activities	PL132	NFLA	-	-	15
Law Enforcement Activities	PL132	NFLL	-	-	2
Law Enforcement Activities	PL132	NFML	-	-	12
Law Enforcement Activities	PL132	NFRD	-	-	22
Law Enforcement Activities	PL132	NFRG	-	-	15
Law Enforcement Activities	PL132	NFRN	-	-	30
Law Enforcement Activities	PL132	NFSW	-	-	4
Law Enforcement Activities	PL132	NFTM	-	-	82
Law Enforcement Activities	PL132	NFTR	-	-	6

PROJECTED BUDGET - FY 1992

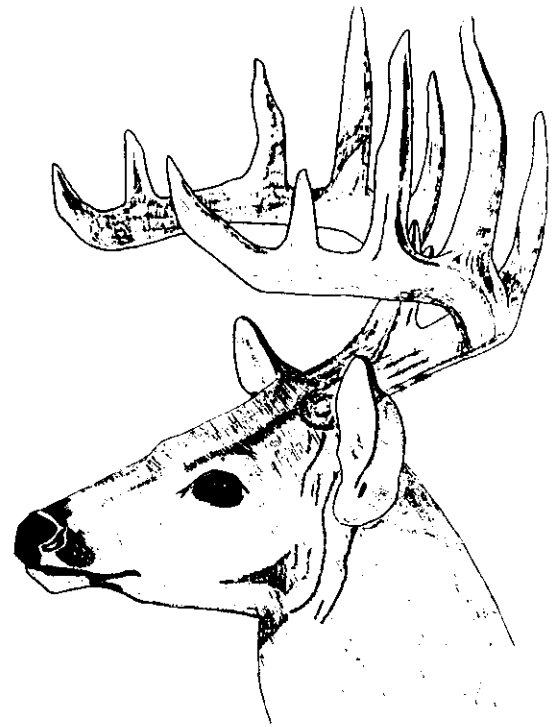
TABLE H-1 (CONTINUED)
Budget Proposal Submitted for Fiscal Year 1992

Activity Name	Activity Code	Fund Code	Measure	Unit	M \$
Law Enforcement Activities	PL132	CNTM	-	-	9
Law Enforcement Activities	PL132	NFWF	-	-	11
Law Enforcement Activities	PL132	SSSS	-	-	63
Line Management	TG3	BDBD	-	-	14
Line Management	TG3	CWFS	-	-	18
Line Management	TG3	CWKV	-	-	126
Line Management	TG3	NFGA	-	-	144
Line Management	TG3	SSSS	-	-	34
Program Support	TG4	BDBD	-	-	74
Program Support	TG4	CWFS	-	-	95
Program Support	TG4	CWKV	-	-	659
Program Support	TG4	NFGA	-	-	826
Program Support	TG4	SSSS	-	-	180
TOTAL					32,374



Appendix I

ROAD DENSITIES



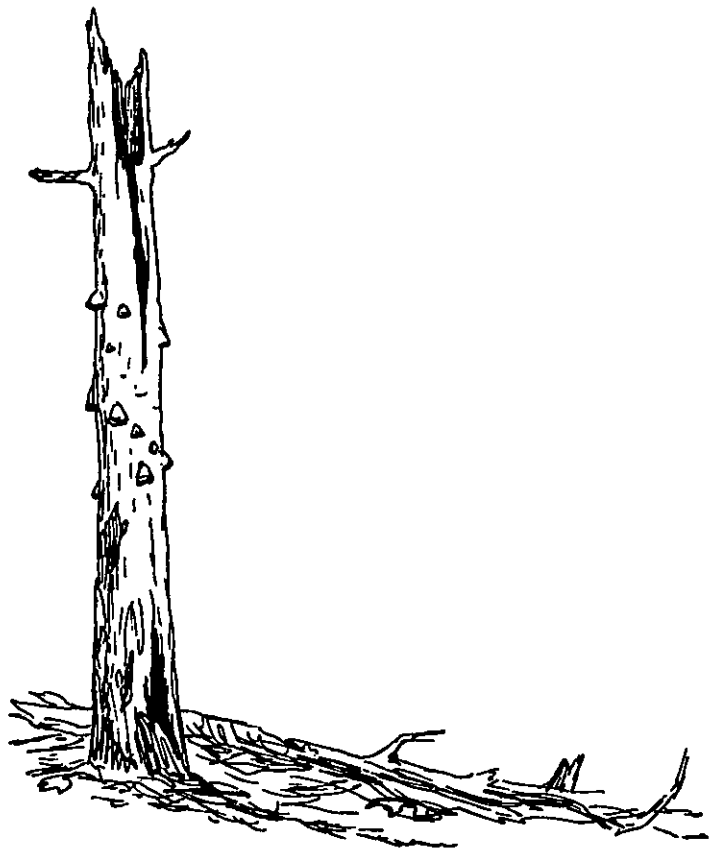
T. Barabito

APPENDIX I ROAD DENSITIES

TABLE I-1
Road Densities 1990 and 1999

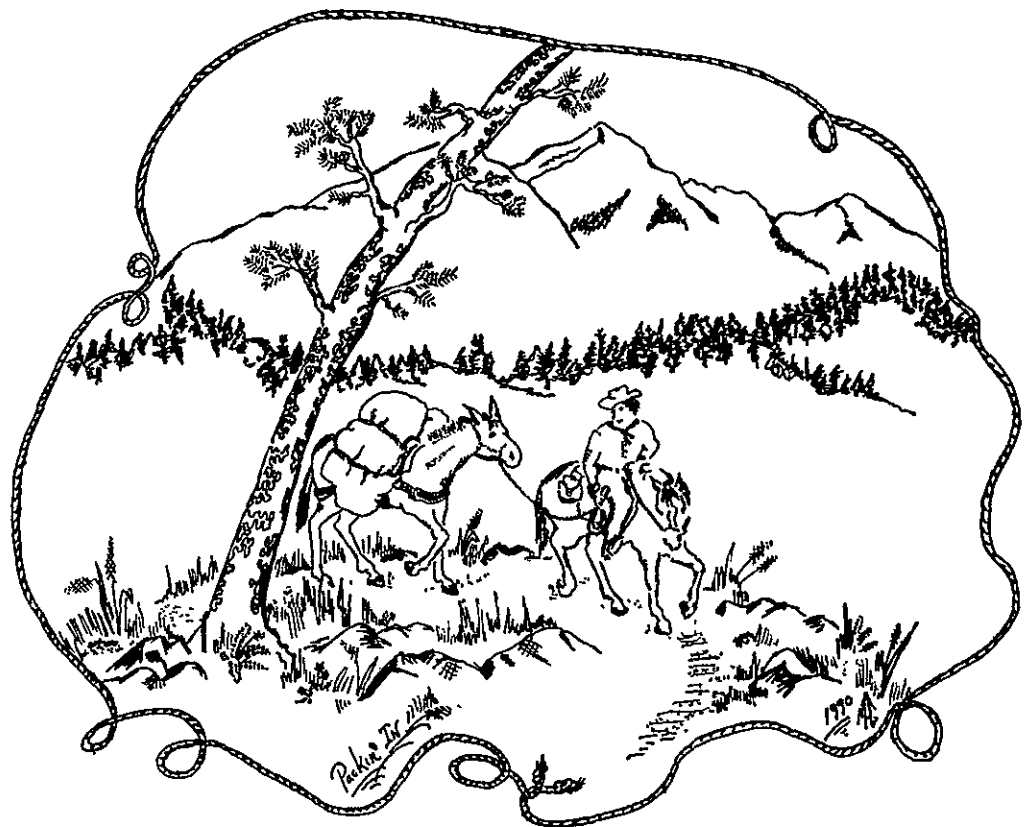
7 Major Watersheds	1990			1999
	Total Miles	Total Acres ^{1/}	mi/mi ²	mi/mi ²
Fox/Cottonwood drainage				
Summer Range	169.7	27,197	4.0	3.2
Winter Range	64.6	10,332	4.0	2.2
Drainage Total	234.3	37,529	4.0	
Middle Fork John Day drainage				
Summer Range	1,446.8	200,353	4.6	3.2
Winter Range	675.4	60,016	7.2	2.2
Wildlife Emphasis	6.3	7,586	0.5	1.5
Drainage Total	2,128.5	267,955	5.1	
Upper John Day drainage				
Summer Range	929.5	129,505	4.6	3.2
Winter Range	141.3	53,922	1.7	2.2
Wildlife Emphasis	4.6	14,223	0.2	1.5
Drainage Total	1,075.4	197,650	3.5	
South Fork John Day drainage				
Summer Range	658.0	114,295	3.7	3.2
Winter Range	111.5	25,874	2.8	2.2
Wildlife Emphasis	10.7	25,774	0.3	1.5
Drainage Total	780.2	165,943	3.0	
Silvies drainage				
Summer Range	2,266.5	305,396	6.8	3.2
Winter Range	273.3	52,761	3.3	2.2
Drainage Total	2,539.8	358,157	4.5	
Malheur drainage				
Summer Range	938.6	185,385	3.2	3.2
Winter Range	161.5	25,006	4.1	2.2
Drainage Total	1,100.1	210,391	3.4	
North Fork Malheur drainage				
Summer Range	559.2	90,653	4.0	3.2
Winter Range	152.5	49,824	2.0	2.2
Drainage Total	711.7	140,477	3.2	
Forest Totals				
Summer Range	6,968.3	1,052,784	4.2	3.2
Winter Range	1,580.1	277,735	3.6	2.2
Wildlife Emphasis	21.6	47,583	0.3	1.5
Forest Total	8,570.0	1,378,102	4.0	2.9

^{1/} Excluding Wilderness Areas MA 6A & 6B.



Appendix J

ROADLESS AREA ALLOCATIONS



APPENDIX J ALLOCATION OF RARE II LANDS

Table J-1 shows the 18 RARE II areas and the allocation of acres into the management areas in this Plan. The current total acres differ from the original RARE II acreages due to more accurate measurements, previous roading, previous logging, etc. (see FEIS, Appendix C, Table C-1)

This table is designed to highlight the specific management area designations that best retain roadless characteristics. Wild and Scenic Rivers are congressionally designated with an emphasis on scenic and recreational values. Semi-Primitive Non-Motorized and Motorized areas emphasize recreational opportunities, and Wildlife Emphasis Non-Scheduled and Scheduled areas emphasize wildlife habitat. The remaining management areas reflect no hierarchy and are simply arranged numerically. Chapter 4 of this Plan explains the management areas in detail.



