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United States
Department of
Agriculture

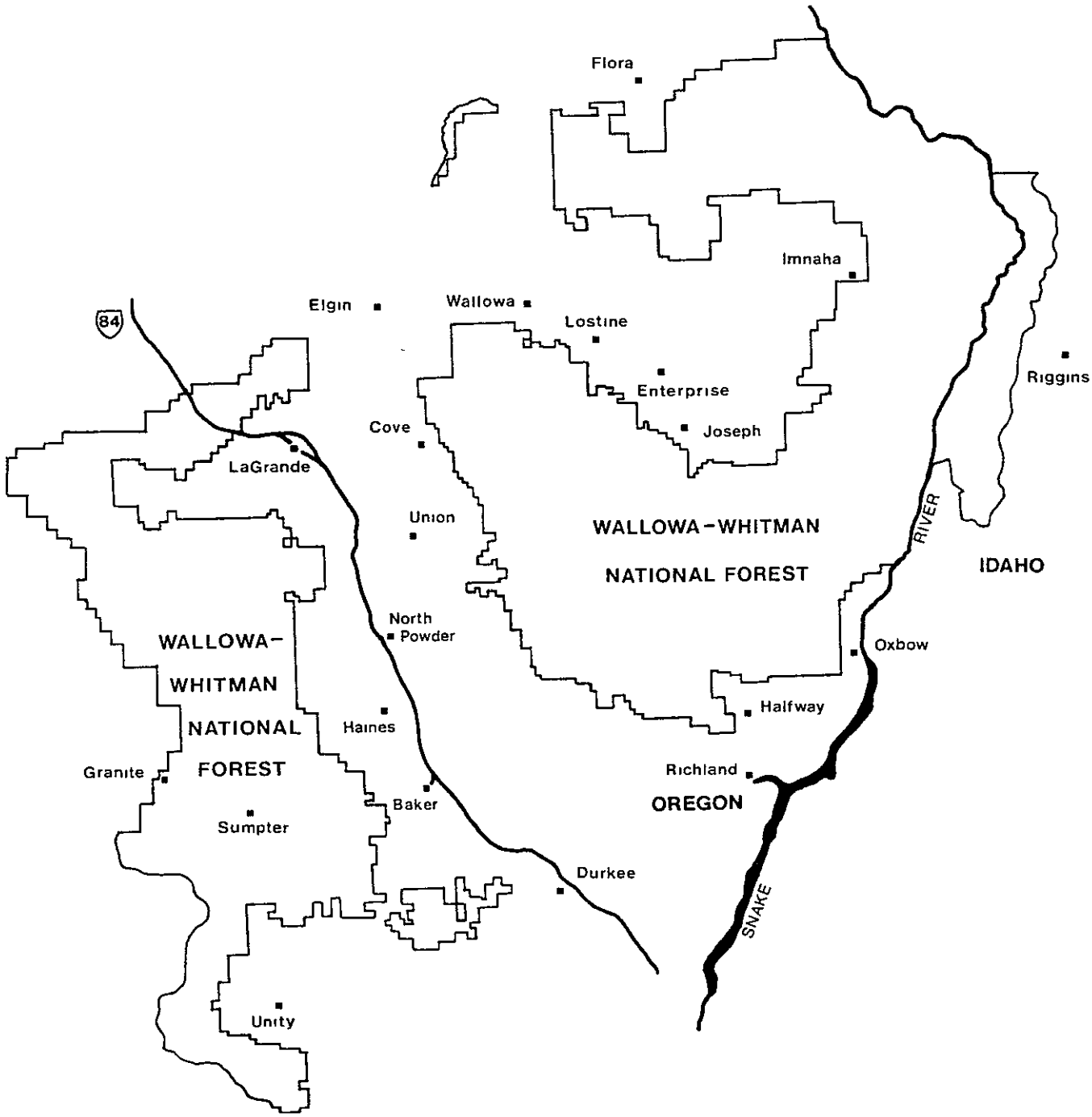
Forest Service

**Pacific
Northwest
Region**

1990

Land and Resource Management Plan

Wallowa-Whitman National Forest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Powder
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WHITMAN
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FOREST
Oxbow
Haines
Halfway
Granite
Richland
OREGON
Baker
Sumpter
Durkee
SNAKE
Unity

Wallowa-Whitman
National Forest

P. O. Box 907
Baker City, OR 97814

1920

April, 1990

Dear Reviewer:

I am pleased to be able to present to you the Land and Resource Management Plan for the Wallowa-Whitman National Forest. It will be the plan which will guide our resource management activities through the decade of the 1990's. The purpose of the plan is to provide direction for multiple use management and sustained yield of goods and services from the Forest in an environmentally sound manner.

Because the plan is not site specific, on-the-ground implementation will be accomplished through project level planning. I encourage your continued involvement as we work together to develop projects which carry out the intent of the plan.

Throughout the coming years, we will monitor the plan and revise or amend it as necessary in recognition of better resource inventories or changes in conditions. We intend to keep you informed of such changes and will be seeking your advice.

Sincerely,

R. M. RICHMOND
Forest Supervisor

ERRATA

As discussed in the Record of Decision, it was necessary to reduce timber harvest along important streams. This resulted in the annual first decade allowable sale quantity being reduced from 144 MMBF to 141 MMBF, and the timber sale program quantity being reduced from approximately 210 MMBF to 207 MMBF Although the standards and guidelines in this Plan (Chapter 4) have been changed to reflect the Record of Decision, numbers found throughout this document have not been changed

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LIST OF TABLES

LIST OF FIGURES

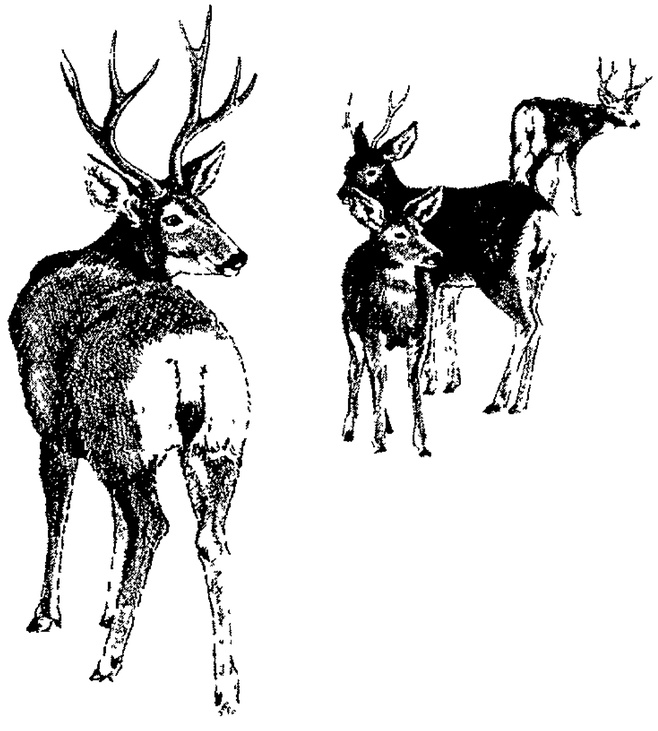
ACRONYMS AND ABBREVIATIONS USED IN THIS DOCUMENT

Those listed with an asterisk are further explained in the Glossary

AC - Acres
AMP - Allotment Management Plan *
AMS - Analysis of the Management Situation *
ASQ - Allowable Sale Quantity *
ATV - All Terrain Vehicle *
AU - Animal Unit *
AUM - Animal Unit Month *
BAP - Benzo (A) Pyrene
BCR - Benefit Cost Ratio
BF - Board Foot *
BIA - Bureau of Indian Affairs
BLM - Bureau of Land Management *
BMP - Best Management Practice *
BTU - British Thermal Unit *
CCC - Civilian Conservation Corps
CEQ - Council on Environmental Quality *
CFL - Commercial Forest Land *
CFR - Code of Federal Regulations *
CI - Capital Investment
CMAI - Culmination of Mean Annual Increment *
CMP - Comprehensive Management Plan (HCNRA)
CRITFC - Columbia River Inter-tribal Fish Commission
DBH - Diameter at Breast Height *
DEIS - Draft EIS *
DEP - Departure *
EA - Environmental Assessment *
EHF - Earned Harvest Factor
EIS - Environmental Impact Statement *
EO - Executive Order
EPA - Environmental Protection Agency *
FEIS - Final EIS *
FERC - Federal Energy Regulatory Commission
FIL - Fire Intensity Level *
FORPLAN *
FPFO - Forestry Program for Oregon
FRES - Forest Range Environmental Study *
FS - Forest Service
FSH - Forest Service Handbook
FSM - Forest Service Manual
FVB - Future Value of Benefits
FVC - Future Value of Costs
FY - Fiscal Year
GIS - Geographic Information System
GNP - Gross National Product
HCNRA - Hells Canyon National Recreation Area
HCRS - Heritage Conservation and Recreation Service
HEI - Habitat Effectiveness Index
ICO's - Issues, concerns, and Opportunities
I&DC - Insect and Disease Control
ID - Interdisciplinary
IPM - Integrated Pest Management *
IMPLAN *
INTEGER *
K-V Act - Knutson-Vandenberg Act *
KV - Kilovolt
LRMP - Land and Resource Management Plan
LTSY - Long Term Sustained Yield *
MA - Management Area
MAUM - Thousand Animal Unit Month
MBF - Thousand Board Feet
MCF - Thousand Cubic Feet
MIH - Management Information Handbook
MIS - Management Indicator Species
MM$ - Million Dollars
MMBF - Million Board Feet
MMCF - Million Cubic Feet
MOU - Memorandum of Understanding
MR - Management Requirement
MRVD - Thousand Recreation Visitor Days
MS - Management Strategy(ies)
MWFUD - Thousand Wildlife/Fish User Day
NA - No Action
NAS - National Activity Structure
NC - No Change
NDF - Nondeclining Flow *
NEPA - National Environmental Policy Act
NFMA - National Forest Management Act
NFMAS - National Fire Management Analysis System
NPB - Net Public Benefits
NRA - National Recreation Area (HCNRA)
NRT - National Recreation Trail *
O&M - Operation and Maintenance
OBERS - Office of Business Economics - Economic Research Service
ODFW - Oregon Department of Fish and Wildlife
ONRC - Oregon Natural Resources Council
ORV - Off Road Vehicle
PAOT - Persons At One Time
P&M - Protection and Management Funds
PILOT - Payment in Lieu of Taxes
PL - Public Law
PNV - Present Net Value
PNW - Pacific Northwest
POM - Polycylic Organic Matter
PVB - Present Value of Benefits
PVC - Present Value of Costs
R-6 - Region 6
RARE II - Roadless Area Review and Evaluation *
RIM - Recreation Information Management *
RNA - Research Natural Area *
ROD - Record of Decision
ROS - Recreation Opportunity Spectrum *
RPA - Forest and Rangeland Renewable Resources Planning Act of 1974 *
RVD - Recreation Visitor Day *
SAF - Society of American Foresters
S&G - Standards and Guidelines
SCORP - Statewide Comprehensive Outdoor Recreation Plan
SHCI - Smolt Habitat Capability Index
SHPO - State Historical Preservation Officer (Office)
SIC - Standard Industrial Classification
SMA - Special Management Area
SMU - Streamside Management Unit *
SPM - Semiprimitive, Motorized
SPNM - Semiprimitive, Nonmotorized
T&E - Threatened and Endangered *
TRI - Total Resource Inventory *
TSI - Timber Stand Improvement *
TSPIRS - Timber Sale Program Information Reporting System
TSPQ - Timber Sale Program Quantity *
TSP - Total Suspended Particulates *
USGS - United States Geological Survey
U S - United States
USDA - United States Department of Agriculture
USDI - United States Department of Interior
VAC - Visual Absorption Capacity *
VMS - Visual Management System
VQO - Visual Quality Objective *
WFUD - Wildlife and Fish User Day *
WRC - Water Resources Council
WRS - Wilderness Recreation Spectrum *

CHAPTER 1

Forest Plan Introduction



CHAPTER 1

FOREST PLAN INTRODUCTION

PURPOSE OF THE FOREST PLAN

The Forest Land and Resource Management Plan (Forest Plan) guides all natural resource management activities and establishes management standards and guidelines for the Wallowa-Whitman National Forest, those portions of the Nez Perce and Payette National Forests that are administered by the Wallowa-Whitman National Forest Supervisor, and other lands within the Hells Canyon National Recreation Area (HCNRA) It describes resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management

The Forest Plan:

1 Establishes Forest-wide multiple-use goals and objectives,

2 Establishes Forest-wide standards and guidelines applying to future activities,

3. Establishes management area direction including management area prescriptions and standards and guidelines applying to future management activities in that management area,

4. Establishes the allowable sale quantity for timber and identifies land suitable for timber management, also sets timber sale program quantity;

5 Establishes monitoring and evaluation requirements

The Forest Plan embodies the provisions of the National Forest Management Act, the implementing regulations, and other guiding documents. Land use determinations, prescriptions, and standards and guidelines constitute a statement of the Plan's management direction, however, the projected outputs, services, and rates of implementation are dependent on the annual budgeting process. The plan will be revised on a 10-year cycle or at least every 15 years.

Upon implementation this plan will guide Forest Service programs and activities on the Wallowa-Whitman National Forest

RELATIONSHIP OF THE FOREST PLAN TO THE EIS AND RECORD OF DECISION

This Forest Plan sets forth the direction for managing the land and resources of the Wallowa-Whitman National Forest. The Plan results from extensive analysis and considerations addressed in the accompanying Environmental Impact Statement (EIS) and Record of Decision The planning process and the analysis procedures used to develop this Plan are described or referred to in the EIS The EIS also describes other alternatives considered in the planning process Specific activities and projects will be planned and implemented to carry out the direction in this Plan The Forest will

perform environmental analysis on these projects and activities. This subsequent environmental analysis will use the data and evaluations in the Plan and Environmental Impact Statement as its basis Environmental analysis of projects will be tiered to the EIS accompanying this Forest Plan.

RELATIONSHIP OF THE FOREST PLAN TO THE REGIONAL GUIDE

The Regional Guide for the Pacific Northwest Region, as amended December 8, 1988, provides direction for National Forest Plans It includes standards and guidelines addressing the major issues and management concerns considered at the Regional level, to facilitate Forest planning The Regional Guide provided Regional standards and guidelines and tentative Forest resource objectives from the 1980 RPA Program for the Forest These were used in formulating this Plan

RELATIONSHIP TO SPECIAL AREA PLANS

Public Law 94-199 required that a separate plan be developed for the Hells Canyon National Recreation Area Such a plan was developed and was approved on April 30, 1982 The regulations guiding the development of Forest Plans (36 CFR 219 2(b)) state that, "(if), in a particular case, special area authorities require the preparation of a separate special area plan, the direction of any such plan may be incorporated without modification in plans prepared under (these regulations) " For the following reasons the Hells Canyon Comprehensive Management Plan is incorporated into this Forest Plan: (1) the analysis completed during development of the Hells Canyon Comprehensive Management Plan is still valid; i e , the issues and concerns identified as being important in management of the area along with the preferred alternative for resolving those issues are unchanged, (2) the process for amending or revising the Hells Canyon Comprehensive Management Plan was established by the Assistant Agriculture Secretary's appeal decision of April 27, 1984 (see further discussion below), and (3) the National Forest Management Act implementing regulations require that, "a Forest Plan shall ordinarily be revised on a 10-year cycle or at least every 15 years. It may also 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 RPA policies, goals, or objectives would have a significant effect on Forest level programs " Revision of the Forest Plan will include new planning for the Hells Canyon NRA. If the Forest Plan is amended this may include replanning for the NRA.

In his April 27, 1984 decision on appeals of the NRA Comprehensive Management Plan, the Assistant Secretary of Agriculture for Natural Resources directed that

> "The plan shall be revised or amended whenever (1) the Forest Supervisor determines that conditions or demands of the public in the area covered by the plan have changed significantly or (2) when any Forest Plan or Forest Plans adopted for the Wallowa-Whitman, Nez Perce or Payette National Forests sets a timber harvest level or any other output level which alone or in combination with the Forest Plan for one or more of those Forests might have a significantly adverse effect on the economy of Wallowa County or Baker County in Oregon or Adams County, Idaho County, or Nez Perce County in Idaho If revision or amendment occurs because of the second of the above-described conditions, every reasonable effort will be made to eliminate or mitigate the significantly adverse effect on the economy of the affected county or counties by revising or amending the Comprehensive Management Plan "

There is no indication that the first condition has occurred Following implementation of Forest Plans for the Nez Perce, Payette, and Wallowa-Whitman National Forests an analysis of the combined economic effects of these Forests on Baker, Wallowa, Adams, Idaho, and Nez Perce Counties will be

made. If it is determined that a significantly adverse effect will result, the Hells Canyon Comprehensive Management Plan will be revised or amended

RELATIONSHIP OF THE FOREST PLAN TO OTHER PLANS

This Forest Plan, including the incorporated Comprehensive Management Plan for the Hells Canyon National Recreation Areas, serves as the single land management plan for the area administered by the Forest Supervisor of the Wallowa-Whitman National Forest. All other land management plans are replaced by the direction in this plan.

Several documents designed to give further guidance to management activities have been or will be tiered to this Forest Plan

Examples of such documents are·

Forest Travel Plan
Livestock Grazing Allotment Management Plans
Fire Management Action Plans
Wilderness Management Plans
Cultural Resource Management Plans
Phillips Lake Recreation Area Management Plan
Oregon Trail Management Plan
Forest Development Transportation Plan
Wild and Scenic River Management Plans
Bald Eagle and Peregrine Falcon Recovery Plans
Corridor Viewshed Plans

The Landownership Plan and the 10-year Timber Sale Action Plan, are presented as appendices to the plan Other plans are available at the Forest Supervisor's Office, Wallowa-Whitman National Forest, P. O Box 907, Baker City, Oregon 97814.

RELATIONSHIP OF THE FOREST PLAN TO PROJECT PLANNING

The management direction provided by this Forest Plan comprises the framework within which project planning and activities take place. It defines management area goals and management standards that guide project activities toward achieving a desired future condition for the management area and, collectively, for the Forest. It specifies a schedule for project activities (management practices) It provides guidance concerning potential landtype and habitat type limitations, including assumptions about the appropriate vegetation management practices for timber sales and other projects. (See Chapter 5.)

PLAN STRUCTURE

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

Chapter 1 is the introduction which describes the purpose of the plan, summarizes the content, establishes the area covered by the plan, and illustrates the geographic location.

Chapter 2 provides a summary of the Analysis of the Management Situation It includes brief descriptions of resource management situations and as appropriate, demand and supply conditions for various commodities and services, productivity potentials, and use and development opportunities

Chapter 3 summarizes the major public issues and management concerns, explaining how each was resolved in the planning process.

Chapter 4 describes the goals, standards, and guidelines established for the period of the plan. Included is a section describing multiple resource prescriptions (management area direction) that are specific to each management area.

Chapter 5 includes implementation direction, a plan for monitoring and evaluating Forest Plan implementation, and a description of the process for plan amendment and revision

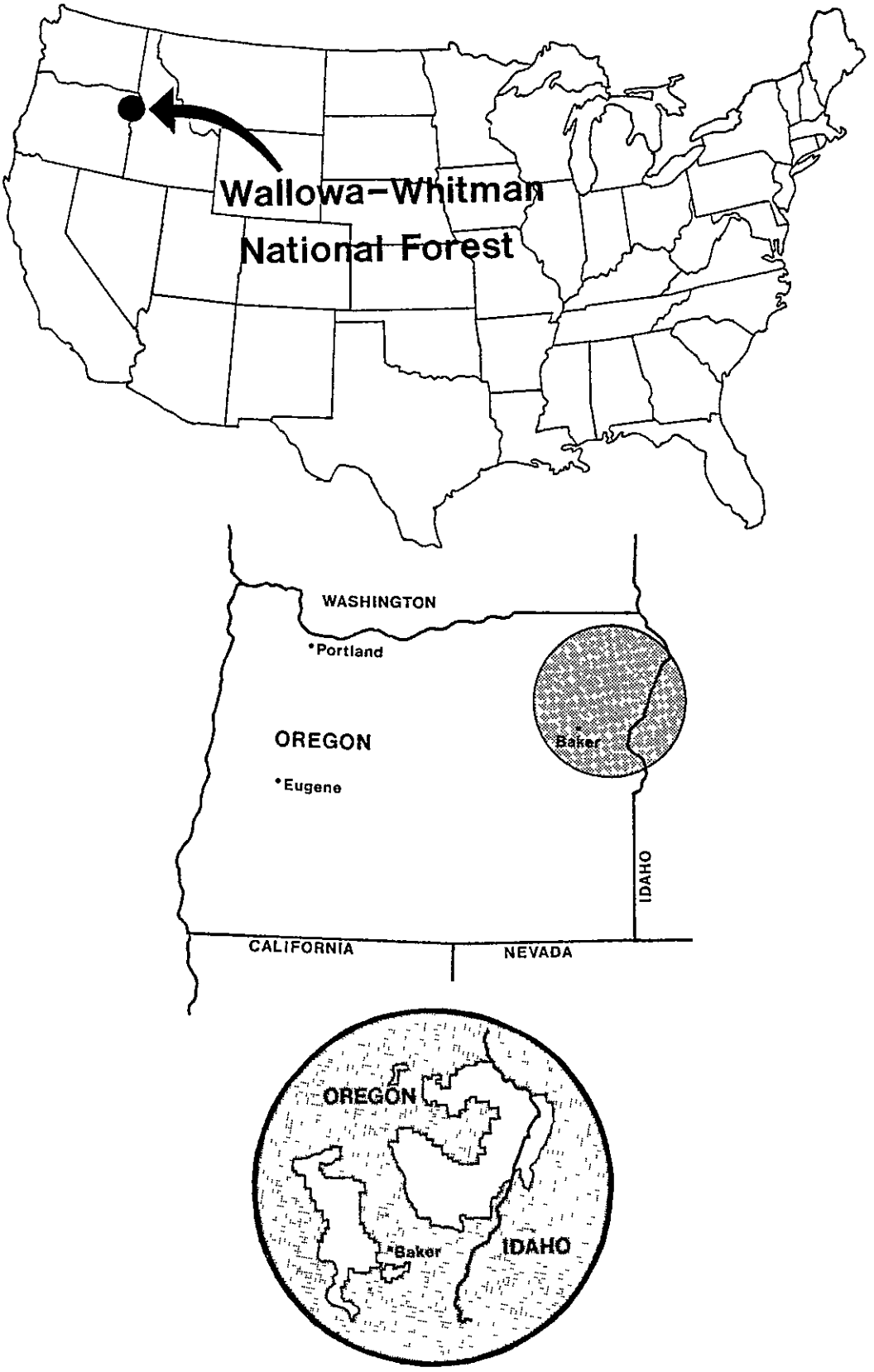
Following Chapter 5 is a glossary of terms used in this document, a schedule of projected activities, a landownership plan, and a ten-year timber sale action plan

FOREST DESCRIPTION

The Forest is in the northeast corner of Oregon and the west central edge of Idaho as shown on the vicinity map (Figure 1-1) It lies within Wallowa, Union, Baker, Malheur, Umatilla, and Grant Counties in Oregon and Adams, Idaho, and Nez Perce Counties in Idaho. It contains over 2 3 million acres of Federal land.

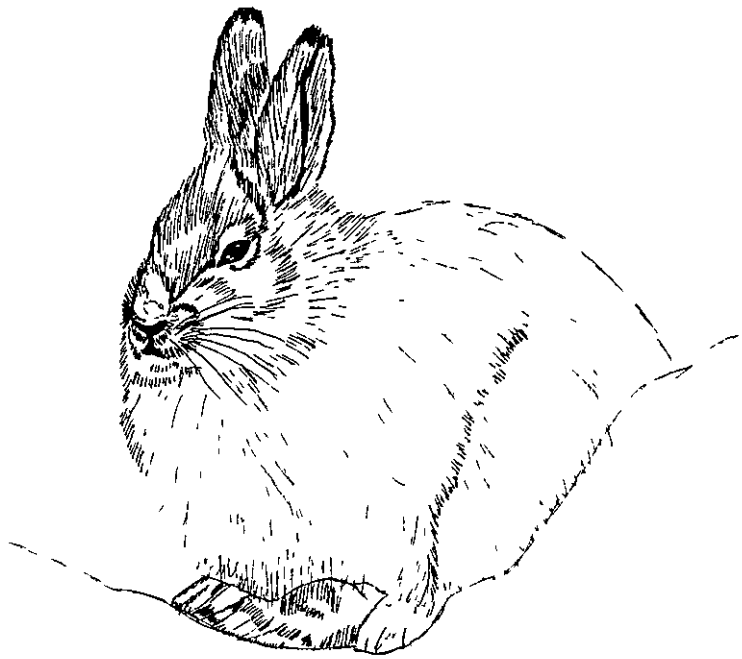
The Forest Supervisor's Office is in Baker City, Oregon, with Ranger Stations for the seven Ranger Districts (Including the Hells Canyon National Recreation Area) located in the towns of Unity, Halfway, Baker City, La Grande, Joseph, and Enterprise (all in Oregon) with the Hells Canyon National Recreation Area Office also in Enterprise

VICINITY MAP



CHAPTER 2

Summary of The Analysis of The Management Situation



CHAPTER 2

SUMMARY OF THE ANALYSIS OF THE MANAGEMENT SITUATION (AMS)

CURRENT MANAGEMENT SITUATION

Throughout this document the Wallowa-Whitman National Forest refers to the area administered by the Wallowa-Whitman Forest Supervisor. It includes the Wallowa and the Whitman National Forests and those portions of the Nez Perce and Payette National Forests that lie within the Hells Canyon National Recreation Area with the exception of the Rapid River Corridor.

MANAGEMENT SITUATION BY RESOURCE

This section provides a summary of the management situation for the Forest programs Included for comparison purposes is Table 2-1 showing projected Forest outputs (targets) and activities as displayed in the Regional Guide for the Pacific Northwest Region (May 1984).

Recreation

The Forest offers a wide range of outdoor recreation opportunities varying from primitive hiking and horseback riding experiences within wilderness and the Hells Canyon National Recreation Area to the relatively developed atmosphere found at Anthony Lakes, Phillips Lake and a number of other recreation sites Although recreation is concentrated in the late spring, summer and fall when most of the Forest is accessible by wheeled vehicle, opportunities for winter recreation are abundant for those interested in downhill or cross-country skiing, snowshoeing or snowmobiling

The Forest has a general surplus of supply over existing and projected recreation demand. It will maintain the surplus through 2030 though changes will occur in recreation use by Recreation Opportunity Spectrum (ROS) class, especially as more land in the semiprimitive recreation classes is converted to the roaded recreation classes The challenge to management will be dispersing use from the popular focal points to other available areas. Some recreational sites near lakes and streams are now at capacity during summer months.

Historical and projected dispersed and developed recreation are displayed in Tables 2-2 through 2-4 along with Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA) estimates, as amended, as identified in the Regional Guide.

To identify the recreation resource environment, the Forest is classified into various categories of the Recreation Opportunity Spectrum (ROS) The ROS is a categorization of land according to a range of recreation experience opportunities.

Table 2-1
RPA PROGRAM OUTPUTS, ACTIVITIES AND COSTS FOR THE WALLOWA-WHITMAN NATIONAL FOREST

Output/Activity	Unit of Measure	Annual Units 1990	2000	2030
Recreation				
Developed Recreation Use (Includes IS)	MRVD's	407	410	430
Dispersed Recreation Use (Includes Wildlife and Fish)	MRVD's	1,180	1,260	1,450
Trail Construction/Reconstruction	Miles	70	73	80
Wildlife and Fish				
Wildlife Habitat Improvement	Thousand acres	10 917	9 293	4 602
Anadromous Fish Improvement	Thousand pounds	52 500	108 000	144 000
Range				
Grazing Use (Livestock)	Thousand AUM's	206	208	220
Timber				
Programmed Sales Offered	Million board feet	220	–	–
	Million cubic feet	41	41	41
Reforestation	Thousand acres	3 200	3 670	4 500
Timber Stand Improvement	Thousand acres	4 160	4 280	4 480
Water				
Meeting Water Quality Goals	Million acre feet	2 670	2 850	2 970
Minerals				
Minerals Leases and Permits	Operating Plan	380	425	500
Human and Community Development				
Human Resources Programs 1/	Enrollee years	4	4	4
Protection				
Fire Management Effectiveness Index	Dollars/ thousand acres	1,214	1,214	1,184
Fuelbreaks and Fuel Treatment	Acres	2,838	2,838	2,838
Lands				
Land Purchase and Acquisition (Excludes Exchange)	Thousand acres	400	0	050
Soils				
Soil and Water Resource Improvement (Improved Watershed Condition)	Thousand acres	1 000	0 900	0 600
Facilities				
Returns to Government	Million Dollars 2/	10 0	13 0	27 1
Road Construction/Reconstruction (Arterial, Collector)	Miles	4 7	5 4	7 2
Total Forest Costs	Million dollars	25 1	26 3	26 8

1/ Human resource programs whose funds are allocated to the Forest Service are not included
2/ All costs and returns are shown in constant 1978 dollars

The six spectrum categories range from primitive to urban. They describe a variety of recreation situations a visitor can experience ranging from presence in an undisturbed, natural environment with little contact with other humans to a highly modified, altered environment with a maximum of varied contacts with others The current situation by ROS classification for the Forest is shown in Table 2-5

(See the Glossary for a more detailed description of the ROS classes.)

The creation of the 655,000-acre Hells Canyon National Recreation Area (HCNRA) in 1975 (P L. 94-199) has had a significant impact on the Forest. Management of the HCNRA is pursuant to its own Comprehensive Management Plan This plan proposes construction of a number of additional recreation sites including campgrounds at Pittsburg Landing, the Upper Imnaha River area, Hells Canyon Reservoir, Dug Bar, near Hat Point and Low Saddle, and in the vicinity of Seven Devils Guard Station This is expected to increase developed recreation capacity by approximately 78,000 RVD's. Substantial road and trail improvements to complement the site development is also specified by the CMP.

Comparing recreation site capacity (587 MRVD's) with current use (367 MRVD's) the Forest would seem to have an oversupply of developed sites However, the oversupply is seasonal rather than total. In summer, sites near water are fully used. In fall, sites near hunting areas are fully used Unused capacity is related to locations that are seasonally unattractive, to midweek periods and to inclement weather. Many developed sites have facilities that are in a deteriorated condition Latest statistics show a need to invest $200,000 in facility replacements

Wilderness

The Forest contains two complete wildernesses plus portions of two others, for total designated wilderness of 582,700 acres Wilderness acreage, present use, capacity, and predicted use are shown in Table 2-5.

Table 2-2
RECREATION USE
(Recreation Visitor Days by Fiscal Year)*

	1981	1982	1983	1984	Average 1981-1984
Developed	394,300	406,500	349,500	316,400	366,700
Dispersed	978,700	1,370,900	1,114,700	1,113,000	1,144,300
Total	1,373,000	1,777,400	1,464,200	1,429,400	1,511,000

*Forest Recreation Information Management (RIM) reports. Includes HCNRA in its entirety

The Eagle Cap Wilderness was created in 1940 Subsequent legislation added to the original acreage in 1972 and most recently in 1984 The Hells Canyon Wilderness was established by the Hells Canyon National Recreation Area legislation An addition was made in 1984. The Monument Rock and the North Fork John Day Wildernesses were established in 1984 The majority of each of these areas lies on the adjacent Malheur and Umatilla National Forests which have primary responsibility for their planning.

With the 1984 wilderness additions, virtually all of the primitive and about 40 percent of the semiprimitive acres on the Forest have been designated wilderness If present trends continue, the primitive and the semiprimitive acreage outside wilderness will continue to shrink and those seeking the recreational experiences these areas provide will find them in short supply Primitive wilderness recreation will also reach capacity sometime around the fourth decade of plan implementation The Forest has no land fitting the category of trailless wilderness, though there are opportunities for off-trail recreation in the Eagle Cap Wilderness.

Due to its relatively low level of use, there are few conflicts between public use and maintenance of wilderness character Some areas around lakes in the Eagle Cap Wilderness do receive intense use during July and August; popular hunting areas are heavily used during October and November.

Landscape Appearance

Much of the 2 3 million acre National Forest retains a near-natural appearance when viewed by the casual observer from its many broad valley viewsheds The past management practices causing the most disturbance include the clearcutting of dead and dying lodgepole pine. Activities which resulted in modification to the landscape include roads, clearcuts and other harvests, utility corridors, mining dredge tailings, other mining operations, numerous rock quarries, and water impoundments. To date, approximately 132,000 acres have been physically altered. The timber harvest program can be expected to maintain or increase the incidence of clearcuts. This is the result of clearcut harvest systems and other harvest systems such as shelterwoods which remove the overwood some ten years after the shelterwood harvest Likewise, utility corridors, mine tailings, and quarries will be long-term modifications

Table 2-3
DEVELOPED RECREATION USE (PROJECTED)
(Recreation Visitor Days by Fiscal Year)

	Base (1981-1984)	Decade 1	Decade 2	Decade 3	Decade 4	Decade 5
RPA TARGETS 1/		407,000	410,000	410,000	410,000	430,000
PROJECTED USE 2/	366,700	399,000	464,000	523,000	571,000	621,000

TABLE 2-4
DISPERSED RECREATION USE (PROJECTED)
(Recreation Visitor Days by Fiscal Year)

	Base (1981-1984)	Decade 1	Decade 2	Decade 3	Decade 4	Decade 5
RPA TARGETS 1/		1,180,000	1,260,000	1,310,000	1,350,000	1,450,000
PROJECTED USE 2/	1,144,300	1,244,000	1,445,000	1,572,000	1,659,000	1,726,000

1/ Regional Guide, Table 3-24.
2/ Projections are based on the population growth rates contained in the 1980 OBERS projections. Decadal increases from Vol 1, p 117 OBERS is an acronym for the joint effort of the Office of Business Economics (OBE), now the Bureau of Economic Analysis (BEA), U. S Department of Commerce, and the Economic Research Service (ERS) of the U S Department of Agriculture
3/ Beginning with Decade 2, dispersed use is limited by capacity in some ROS classes.

Table 2-5
FOREST CAPACITY AND USE BY RECREATION OPPORTUNITY SPECTRUM CLASS (RECREATION VISITOR DAYS)

ROS Class	Acres	Current 1/ Capacity RVD'S & WFUD'S)	Projected Capacity (RVD's) Decade 5	Projected Demand (RVD's & WFUD's) Decade 2	Decade 3	Decade 4	Decade 5
Nonwilderness							
Rural	1,500	172,700	172,700	136,000	156,000	174,000 2/	187,000 2/
Roaded Modified	242,100	1,209,800	6,932,000 3/	1,139,000 3/	1,307,000 3/	1,456,000 3/	1,568,000 3/
Roaded Natural	985,600	4,925,000	3/	3/	3/	3/	3/
Semiprimitive Motorized	260,200	573,700	339,000	344,000	395,000	440,000	474,000
Semiprimitive Nonmotorized	269,000	322,800	200,200	157,000	180,000	200,000	216,000
Primitive	8,115	7,000	7,000	8,000	9,000	10,000	11,000
Subtotal	1,766,515	7,211,000	7,650,700	1,784,000	2,047,000	2,280,000	2,456,000
Wilderness							
Primitive (Trailed)	515,200	276,400	300,200	248,000	284,000	316,000	341,000
Semiprimitive	67,500	56,400	32,600	9,000 4/	11,000	12,000	13,000
Subtotal	582,700	332,800	332,800	257,000	295,000	328,000	354,000
Total	2,349,215	7,543,800	7,983,500	2,041,000	2,342,000	2,608,000	2,810,000

1/ Under current land management plans, capacity for semiprimitive recreation will decrease and capacity for roaded recreation will increase as existing roadless areas are developed
2/ Demand for developed recreation within the rural ROS class will exceed capacity by 2020 There is adequate developed recreation capacity within other ROS classes to make up for this shortfall
3/ Roaded Natural and Roaded Modified identified as Roaded Modified
4/ Reflects changes in Wilderness Recreation Opportunity Spectrum categories

The visual resource has been inventoried according to the National Forest Visual Management System. This provides an inventory of the existing visual condition as well as the desired visual quality levels. The desired visual quality levels are based on a purely visual management value system The actual visual quality objectives of the various management alternatives may or may not be the same as the desired levels. Current land management direction from unit plans requires that these objectives be met to the extent practicable at all management activities At present, there are 617,274 acres in sensitivity level 1 viewsheds. (See map in map packet.)