**TABLE J-1
ALLOCATION OF RARE II LANDS**

		ALLOCATION OF RARE II ACRES BY MANAGEMENT AREA ^{1/}															
		Wild and Scenic Rivers	Semi-Primitive Emphasis			Wildlife Emphasis		Other Management Emphasis									
Roadless Area Name	RARE II Acres ^{2/}	22	10	11	20	21	1	2	3	4A	5	7	8	9	13	14	16
(Aldrich Mountain	4,951		4,614		337												
Baldy Mountain	6,431				5,380	873	5	86									87
(Cedar Grove (N Slope)	112												112				
Dixie Butte	12,110				6,895	2,646	195	247						105	460	1,562	
(Dry Cabin	12,221				11,021										1,200		
Flag Creek	7,789	1,070				2,627	1,479	66	1,635						300		612
Fox Creek	5,879					2,938	777	290							600	832	442
Glacier Mountain	19,572			14,578		2,048	122	167							460	1,642	555
Greenhorn Mountain	16,197					1,825	195	229				13,322	300			326	
Jump-Off-Joe	4,006				4,006												
Malheur River	6,984	3,066				975	1,297	219	826							109	492
McClellan Mountain	20,646		18,717			509	752	74							320		274
Myrtle-Silvies	11,747		9,855			873	194	93	590								142
Nipple Butte	11,525				5,795	2,695	567	260	825						460		923
NF Malheur River	18,276	3,411	2,670 ^{3/}			2,281	217	648	7,113						600	433	903
Pine Creek	5,420							21	3,296	906					900		297
Shaketable	7,137		6,762											375			
Utley Butte	9,945				9,045										900		

^{1/}See Chapter 4 for description of Management Areas
^{2/}See FEIS, Appendix C, Table C-1
^{3/}Will be renamed Bear Creek.

Appendix K

ROADLESS BOUNDARIES



APPENDIX K UNROADED AREA BOUNDARIES

Based on the Forest Plan, approximately 79,854 acres (44 percent of the current roadless area inventory) will be managed with no scheduled timber harvest and no additional roads. These acres will be managed under semiprimitive nonmotorized (MA 10) and semiprimitive motorized (MA 11) allocations, and under the wild portion of the Wild and Scenic River (MA 22) allocation. Greenhorn Mountain will be managed as semiprimitive nonmotorized, but falls under Management Area 7, Scenic Area.

Approximately 22,076 acres will be managed under a wildlife emphasis with non-scheduled timber harvest (MA 21) allocation. In these areas timber harvest will be scheduled but site-specific decisions will emphasize wildlife objectives.

Approximately 23,674 acres will be managed under a wildlife emphasis with scheduled timber harvest (MAs 20A and 20B) allocation. In these areas timber harvest will be scheduled but site-specific decisions will emphasize wildlife objectives.

While roads in the wildlife emphasis areas (with and without scheduled timber harvest) will be allowed, additional road construction will be minimized. In these areas all roads will be obliterated or closed to vehicle traffic once project activities are completed.

The boundary for each of these areas is shown on the following maps (see pages K-3 through K-14).

Table K-1 displays the roadless area acreages and the management allocations retained in this Forest Plan.

UNROADED AREA BOUNDARIES

**Table K-1
Roadless Areas on the Malheur National Forest**

Name	RARE II (Acres) ^{1/}	Manageable Boundary (Acres) ^{2/}	Roadless Area (Acres) ^{3/}	Management Area
Aldrich Mountain	4,951	8,609	8,609	10
Baldy Mountain	6,431	5,380	5,380	21
Cedar Grove	112	^{4/}	^{4/}	10
Dixie Butte	12,110	7,000	6,895	21
Dry Cabin	12,221	15,829	14,629	20A
Flag Creek	7,789	7,789	0	1-2
Fox Creek	5,879	3,131	0	1-2
Glacier Mountain	19,572	14,578	14,578	11
Greenhorn Mountain	16,197	13,322	13,322	10
Jump-Off-Joe	4,006	4,006	4,006	21
Malheur River	6,984	3,066	3,066 ^{5/}	22
McClellan Mountain	20,646	18,717	18,717	10
Myrtle-Silvies	11,747	9,855	9,855	10
Nipple Butte	11,525	5,795	5,795	21
Bear Creek (former North Fork Malheur River)	18,276	6,081	2,710 ^{6/}	10
Pine Creek	5,420	6,500	0	1-2
Shaketable	7,137	9,372	8,997	10
Utley Butte	9,945	9,945	9,045	20B

^{1/}Maps with RARE II boundaries are found in Appendix C of the FEIS

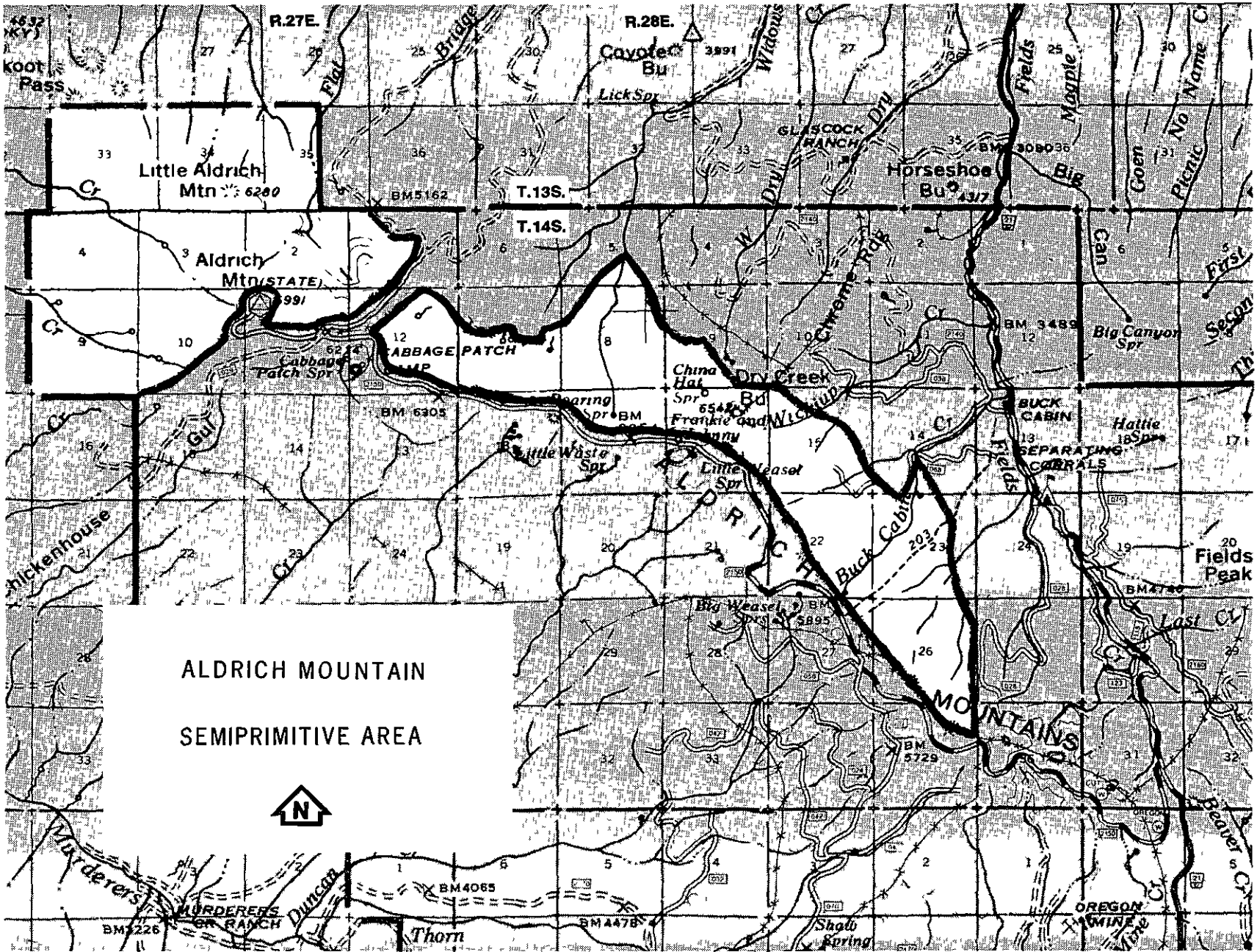
^{2/}RARE II boundary adjusted to be more easily managed

^{3/}May differ from manageable boundary due to overlap with research natural areas or old growth. Maps with manageable boundaries follow in this appendix.

^{4/}Special Interest Area, also within the manageable boundary of Aldrich Mountain

^{5/}Malheur River is now in the Wild and Scenic River System

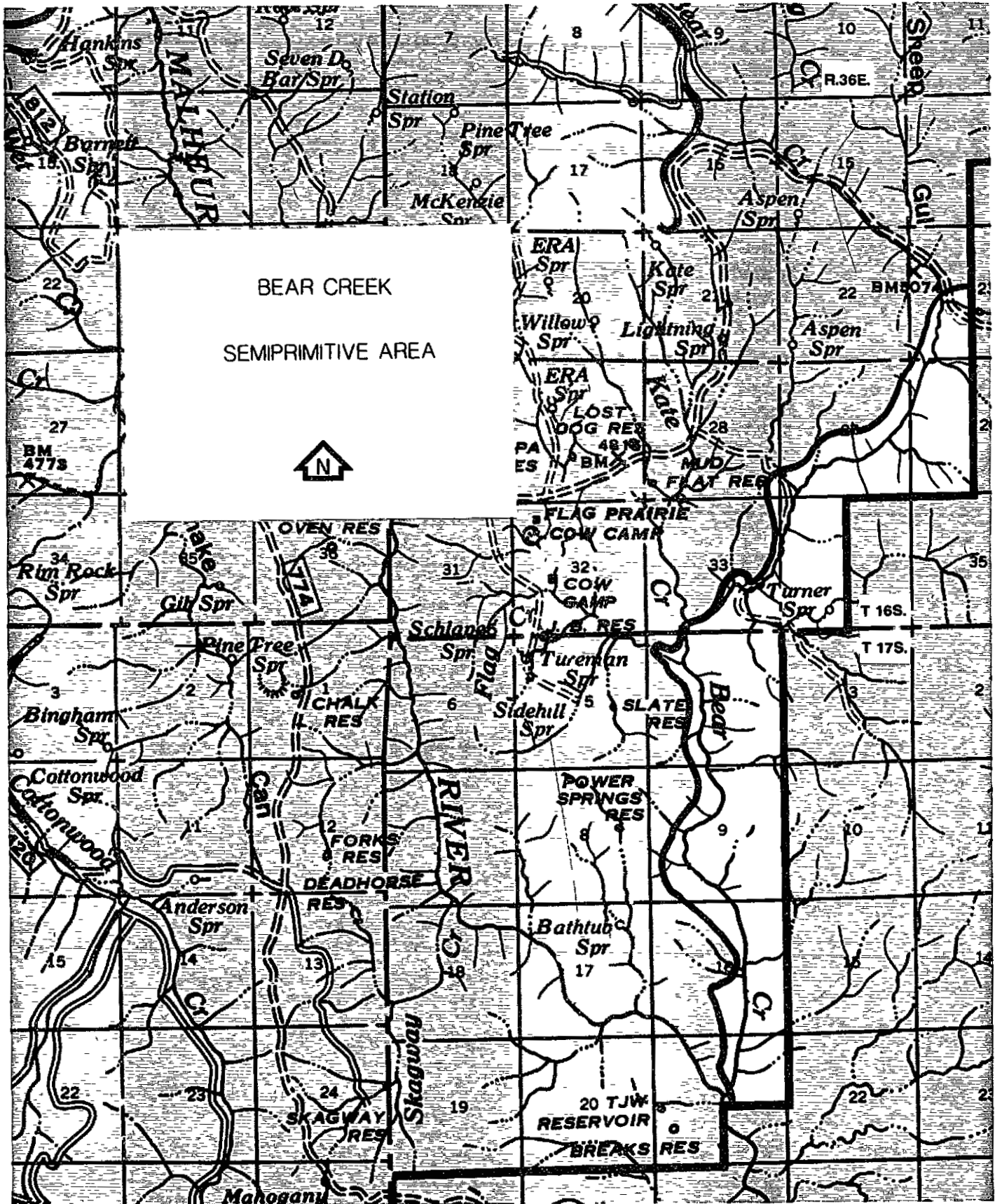
^{6/}North Fork Malheur River is now in the Wild and Scenic River System, acres remaining roadless are outside the Scenic River corridor, and have been renamed Bear Creek