National Wild and Scenic Rivers

The Omnibus Oregon Wild and Scenic Rivers Act, which was signed into law on October 28, 1988 added nine streams within the Forest to the system They are all or portions of the North Powder, North Fork John Day, Grande Ronde, Minam, Lostine, Joseph Creek, Imnaha, South Fork Imnaha, and Eagle Creek These additions, plus the Snake River which was added to the system in 1975, account for ten wild and scenic rivers on the Forest -- a total of 269 miles As required by the Wild and Scenic Rivers Act, river corridor boundaries and river management plans will be established via separate NEPA analyses tiered to the Forest Plan.

Wildlife

There are 379 species of terrestrial vertebrate wildlife within the geographic area of the Wallowa-Whitman National Forest These species include 10 amphibians, 16 reptiles, 263 birds and 90 mammals. Fifty-one of the bird species are migrant or incidental visitors only More complete descriptions of species and their habitats are found in Wildlife Habitats in Managed Forests * The Wallowa-Whitman is noted for Rocky Mountain elk and mule deer and the hunting these species provide Bear, cougar, mountain sheep, grouse and chukar partridge are also hunted

The Forest provides habitat for a number of primary cavity excavators (species which excavate nesting sites in dead or live trees). These include such species as pileated woodpecker, yellow-bellied sapsucker, hairy woodpecker, downy woodpecker, black-capped chickadee, mountain chickadee, and chestnut-backed chickadee. These species, plus secondary cavity nesters (species which nest in the cavities excavated by other animals) are important to the Forest for a variety of reasons, including their beneficial effects on insect populations There is evidence that, through the consumption of insects which are destructive to the forest, these birds may contribute significantly to the prevention or reduction of insect outbreaks

Although the relationships between insectivorous bird populations and populations of forest-damaging insects are not fully understood, there is ample evidence to support maintaining higher than minimum population levels of these species *

Many species of wildlife are adaptable to use of the Forest by humans Some are not, or are not capable of sustaining as high a population level as is possible in a forest with little human influence The numbers of cougars, bobcats, pine martens and numerous other species have declined as public use of the Forest has increased. Historically, these species were not valued to the same extent as game animals which provided food and a high degree of hunting recreation, so their decline did not arouse great alarm.

*Thomas, Jack W. and Others. Wildlife Habitats in Managed Forests of the Blue Mountains of Oregon and Washington. Agriculture Handbook No. 553. Portland, OR. U S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station. 1979

Deer, and to a lesser extent elk, are relatively adaptable to human activities, elk are probably present in greater numbers today than at any time in recorded history However, because of their importance to the recreational hunter and the steady increase in hunters, there is a desire for more animals to hunt. Since deer and elk utilize the coniferous forest for cover, and eat many of the same plants which livestock eat, conflicts can occur.

While the Forest Service has the responsibility for managing wildlife habitat on National Forest lands, the States are responsible for managing the wildlife species on all lands. In Oregon this responsibility is assumed by the Oregon Department of Fish and Wildlife (ODF&W). In Idaho the programs are managed by the Idaho Fish and Game Department. These wildlife management agencies are pressured by the hunting public to increase elk numbers, the habitat of which is on public and private lands which have competing uses. In recognition that big-game numbers cannot continue to increase indefinitely, the States have established elk and deer population objective levels by game management unit. At present most units on the Wallowa-Whitman have reached these target levels Big-game numbers on the Idaho portion of the HCNRA are below recent historical levels and State management objectives

Unlike such Forest outputs as timber, domestic livestock grazing, and water, the relationship between the available quantity of big game and its use is not direct. In the case of big game, the benefit is in the recreation provided. Deer and elk support a high level of recreational activity since hunters (especially elk hunters) tend to tolerate a low rate of success.

The eating habits of elk are much closer to those of domestic livestock than are those of deer It is recognized that there is a level of competition for forage between elk and domestic livestock where dual use by these animals occurs However, the actual amount or level of competition is highly variable between areas and seasons of the year and is not well understood.

Deer and elk which summer on the Forest also impact area ranchers, especially where the ranches lie within the natural winter range of the game animals This problem has been lessened by State feeding programs

The Regional Guide provides RPA targets for wildlife habitat improvement. These targets are shown in Table 2-6

Table 2-6
WILDLIFE HABITAT IMPROVEMENT
(Acres)

	Decade 1	Decade 2	Decade 3	Decade 4	Decade 5
RPA Levels *	2,183	1,859	1,498	938	920

*Regional Guide, Table 3-24, adjusted to reflect acres rather than acre equivalents

Management Indicator Species

The NFMA Regulations require that "...fish and wildlife habitat be managed to maintain viable populations of existing ..species in the planning area." To insure this, the regulations direct that (1) "Habitat must be provided to support, at least, a minimum number of reproductive individuals," and (2) "Habitat must be well-distributed so that those individuals can interact with others in the planning area " The key concepts in these two items are adequate numbers of reproductive individuals, and assurance that these numbers will continue to exist through interaction of individuals within the population

To assure that these viable populations are maintained, the Pacific Northwest Region of the Forest Service has identified management requirements (MR's) for a number of wildlife species within the Region. These species are emphasized either because they are threatened or endangered (such as the bald eagle or American peregrine falcon) or because their populations can be used as an indicator of the health of a specific type of habitat. For example, the pileated woodpecker is highly dependent on snag habitat. If good habitat is provided for pileated woodpeckers and their population is maintained at some desired level, it is assumed that adequate habitat is also being provided for other snag-dependent species Species used to indicate the suitability of specific types of habitat are called management indicator species

The management indicator species on the Wallowa-Whitman are the Rocky Mountain elk (a species commonly hunted and also an indicator for mule deer habitat); the pileated woodpecker, goshawk, pine marten, and primary cavity excavators (indicators of snag habitat and old-growth forest stands) and steelhead and resident trout (indicators of riparian and aquatic habitats) The rationale for selection of these indicator species is discussed in Appendix G of the Environmental Impact Statement.

Fish

Chinook salmon and steelhead trout comprise the great bulk of the anadromous species spawned on the Forest. Anadromous fish from spawning grounds on the Wallowa-Whitman play a role not only as commercial and sport fish, but also in the culture of the Indian tribes who retain certain fishing rights to them by treaty.

Prior to the 1950's, the spawning streams of the Wallowa-Whitman played a significant role in the salmon and steelhead anadromous fisheries of the Columbia River System However, beginning with Bonneville Dam in the mid-30's, a total of 11 dams have been constructed on the Columbia and the Lower Snake Rivers which have either totally blocked anadromous fish runs or have significantly contributed to their decline. Presently, the Imnaha and the Grande Ronde drainages are the highest upstream spawning streams on the Snake River in Oregon. Combined, they provide about 640 miles of spawning and rearing habitat for salmon and steelhead. Fish from these two streams must pass eight dams on the Lower Snake and the Columbia Rivers in their round trip to and from the ocean An additional 45 miles of spawning and rearing habitat exist on the upper North Fork John Day River on the Wallowa-Whitman. Fish from these streams pass three Columbia River dams

Juvenile fish (smolt) suffer heavy losses during downstream passage over or through these dams. The estimated survival rate for smolt making their way to the ocean in recent years is 0.2 to 0.7% on the Imnaha and the Grande Ronde, 2 5 to 4 0% on the North Fork John Day

If this low rate of spawning escapement to the ocean were allowed to continue, the fish runs would soon disappear, particularly on the Imnaha and the Grande Ronde Systems. It is estimated that steelhead and salmon production from the National Forest streams could increase from about 73,000 pounds to about 1,380,000 pounds if full escapement were effected.

State, Federal and tribal agencies are presently investing millions of dollars in projects to provide better escapement. The Bonneville Power Administration is providing much of the funding Additional facilities and improvements are in various stages of planning and construction to increase anadromous fish runs. Projects such as barge transportation of smolt, improving passage facilities of dams, and increasing river flows during out-migration are all designed to increase escapement These efforts have begun to show results with much higher spawning redd counts inventoried during the 1985 spawning season Fishery biologists are optimistic that anadromous fish runs in the Columbia and Snake Rivers can be restored to near the 1950 level

In addition to production increases resulting from escapement of migratory fish past the dams, it is estimated that 221,000 pounds of steelhead and salmon can be produced from Forest streams through habitat enhancement work This is well above the final RPA goal of 144,000 pounds. Fish habitat improvement often involves increasing vegetation along streams. This often benefits other wildlife as well as fish.

Range

The Forest provides a diverse setting for range resources. Most of the Forest supports herbaceous or shrubby vegetation that provides forage and habitat for wildlife, protection for soils, water production and a visually pleasing diversity. Range vegetation on the Forest varies from riparian meadow bottoms to grass and shrubs under conifer overstories, grasslands and high alpine lands characterized by harsh conditions and short growing seasons.

Of the 2.3 million acres of the Forest, approximately 1.3 million are classified as suitable for livestock grazing under controlled management conditions that will maintain or improve the range resource Many of the Forest resources were severely damaged by uncontrolled grazing early in the century The effects of the historical problems are still evident in some areas today In addition, current management is not always adequate to provide for rehabilitation of existing problem areas or to consistently prevent the occurrence of new problems.

Many of the conflicts associated with the range resource occur in the riparian areas where cattle have traditionally concentrated Much work has been done to reduce the impact to acceptable levels but much remains to be done Allotment management planning emphasizes riparian values, where they exist, as the top priority for management improvement

Although complete information does not exist, preliminary information indicates that few riparian areas of the Forest are in good condition

The Forest annually provides 186,000 animal unit months (AUM's) of livestock grazing use. However, all of this capacity is seldom used, either at the choice of the permittees or because of the need to defer grazing to protect new grass seedings or other temporary restriction In 1988 grazing use amounted to 150,000 AUM's by 21,700 cattle and 5,600 sheep For this use grazing permittees paid over $161,000 at a rate of $1 54 per AUM In 1989 the rate increased to $1 89 per AUM.

There is a desire on the part of the local livestock industry to maintain and increase National Forest grazing This coincides with RPA projections of increases in our National population and in our total demand for beef Complicating the matter are concerns about streamside damage to soil, vegetation and water quality from livestock grazing, and the cost of improvements needed to alleviate such concerns.

Particular problems occur in the steep canyon areas where cattle tend to concentrate along stream bottoms, overutilizing the forage and damaging other riparian vegetation This situation has improved in recent years as Forest Service managers and permittees have worked together to find ways to

alleviate it However, problem areas persist and some 29 allotments are recognized as having need for improvement measures or grazing adjustments

Hells Canyon presents particular problems in that the rugged terrain, suitable only for sheep grazing, has proven to be unprofitable for several operators in recent years. Future use apparently depends on an upturn in market conditions.

Noxious weeds are a continuing problem on the Forest and on adjacent lands Control of these pests requires close cooperation between the Forest Service, county governments and private landowners

Timber

About 1.09 million acres (46 percent of the Forest) are classified as suitable forest land. This is land at least 10 percent forested which is available for timber management activities and which can be managed with existing technology. See Table 2-7 for a summary of the forest land use classification and a comparison with the previous land classification. (For additional discussion see EIS Appendix E.)

The great majority of the Forest's receipts accrue from timber sales Local governments rely on their returned share of these Forest receipts for a large part of their budgets for roads and schools Roughly one-half of the timber processed locally comes from the Wallowa-Whitman National Forest, making the Forest responsible for many jobs in the local communities

Personal use of fuelwood is reducing a backlog of dead and down material left from timber sales and the mountain pine beetle epidemic It appears that by the end of the century, fuelwood will mainly be available from thinning live trees in overstocked stands and from logging residue

Based on aerial survey data, the mountain pine beetle and Douglas-fir tussock moth killed in excess of 66 million board feet annually in the 1970's. They have now returned to endemic levels but the western spruce budworm, larch casebearer and spruce bark beetles are causing serious losses The mountain pine beetle outbreak on the west side of the Forest has collapsed because most of the susceptible host has been killed. Salvage of the dead and the dying pine timber is continuing in accessible areas under a multi-year rehabilitation program for the outbreak area

The Forest's annual programmed timber harvest is based on the 1962 Timber Management Plan as amended. The Timber Management Plan estimates the potential yield from the Forest to be 183 MMBF/yr. Actual timber offerings during the 1979-83 base period averaged 159 MMBF A significant outcome of the analysis of timber production potential was the realization that recent timber harvest levels under this timber plan were higher than the nondeclining flow level, given land management direction from the unit plans This was caused by a variety of factors The more significant of these were· (1) the failure of the timber management plan to fully* recognize unit plan direction, (2) accelerated harvest of lodgepole pine in addition to the evenflow of other species, (3) losses due to insect epidemics, and (4) a more precise (though reduced) estimate of standing timber volume.

*Amendment No. 7 to the Timber Management Plan accounted for some of the Unit Plan direction by eliminating from the timber base certain dispersed recreation lands--lands from which timber harvest can occur for other resource improvement purposes or to salvage catastrophic losses These lands are not, therefore, within the regulated timber harvest base Not accounted for by Amendment No 7 were the reductions in yields due to provisions for wildlife and other resources which may reduce potential timber yield by as much as 10 percent or more on some lands.

Table 2-7
LAND USE CLASSIFICATION - COMPARISON OF 1962 TIMBER MANAGEMENT PLAN TO FOREST PLAN

Land Category 1/	Forest Plan Total Acres	Forest Plan Idaho Acres	Forest Plan Oregon Acres	1962 TM Plan Acres	Difference Between Forest Plan and 1962 TM Plan 2/
Net National Forest Land	2,349,215	142,534	2,206,681	2,206,681	
Water	5,386	631	4,755		
Existing Roads	10,686	102	10,584		
Other Non-forest Land	921,218	90,038	831,180		
Non-forest Land	937,290	90,771	846,519	474,681	+ 371,838
Total Forested Land	1,411,925	51,763	1,360,162	1,732,000	- 371,838
Not Capable (Not Productive 3/)				206,300	
Capable but not Available (Reserved)	231,623	34,388	197,235	178,174	+ 19,061
Available and Capable (Commercial Forest Land)	1,180,302	17,375	1,162,927	1,347,526	- 184,599
Technologically Not Suited	90,230	386	89,844		
Available, Capable, and Tentatively Suitable	1,090,072	16,989	1,073,083	1,347,526	- 274,443

1/ Current terminology, with terminology of previous plans in parentheses.
2/ Differences noted are between the 1962 TM Plan (9th Amendment) and the Oregon portion of the proposed plan
3/ Term not used in current planning efforts.

It was intended that upon completion of land management (unit) plans, a new timber management plan would be prepared which would calculate the Forest's allowable harvest levels based on the management direction provided in the unit plans. Due to NFMA direction to undertake a new round of planning a timber management plan based on the unit plans was never completed Therefore, although the Forest has been managed according to direction in the unit plans, the allowable harvest has not reflected all of the direction from those plans

The maximum implementable level of timber harvest, under a nondeclining flow schedule is shown in Table 2-8 along with RPA targets as identified in the Regional Guide. These figures are taken from Alternative B of the EIS and are not achievable under this plan which is based on Alternative C.

The current RPA timber target is based on data from the 1962 Timber Management Plan, as amended Therefore it does not accurately reflect the current land base, the current inventory or present timber yield tables. The timber outputs displayed in Table 2-8 include significant amounts of salvage (principally lodgepole pine) and cull material added to the base harvest schedule for green volume

Table 2-8
RPA TIMBER TARGETS AND POTENTIAL TIMBER OUTPUTS UNDER NONDECLINING FLOW*
(Million Cubic Feet)

	Decade 1	Decade 2	Decade 3	Decade 4	Decade 5
Sawtimber	39 1	39 1	39.1	39.1	39.1
Roundwood	8 8	7 4	5 8	5.8	5.8
Charge Personal-Use Fuelwood	5.0	5 0	5 0	5 0	5 0
Total	52 9	51 5	49.9	49.9	49.9
RPA Target	41	41	41	41	41

*Cubic feet rather than board feet are shown here and elsewhere in the plan because the Scribner board foot rule is outmoded in view of the increasing component of smaller trees and better utilization of today's forest. Scribner was developed to estimate the sawn products which could be derived from the large trees comprising northwest forests early in the century.

The Scribner rule, one of the many used in the United States, is a diagram rule. That is, it was formulated by portraying dimension lumber which could be retrieved from the cylinder of the tree but ignored the wood fiber in the taper of the tree that would not make a board. This worked well for large trees when lumber was the primary product sought. However, Scribner becomes less accurate as the average tree size comprising the managed forest is reduced and as utilization of the tree is increased through more efficient milling and a wider range of products. We expect that within 10 years board foot measure will seldom be used

Cubic measure more accurately estimates the total wood fiber volume of the tree to established utilization standards. All forest volume measurements are estimates because the shape and taper of trees vary.

Water

The production of water volume is rarely in conflict with other resource uses. Water quality, however, may be affected by other activities and the supply of water during some time periods may fall short of demand. Either of these two occurrences may result in controversy and conflict between users

During the public participation process, substantial comment was received pertaining to water and watershed management In most instances respondents were concerned about maintenance or improvement of water quality Other potential issues which surfaced related to maintenance of streamflows and runoff timing, dam construction, the use of herbicides, and the development of hydropower.

Management concerns emphasized erosion control and the effects of recreational and livestock use on domestic water quality Other concerns included flood occurrence, water storage and transportation facilities, fuels and fire management, and mining.

The major users of surface water in the planning area are agriculture, industry, municipal supply, and other domestic use. Agriculture is by far the largest user of water with use increasing as more lands come under irrigation Fish, both resident and anadromous, depend on water quality and quantity.

The cities of Baker and La Grande have Memoranda of Agreement with the Secretary of Agriculture establishing municipal supply watersheds The Baker City Watershed includes 8,763 acres of National Forest land, providing water for a population near 10,000. The La Grande Municipal Watershed includes 15,500 acres of National Forest land supplying a population of over 11,000.

Both cities experienced water shortages in recent years and now rely on wells to supplement stream flows Opportunities exist for increased supply if facilities are improved, increased storage is provided, or additional sources are tapped

Several other communities rely on the Forest for municipal water Sumpter obtains its water from the McCully Fork of the Powder River, Granite from a spring located on National Forest land, and Union utilizes water from Catherine Creek In addition, Wallowa and Joseph receive all or part of their domestic water supplies from streams originating on National Forest land

The City of Halfway possesses a special use permit for use of Leep Springs as a domestic source, although it currently is not using this supply.

The National Forest has 1,462 identified water uses on its most recent water uses inventory. There are 27 Forest Service campgrounds and two picnic areas with piped-in water Two uses for irrigation (pastures) have been identified. The remaining 1,431 uses are associated with stock watering The Forest is presently reviewing these uses to determine those which require water rights

Total water rights exceed total annual runoff on a number of streams across the Forest Nearly all streams are seasonally overappropriated The State, which regulates water use, allocates water on a first-come basis with the oldest water rights taking priority over more recent rights

The Forest has the opportunity to increase the quality of water flowing from National Forest land The opportunity exists to improve or correct many of the water quality problems caused by ungulate damage in riparian areas, local stream bottom roads, and other areas of reduced watershed condition There are some water quality problems, such as sediment from poorly located roads, or stream temperature increases due to depleted flows which, while they may be improved, cannot realistically be eliminated in the foreseeable future

Minerals

The Forest is in the heart of what has been historically the most productive gold/silver region within the State of Oregon. Both lode and placer mines have had sizable production in the past and many are presently being reactivated In 1942 War Production Board Order L-208 closed all precious metals mines. Increased operating costs and a fixed gold price precluded the reopening of all but a few mines after World War II Only with the increase in gold and silver prices has the area re-emerged as a focus of mining interest. Currently thousands of lode and placer mining claims exist in the mineral belt of northeastern Oregon and western Idaho. Past and present mineral activity is concentrated in older, pre-Tertiary rocks, usually within and around the margins of intrusives.*

While the timber industry and agriculture comprise the great bulk of the area's basic industry, the considerable undeveloped mineral resource of the region provides a significant potential employment opportunity.

Numerous mining companies are exploring and developing properties in the Forest vicinity High precious metals prices plus improved mining and metallurgical techniques make many of the old deposits attractive In addition, exploration in recent years has also been directed toward large-tonnage, low-grade copper-molybdenum deposits At least two such deposits are currently being explored within the Forest boundaries. Figure 2-2 is a map outlining Forest areas in which nonenergy minerals are found (For a description of the numbered mineral areas, see Appendix J of the EIS)

A continuing concern of Forest managers is mining law compliance Under existing law the holder of a valid claim may erect structures necessary to work the claim There have been instances of structures being built, perhaps unknowingly, on invalid claims and later being used solely for purposes unrelated to mining. Abuses of this sort on the Forest have been reduced in recent years Effort is still underway to correct them.

Forest managers must also be sure that mining does not substantially degrade long-term water quality during operation and that rehabilitation is achieved

The Forest has not historically been considered favorable for oil and gas exploration. Only recently has there been interest shown in obtaining leases in the vicinity.

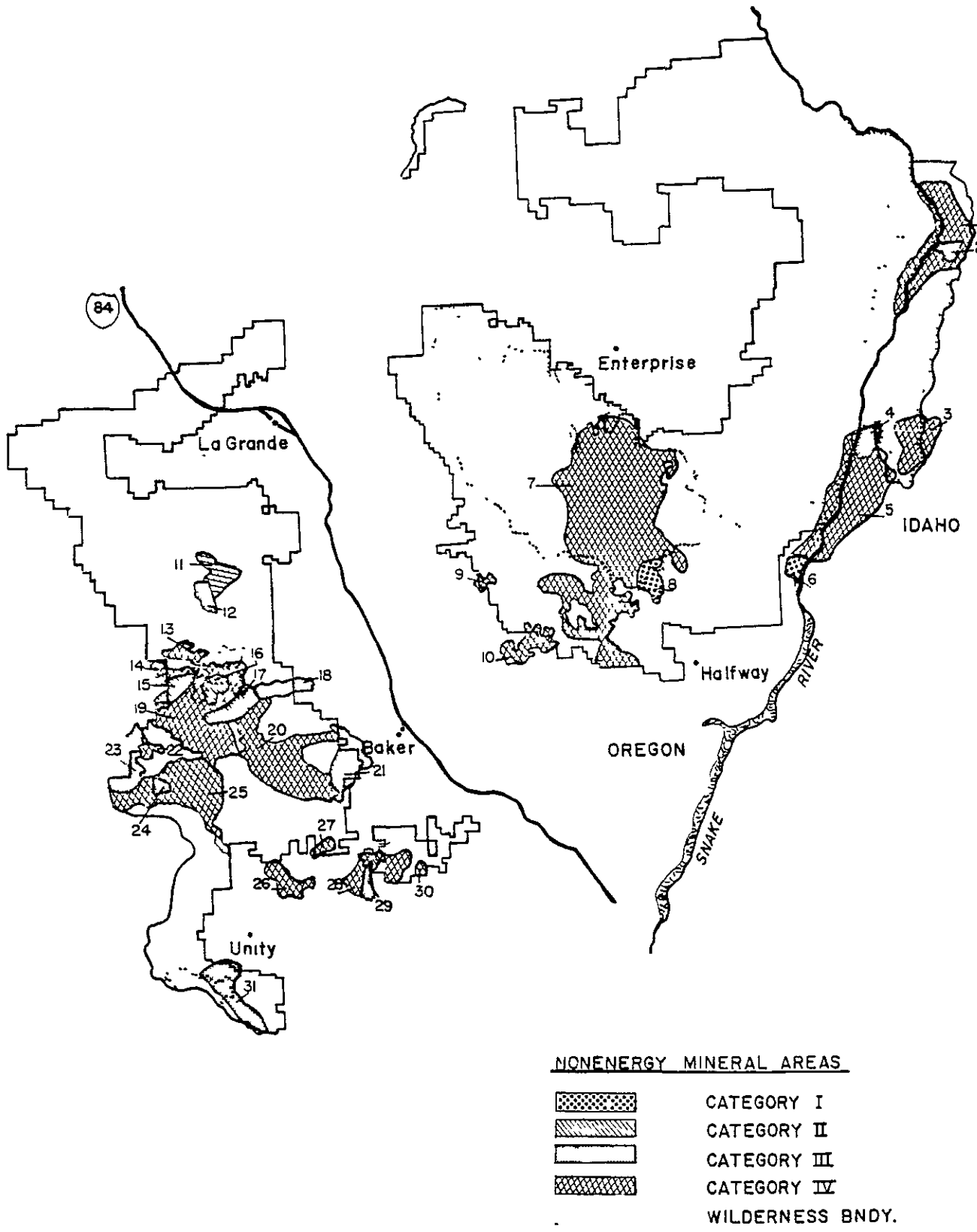
Although a few hot springs are known to occur in and near the Forest, there does not presently appear to be a high potential for geothermal resource development There currently are no geothermal leases or lease applications for lands within the Forest boundaries

A new, possibly extensive, coal field lies near the communities of Flora and Paradise in northern Wallowa County. Lignite seams occur between basalt flows. Most of the coal-bearing layers have been found outside National Forest boundaries. A program of exploratory drilling, sampling, analysis and geologic mapping is necessary before any assessment can be made as to the feasibility of extracting the coal Given a marketable deposit, environmental concerns of aquifer disruption and loss of topsoil productivity would then be addressed.

Sand, gravel, crushed rock, building stone and limestone occur within the Forest boundaries. These are all low-unit-value materials which must be near transportation routes, and usually the point of consumption, to be utilized A continuing need for some quantities of these materials can be anticipated, with increased demand during periods of growth The region has a history of producing large amounts of cement.

*See glossary

FIGURE 2-1
NONENERGY MINERAL AREAS



Old-Growth Forest

During the past ten years there has been a growing interest in old-growth forest, apparently brought about by an awareness that unaltered old-growth stands are diminishing The reason most often given for retaining old-growth forest is to meet wildlife needs but the desire apparently goes beyond this. On the Wallowa-Whitman National Forest there are no wildlife species that have been identified as requiring solely old-growth forest, although some species require conditions that are best represented in old-growth stands People also want old-growth for the recreational enjoyment it provides, for aesthethic and other qualities such as the size and age of its trees. Those opposed to the retention of old-growth conditions cite their concern for the loss of wood production and would prefer that land be converted to rapidly growing timber stands. These conflicting desires are the basis of the old-growth issue. (For further discussion of the issue, see the Regional Guide or Forest Plan EIS)

Because the term "old-growth" means different things to different people, any definition is subject to criticism. Old-growth definitions for forest types found on the Wallowa-Whitman are shown in the description of Management Area 15, Section 4 of this document.

At present there are some 173,000 acres on the Wallowa-Whitman that meet the definition of old-growth These acres are generally well distributed over the Forest Included are some 67,000 acres in classified wilderness.

Under present land management direction from the Burnt Powder, Grande Ronde and Wallowa Valley Unit Plans, there are 131 specifically defined areas varying in size from 100 to 3,000 acres that are to be managed for old-growth forest This land management allocation totals 76,000 acres Approximately 28,000 acres currently meet the definition of old growth. In addition, a minimum of ten percent of lands in the Dispersed Recreation/Timber Management allocation in the Hells Canyon National Recreation Area are to be managed as old-growth and all the forest in the Forage Management allocation, also within the NRA, is to be managed as old growth Within Land Management Strategies 6 and 19 of the Desolation Planning Unit, sufficient old-growth is to be retained to ensure viable populations of wildlife species In certain other land allocations timber cutting is not permitted or is permitted at a very low rate Therefore old-growth conditions persist in those areas which include the Dispersed Recreation/Native Vegetation and Forage allocations in the Hells Canyon NRA, the Dispersed Recreation Emphasis (Strategy 5) areas and the Special Management Units in Upper Five Points Creek and on Castle Ridge.

There are still relatively large acreages of old-growth forest available, but options for resolving the issue of how much should be retained are dwindling.

Soils

No individual public issues relating to soils were developed during the planning process. However, soils management was a facet of a number of issues including transportation system management, timber production, minerals, livestock production, and water.

Management concerns center around maintaining soil productivity Activities which can affect soil productivity include timber harvesting, site preparation for reforestation, fuels treatment, road construction, grazing by domestic livestock and wildlife, some forms of recreational use, and fire Since soil is a nonrenewable resource, its loss is irretrievable.

Forest soils reflect wide variations in climate, topography, parent materials, vegetation, and the length of time soils have been developing Since most of the soils have developed from volcanic ash, fine to medium textured soils dominate the Forest.

Subsoils which developed from volcanic rock, sediments and metasedimentary materials have very fine to fine textures. Acreages of coarse textured soils, derived from granodiorite, are found in the central Wallowa Mountains, along the Elkhorn Ridge, and in the Seven Devils Mountains in Idaho The southern portion of the Forest includes fine textured soils derived from pyroclastic rocks Numerous localized inclusions and variations in geology and soil type occur across the Forest.

Volcanic ash, deposited as a result of volcanic eruptions on Mount Mazama and Glacier Peak more than 6000 years ago, still influences soils of the Forest This ash, which is capable of absorbing and holding large quantities of water, has contributed positively to the productivity of most sites where it is found

Management of the soil resource as a part of overall Forest management is in a state of rapid change Traditionally, soil management efforts have concentrated on reducing soil losses due to erosion Strides have been made in controlling losses following timber harvest activities and in reducing erosion from rangelands; however, areas with accelerated erosion persist Research now indicates that changes in soil structure, particularly those associated with soil compaction, can have long-term effects on productivity even though soil loss from the site may not occur Recent efforts on the Forest have been directed toward reducing and mitigating damage to soil structure through improved timber harvest techniques In some instances this has included ripping previously damaged soils.

In addition to areas compacted by tractor activity, some areas of the Forest suffer from reduced watershed condition. These are primarily areas of accelerated surface or streambank erosion in need of erosion control or streambank stabilization, many resulting from past timber harvest, road construction and grazing activities

Timber management requires the existence of roads, skid trails, landings, and other facilities which either reduce site productivity or remove land from the productive base These same activities expose soils to erosive forces and increase the probability of mass soil movement Through the direction in the Forest Plan and Forest Service Manual, the extent and severity of these impacts will be limited and guidelines are provided for mitigating problems which already exist

The Regional Guide provides a target of 1,000 acres of soil and water resource improvement annually through 1990 tapering to 600 acres annually by 2030 Since watershed improvement is primarily dependent upon funding and manpower, these levels of accomplishment are feasible. These activities may include erosion control through grass seeding or other means, stabilization of stream banks through the use of structures or establishment of vegetation; obliteration and rehabilitation of unneeded roads or wheel tracks, and mitigation of compacted soils.

Several other management concerns have been expressed although the degree and extent of their impact are unknown Soil compaction due to grazing by ungulates has been measured in the upper soil layers in numerous areas across the Forest. It is not known how much effect this compaction has on forage production, how long this compaction would last if ungulate traffic were removed, or what the effects are on hydrology, timber production, or wildlife Concern has also surfaced over the effects of management on soil wettability, soil chemistry, and soil nutrient levels. The answers to these questions must be developed through research

Threatened, Endangered, and Sensitive Species

The Endangered Species Act of 1973 (P L 93-205), as amended, declared that Federal agencies shall seek to conserve endangered and threatened species of plants and animals In order to meet the intent of this direction the Forest Service has established objectives and policies for inventorying the species, determining habitat or environmental needs, and protecting critical habitat and/or conditions necessary to preserve the plants or animals Section 5 of the Endangered Species Act directs the Secretary of Agriculture to establish and implement a program to conserve fish, wildlife,

and plants, including federally listed species (FSM 2670.1) Included is direction to protect certain sensitive species to ensure that they do not become threatened or endangered. The U. S. Fish and Wildlife Service, USDI, has primary responsibility for administering the Endangered Species Act When the Forest Service proposes an activity that may affect a species listed or proposed for listing as threatened or endangered, the Fish and Wildlife Service is consulted

The threatened, endangered, and sensitive species on the Wallowa-Whitman are listed in the EIS

Land Adjustments and Special Uses

Because of the pattern of land ownership within and around the National Forest, there is a constant need for adjustment to improve National Forest administration as well as for the effectiveness of private land management Most land adjustment occurs through land exchange. At present, the Forest Service is responding to proposals from adjacent landowners and many acres have been exchanged in recent years as a result of these contacts. This has resulted in consolidating ownership of many lands, to the benefit of both parties.

Although rights of way on most major travel routes have been acquired, there is a continuing program for the purchase of road and trail rights-of-way in order to insure public access to National Forest land

It is in the public interest to occasionally purchase private lands The need for such purchases in future years will depend largely on the success of local counties in administering their land use regulations within the Hells Canyon National Recreation Area Where it proves futile to gain landowner compliance with regulations, purchase of the lands by the federal government may be the only recourse. Consolidation of ownership through land exchange will be the primary direction for land adjustment

The Forest is working with public agencies and private parties to achieve a more efficient pattern of land ownership. The Land Adjustment Plan (Appendix D) serves as a basis for land adjustment.

In addition to providing natural resources and recreation, the National Forest also provides lands for a wide variety of special uses for private and public agencies Such uses are authorized by special use provisions, mining laws and withdrawal authority of other agencies By far the most common are those permitted by special use provisions and covered by special use permit. Table 2-9 displays the *special uses permitted on the Forest*

These permits are periodically inspected to insure compliance with conditions of use and to evaluate the appropriateness of continuing such use Permittees pay for the right to use National Forest lands for these purposes. Of these receipts, 25 percent is ultimately returned to the local governments.

Table 2-9
SUMMARY OF SPECIAL USES - 1985

Uses	Total Cases	Total Miles of Right-of-way	Total Acres Permitted Area
Boat dock & wharf	1	.0	.1
Organization camp	1	.0	2.0
Cabin (recreation)	7	.0	14.1
Recreation residence	43	0	20 2
Resort	3	.0	65 2
Camp & picnic	2	.0	179.0
Target range	2	.0	39.9
Tramway	1	.0	7.0
Outfitting & guiding	63	.0	.0
Winter sports resort	1	0	22.5
Ski slope, trail	1	20.1	243.3
Cultivation, hay production	3	0	25.7
Pasture	27	0	4,098 2
Non-recreation residence	2	0	24 0
Range facility	4	.0	40.1
Cemetery	1	.0	1 6
Solid waste disposal area	1	0	4
Community residence	3	0	3 6
Service building	1	0	.1
Camp (industrial)	1	.0	.2
Fish hatchery	1	.0	.4
Warehouse, storage yard	16	.0	18.2
Weighing station	1	.0	.2
Experimental, demonstration	1	0	.1
Education center	1	0	15 0
Airport, beacon	2	1 0	1 4
Class D road permit	13	13 6	14.9
Class E road permit	5	4 4	16 1
Powerline	20	80 3	547 9
Powerplant	1	0	1 4
Buried powerline	1	1 9	3 2
Antenna system (receiving)	2	1.6	.8
Electronic site	33	.0	10 8
Telephone, telegraph	7	39.4	145 0
Telephone buried cable	4	145 2	57 8
Water transmission	55	233.3	263 5
Dam, reservoir	16	.0	463 6
Water diversion, weir	6	.2	3 5
Well spring, windmill	15	1 0	4 9
Stock water	1	.0	7
System, supply	4	3	.9

Research

The Starkey Experimental Forest and Range occupies 27,051 acres of the Forest, 20 miles west of the city of La Grande. This area is devoted primarily to range and wildlife research purposes and is administered by the Project Leader of the Forest Service Range and Wildlife Laboratory in La Grande. Scientists working at this laboratory are the primary users of the area for research purposes Research has first priority on the experimental forest. When other uses, such as the occasional sale of timber, do not conflict with research, they are carried out in coordination with the Forest Supervisor and the La Grande District Ranger.