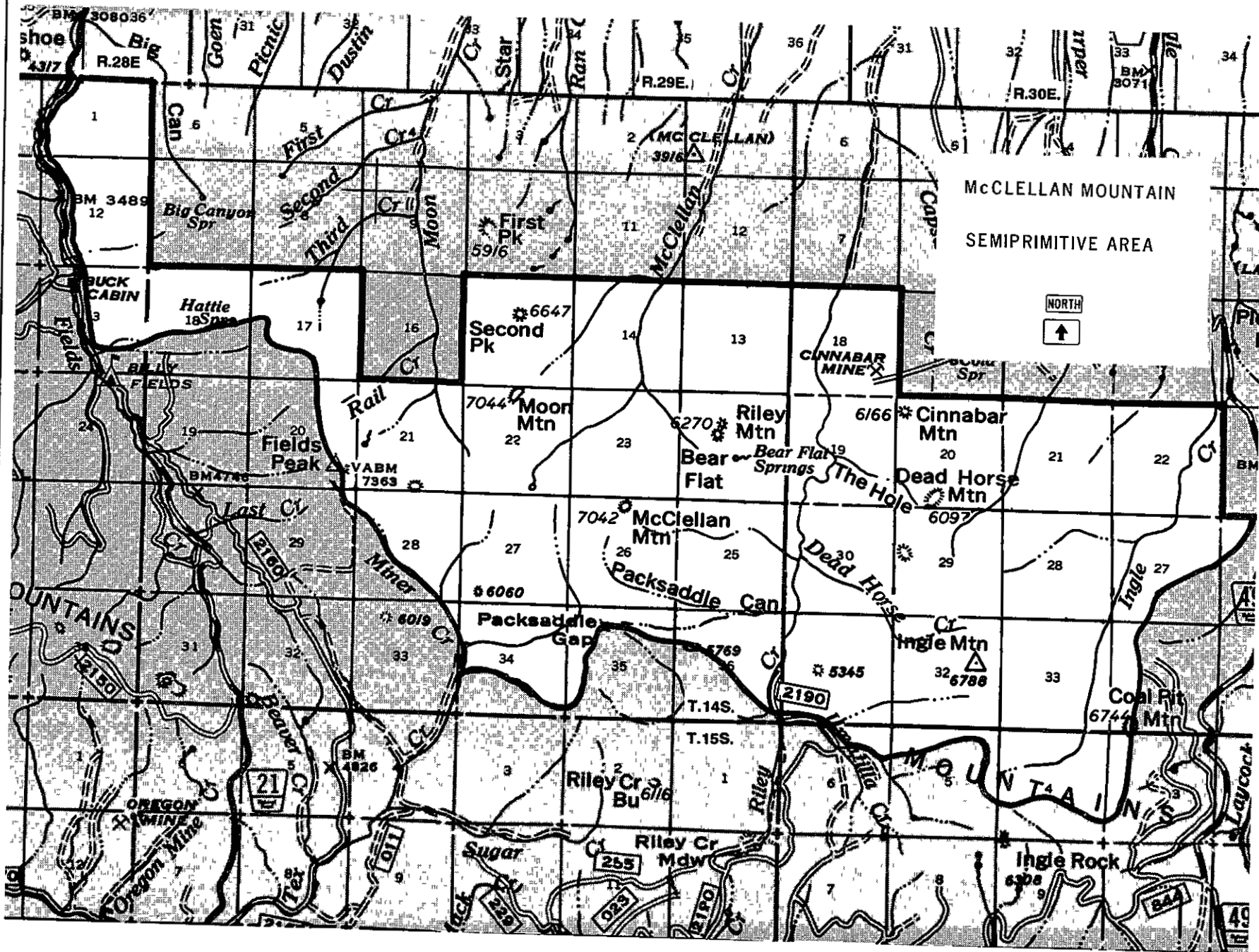


ALDRICH MOUNTAIN
SEMPRIMITIVE AREA

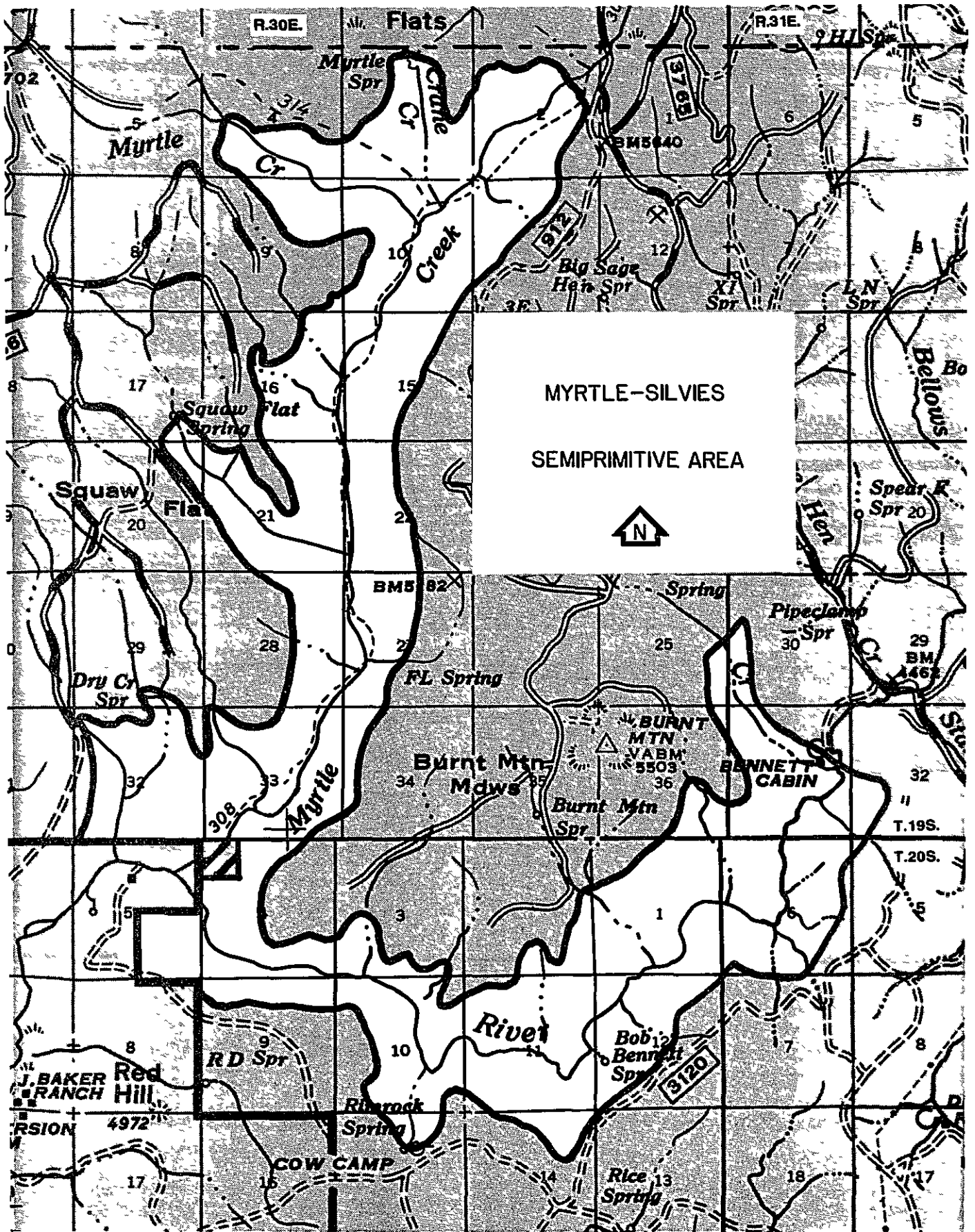
UNROADED AREA BOUNDARIES

UNROADED AREA BOUNDARIES

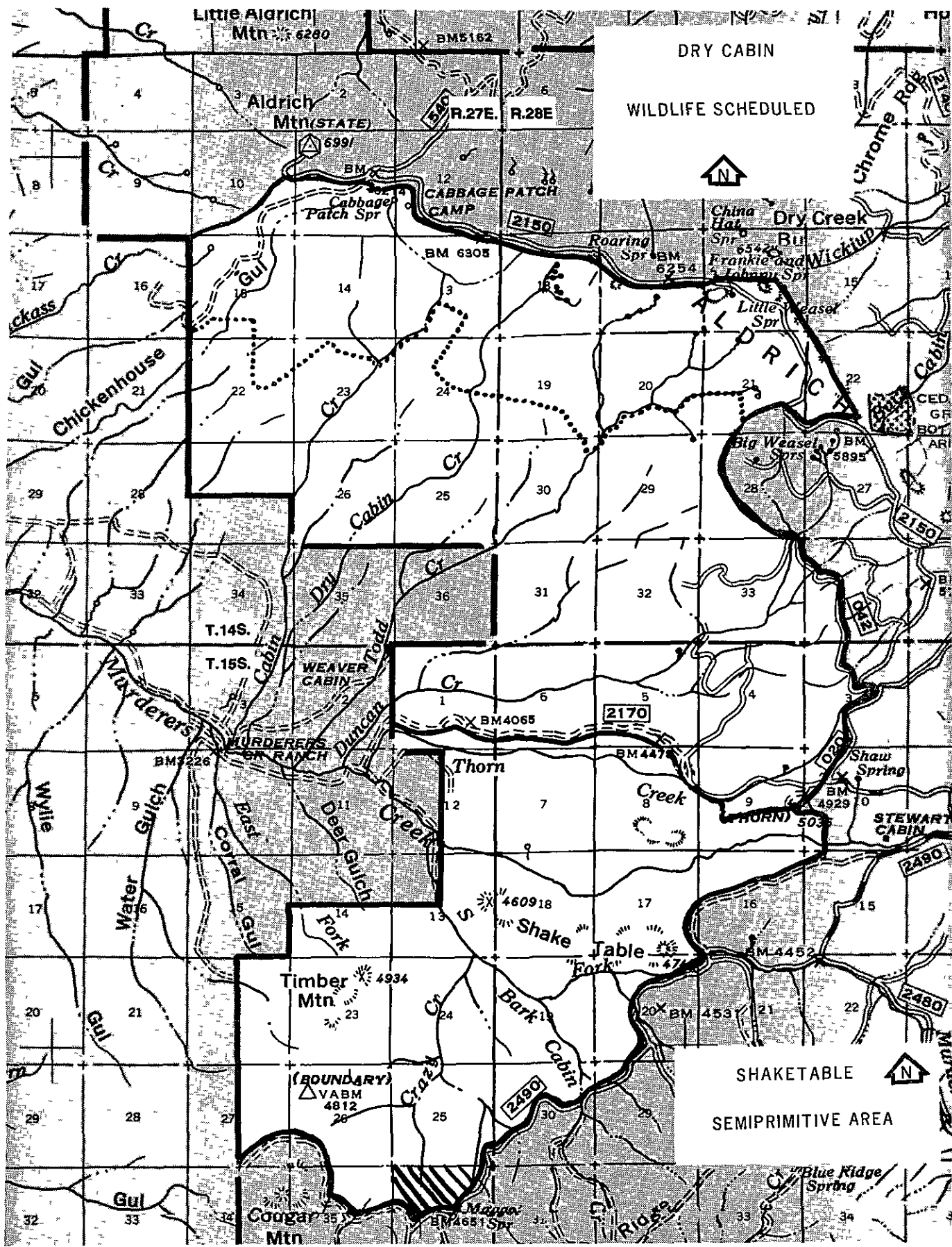




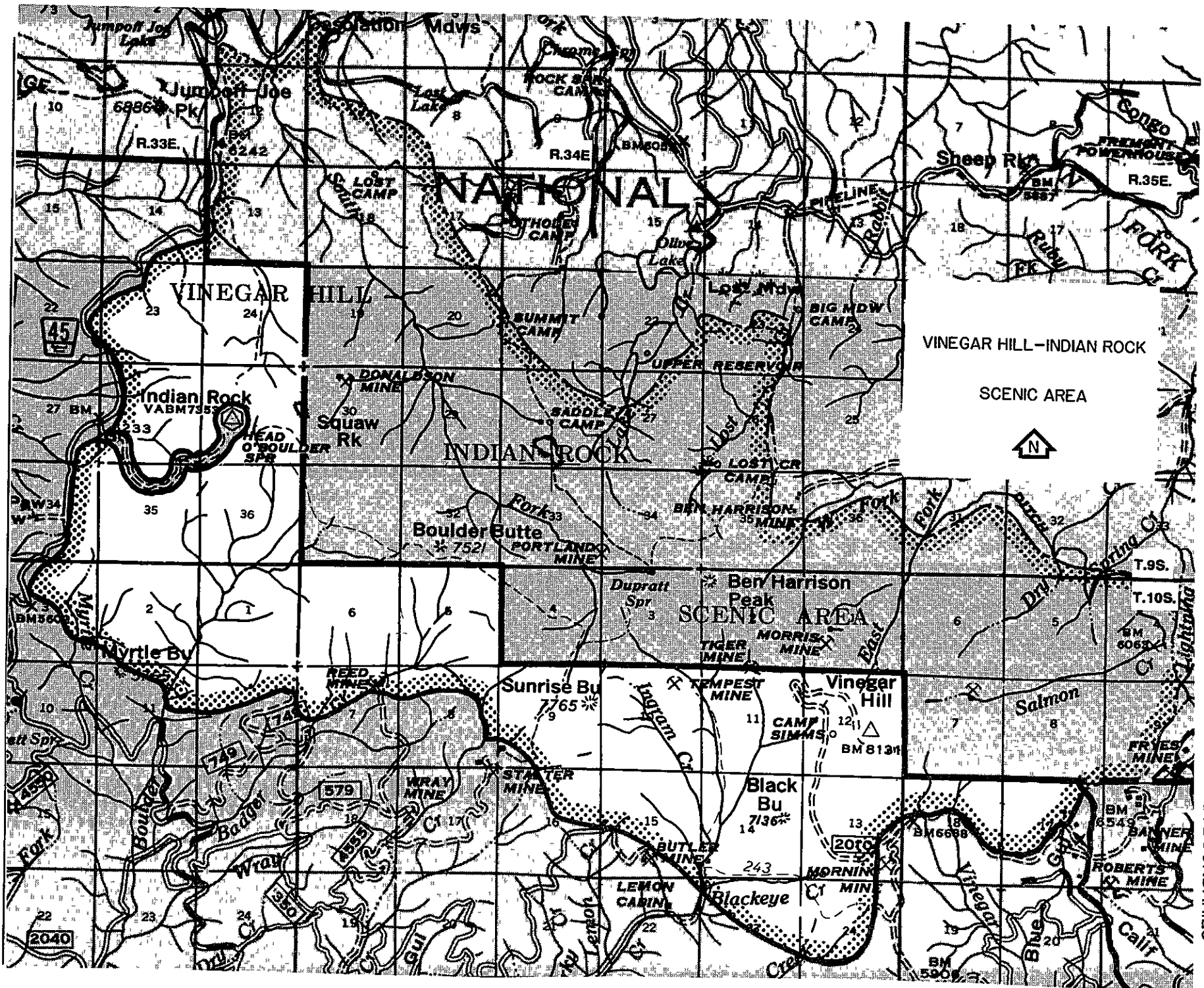
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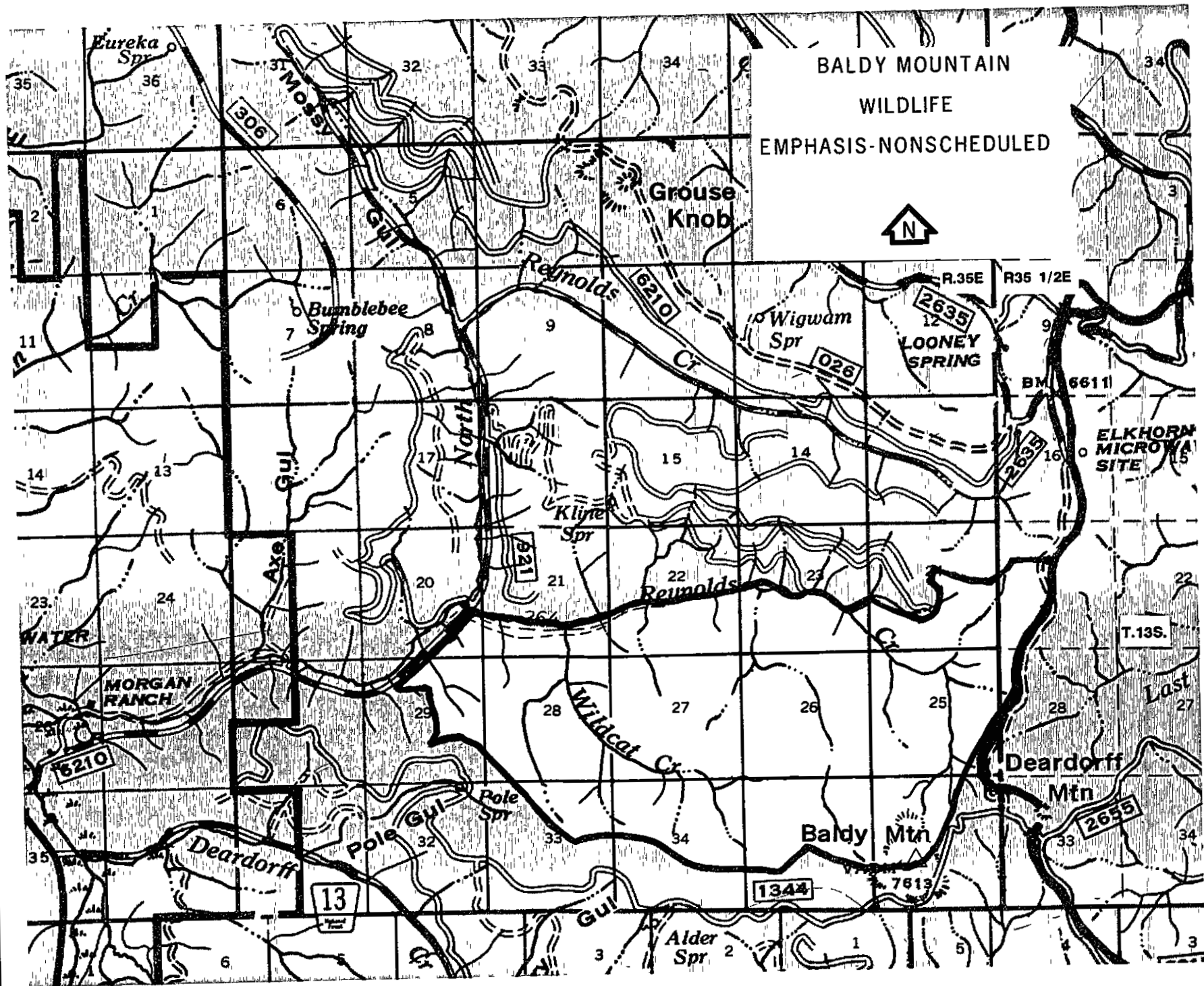