There is a recognized need to establish tracts of undisturbed land for scientific and educational purposes on National Forest as well as other lands Such areas, when maintained in an undisturbed state, serve as a baseline for comparison with areas influenced by management At present, there are four Federal Research Natural Areas (RNA's) established within the Blue Mountain Province which includes the Ochoco, Umatilla, Malheur and Wallowa-Whitman National Forests There is one on the Wallowa-Whitman, the 990-acre Indian Creek area, about five miles east of the town of Cove in Union County. There is a need for at least 18 more for minimal representation of the identified ecological cells within the province. The potential appears to be primarily on National Forest land The most suitable sites for 12 of the areas appear to be on the Wallowa-Whitman

Human Resource Program

The history of this effort on the Forest is a long one, dating back to the days of the Civilian Conservation Corps during the Great Depression. That effort ended with World War II and there was no further involvement on the part of the Forest until the 1960's when various programs were instituted.

Today the Forest numbers in its Human Resource Program (HRP) the Senior Community Services Employment Program (SCSEP), the Youth Conservation Corp (YCC), volunteer and hosted programs. In various ways these programs attempt to focus the resources of the individual on Forest activities to the benefit of both the Forest and the individual Recent Forest involvement is summarized in Table 2-10.

Table 2-10
HUMAN RESOURCE PROGRAM ENROLLEE POSITIONS

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
SCSEP	7	12	15	16	15	18	18	18	19	20	20	17
YCC	48	84	32	25	10	24	20	15	21	25	21	18
YACC	-	60	44	39	23*	-	-	-	-	-	-	-
VOLUNTEERS									87	96	167	102
HOSTED								43	37	34	27	14

* Last year of program

From 1977 through 1981 the Forest operated from one to three YCC camps per year Some were residential and others were nonresidential. Camps were located at various locations throughout the Forest and in local towns.

Human resource programs fluctuate with the political-economic climate. During periods of high unemployment or the presence of an administration supportive of the programs' philosophy, funding for human resource programs often increases Since the Forest can provide work in both urban and rural areas, agencies responsible for administering these programs look to the Forest to host them The only influence the Forest has in securing these programs is that which results from its past performance on similar activities Ultimately its participation is determined by other government agencies.

Because funding levels change so dramatically, long-term human resource program planning is difficult Appropriated funds are often used to support human resource programs for such costs as travel, living expenses, tools and equipment Any time a program is not continuous, management must take time to learn or re-learn the administrative processes and gain proficiency in their exercise. Short lead times resulting from the political nature of these programs make the situation more difficult both for starting up the programs and phasing them out Recruiting and retaining highly qualified work supervisors for uncertain programs is difficult Effective management is critical because enrollees come from varied cultural backgrounds and require sensitivity on the part of their managers

There exists on the Forest a cadre of personnel familiar with these types of programs by virtue of their experience. The Forest thus does have the basic ability to accommodate the needs of these programs as they arise.

Energy Management and Utility Corridors

The Forest's main contribution to date has come in the use of land for hydropower generation facilities. Use of dead timber for home heating is important in the Forest vicinity, displacing sizable amounts of more commonly used fuels.

Local wood products firms use wood residue as a source of heat to generate electricity for plant operations. Efforts are underway to use the large amount of cull wood material resulting from the mountain pine beetle infestation to generate electrical power. Twelve hydropower withdrawals exist on the Forest, totally about 60,000 acres

Techniques currently being developed include low head and run-of-stream hydroelectric projects The Forest has numerous reservoirs and ditches that could generate power with minor modifications One of the main advantages of this type of project is that the water can be utilized for power generation without significantly affecting other uses such as irrigation and recreation A discussion of the Forest's potential for geothermal, gas, oil and coal resources is contained in the Minerals section hereof.

The Forest plays an important role in energy transmission by providing rights-of-way for power transmission lines. A group of major facilities crosses the Forest between Pendleton and La Grande Included are an interstate highway, a railway, a major electric transmission line, a petroleum products pipeline and two large natural gas pipelines. An additional electric transmission line is proposed Additional power facilities cross at various points, making over 80 miles of power transmission rights-of-way on the Forest.

Air Quality

Forest management activities, particularly timber slash burning, can contribute significantly to short-term air quality problems. Adverse effects, however, can often be adjusted by avoiding periods of poor smoke dispersal

The Forest lies in the Eastern Oregon Intrastate Air Quality Region, the Idaho Intrastate Air Quality Region (No. 62) and the Eastern Washington-Northern Idaho Interstate Air Quality Region No 63). In accordance with the Clean Air Act (P.L. 88-206) as amended, these regions are classified according to the amount of air degradation that could be permitted. The Eastern Oregon Air Quality Region has been classified Priority 2 (moderate degradation permitted) for suspended particulates and Priority 3 (fairly heavy degradation permitted) for other pollutants The two Idaho regions are classed as Priority 1 (virtually no degradation permitted) for particulates. However, Region 62 is classed Priority 1 for pollutants whereas Region 63 is classed as Priority 3. A further complication is the fact that the Eagle Cap and Hells Canyon Wilderness areas have each been classified as Priority 1 for both measures, regardless of the air quality region in which they lie.

Despite the complex jurisdictions within which the Forest lies, it is unlikely that air quality will become an issue in the near future as long as laws controlling industrial activities outside the Forest are enforced.

For more discussion on this subject as it relates to the Wallowa-Whitman National Forest, see Air Quality, Hells Canyon National Recreation Area USDA, Forest Service, 1980, the Regional Guide, and the accompanying Forest Plan EIS

Fire and Fuels Management

The changes caused by humans have had a significant influence on the role of fire Fire exclusion policies since the turn of the century have resulted in changes in vegetation which have, in turn, caused an increase in fire-susceptible species in areas of high fire occurrence The general timber stand conditions are changing from seral to climax (True firs are increasing while ponderosa pine and western larch are decreasing) As the stands move toward climax conditions more ground and ladder fuels exist, increasing the probability of high intensity fires. True fir and mixed conifer stands will generally be killed or damaged even by low intensity fires Timber management activities may add dry fuel accumulations to these stands, increasing the risk that they cannot be managed to maturity Treatment of these accumulations reduces the hazard.

More than 70 percent of the wildfires that occurred from 1970 to 1983 were started by lightning. Management activities will not have a major impact on reducing these ignitions, although we can affect the fuel conditions in which they burn. Lightning fires typically occur from mid-June through mid-August, normally burning at low intensities except for exceptionally dry years when extreme burning conditions occur.

A major management concern is whether treatment of precommercial thinning slash is advisable in previously unmanaged stands, given the tree size, high fuel treatment costs and a species composition shift to less fire-tolerant species Besides the option of treating the slash, management must also consider the possibilities of eliminating precommercial thinning altogether, or living with the increased hazard for five to ten years Precommercial thinning at smaller tree sizes may help mitigate this hazard.

Fire management area plans have been approved for the Eagle Cap and Hells Canyon Wildernesses which allow ignitions from lightning to burn as prescribed fires. An approved plan for the Elkhorn Fire Management Area permits lightning fires to burn as prescribed fire within the Baldy Creek portion of the North Fork John Day Wilderness. In other parts of the Elkhorn Fire Management Area (essentially

the remainder of the Elkhorn Mountains) planned ignitions as well as lightning-caused fires may be allowed to burn as prescribed fires in order to achieve resource objectives

The addition of 142,500 acres of Idaho lands to the HCNRA under Wallowa-Whitman administration has resulted in a proportional increase in reportable fires that had been charged to the Nez Perce and Payette National Forests in years past

The La Grande Fire Center serves as a shared resource base for the Wallowa-Whitman, Malheur and Umatilla Forests as well as providing assistance to the Nez Perce and Payette Forests in Idaho. A retardant tanker, two interagency crews and a Regional fire cache are all based at La Grande; these forces are an integral part of the Wallowa-Whitman suppression forces.

Fuel reduction programs have increased, along with timber harvest and precommercial thinning over the past ten years. Prescribed burning offers excellent opportunities for fuel reduction on the Wallowa-Whitman, but it remains an unrealized potential Prescribed burning increased from 800 acres in 1978 to 3,500 acres recently and has the potential for substantially larger acreages in the future It is being used increasingly for the furtherance of natural regeneration following timber harvests, as well as for range and wildlife habitat improvement.

Transportation

Transportation facilities for the Forest include 9,300 miles of road (7,000 miles of which are open for use) 1,750 miles of trail and five landing strips In addition, the Snake River provides 68 miles of river that are a part of the transportation network The transportation system is established and is likely, with certain construction and reconstruction projects, to be satisfactory for serving most future management scenarios. Exceptions are the relatively few undeveloped areas (not including wilderness) that will require additional roads if they are to be managed for timber production

The present trail system primarily serves the four wilderness areas, unroaded areas in the Hells Canyon National Recreation Area and the Elkhorn Range. Whereas the trails once served many administrative purposes, there is now management concern that the trail system needs to be brought more in line with recreation needs The Elkhorn Crest Trail (Trail No 1611); the Snake River Trail (Trail No. 102), the High Wallowa Trail (Trail No. 1813), and the Nee Mee Poo Trail (Trail No 1727) are National Recreation Trails The Nee Mee Poo Trail (Trail No 1727) is also a National Historic Trail.

Problems associated with the trail system frequently arise because the trail was poorly located -- resulting in problems with slides, washouts, and mud bogs. Such trails cannot be maintained effectively and are placed on the capital investment program on a Forest priority basis for construction or reconstruction. Setbacks also occur due to funding limitations which can ultimately turn maintenance work into reconstruction. Many trails on the Forest have no legal access to trailheads because the roads leading to the trailheads are on private land with no right-of-way.*

Of all the various transportation facilities, roads usually have the most significant positive and negative impacts. Additional road construction in unroaded areas, and the number of miles of roads that are open to unrestricted public use, have been identified as issues to be dealt with in the Forest Plan A brief history of the road system on the Wallowa-Whitman is helpful in understanding the current situation

*See the Forest Trail Management Plan for more complete information.

Much of the National Forest was logged by railroad in the early part of the 20th century, but since the 1930's roads have become the primary method of accessing timberlands. Although some roads were built in connection with mining activities, timber harvesting was the reason behind construction of the large majority of the existing roads on the Forest Most roads were built to remove timber, provide for other uses such as recreation and fire access, and to establish a basic system that could be used for future management activities

By the end of the 1960's, most of the basic road system had been constructed into the Forest's timbered areas. The emphasis then began shifting from accessing new areas to reconstructing older roads to meet more stringent environmental concerns, to serve an increasing public recreation traffic; and to better meet the needs of different, and sometimes larger, logging equipment By the mid-1970's, construction of new roads on the Forest was averaging 100 miles per year, but reconstruction was averaging about 200 miles per year. Most reconstruction was to improve roads which had been built 20-40 years before, and consisted of upgrading to higher standards for reasons of safety, reduced maintenance, reduced timber haul costs, and to a large extent to extend the logging season. Logging on the Wallowa-Whitman is limited to a short, dry summer period, plus a few areas where winter logging is feasible, but improved roads (particularly placing rock surfacing on the roads) can extend that season significantly This extension of the logging season was considered to be beneficial to the local economy by allowing a longer period of employment

As the 1970's drew to a close, the public and the Forest Service became increasingly concerned about the high cost of road construction and reconstruction activities Standards were reanalyzed and new guidelines developed which were much more flexible than had been the case The Forest Service land managers began to look much more closely at the benefits and the costs associated with roads, and written objectives were used to document the minimum criteria for which roads were to be designed As a result of this increased cost-consciousness, both construction and reconstruction were reduced and brought in line with actual needs. The effects of these changes are shown in Table 2-11, where the cost of construction and reconstruction shows a significant drop in 1982 and 1983.

Haul and maintenance appraisal allowances have approximately doubled over the last ten-year period There are many reasons for this. Haul costs have gone up because of increases in fuel costs and other vehicle-related costs. Maintenance costs have risen because of increased costs for oil used in dust abatement There is also some slight increase in haul and maintenance costs due to decreases in reconstruction expenditures. As the condition of the road system deteriorates, more and more funds will need to be spent for road maintenance

In addition to the costs associated with timber road construction, haul, and maintenance, the Forest Service incurs costs associated with maintaining the transportation system for public use and for administrative purposes These maintenance costs average approximately $900,000 per year for roads and $150,000 per year for trails.

Reductions in the cost of road construction were not made without impact Many of the decisions on limited road access were based on strict control of use, including public access, to allow roads to be built for single purposes only and to be closed to all uses during long periods between projects.

Table 2-11
TIMBER TRANSPORTATION COSTS REFLECTED IN LOWER STUMPAGE VALUES
(Figures Shown in 1982 Dollars)

	Haul and Road Maintenance 1/	Purchaser Credits for Road Construction and Reconstruction 2/
1983	$7,162,900	$2,720,800
1982	7,130,400	2,726,600
1981	9,447,700	5,913,300
1980	6,455,100	3,851,900
1979	8,572,600	6,465,600
1978	6,736,100	4,691,700
1977	7,515,900	2,546,300
1976	4,798,300	3,694,200
1975	5,927,200	6,186,500
1974	3,351,700	3,316,300
1973	5,592,500	4,627,200
1972	3,931,300	4,712,400
1979-1983 Average	7,753,700	4,335,600

1/ The costs of hauling timber and of maintaining Forest system roads over which the timber is hauled
2/ The cost of road work necessary to harvest the timber for which the timber purchaser pays (as a payment in kind) in partial payment for the timber.

Although placing restrictions on access is considered in a negative light by many users, there are others who favor such actions Those recreationists who favor more solitude, less crowding, and more primitive conditions in the National Forests favor reduced access and lower standard roads Wildlife managers are also faced with contradictory feelings regarding access. While roads allow better dispersal of hunters and easier harvesting of game, they can also reduce the quality of the habitat as the impact of users increases

To deal with this problem, the Forest Service and the State of Oregon (Department of Fish and Wildlife) have been involved in cooperative efforts aimed at balancing the number of open and closed roads based on habitat and hunter needs Many areas of the Forest have roads that are closed either seasonally or year-round in an effort to deal with this situation

In an effort to provide some consistency across the Forest in dealing with road closures, the Wallowa-Whitman developed a general guideline in the late 1970's which was aimed at managing for an open road density of no more than 2 5 miles per square mile in roaded areas of the Forest This guideline was intended to provide some balance between the needs of those wanting roads closed and those wanting more open roads (such as fuelwood cutters, berry pickers, hunters, and others).

Roads which are located too close to streams can also be contributors of stream sedimentation. Indications are that much of the sediment from forest lands that reaches stream channels originates on roads. Many miles of roads on the Wallowa-Whitman are located adjacent to streams, as these "water grades" were a natural location as access was spreading into the Forest. Many of these streamside roads have been closed during timber sales and other project work over the years, but many more still exist Most of the roads served only short, local purposes (spur roads), and as such can be closed without much impact However, several major roads also parallel streams, and the cost of closing these or constructing new roads in their place can be prohibitive. Therefore these major roads are usually left in place and their effects mitigated by using improved drainage and reducing surface erosion by paving or other methods.

The Forest recently completed an inventory of all roads that exist (including "wheel tracks") so that management decisions can be made on which roads should be retained as part of the permanent system and which can be closed off and returned to resource production. Table 2-12 shows the present condition class of the roads on the Forest

While Forest recreation users once favored more roads because of the access they provided to the Forest, some now see roads as degrading their recreation experience. Wood gathering, wildlife habitat, aesthetics and hunting are just some of the many Forest considerations affected by roads -- positively or negatively, depending on personal values

The Wallowa-Whitman National Forest Development Transportation Plan provides the basis for administering the road system. This plan consists of many individual documents ranging from basic data such as inventories and maps to more detailed information which document management decisions.

Table 2-12
CURRENT TRANSPORTATION SYSTEM
(Miles of Roads)

	Arterial	Collector	Local	Total
Primitive (wheel track)	9	90	2,651	2,750
Graded, Drained, Unsurfaced	180	830	4,110	5,120
Graded, Drained, Surfaced	178	593	525	1,296
Paved	118	11	9	138
Total on Forest	485	1,524	7,295	9,304
National Forest Roads Outside Forest Boundary	47	99	136	282

Included in the Forest Development Transportation Plan are road management objectives for each road on the Forest. These objectives are identified through project-level environmental analyses or other interdisciplinary, objective-setting processes. The objectives include road standards and maintenance needs and they determine whether a road will be closed or left open for the rest of the Forest Transportation Development Plan. Annual maintenance plans, road closure plans and long-range capital investment plans all stem from these road management objectives.

Cultural Resources

The cultural resource program was developed as a result of public interest in protection of nonrenewable National heritage resources. In the Pacific Northwest Region the program is a formal effort to organize the stewardship of the extensive, nonurban cultural heritage resource base (Wildesen 1980:1). The management of cultural resources benefits the public by protecting and providing knowledge of past lifeways. Public participation in the form of visitor days has not been measured but some part of recreation visitation relates to heritage sites.