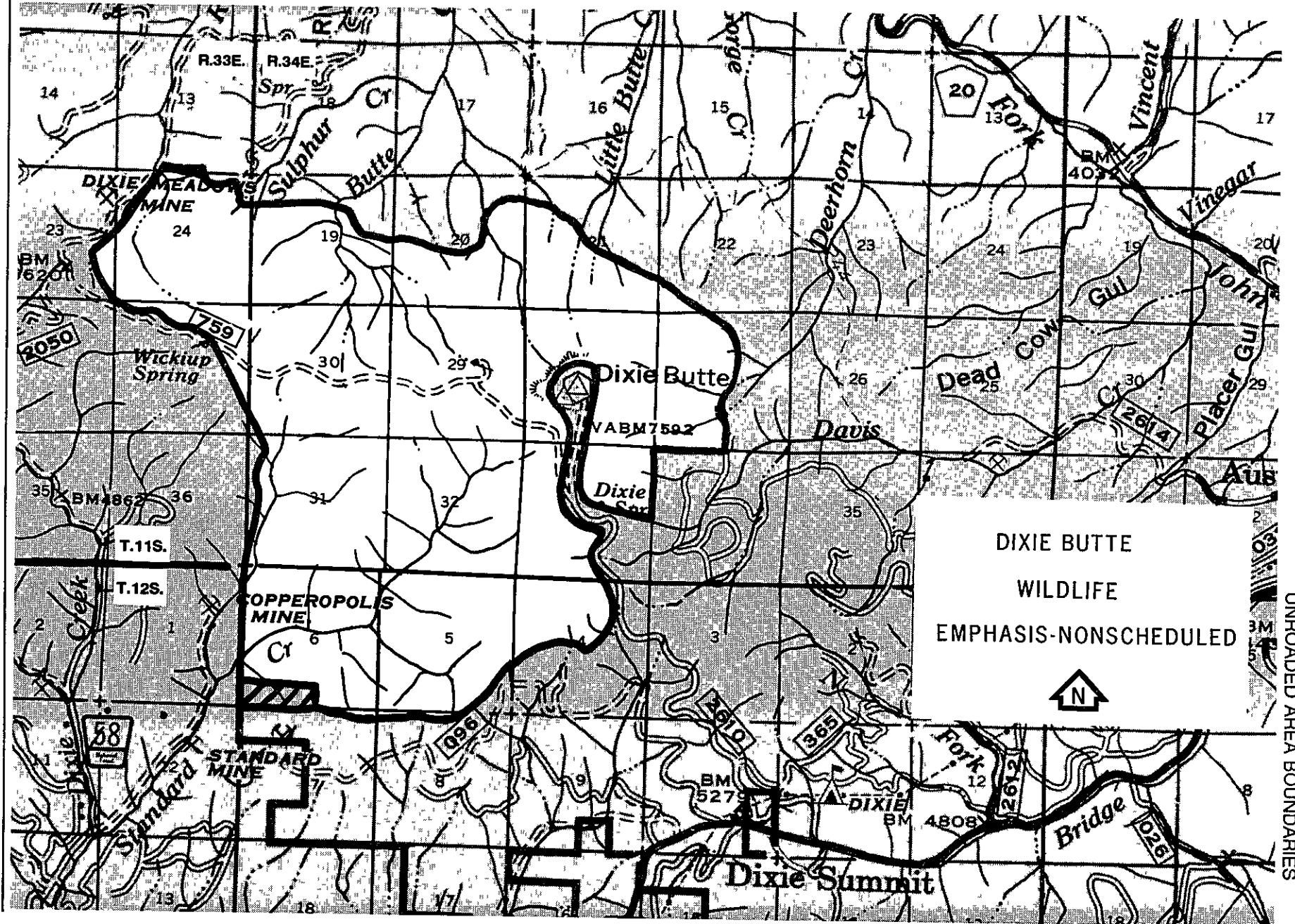
UNROADED AREA BOUNDARIES



Appendix K Unroaded Area Boundaries

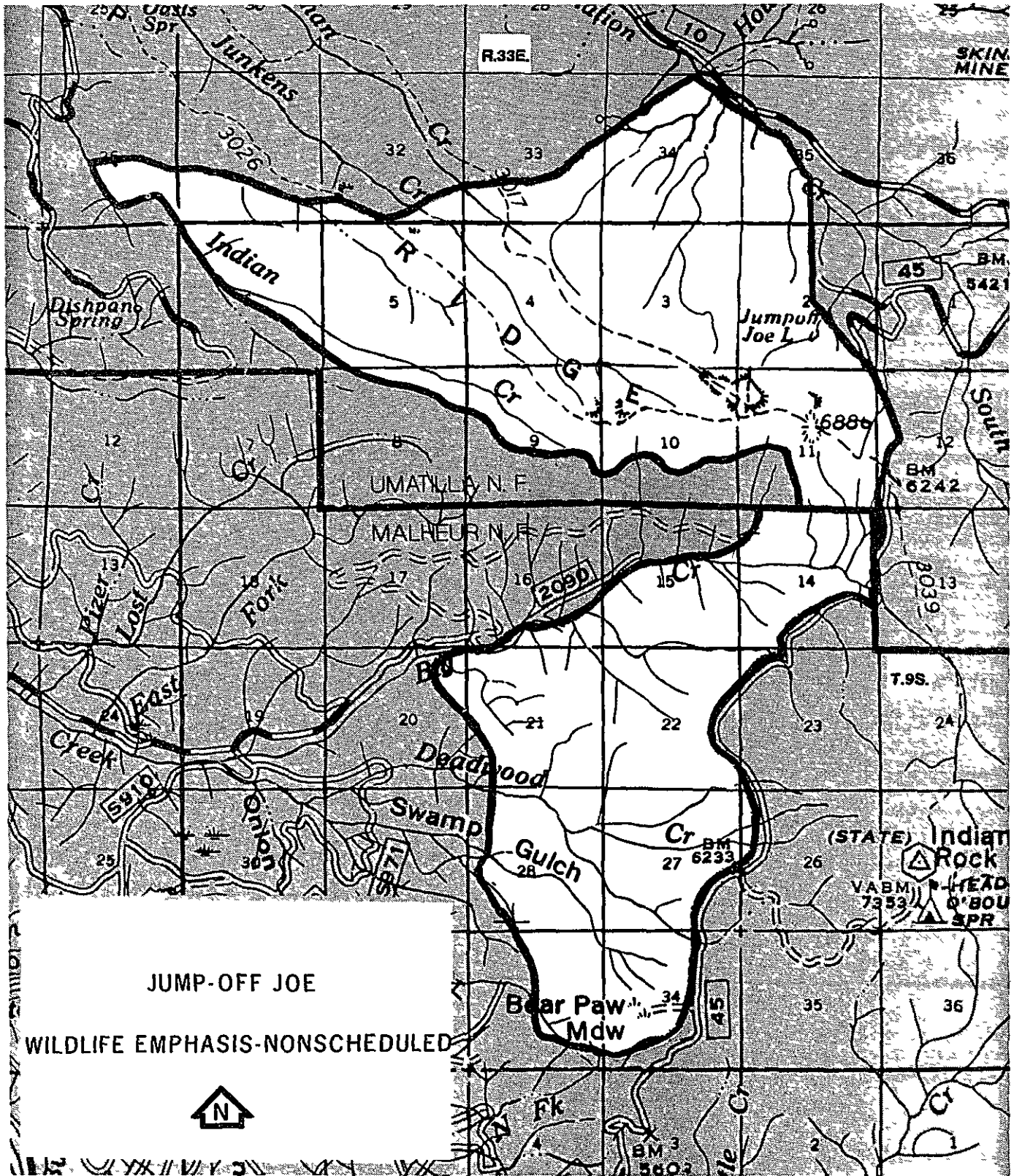


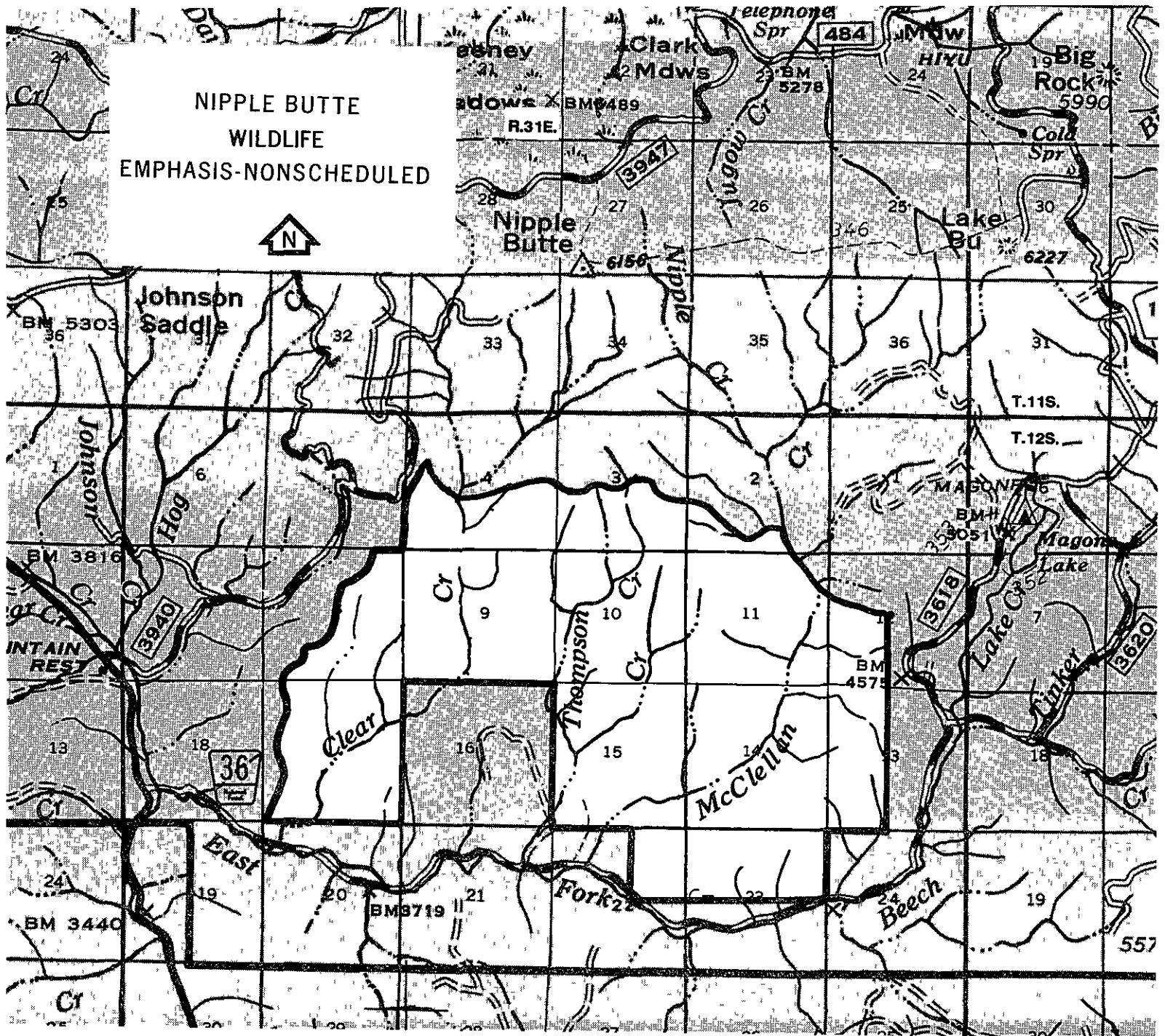




UNROADED AREA BOUNDARIES

UNROADED AREA BOUNDARIES

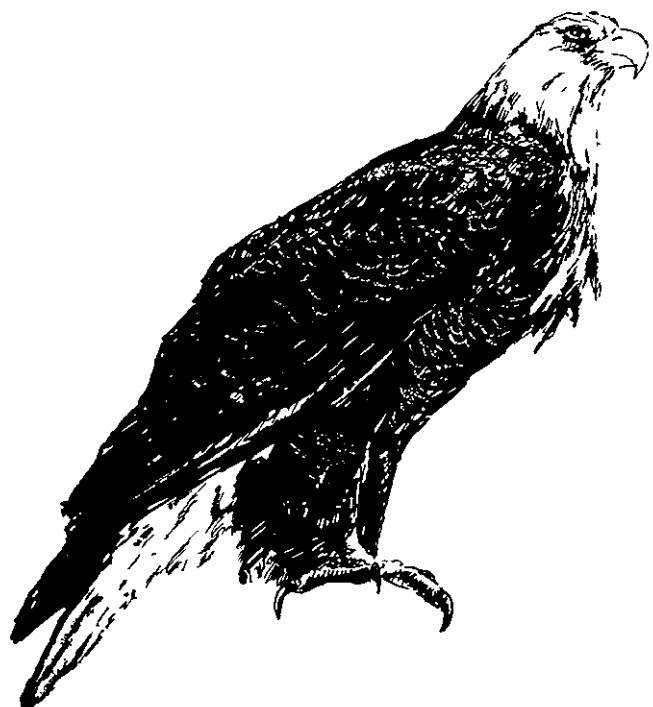




UNROADED AREA BOUNDARIES

Appendix L

VISUALS



APPENDIX L VISUAL CONDITION OF VIEWSHEDS

Shown in Table L-1 are the existing visual condition, future visual condition, and visual quality objective for each viewshed corridor as established by this Forest Plan. Figure L-1 shows a representative drawing of what these terms mean. Figure L-2 shows the location of the main viewshed corridors on the Forest

**TABLE L-1
Visual Condition Of Viewsheds**

Viewsheds	Sensitivity Level	Approx Acres	Visual Condition		Visual Quality Objective	
			Existing	Future	Foreground	Middleground
Highway 395	I	38,248	Moderately Altered	Slightly Altered	Retention	Partial Retention
Highway 26	I	28,107	Slightly Altered	Slightly Altered	Retention	Partial Retention
Highway 7	I	11,399	Slightly Altered	Slightly Altered	Retention	Partial Retention
Wilderness Loop	I	62,691	Moderately Altered	Slightly Altered	Retention	Partial Retention ^{1/}
Strawberry	I	366	Natural Appearing	Natural Appearing	Retention	Partial Retention
Malheur R.	I & II	1,627 ^{2/}	Natural Appearing	Natural Appearing	Retention	Partial Retention
N F. Malheur R	I & II	8,603 ^{2/}	Natural Appearing	Natural Appearing	Retention	Partial Retention
Emigrant	II	4,142	Moderately Altered	Moderately Altered	Partial Retention	Modification
County Rd. 20	II	27,506	Slightly Altered	Moderately Altered	Partial Retention	Modification
Canyon Creek	II	3,550	Slightly Altered	Moderately Altered	Partial Retention	Modification
Yellowjacket	II	4,675	Slightly Altered	Slightly Altered	Partial Retention	Modification
Izee	II	7,190	Slightly Altered	Slightly Altered	Partial Retention	Modification
Glacier Loop	II	15,885	Moderately Altered	Moderately Altered	Partial Retention	Modification
Table	II	1,122	Slightly Altered	Slightly Altered	Partial Retention	Modification
Skyline Trail	II	958	Slightly Altered	Slightly Altered	Partial Retention	Modification
Roads End	II	3,475	Moderately Altered	Moderately Altered	Partial Retention	Modification
Magone	II	4,173	Slightly Altered	Moderately Altered	Partial Retention	Modification
So. 1/2 Co. Rd. 18	II	4,724	Slightly Altered	Moderately Altered	Partial Retention	Modification
F.S. Rd. 16	II	3,361	Moderately Altered	Moderately Altered	Partial Retention	Modification

^{1/}Manage the background in the Wilderness Loop that is viewed when looking at the Strawberry Mtn Wilderness as partial retention middleground

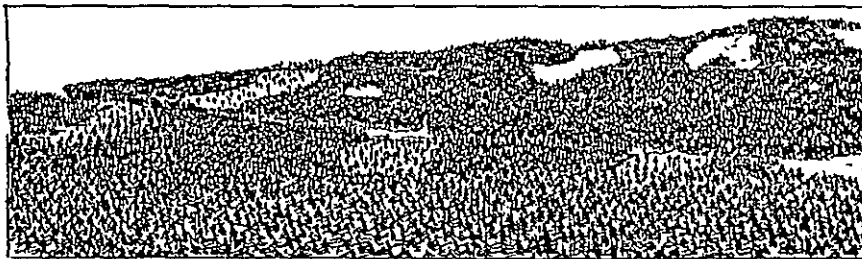
^{2/}Middleground acres will be confirmed with development of Wild and Scenic River corridor management plan