The cultural resource base of the Forest includes a diverse range of historic and prehistoric artifacts and sites. These include 1) historic cabins, trails, mines and related flumes, adits, ditches and other structures, railroad grades, immigrant roads, mills and homesteads, 2) historic Forest Service structures including guard stations, lookout towers, corrals, camps, administrative centers, and CCC campgrounds and buildings; 3) prehistoric (Native American) campsites, villages, graves, quarries, workshops, trails, caves, shelters and religious sites. All of these have historic and cultural value to the general public as well as research value for the scientific community

One important cultural feature on the Forest is the Blue Mountain segment of the Oregon Trail This trail, which spans the 2000 miles from Independence, Missouri to Oregon City, Oregon, contributed significantly to the settlement of the Pacific Northwest during the period 1841-1848 It was designated as a National Historic Trail in 1970

The Blue Mountain Segment of the trail is 16 miles in length, of which six miles are on National Forest lands with the remainder being on private lands This segment contains some of the best remaining examples of intact trail. The Forest is the lead agency for managing this segment and has developed a management plan to assure that its historic value is preserved

Key concepts of cultural resource management are the inventory and evaluation of all resources The major goals are the protection and enhancement of all eligible resources for the advancement of public knowledge and enjoyment Cultural resource management is guided by statutes and their implementing regulations as well as Forest Service policy expressed in the Forest Service manuals The Wallowa-Whitman employs two full-time archaeologists, one of whom directs the Forest program and one who works primarily in the Hells Canyon National Recreation Area Cultural resource technicians are assigned to each Ranger District and spend a part of their time in this capacity.

An overview of historical and archaeological resources for the Forest (excluding Hells Canyon NRA) was completed in 1978. The Hells Canyon NRA historical overview was also completed in 1978 while the archaeological overview is underway

Since the completion of the overviews, some 800,000 acres on the Forest have been sampled for cultural resources (through 1984) Over 4,400 cultural resource sites were found and recorded during this process.

Law Enforcement

Compliance with nonfederal statutes on the Forest is the responsibility of State and local government officials Violations cover a wide range including speeding and exceeding gross vehicle weight limitations, game violations, cannabis cultivation, and assault. Nonfederal law enforcement officials are precluded from enforcing federal law, however Federal and nonfederal officials therefore exchange information and assistance

There is one full-time federal law enforcement official (Special Agent) on the Forest. Three other Forest Service employees are Law Enforcement Officers, having received training at the Federal Law Enforcement Training Academy Twenty-eight others have successfully completed training that qualifies them to issue notices of violation

Timber theft and recreation-related violations comprise the great bulk of federal law enforcement activity on the Forest To date, the timber theft problem is basically in fuelwood, posts and poles Good timber sale contract administration will be continued to insure that timber harvests are conducted properly and that true value is returned to the government. Care must also be taken to insure that laws governing log export are followed.

Illegal outfitter guides are a major concern on the Forest They pay no permit fees, carry no insurance and thus are able to undercut the fees charged by legitimate operators The insurance required of legitimate operators affords protection not only to the recreationists and the operator but also to the United States Government. Prosecution of these cases is difficult because participants are usually uncooperative, having established a friendship with the outfitter during the outing The normal process involves booking and completing a trip with the outfitter by law enforcement personnel, which involves expenditure of Forest Service funds After a successful prosecution, fines are returned to the U S Treasury General Fund

Other federal concerns include unauthorized use of range, mining claim violations and archaeological trespass.

SUMMARY OF RESOURCE SUPPLY AND DEMAND PROJECTIONS

This section summarizes anticipated supply and demand conditions for Forest goods and services for the RPA time period The great bulk of the Forest outputs and activities identified in the RPA program are intermediate in nature--they do not represent final outputs. To speak of supply-demand relationships for precommercial thinning or miles of road constructed, for instance, would be inappropriate. The appropriate consideration in the former case is sawtimber production, in the latter instance, roaded versus nonroaded recreation Precommercial thinning, road construction, local area impacts, and so on are effects and are, therefore, not discussed here.

As used in this section of the document, "demand" identifies a particular point or instant on a demand schedule. As such, it reflects an intersection at a particular point in time between a demand schedule (a list of willingness-to-pay values for various levels of offerings) and a supply schedule (a list of volumes the seller is willing-to-offer at various prices)

Table 2-13 depicts those intersection points over time for those Forest outputs for which such a display is meaningful As such, they assume a continuation into the future of those factors which would provide viability for the respective enterprises In the case of livestock grazing, for instance, the figures assume continued population growth in the United States, a certain level of red meat consumption per capita, certain levels of imports and exports, certain cost levels for the goods and

Table 2-13
SUMMARY OF PROJECTED SUPPLY AND ANTICIPATED DEMAND

		Decade 1	Decade 2	Decade 3	Decade 4	Decade 5
Recreation						
Developed Recreation						
Including Visitor Information Service (MRVD's & MWFUD's)						
Projected Supply						
No Action		587	595	603	610	618
Maximum Developed Recreation 1/		661	661	661	661	661
Preferred		661	661	661	661	661
Anticipated Demand 2/		399	464	523	572	621
Dispersed Recreation Including Wildlife and Fish Use (MRVD's & MWFUD's)						
Projected Supply						
No Action		7,067	7,379	7,621	7,614	7,606
Maximum Dispersed Recreation 3/		6,957	7,213	7,380	7,380	7,380
Preferred		6 995	7,183	7,304	7,304	7,304
Anticipated Demand 2/		1,427	1,577	1,819	2,037	2,189
Projected Supply of Roaded Recreation 4/						
No Action		6,492	6,983	7,351	7,351	7,351
Maximum Roaded Recreation 5/		6,553	7,228	7,657	7,657	7 657
Preferred		6,492	6,860	7,105	7,105	7,105
Anticipated Demand 2/		1,141	1,275	1,463	1,630	1,755
Projected Supply of Nonroaded Recreation 4/						
No Action		575	396	270	263	255
Maximum Nonroaded Recreation 3/		1,188	1,075	997	997	997
Preferred		503	323	199	199	199
Anticipated Demand 2/		286	302	356	407	434
Timber						
Sawtimber MMCF (MMBF in parentheses)						
Projected Supply						
No Action	(134)	27 1	27 3	27 6	27 0	27 2
Maximum Timber Benchmark	(184)	39 1 8/	39 1 8/	39 1 8/	39 1 8/	39 1 8/
Preferred	(144)	27 7	27 3	28 1	27.5	27 3
Anticipated Demand 6/	(250)	50 0	50 0	50 0	50.0	50 0
Roundwood (MMCF)						
Projected Supply						
No Action		7 8	6 5	5 2	5 2	5 2
Maximum Timber Benchmark		10 9	9 1	7 2	7 2	7 2
Preferred		7 9	6 6	5 2	5 2	5 2
Anticipated Demand 7/		12	12	12	12	12

SEE END OF TABLE FOR FOOTNOTES

Table 2-13 (Continued)
SUMMARY OF PROJECTED SUPPLY AND ANTICIPATED DEMAND

	Decade 1	Decade 2	Decade 3	Decade 4	Decade 5
Livestock Grazing (MAUM's)					
Projected Supply					
No Action	186	186	186	186	186
Maximum Livestock Benchmark	227	227	227	227	227
Preferred	186	160	160	160	160
Anticipated Demand	227	227	227	227	227

1/ All alternatives except A, which is a budget-constrained alternative
2/ Based on recent historical experience, OBERS population projections for the State of Oregon, and Forest recreational opportunities
3/ Alternative E
4/ Inclusive of WFUD's and recreational experience occurring in wilderness Roaded recreation is the sum of rural, roaded natural, and roaded modified recreation Nonroaded recreation is all other ROS categories
5/ Alternative B
6/ Based on mill capacity depicted on pp 25 and 53 of James O Howard's Oregon's Forest Products Industry 1982, Resource Bulletin PNW-118, October 1984, USDA Forest Service Projections of demand entail projections of a myriad of interconnected factors--some of which can reasonably be estimated (population, for instance) and some of which cannot (technological breakthrough, shifts in appraisal methods, etc) It is reasonable to assume that installed mill capacity could be maintained for 2 decades, and that mill capacity beyond that time would be sufficient to process Forest offerings Cubic foot figures were generated using a 5 1 ratio
7/ Anticipated demand levels are basically an expression of mill capacity continued into the future. Arguments might be made that population pressures would tend to increase overall National demand, assuming a relatively stable price structures No increase was shown however because of the opportunities available to substitute other products for wood and because, as an expression of local demand, expanded mill capacity would be contrary logic when raw material supply levels are not expected to increase
8/ Assumes a 5 1 board foot cubic foot ratio

MRVD's = Thousands of recreation visitor days
MWFUD's = Thousands of wildlife and fish user days
MMCF = Million cubic feet
MMBF = Million board feet
MAUM's = Thousands of animal unit months

services used in the production of red meat, and so on The projections, like any projections, are therefore expected to be less accurate in the distant future than in the near future

Many associations are not shown in the table They include such considerations as old-growth tree stands, roadless area acreage, and deer and elk numbers. The supply and demand intersection points for these factors are determined in alternative ways. Minimum levels of old growth have been determined by first determining the minimum amount of that habitat necessary for species associated with it

Proceeding from that basis, alternatives have been developed which affect different levels of old growth to reflect concerns that old growth be preserved for its own sake or to allow for unexpected losses to the old-growth base Selecting a particular old-growth level is in itself a determination that that level is an approximation of a supply-demand intersect

In similar fashion, the selection of a particular level of roadless area or managing big game habitat for a particular level of numbers reflects the decisionmaker's view that that particular approximates the supply-demand intercept: what the American people are willing to "spend" in order to achieve a certain output level

INFORMATION NEEDS

This section lists the information, inventory and research needs that have been identified for the Wallowa-Whitman National Forest This recognizes gaps in data or scientific knowledge that would be desirable to fill prior to preparation of the next Wallowa-Whitman National Forest Land and Resource Management Plan The concept used to organize and develop these needs recognizes that biological, physical and social ecosystems are the foundation for the planning process

This ecosystem perspective has been used to develop a comprehensive framework for identifying and organizing information, inventory, and research needs. This framework is intended to encourage integrated research approaches that address interdisciplinary needs rather than the traditional functional approach. The ecosystem approach has been taken to meet planning needs, this approach should also help the public understand information needs in the final plans.

Of the many ecosystems found in wildlands, several were identified as having particular current importance in forest planning Old growth, riparian/aquatic and upper-slope ecosystems are examples where more information would be desirable to test planning assumptions as future plans are developed. Human visitors in the forest are an integral part of these ecosystems People's needs and expectations of the Forest should be considered in Forest Planning

Information needed to address these concerns falls into six general categories

Interactions/Processes

This category includes information leading to a better understanding of interactions within and between ecosystems, effects of one resource on others, and the physical, biological, social, and political processes that influence these interactions and resources

Examples.

> Clarify the relationships between recreation settings, use, and opportunities and other resource uses

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

- Assess the relationships among hydrologic recovery, peak discharge, channel response as a result of rain-on-snow flood events, and late-summer low flows

- Evaluate the effects of insects and pathogens on forest composition and the influence of forest composition on the population dynamics of insects and pathogens

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

- Identify the ecological conditions required for growth of unwanted trees and brush to provide basic information for the effective control of these species

- Determine the response of management indicator species to patterns of habitat created by management and natural succession

- Determine the effects of vertebrate species on other ecosystem components (e g , effects of bears on plantations; effects of insectivorous birds on forest insect populations)

- Evaluate the roles of disturbance processes in the maintenance and succession of natural systems.

- Determine the mechanisms of plant and animal dependence on fire

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

- Increase knowledge of site/moisture relationships in harvested areas (microwatersheds)

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

- Develop a riparian habitat classification and determine productivity, succession, and recovery rates for riparian areas

- Develop site specific animal unit equivalencies for deer, elk and livestock

- Determine responses of deer and elk to intensive forest management practices

- Determine elk and deer responses to varying traffic levels on Forest roads

- Determine the short and the long-term effects of intensive timber management activities on

    1. Each class of raptors
    2. Pine martens
    3. Forest owls

Long-Term Productivity

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

Examples:

- Determine the amount of in-stream woody debris necessary to maintain the productivity of fish habitat.
- Evaluate the effects of soil compaction on long-term productivity
- Assess the effects of certain harvest practices and residue treatments on long-term productivity
- Determine the effects of removing various levels of biomass on soil productivity
- Identify the current productivity levels of resources such as timber, wildlife forage, and fish habitat to establish baseline levels of productivity
- Establish baseline information on nutrient levels and distribution in soils and vegetation for major soil groups and forest associations
- Understand the role of fire in the nitrogen and carbon cycles that maintain long-term productivity
- Determine the effects of management practices on the incidence and severity of pathogens and insects as they affect long-term productivity
- Determine the effects of forest fragmentation on ecosystem integrity and function, including viability of vertebrate species.
- Fertilization Study Only one study exists regarding fertilization on the Wallowa-Whitman and it is only applicable to ponderosa pine sites. We need a study on growth response to fertilization in the mixed conifer and grand fir sites which make up a major portion of our community types.
- Prognosis Variant for the Blue Mountains We have access to an eastern Oregon/Washington variant developed by the University of Idaho but it does not include height growth predictive equations from local data or local plant associations. We need a Blue Mountain variant based on local diameter and height growth data and local plant associations
- Identify better techniques for the identification of lands suitable for timber production

Cumulative Effects

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

Examples:

- Understand the cumulative effects of various management practices on resource outputs.
- Determine the cumulative effects of timber management activities (timber harvest, road construction, and site preparation) on water quality and stream stability.
- Identify the effects of changing habitat patterns on selected management indicator species
- Evaluate the cumulative effects on soil productivity of ground-based timber harvest equipment under unevenaged and evenaged management.
- Develop indicators or criteria to predict when recreation user patterns may change as a result of intensive forestry practices
- Evaluate the effects of fire exclusion on the structure and function of ecosystems.
- Determine the effects of human disturbance and livestock competition on wildlife species.
- Determine ways of incorporating integrated pest management research into future planning efforts, e g , effects of tree thinning on spruce budworm populations, effects of management on insect predators such as birds and ants.

Management Strategies and Techniques

Studies are identified that are needed to improve understanding of resource responses to prescribed management actions, to develop or improve inventories and monitoring techniques, and to enhance resource protection Information is also needed to evaluate effects of certain management strategies for a variety of resources

Examples:

- Develop strategies that minimize soil disturbance and compaction during harvesting
- Evaluate the effects of planting genetically-selected stock on stand growth and yield, pathogen and insect population dynamics, forage nutritional quality for wildlife, etc.
- Develop effective methods of unevenaged management to produce optimized resource benefits.
- Determine the results of alternative timber management strategies on transitory range production, water runoff amounts and quality, recreational use patterns, public perception of landscape quality, insect and pathogen population dynamics, soil mass-movement potential, etc
- Assess the relationship of human presence in recreation areas and wilderness on habitat use by wildlife
- Assess the results of stream rehabilitation projects on fish population dynamics, public perception of landscape and recreation quality, stream hydrology, etc
- Develop short- and long-term pest population monitoring techniques for integrated pest management decision systems.

- Develop silvicultural techniques for managing pathogen and insect populations
- Predict the changes in air quality that will result from alternative management strategies.
- Evaluate decision processes that can compare market and nonmarket benefits
- Improve the efficacy of fire use for vegetation management and as an alternative to herbicide use
- Evaluate the costs and benefits (both monetary and nonmonetary) of alternative logging residue treatments
- Develop market area strategy for small diameter material. Explore alternatives for utilization including biomass for energy production, small product, wood chipping, etc. Define market area, and identify barriers to effective use of forest resources (ex· transportation, manufacturing facilities, labor pool, capital availability, etc) and identify possible solutions
- Integrate insect and disease models into forest planning models
- Develop effective techniques for reforesting areas with harsh climates, steep terrains, and/or competing vegetation.
- Evaluate alternatives for managing old-growth forests and for maintaining habitat characteristics (e.g., snags and logs) in young, managed forests.
- Develop and refine monitoring techniques, including· techniques used to assess habitat conditions and trends, methods of assessing population density and reproductive success, procedures for using habitat information to make inferences about populations, cost-effective sampling designs that provide information about both habitats and populations with appropriate reliability
- Determine the short- and long-range term effects on various winter range plant communities in the Imnaha, the Grande Ronde, and the Snake River Canyon areas from use of prescribed fire with followup aerial seeding.
- Develop efficient methods for achieving regeneration within five years Includes consideration of all nonlodgepole pine stands Some particular problems include those encountered on south and west slope ponderosa pine sites and sites with heavy pinegrass cover of steep slopes where mechanical site prep is impractical

CHAPTER 3

Response to Issues,Concerns and Opportunities

CHAPTER 3

RESPONSE TO ISSUES, CONCERNS, AND OPPORTUNITIES

OVERVIEW

A major step in the development of this plan was the identification of issues and concerns related to management of the Forest Through a scoping process* ten primary issues and concerns were identified In this section these issues are summarized and a brief description of their disposition in this proposed plan is provided. The reader is encouraged to read Chapter I and Appendix A of the Environmental Impact Statement for a more detailed description of the issues and concerns. The issues are listed as follows:

Transportation System
Timber Production
Local Economy
Management of Nonwilderness Roadless Areas
Old-Growth Tree Stands
Wildlife Habitat Deer and Elk
Recreation Diversity
Livestock Grazing
Minerals
Fish Habitat/Water Quality

TRANSPORTATION SYSTEM

The public concerns varied with this issue with many people expressing that there were too many roads and an excessive number open to vehicular traffic However, many felt otherwise, believing that roads should be provided into presently undeveloped areas for recreational access and fuelwood cutting Closures of roads, while apparently popular with many Forest users, also have many critics as evidenced by the public controversy over the Forest Travel Management Plan

This plan responds to the issue by providing a variety of conditions, some of which should satisfy every Forest visitor. Some 354,000 acres of roadless area are to remain undeveloped except for the "jeep trails" that are now present These roads will continue to provide limited access to motor vehicles as determined on a year-to-year basis through the Forest Travel Management Plan

The plan provides for 109,000 acres of Management Area 3 on summer ranges This limits open road mileage to 1.5 miles per square mile. These are generally areas where road mileage is currently low and which are important summer big-game habitat On winter ranges that are in Management Area 1, and within the North Fork John Day drainage (MA 18) the intent is to limit open road mileage to 1.5 miles per square mile

*See glossary

The open road density of the remainder of the Forest outside wilderness is limited to 2.5 miles per square mile. Where current density exceeds this amount, it is intended that the desired density will usually be achieved over time as roads are closed following future timber harvests.

The standards and guidelines are found in Chapter 4 They provide the overall goals and direction for transportation planning and management on the Forest.

The trail system will be managed with emphasis on recreational use within Management Area 6, Management Area 7, wilderness and the Hells Canyon National Recreation Area.

TIMBER PRODUCTION

This issue relates primarily to (1) concern for maintaining or increasing levels of timber production from the National Forest and (2) interest in maintaining relatively high levels of species, other than lodgepole pine, from which lumber can be sawn or plywood veneer can be peeled (sawtimber)

The sustainable level of timber production was determined through a series of steps

1. Identification of available, capable and suitable timber land.

2 Development of timber yield tables for existing timber stands and future stands

3 Allocation of lands to various management areas considering the number of possible uses for those lands and the compromises involved.

4 Calculation of timber harvest levels from lands having a scheduled timber harvest.

The plan schedules timber harvest on 836,790 acres which includes 77 percent of all lands identified as available, capable, and suitable for timber production. From these acres, timber harvests (allowable sale quantity) are planned averaging 27 7 million cubic feet (144 million board feet) annually during the first decade.

Compared to recent levels, this plan will achieve approximately 94 percent of the total volume (all species and materials) and 97 percent of the sawtimber volume in the first decade (cubic measure). In the second decade the sawtimber volume slips to 95 percent of recent levels By the third decade, 98 percent of recent levels of sawtimber production is achieved and 89 percent of total volumes

While these amounts are lower than recent levels, which were established by the 1962 Timber Management Plan as amended, they are somewhat higher than the amount suggested by the most recent land management plans (unit plans). (See Alternative A, the No Action Alternative, of the Environmental Impact Statement)

Under this plan the Forest will harvest ponderosa pine at a rate averaging approximately 34 million board feet per year in the first decade This level is higher than what is sustainable in the long term This higher level of ponderosa pine harvest in the first decade is intended to help timber industry make the transition from the high historical ponderosa pine levels to lower future levels

MANAGEMENT OF UNDEVELOPED AREAS

The issue has to do with how much roadless area and which of the inventoried roadless areas should be retained in an undeveloped state. Of the 484,000 acres of inventoried roadless areas, 390,000 acres will remain undeveloped with this plan at the year 2000. This includes Management Area 6, wild rivers, research natural areas, and several management areas within the Hells Canyon National Recreation Area. Those areas that will remain roadless include most of the Twin Mountain roadless area (in the Elkhorn Mountain Range) and portions of several roadless areas which surround the Eagle Cap Wilderness. In addition, approximately 25,000 roadless acres are likely to remain unroaded due to economic conditions for the next 15 years even though they are allocated to management areas that permit development This includes major portions of the Tope Creek, Joseph Canyon and Deadhorse roadless areas

LOCAL ECONOMY

Employment and receipts generated by National Forest uses and products are important to local economies This issue is closely related to the timber production issue since timber production has greater influence on the local economy than any other National Forest resource

The indicators used to evaluate the effects of Forest management on the local economy are jobs, personal income and payments to counties. It is estimated that during the first decade of implementation this plan will provide Forest-related jobs at 100 percent of recent historical levels (1979-1983) Personal income will drop to 99 percent and payments to counties will be 99 percent of recent historical levels.

RECREATION DIVERSITY

An issue identified in the planning process had to do with the mix of Forest conditions that will provide the optimum recreation opportunity. This requires a variety of conditions

There is adequate capacity to meet projected recreation demand in all Recreation Opportunity Spectrum (ROS) classes until the year 2000. After 2000, shortages appear and gradually increase in most primitive and semiprimitive ROS classes, due to development of presently unroaded areas and gradual increases in demand. The total shortfall is expected to amount to about 229,000 visitor days (about 8% of total demand) by the year 2030 A large surplus in capacity exists in roaded natural and modified ROS classes throughout the planning period. There is a possibility of satisfying some of the unmet demand for semiprimitive motorized recreation by closing roads to conventional vehicles in these areas However, in most instances, the surplus of roaded capacity will not take the place of shortages in more primitive settings.

Developed recreation opportunities will increase and will exceed demand even in 2025 by approximately 18 percent This increase in supplies is due to the development of sites in the Hells Canyon National Recreation Area This is an over-supply in theory only. Developed sites are normally not used to full capacity because of less than full use on weekdays, early and late season and during inclement weather.

LIVESTOCK GRAZING

Many area ranchers depend on National forest grazing, and would like to see permitted grazing levels maintained or increased. At the same time, there is growing concern by others about the effects of grazing. Some groups and individuals are suggesting that use be reduced and some are encouraging removal of all livestock from National forests.

Herbaceous and woody plants serve a variety of purposes including wildlife cover and forage, soil protection, and water runoff control. Under conditions of controlled management, forage production which exceeds that needed for the maintenance or improvement of the forage resource and meets the needs of other resources such as wildlife and soil protection, can and will be made available for harvest by domestic livestock.

As allotment management plans are developed that are designed to implement the utilization standards and to meet the objectives outlined in this Forest Plan, it is anticipated that adjustments on some allotments will be needed. Current conditions and estimates indicate that it may be difficult to meet the planned level of 186,000 permitted AUM's Stocking of some vacant allotments and improvements in management are likely to offset to some degree reductions resulting from implementation of utilization standards and resolution of resource conflicts In addition, economic conditions have resulted in actual use levels significantly below permitted levels For example, in 1988, only 150,000 of the 186,000 permitted AUM's were actually used This situation is likely to continue

OLD-GROWTH TREE STANDS

Maintaining some amount of old-growth tree stands is important for recreation values and wildlife habitat. Retaining old-growth forests is controversial since it affects the timber production levels of the Forest.

Of the 173,000 acres of old-growth timber currently in existence, over 160,000 acres will be retained in the long term (50 years). This includes old-growth within wilderness and other allocations which preclude scheduled timber harvest and unsuited lands It is provided in groves throughout the Forest in such a manner as to provide mature and overmature timber within no more than three miles from any point in the Forest

MINERALS

The Forest contains important mineralized areas as evidenced by numerous mines and claims. Approximately 194,000 acres with mineral potential have been closed to mineral entry by wilderness or Hells Canyon National Recreation Area legislation The amount that remains open to unrestricted exploration and mining is an important issue

Of the 229,400 acres of known mineral potential that are not closed to further entry, 195,000 (85 percent) are available for mineral entry with only normal coordination requirements. The remaining 34,400 acres are all available but lie within undeveloped areas or areas with special environmental constraints which may make exploration more difficult.

WILDLIFE HABITAT: DEER AND ELK

The level of deer and elk habitat that should be provided on the Wallowa- Whitman is an important recreational as well as economic issue. The issue has to do with the amount of timber land where deer and elk habitat management will be emphasized.

Outside of the Hells Canyon National Recreation Area, big-game habitat will be emphasized on winter ranges totalling 290,000 acres with an additional 168,000 acres managed to provide near-optimum summer range. Allocation of forage to big game will provide for approximately 100 percent of the National Forest contribution to the State's big-game objective levels.

FISH HABITAT/WATER QUALITY

The importance of maintaining the high quality water for anadromous fish as well as other uses can hardly be overemphasized The Standards and Guidelines described in Chapter 4 address this issue from several approaches including riparian ecosystem protection, watershed protection, mitigation of timber management activities, and control of livestock grazing. Included is direction to manage more than 60,000 acres within the North Fork John Day Drainage emphasizing fish habitat, achieve near optimum riparian conditions on the other riparian areas of the Forest, utilize Best Management Practices (BMP's), and monitor activities to ensure BMP's are followed and that mitigation measures are effective.

CHAPTER 4

Forest Management Direction

CHAPTER 4

FOREST MANAGEMENT DIRECTION

OVERVIEW

This chapter presents the management goals, objectives, standards and guidelines that constitute direction for Resource Management The distribution of management areas across the Forest can be seen on the Alternative C map. A control map showing detailed management area boundaries is available for review at the National Forest Headquarters.

FOREST MANAGEMENT GOALS

The goals for the Wallowa-Whitman National Forest by resource area are·

Human Rights

To provide all persons equal opportunity regardless of race, color, creed, sex, marital status, age, handicap, religion, or national origin.

Cultural

To provide for the identification, protection, preservation, enhancement and interpretation of prehistoric and historic sites, buildings, objects, and antiquities of local, regional, or National significance so as to preserve their historical, cultural, and scientific values for the benefit of the public

Soil and Water

To maintain and enhance soil productivity, water quality and water quantity and to meet or exceed State water quality standards, and to acquire water rights for water uses under State law.

Municipal Watersheds

All domestic supply watersheds will be managed to maintain or improve water quality and streamflows so that, with adequate treatment by the purveyor, it will result in a safe and satisfactory water supply.

Air

To maintain air quality at a level that is adequate for the protection and use of National Forest resources, and that meets or exceeds applicable Federal and State standards and regulations

Diversity

Maintain native and desirable introduced or historic plant and animal species and communities Provide for all seral stages of terrestrial and aquatic plant associations in a distribution

and abundance to accomplish this goal. Maintain or enhance ecosystem function to provide for long-term integrity and productivity of biological communities.

Wildlife

To maintain or enhance the unique and valuable characteristics of riparian areas and to maintain or improve water quality, wildlife habitat, and fish habitat near or within riparian ecosystems.

To protect and manage habitat for the perpetuation and recovery of plants, animals, and invertebrates which are listed as threatened, endangered, or sensitive

To provide habitat for viable populations of all existing native and desired nonnative vertebrate wildlife species and to maintain or enhance the overall quality of wildlife habitat across the Forest

To provide near-optimum hiding cover, thermal cover and forage conditions on big-game winter ranges and selected summer ranges

To protect and enhance anadromous fish habitat, particularly within the John Day River drainage

Recreation

In coordination with and awareness of recreational opportunities on other lands, provide a wide variety of recreational opportunities in an attractive setting, and make those opportunities available to all segments of society.

Landownership

To provide for well-planned adjustments to landownership that are responsive to Forest management objectives

Wilderness

To preserve the natural conditions and outstanding opportunities for solitude represented in the four wildernesses on the Forest.

Energy

To provide for exploration, development, and production of energy resources on the Forest in coordination with other resource values and environmental considerations. Also to provide for energy transmission facilities on National Forest lands

To encourage and assist, whenever possible, in the continuation of regional geologic mapping and mineral resource studies on the Forest in cooperation with other natural resource agencies

Minerals

To provide for exploration, development, and production of a variety of minerals on the Forest in coordination with other resource objectives, environmental considerations, and mining laws

To encourage and assist, whenever possible, in the continuation of regional geologic mapping and mineral resource studies on the Forest in cooperation with other natural resource agencies.

Transportation

To 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 System lands

Protection

To provide well-planned and executed fire protection and fire use programs that are cost efficient and responsive to land and resource management goals and objectives.

To control Forest pests to levels that are compatible with resource objectives.

Timber

To provide for production of wood fiber to satisfy National needs and benefit local economies consistent with multiple resource objectives, environmental constraints, and economic efficiency.

To provide fuelwood for personal and commercial uses.

Range

To manage range vegetation and related resources in a manner insuring that the basic needs of the forage and browse plants and the soil resource are met To make available for harvest, forage production that is excess to the basic needs of the plants and soil resource, for wildlife (within agreed upon management objectives) and domestic livestock (within Forest Plan utilization standards).

FOREST MANAGEMENT OBJECTIVES AND RESOURCE SUMMARIES

Table 4-1 shows outputs and activities by resource. These outputs and activities are resource management objectives for the Forest. Actual achievement of the levels of outputs and activities depends on funding. Appendix A includes a list of probable projects for the first decade of plan implementation. A listing of timber sales planned for the first five years of plan implementation is found in Appendix E.

The following is a narrative description by resource.

Soil and Water

Soil and water restoration work is at significantly higher levels (1,000 acres per year) than has occurred in recent years Standards and guidelines place high priority on the protection of soil and water.

Timber

Timber harvest is scheduled from 837,000 acres on a nondeclining flow basis Areas not scheduled for timber harvest include alpine and subalpine areas around the perimeter of the Eagle Cap Wilderness and in the Elkhorn Mountains, much of the Hells Canyon National Recreation Area, and selected groves of old growth forest. Timber management is constrained on winter ranges and some summer ranges to provide better big game habitat

The sawtimber volume to be sold in the first decade is 144 MMBF annually Figure 4-1 displays the long-term sustained yield capacity (42.3 MMCF/yr) and the allowable sale quantity. Salvage of cull material and dead lodgepole pine is projected to add 7.8 MMCF per year. This level of timber production will require considerable investment in fuel treatment, tree planting, and timber stand improvement Approximately 5 million cubic feet of personal-use firewood may be removed from the Forest each year.

Range Vegetation

Range vegetation is managed at levels that meet the basic needs of the plants and soils, the forage needs for wildlife at management objective population levels, and to provide forage for permitted domestic livestock. Beginning plan outputs for permitted livestock AUM's will be 186,000 (current level). As allotment management plans (AMP's) are developed and implement the utilization standards, adjustments on an allotment specific basis will be necessary It is anticipated that filling of vacant *allotments and management improvements resulting from the Forest Plan funding levels will offset* downward adjustments to some degree However, until the actual AMP's are implemented, the deviation from the planned output of 186,000 AUM's will not be known

Recreation

Primitive and semiprimitive recreation opportunities are provided in wilderness, portions of the Hells Canyon National Recreation Area and in alpine and subalpine areas in the Elkhorn and Wallowa Mountains Portions of the Monument Rock and Grande Ronde roadless areas also provide semiprimitive recreation opportunities The remainder of the Forest is managed to provide recreation opportunities in a roaded setting. Some big-game summer ranges (selected primarily because of their importance to big-game hunters) are managed to provide a more challenging hunting experience and higher quality big-game habitat than is normally found in roaded settings.

Recreation site construction and reconstruction for the first decade are directed at completing the development specified in the Hells Canyon National Recreation Area Comprehensive Management Plan, addressing the backlog of deteriorated facilities in existing sites, and improving the distribution of sites throughout the Forest.

Landownership

Landownership will be adjusted, as opportunities arise, where this would serve to consolidate National Forest System lands, result in a net reduction in property lines, acquire lands in Federally-designated areas, obtain lands needed for administrative or research purposes, improve resource conservation and production, resolve landownership conflicts, or otherwise be clearly in the public interest Land ownership objectives for each management area are found in the Landownership Plan in Appendix D.

Wilderness

The Eagle Cap Wilderness is managed under Alternative C of the Eagle Cap Environmental Assessment which emphasizes rehabilitation, enhancement of opportunities for solitude, and provides a wide range of primitive and unconfined recreation opportunities The Monument Rock and North Fork John Day Wilderness management direction will be written by the Malheur and Umatilla National Forests, respectively. The Hells Canyon Wilderness will be managed as described herein and in the *Hells Canyon NRA Comprehensive Management Plan.*

Table 4-1
RESOURCE OUTPUTS AND ACTIVITIES
- TIMBER -

Output/Activity	Unit of Measure	NAS Code	MIH Code	Decade 1	Decade 2	Decade 3	Decade 4	Decade 5
Lands Suitable for Timber Production 1/	M Acres	NA	NA	836 8				
Management Intensities 2/								
PLTPCH	M Acres	NA	NA	40 1				
PLT PH	M Acres	NA	NA	149 8				
PLT CH	M Acres	NA	NA	20 4				
PLT H	M Acres	NA	NA	114 7				
NATPCH	M Acres	NA	NA	51 1				
NAT PH	M Acres	NA	NA	135 7				
NAT H	M Acres	NA	NA	218 0				
SELECT	M Acres	NA	NA	107 0				
Timber Harvested by								
Commercial Thinning	M Acres/Year	NA	NA	3 9	2 2	0	0	1 1
Clearcut	M Acres/Year	NA	NA	4 4	4 4	3 2	4 5	3 3
Shelterwood	M Acres/Year	NA	NA	8 4	6 3	5 7	5 9	4 5
Overwood Removal	M Acres/Year	NA	NA	1 2	6 8	9 7	7 4	8 5
Selection	M Acres/Year	NA	NA	6 5	2 5	5 4	4 3	8 5
				24 4	22 2	24 0	22 1	25 8
Allowable Sale Quantity								
Sawlog Volume	Million CF/Year	NA	XO6	27 7	27 3	28 1	27 5	27 3
	Million BF/Year			144	Not Estimated			
Unregulated Timber 3/	Million CF/Year	NA	X07	7 9	6 6	5 2	5 2	5 2
Personal Use Fuelwood	Million CF/Year	NA	X08	5 0	5 0	5 0	5 0	5 0
Fuel Treatment	M Acres/Year	PF2	P11	22 4	19 2	20 9	21 0	22 7
Reforestation 4/	M Acres/Year	ET24	X36					
Planting				4 7	4 0	2 7	3 9	2 4
Natural				9 6	8 7	5 1	7 9	5 2
Total				14 3	12 7	7 8	11 8	7 6
Timber Stand Improvement	M Acres/Year	ET25	X41	7 4	9 1	8 4	2 5	6 6
Fire Management Effectiveness Index	$/M Protected Acres/Year	NA	Y79	948	934	918	918	918

NA Not Applicable

1/ Suitable for timber production given the multiple use objectives of this plan (36 CFR 219 14 (d))

2/ PLTPCH = Plant, precommercially thin, commercially thin and harvest; PLT PH = Plant, precommercially thin and harvest, PLT CH = Plant, commercially thin and harvest, PLT H = Plant and harvest, NATPCH = Natural regeneration, precommercially thin, commercially thin and harvest, NAT PH = Natural regeneration, precommercially thin and harvest, and NAT H = Natural regeneration and harvest

3/ Salvage of cull, dead lodgepole pine, and small diameter (less than 5 inches) material which is not part of the allowable sale quantity