VISUAL CONDITION OF VIEWSHEDS

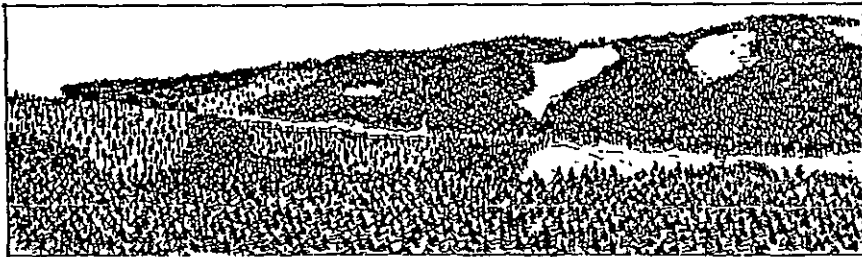
FIGURE L-1
Visual Condition



Natural Appearing



Slightly Altered

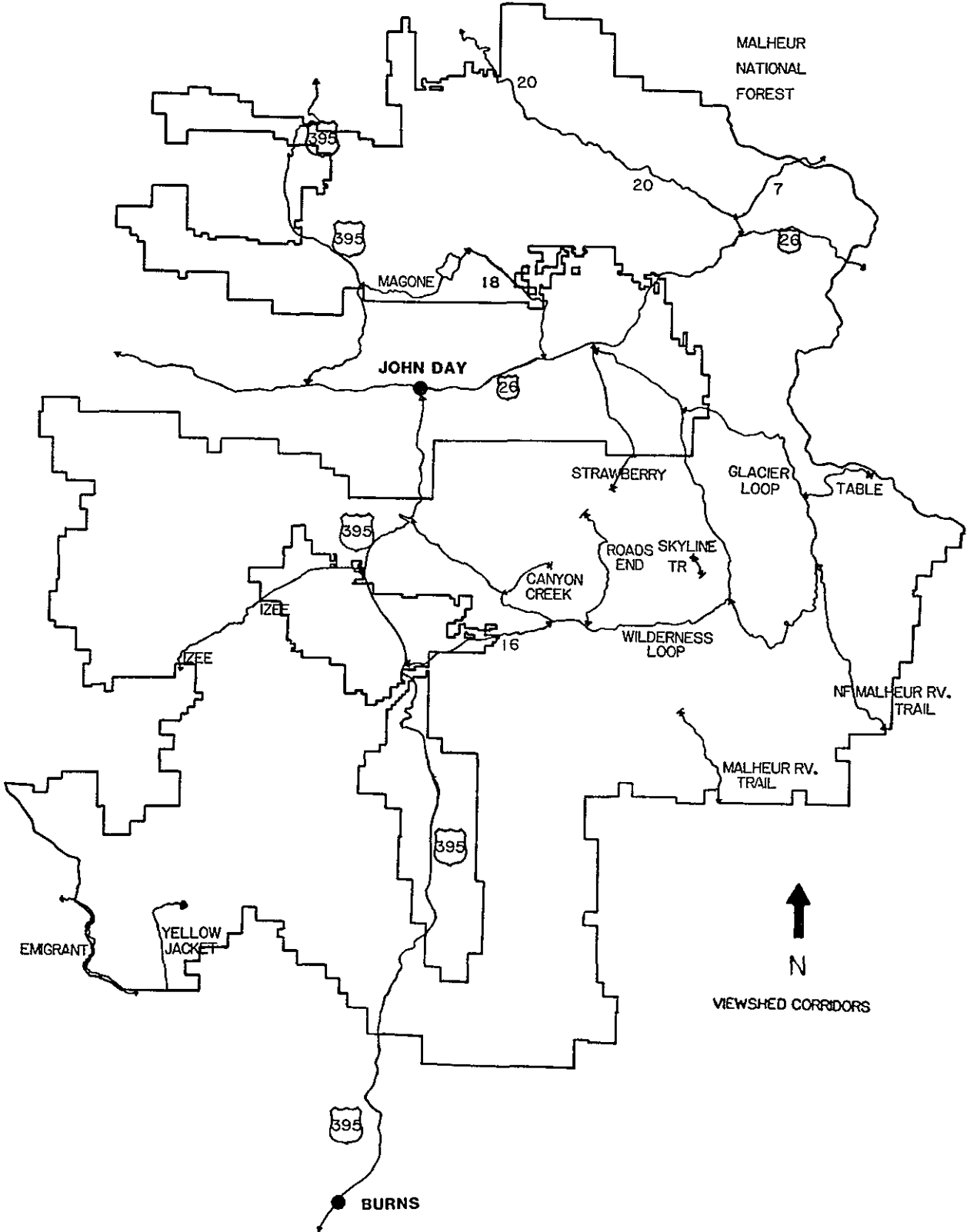


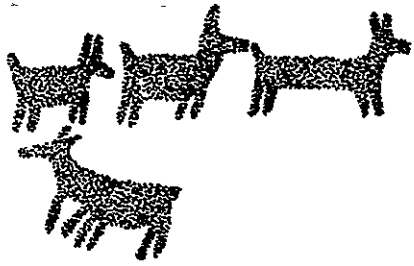
Moderately Altered



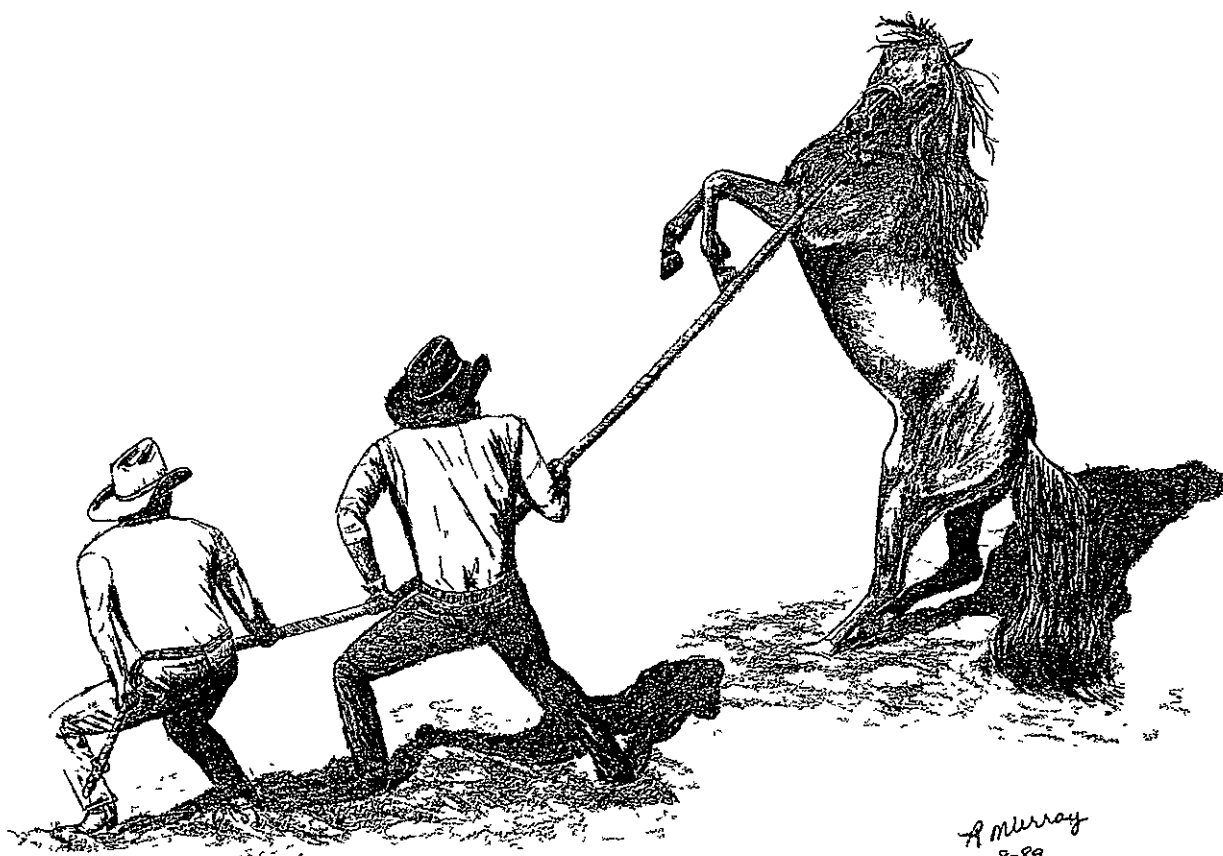
Heavily Altered

FIGURE L-2
Visual Corridors





Appendix M
LAND OWNERSHIP



APPENDIX M LAND OWNERSHIP ADJUSTMENT SCHEDULE

Landownership patterns can be changed over time through exchanges of National Forest System land for land of other ownerships, through direct purchase of land (usually with Land and Water Conservation Funds), through donation to the Forest Service, and through transfers with other Federal agencies. This plan establishes guidance for landownership adjustments during the plan period. These adjustments will further the objectives of the Forest Plan and result in a landownership pattern that best accommodates the direction contained in this Forest Plan.

National Forest System lands and certain lands in other ownerships within and surrounding the Forest have been classified and priorities for acquisition or exchange with the intent of eventually achieving the best land ownership pattern for Forest Plan implementation. All lands so classified have been placed in one of the following groups.

Group 1

These are lands where Congress has either directly or indirectly instructed the Forest Service to retain ownership and acquire non-Federal lands for a designated National purpose. The objective for Group I lands is to retain existing ownership and acquire the remaining lands as indicated by Congressional direction. Acquisition of less than fee title will be considered if direction and land management objectives can be met.

Examples on the Malheur National Forest of Group I lands are the Strawberry Mountain and Monument Rock Wildernesses.

Group 2

These lands have been recognized for a special kind of management and are allocated to meet specific purpose. They include Special Interest Areas, Research Natural Areas, and other areas with specific designated management objectives such as recreation management, fish and wildlife protection, visual quality, watershed protection. The objective for Group II lands is to retain existing ownership and acquire private lands as the opportunity or need occurs. Acquisition of less than fee title will be considered if direction and land management objectives can be met.

Examples of Group 2 lands on the Malheur National Forest include the Cedar Grove Botanical Area, and the Vinegar Hill - Indian Rock Scenic Area.

Group 3

Lands in this group are in areas where management objectives would be similar whether the lands are in public or private ownership. National Forest System lands in this group will generally be available for exchange unless disposition would break up contiguous blocks of Federal ownership. Areas of mixed private and Federal ownership are included with the objective of rearranging ownership patterns to benefit management efficiency for both ownerships. These lands will usually provide most of the land considered in exchange projects.

LAND OWNERSHIP ADJUSTMENT SCHEDULE

Group 4

These lands include small isolated tracts of National Forest System land situated away from contiguous blocks of Federal land and private lands that are managed for intensive uses such as agriculture, residential subdivision, or industrial development. Federal lands in this group will normally be made available for disposal in land exchanges to acquire private lands in Group 1, 2, and 3. Private lands in this group are generally not available and will normally not be acquired by the Forest Service.

Group 5

These are lands which need more intensive study and planning before landownership decisions can be made. Land acquisition and disposal decisions will be deferred until the needed studies have been completed.

Private lands in Group 1, 2, and 3, respectively, have the highest priorities for acquisition to meet National Forest management needs. National Forest System lands in Group 4 and 3, respectively, have the highest priority for disposal in exchange for private lands.

Shown below are approximate acres of Malheur National Forest lands in Groups 3 and 4 for disposition and private lands in Groups 1, 2, and 3 for acquisition:

Ownership	Group 1	Group 2	Group 3	Group 4
Available National Forest System Land	N/A	N/A	168,000	22,000
Private land considered for acquisition	650	15,000	58,120	N/A

LAND OWNERSHIP ADJUSTMENT SCHEDULE

Table M-1 displays the relationship of the management areas to the landownership groups.

**TABLE M-1
Management Areas and Land Ownership Groups**

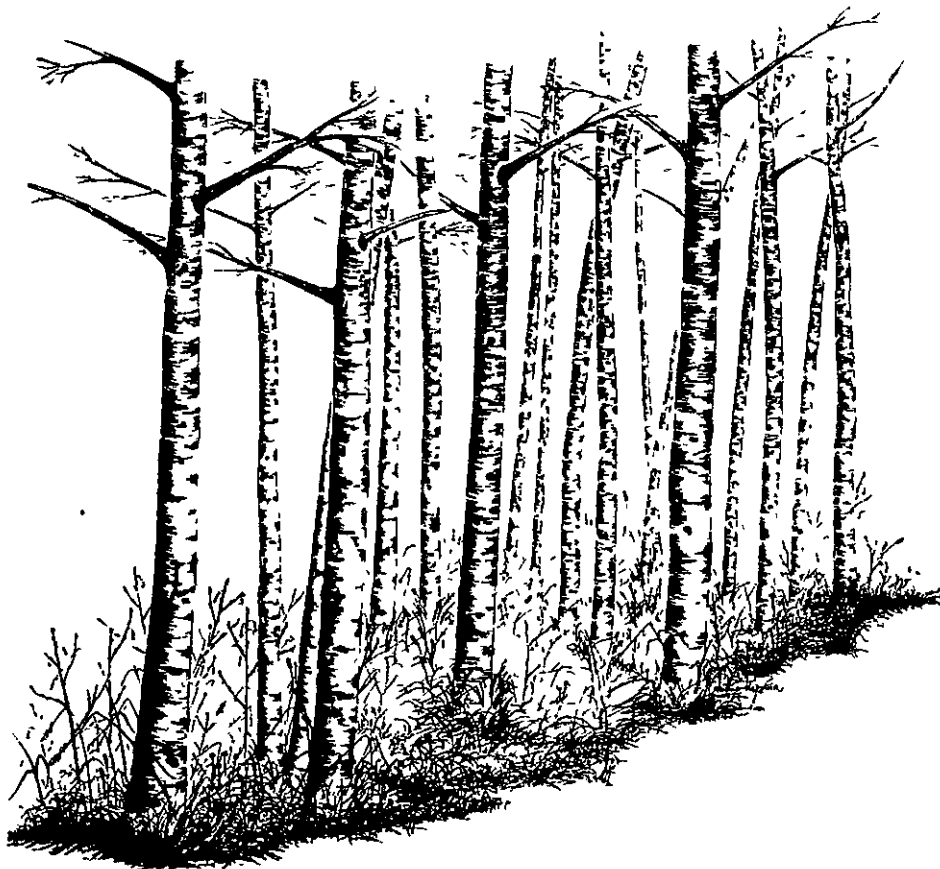
Management Area	Group 1	Group 2	Group 3	Group 4	Group 5
1 - General Forest			X	X	X
2 - Rangeland			X	X	X
3A- Non-Anadromous Riparian Areas		X	X	X	X
3B- Anadromous Riparian Areas		X	X	X	X
4A - Big-Game Winter Range		X	X	X	X
5 - Bald Eagle Winter Roosts		X			X
6A - Strawberry Mountain Wilderness	X				
6B - Monument Rock Wilderness	X				
7 - Scenic Area		X			
8 - Special Interest Areas		X			
9 - Research Natural Areas	X	X			
10 - Semi-Primitive Non-Motorized		X			X
11 - Semi-Primitive Motorized		X			X
12 - Developed Recreation Sites		X			
13 - Old-Growth Habitat		X	X	X	X
14 - Visual Corridors		X	X	X	X
16 - Minimum Level		X	X	X	X
17 - Byram Gulch Municipal Supply Watershed		X			
18 - Long Creek Municipal Supply Watershed		X			
19 - Administrative Sites		X			
20A- Dry Cabin Wildlife Emphasis Area With Scheduled Harvest			X		X
20B- Utley Butte Wildlife Emphasis Area With Scheduled Timber Harvest			X	X	X
21- Wildlife Emphasis With Non-Scheduled Timber Harvest		X	X		X
22- Wild and Scenic River	X				

LAND OWNERSHIP ADJUSTMENT SCHEDULE

Landownership adjustment projects permitted through this Forest Plan are subject to environmental analysis under the National Environmental Policy Act process as they are planned for implementation and will be on a willing seller/buyer basis whenever possible. If the environmental analysis for a project shows that: (1) the *management area prescriptions and standards can be complied with*, and (2) little or no environmental effects are expected beyond those identified and documented in the Forest Plan Final EIS, the analysis will probably result in a categorical exclusion. An analysis file and/or a project file will be available for public review, but the analysis will not necessarily be documented in the form of an environmental assessment or environmental impact statement.

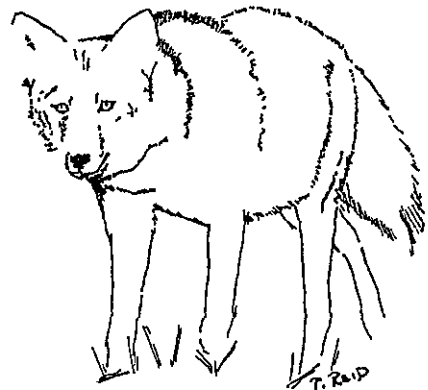
Shown below is schedule of acres to be adjusted by year for the first decade. Outputs in individual years may be significantly different from those shown, depending upon final budgets and proponents ability and desire to provide negotiated levels of cooperation:

	ACRES ADJUSTED BY FISCAL YEAR									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Thousand Acres	1.8	1.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0



Appendix N

SUBWATERSHEDS



APPENDIX N SUBWATERSHEDS

This appendix identifies the subwatersheds or aggregations of subwatersheds, that will be used as the land base for managing and monitoring accomplishment of resource management objectives such as wildlife tree habitat levels, and elk habitat effectiveness. These subwatersheds will also be used for project level watershed cumulative effects analysis, and will be key components of area transportation analysis and timber sale planning. A map of these subwatersheds is part of the planning records and can be reviewed at the Forest Supervisor's Office in John Day, Oregon or at any of the District Ranger Offices.

TABLE N-1 SUBWATERSHEDS

Watershed/Subwatershed	Acres
MIDDLE FORK OF JOHN DAY RIVER	
Bridge Creek	6,890
Clear Creek	11,420
Dry Fork Clear Creek	1,179
Squaw Creek	10,099
Lunch Creek	4,679
Summit Creek	12,669
Crawford Creek	5,796
Mill Creek	3,759
Davis Creek/Placer Creek	6,873
Vinegar Creek	7,215
Little Boulder Creek/Tincup/Windlass/Caribou Creeks	9,660
Butte Creek	4,810
Granite Boulder Creek	6,637
Ragged Creek	2,792
Beaver Creek/Dry Creek	5,231
Big Boulder Creek	10,330
Vincent Creek	3,531
Lick Creek	9,817
Upper Camp Creek	14,862
Lower Camp Creek	13,563
Ruby Creek/Riverside Gulch	3,844
Bear Creek/Hawkins Creek	10,054
Big Creek/Huckleberry Creek	15,600
Deerhorn Creek/Little Butte Creek	7,740
Elk Creek/Mosquito/Deep Creeks	9,226
Upper Middle Fork John Day River	7,329
Sunshine/Balance/Dunstan Creeks	6,492
Coyote Creek/Horse Creek	4,977
TOTAL	217,074

SUBWATERSHEDS

TABLE N-1 (continued)
SUBWATERSHEDS

Watershed/Subwatershed	Acres
LOWER MIDDLE FORK JOHN DAY	
Slide Creek/Bum Canyon	9,844
TOTAL	9,844
UPPER JOHN DAY RIVER	
Roberts Creek	13,182
Call Creek/Rail Creek	13,431
Thompson Creek	2,497
Deardorff Creek	11,105
Wildcat Creek	4,863
Reynolds Creek	8,372
Axe Creek	3,282
Dads Creek/Dans Creek	8,792
Standard Creek	3,829
Dixie Creek	4,756
Bear Creek/Hall Creek	1,332
Grub Creek	3,575
Pine Creek/Dog Creek	9,108
Indian Creek	11,789
Strawberry Creek/Squaw Creek	10,750
TOTAL	110,663
LOWER JOHN DAY RIVER	
Laycock Creek	5,588
Ingle Creek/Harper Creek	4,495
Riley Creek	8,897
Moon Creek/McClellan Creek	4,206
Fields Creek	10,701
Widows Creek/Dry/Flat/Aldrich Creeks	6,635
Belshaw Creek/Cummings Creek	7,372
Birch Creek/Dry Creek	7,800
TOTAL	55,694
UPPER SOUTH FORK JOHN DAY RIVER	
Upper South Fork John Day River	7,005
Donivan Creek	9,213
Venator Creek/Alsup Creek	9,384
Lonsome/Grasshopper Creek	10,212
Officer Creek/Smokey Creek	10,367
Rosebud Creek/S.F. John Day River TLW's	7,665
Spoon Creek	6,229
Corral Creek	6,663
Alder Creek/Utley Creek	7,657
TOTAL	74,395

TABLE N-1 (continued)
SUBWATERSHEDS

Watershed/Subwatershed	Acres
LOWER SOUTH FORK JOHN DAY RIVER	
Tex Creek	8,133
Upper Murderers Creek	11,090
North Fork Deer Creek	4,153
Upper SF Murders Creek	4,206
South Fork Deer Creek	3,279
Alder/Corral Creeks	3,128
Vester Creek/Buck Cabin Creek	4,970
Deer Creek TLW's	11,578
Lower SF Murderers Creek	11,961
Lower Murderers Creek	8,038
Thorn Creek	2,707
Duncan Creek	6,532
Todd Creek	2,944
Cabin Creek	4,376
Chickenhouse Creek/Oliver/Smokey Creeks	5,089
TOTAL	92,184
COTTONWOOD CREEK	
Fox Creek	4,626
Dunning Creek/Smith Creek	3,817
Mill Creek/Murphy Creek	4,471
Donaldson Creek/Board/Boulder Creeks	8,145
Willow Spring Basin/Mine/Cohoe Creeks	8,175
Fox Creek Tiny Little Watersheds (TLW's)	7,110
TOTAL	36,344
DEER CREEK	
West Fork Deer Creek/East Fork Deer Creek	7,333
TOTAL	7,333
BEECH CREEK	
Cottonwood Creek/Upper Beech Creek	5,454
Hog Creek/Enis Creek	4,114
Bear Creek/Fall Creek	10,178
Clear Creek/Thompson Creek	6,742
McClellan Creek	6,444
Lake Creek/Tinker/Upper East Fork Beech Creeks	7,333
East Fork Beech Creek South	3,377
TOTAL	43,462

SUBWATERSHEDS

TABLE N-1 (continued)
SUBWATERSHEDS

Watershed/Subwatershed	Acres
LONG CREEK	
Jugow Creek/Upper Long Creek	3,531
Upper South Fork Long Creek	2,865
Lower South Fork Long Creek	8,252
Jonas Creek/Keeney Creek	2,319
Lower Long Creek/Pass Creek	11,184
TOTAL	28,151
LOWER SILVIES RIVER	
Flat Creek	6,755
Bridge Creek	9,489
East Silvies Valley TLW's	13,899
Trout Creek	14,732
Stancliffe Creek	6,755
Lower Silvies River	9,583
Lower Myrtle Creek/Lower Silvies TLW's	9,042
Sage Hen Creek/Little Sage Hen Creek	9,016
West Silvies Valley TLW's/Boulder/Fawn Creeks	11,820
Upper Myrtle Creek	17,952
TOTAL	109,043
UPPER SILVIES RIVER	
Silvies River/Hog Creek	5,660
Upper Silvies River	8,822
Wickiup Creek	5,303
Upper Silvies NW TLW's	12,829
Camp Creek/Starr Creek	4,928
Van Aspen Creek	5,730
Bear Creek TLW's	13,536
Bear Creek/Big Bend Creek	4,561
Upper Bear Creek/Dark Canyon Creek	4,412
Little Bear Creek	4,521
Antelope Creek/Bear Creek TLW's/Upper Silvies East TLW's	21,913
Shirrtail Creek	8,043
Lower Camp Creek	5,343
Crooked Creek	7,082
Camp Creek/ Wymer Creek	10,927
Scotty Creek/Damon Creek	16,375
TOTAL	139,985

TABLE N-1 (continued)
SUBWATERSHEDS

Watershed/Subwatershed	Acres
EMIGRANT CREEK	
Whiskey Creek	5,826
Emigrant Creek TLW's	8,398
Blue Creek/Gunther Creek	6,505
Sawtooth Creek	12,152
Yellowjacket Creek/Beaverdam Creek	10,154
West Fork Hay Creek/Deadwood Creek	8,026
Hay Creek	9,179
TOTAL	60,240
POISON CREEK	
Poison Creek/Dry/Buck Creeks	8,043
Devine Canyon	6,321
Prater Creek/Coffeepot Creek	10,461
Rattlesnake Creek	7,662
Cow Creek	13,852
TOTAL	46,339
MALHEUR RIVER	
McCoy Creek/Lake Creek	14,351
Upper Big/Snowshoe/Corral Basin Creeks	10,593
Lower Big/Bosenberg Creeks	10,816
Summit Creek	11,315
Wickiup Creek	11,237
Crooked Creek	6,658
Frazier/Tureman/Diamond Dot/Dollar Basin Creeks	8,798
Black Canyon Creek	5,993
Cliff Creek/Skookum Creek	10,951
Malheur River TLW's	9,844
Bluebucket Creek	10,641
TOTAL	111,179
UPPER LITTLE MALHEUR RIVER	
Upper Little Malheur River	12,590
Camp Creek/Lower Little Malheur River	11,802
TOTAL	24,392
LOWER LITTLE MALHEUR RIVER	
Anderson Creek/Lower Little Malheur TLW's	5,165
TOTAL	5,165

SUBWATERSHEDS

TABLE N-1 (continued)
SUBWATERSHEDS

Watershed/Subwatershed	Acres
LOWER MALHEUR RIVER	
Middle Fork Wolf Creek	9,134
East Fork Wolf Creek	11,749
Squaw Creek/Wolf Creek TLW's	10,463
West Fork Wolf Creek	3,103
Schurtz Creek	7,480
Gabe Creek/Dry Creek	3,519
Calamity Creek	15,100
Gunbarrel Creek/Wolf Creek TLW's	10,514
Muddy Creek/Little Muddy Creek	7,182
Upper Pine Creek	12,656
Lower Pine Creek	18,531
TOTAL	109,431
NORTH FORK MALHEUR RIVER	
Glacier Creek	17,374
Spring Creek	11,644
Little Crane Creek/Wet Creek	9,393
Stink Creek	10,160
Crane Creek	14,128
Rattlesnake Creek	4,757
Dutch Oven Creek	8,713
Lower Bear Creek	10,304
Upper Bear Creek	7,110
Upper Cottonwood Creek	14,062
Lower Cottonwood Creek	5,184
TOTAL	112,829
CANYON CREEK	
Upper Main Stem Canyon Creek	8,109
Middle Fork Canyon Creek	6,900
East Fork Canyon Creek	10,869
Berry Creek/Sheep Gulch	6,137
Vance Creek	3,877
Lower Canyon Creek TLW's/Fawn/Road Gulch Creeks	12,879
Upper Canyon Creek TLW's/Dry Soda/Wickiup/Lower Gap Creeks	7,202
Wall Creek	4,048
TOTAL	60,021