4/ Includes all lands where activities to aid in tree reestablishment are employed

Table 4-1
RESOURCE OUTPUTS AND ACTIVITIES
- RECREATION -

Output/Activity	Unit of Measure	NAS Code	MIH Code	Decade 1	Decade 2	Decade 3	Decade 4	Decade 5
Developed Recreation Use	M RVD's/Year	NA	W09, W10	399	464	523	571	621
Nonwilderness Dispersed Recreation Use 1/								
Roaded 2/	M RVD's/Year	NA	W07, W08	373	433			507
Unroaded 3/	M RVD's/Year	NA	W03, W05	423	491			575
Wilderness Use 1/	M RVD's/Year	NA	W33	78	91	108	128	152
Wildlife and Fish Recreation Use	M WFUD's/Year 4/	NA	W41-W48, W50, W51, W55	370	370	370	370	370
Trail Construction and Reconstruction	Miles/Year	AT22	A10, A11	4	5	5	5	5
Developed Site Construction and Reconstruction	PAOT/Year 5/	NA	A05, A06	750	50	50	50	50
Visual Quality Objectives								
Preservation	M Acres	NA	W18	582 7	582 7	582 7	582 7	582 7
Retention	M Acres	NA	W19	211 2	211 2	211 2	211 2	211 2
Partial Retention	M Acres	NA	W20	325 9	325 9	325 9	325 9	325 9
Modification/Max Mod	M Acres	NA	W21, W22	1,229 4	1,229 4	1,229 4	1,229 4	1,229 4
Unroaded Areas Remaining	M Acres	NA	A01	410	390	374	374	374
Developed Recreation Capacity	MRVD's	AN23	NA	661	661	661	661	661
Wilderness Management	M Acres	AW	NA	583	583	583	583	583 583
Cultural Resource Management	M Acres	AC	NA	10,000	10,000	5,000	5,000	5,000
Land Exchange or Transfer	Acres/Year	JL263,JL264	J13,J14,J17	250	250	250	250	250
Range Vegetation Management 6/	M Acres	NA	NA	2,307	2,307	2,307	2,307	2,307
Noxious Weed Control	M Acres/Year	DN24	D12	0 400	0 450	0 450	0 450	0 450
Trail Maintenance	Miles	AT23	A12	2,250	2,250	2,250	2,250	2,250
Land Line Location	Miles/Year	JL24	J06	100	100	100	100	100

NA Not applicable
NE Not estimated
1/ Figures are exclusive of wildlife and fish recreation user days (WFUD's)
2/ Includes roaded natural, roaded modified, rural, and urban recreation opportunity spectrum classes
3/ Includes primitive, semiprimitive nonmotorized, and semiprimitive motorized recreation opportunity spectrum classes
4/ Wildlife and fish user days (hunting and fishing)
5/ Persons at one time, capacity increased or improved per year
6/ All Forest acreage except for that assigned to Management Areas 15 and 16

Table 4-1
RESOURCE OUTPUTS AND ACTIVITIES
- WILDLIFE, RANGE, WATERSHED -

Output/Activity	Unit of Measure	NAS Code	MIH Code	Decade 1	Decade 2	Decade 3	Decade 4	Decade 5
Old Growth	M Acres	NA	NA	164	162	161	161	161
Management Indicator Species 1/								
Pileated Woodpecker	Pairs	NA	W47	346	330	323	323	323
Goshawk		NA	W47	2/	2/	2/	2/	2/
Primary Cavity Excavators		NA	W47	2/	2/	2/	2/	2/
Resident Trout		NA	W54	2/	2/	2/	2/	2/
Steelhead		NA	W54	2/	2/	2/	2/	2/
Pine Marten 3/	Pairs	NA	W45	2/	2/	2/	2/	2/
Rocky Mountain Elk 4/	M Elk Summering	NA	W42	21 0	20 0	19 2	19 8	19 8
Fish Habitat Improvement	Acres		C05	250	200	0	0	0
	Structures		C07	500	400	0	0	0
Wildlife Habitat Improvement	Acres	CW222	C02	1,000	1,000	1,000	1,000	1,000
Wildlife Habitat Improvement	Acre Equivalents	CW222	C02	5,000	5,000	5,000	5,000	5,000
Water Yield	Million Acre Feet	NA	X81	2 73	2 73	2 73	2 73	2 73
Sediment	% of Natural	NA	NA	119	119	120	120	120
Watershed Improvement Work	Acres/Year	FW22	FO5,KO5	1,000	1,000	1,000	1,000	1,000
Range--Permitted Grazing 5/	M AUM's/Year	NA	W66	186	160	160	160	160
Allotment Management Planning	Plans/Year	NA	NA	15	15	15	15	15

NA Not applicable
1/ Numbers of management indicator species are index values only, based upon acres of available habitat
2/ Actual numbers to be generated during monitoring
3/ Population trend not estimated, but expected to parallel pileated woodpecker
4/ Index number of elk summering on the Forest
5/ Levels shown are estimated for the Forest as a whole, based on available forage and investments by livestock permittees and the Forest Service Levels for individual grazing allotments will depend on allotment-specific analysis

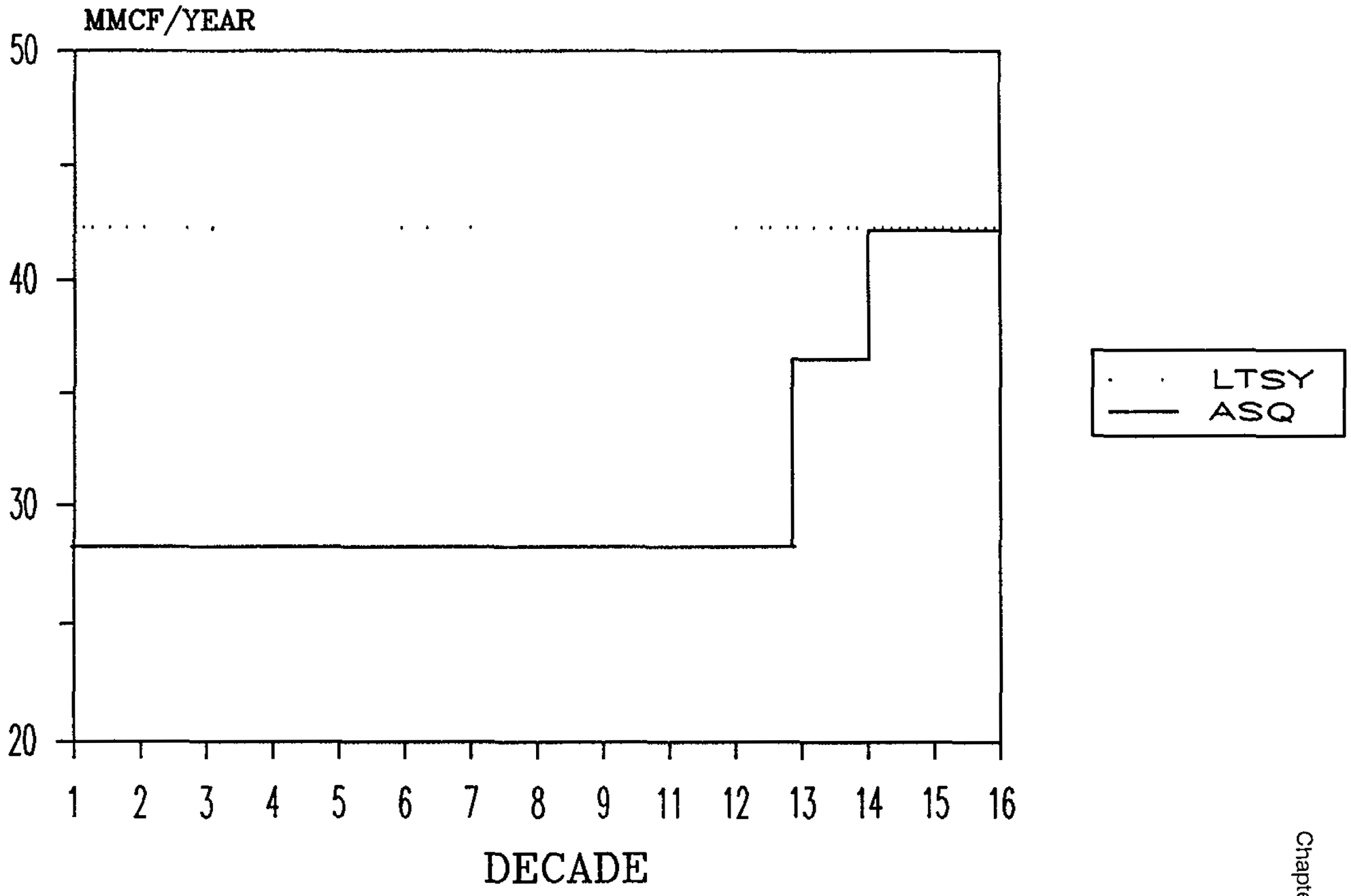
Table 4-1
RESOURCE OUTPUTS AND ACTIVITIES
- ROADS, MINERALS, LOCAL ECONOMY, COSTS AND RETURNS -

Output/Activity	Unit of Measure	NAS CODE	MIH Code	Decade 1	Decade 2	Decade 3	Decade 4	Decade 5
Arterial and Collector Road Construction and Reconstruction	Miles/Year	NA	L04, L08	69	59	68	68	76
Timber Purchaser Road Construction and Reconstruction	Miles/Year	NA	L14, L29	180	123	125	125	128
Roads Suitable for Public (Passenger Car)	Miles 1/	NA	L19 (749)	900	930	930	930	930
Roads Suitable for Public (High Clearance Vehicle)	Miles 1/	NA	L19 (747)	4,630	4,975	5,180	5,180	5,180
Roads Requiring User Maintenance (High Clearance Vehicle)	Miles 1/	NA	L19 (748)	750	750	750	750	750
Closed Roads	Miles 1/	NA	L19 (746)	4,475	4,620	4,705	4,705	4,705
Minerals Produced 2/	Million $/Year	NA	Y01	13 5	54 2	71 6	94 6	125.0
Mineral Operating Plans	Number Active/Year	NA	001-008	354	397	419	442	466
Human Resource Program	Person Years/Year	NA	Z56	4	4	4	4	4
Changes in Forest-Related Jobs	Number	NA	NA	+19	NE	NE	NE	NE
Changes in Forest-Related Personal Income	Million $/Year	NA	NA	-0 6	NE	NE	NE	NE
Payments to Counties	Million $/Year	NA	NA	4 3	NE	NE	NE	NE
Operational Costs	Million $/Year	NA	NA	12 8	12 1	11 9	11 9	12 0
Capital Investment Costs	Million $/Year	NA	NA	9 4	8 2	7.6	7.8	7 6
Total National Forest								
Allocated	Million $/Year	NA	NA	7.3	6 3	5 7	5 9	5 7
Appropriated	Million $/Year	NA	NA	14.9	14 0	13.8	13 9	13 9
Returns to Government	Million $/Year	NA	G01-G08	16 4	16 2	19 9	15 4	14.7

NA Not applicable
NE Not estimated
1/ At end of decade
2/ Gross metal values, including costs of extraction and processing Therefore not directly comparable with other resource values contained in this analysis

FIGURE 4-1

LONG-TERM SUSTAINED YIELD CAPACITY AND ALLOWABLE SALE QUANTITY



Landscapes

The visual quality objectives summarized in Table 4-1 will maintain the natural appearance of landscapes seen from major travel routes and recreation sites. Other lands outside of wilderness will appear somewhat modified to heavily modified by timber management activities (See Tables IV-6 and IV-7 of the FEIS for a list of viewsheds and expected visual condition resulting from plan implementation).

Roadless Areas

Of the 251,980 acres of inventoried roadless area outside the Hells Canyon National Recreation area none are recommended for wilderness, 121,470 acres are retained in a roadless condition and 130,510 acres are available for development (Only the Dunns Bluff Roadless Area was considered for wilderness in the analysis for this plan.)

The Homestead Roadless Area is currently being considered for wilderness in an environmental analysis conducted by the Bureau of Land Management (BLM). (The BLM manages the larger portion of this area) The results of that analysis will be incorporated into this plan.

Although timber harvesting will occur within the Joseph Canyon roadless area in this alternative, the area will be managed to retain its essentially roadless condition. Logging systems will be utilized which will not require significant new road construction.

Transportation

Twenty-eight percent of the total existing roadless area of the Forest is accessed for timber harvest under this alternative It is estimated that road construction in areas which are currently roadless will total 359 miles in the first decade, 271 miles in the second decade, and 73 miles in the third decade. No significant additions to the road system are anticipated after the third decade

The Five Points drainage will not be made more accessible for motorized use than it is at present, except as necessary to carry out timber sale projects All new roads will be closed or blocked to public motorized use (except that all-terrain vehicles and over-snow vehicles may be used where not restricted by the annual Forest Travel Management Plan)

Other portions of the Forest are currently roaded but do not have access to some timber stands Completion of the Forest's road system will require about an additional 2,000 miles of road. The use of the transportation system on winter ranges is restricted so that only 1.5 miles of road per square mile are open to motorized use during the winter months In areas where undeveloped dispersed recreation is emphasized, road density is maintained at current levels. On selected summer ranges and within the North Fork John Day Drainage open roads will be limited to not more than 1 5 miles per square mile year long Elsewhere on the Forest the goal for road density is not to exceed 2 5 miles per square mile To achieve the specified open-road densities will require closure of approximately 2,150 miles of existing road.

The development, maintenance, and management of the Forest development road system is to be continued as needed to respond to resource management objectives Many road-related activities will occur in support of the timber management program, with additional activities undertaken to facilitate recreation use, Forest administration, and resource protection.

The Forest Service Road Management System includes five levels of roads, briefly defined as follows (for more complete definitions, see Forest Service Handbook 7709.15).

- Level 1 - Roads which are normally closed or blocked to all standard motor vehicles until they are needed for some specific project or purpose.

- Level 2 - Roads which are open but which may not be suitable for vehicles other than high clearance types

- Levels 3, 4, and 5 - Roads which are open and maintained for all types of vehicles, including passenger cars

An objective of road system management on the Wallowa-Whitman National Forest is to have a mixture of all different levels of roads necessary to provide for the use and protection of the National Forest. Each road on the National Forest Transportation System is guided by a written "Road Management Objective," which states the purpose and need for the road. This objective determines which level of road is appropriate The anticipated mix of roads is shown in the chart below

The projected operational status of the Forest development road system is shown in Table 4-2 (NOTE: Mileages shown in this table are estimates, and may vary once the plan is implemented and densities are calculated on the ground)

Table 4-2
Current and Projected Road Miles by Operational Status

Decade	Open & Maint For Pass Car Mi.	%	Open & Maint for High Clearance Vehicles Mi	%	Seasonally Closed to All Vehicles Mi.	%	Long-Term Closure Mi	%	Total Forest Mileage Mile
Current	835	9	6470	67	(1400)	(15)	2281	24	9586
1st	900	8	5378	50	(1000)	(10)	4475	42	10755
5th	930	8	5930	51	(300)	(3)	4705	41	11565

Direction detailing construction, reconstruction, operational management, and environmental protection requirements for the Forest development road system are further described in the Forest-wide standards and guidelines and throughout the Management Area Prescriptions detailed in this chapter.

Research

In addition to the one existing research natural area, 18 areas, as displayed in Table 4-3, are recommended for inclusion into the Research Natural Area System

Table 4-3
Proposed and Existing Research Natural Areas

Lightning Creek	Pleasant Valley
Alum Beds	Little Granite
Horse Pasture Ridge	Craig Mountain Lake
West Razz Pond and Razz Lake	Mt Joseph
Bills Creek	Vance Knoll
Duck Lake	Basin Creek
Indian Creek (existing RNA)	Haystack Rock
Point Prominence	Lake Fork
Bob Creek	Cougar Meadow
	Government Draw

Old Growth

Old-growth forest is provided at a level higher than necessary to satisfy the management requirements (MR's) for pileated woodpecker, pine marten and three-toed woodpecker on available, capable Forest lands. This distribution of old-growth is expected to help satisfy needs of goshawk and Townsend's warbler, with many existing goshawk territories included in the old-growth allocation Fourteen thousand acres of subalpine forest unsuited for timber management and 53,000 acres of uneconomic lodgepole pine augment this old-growth habitat for pine marten and three-toed woodpeckers. Old-growth habitat will total approximately 161,500 acres over the long term, including large reserves of old-growth in wilderness, the HCNRA, and unsuited lands.

Fish and Wildlife

The Forest will participate in establishing eight pairs of bald eagle and four pairs of peregrine falcon. These are the recovery objective levels described in Chapter III of the EIS

Timber managed without thinnings, totalling 333,000 acres, ensure the future development of pole thickets and dense young-to-mature forest stands to the benefit of sharp-shinned hawks and Cooper's hawks

Habitat for those primary cavity excavators relying on smaller snags is expected to exceed the 40 percent level of effectiveness, partially through natural mortality, in managed stands Habitat effectiveness for all cavity nesters will be managed at or above the 60 percent level in riparian zones and throughout the Hells Canyon National Recreation Area High snag levels on 568,000 acres of unsuitable lands (including wilderness and old-growth) will occur to the benefit of all primary cavity excavators.

Most big-game winter ranges are managed to provide high quality cover and forage conditions Some summer ranges, because of their importance to elk, are also managed to provide high quality habitat. The remaining summer ranges are managed emphasizing production of commodities, although a

level of elk (big-game) habitat protection is provided through application of Regional harvest dispersion constraints

Riparian habitat will be maintained or enhanced through more stringent livestock management requirements to the benefit of wildlife and salmonid fishes. High emphasis is placed on anadromous fish habitat improvement, with about 600 acres per year of habitat improvement targeted. Timber harvest in the John Day River drainage, and elsewhere, will be scheduled so to maintain water flows within desired limits for the protection of anadromous fish habitat

Municipal Watersheds

Timber harvest occurs at a reduced level within the Baker and La Grande domestic supply watersheds. Within the overall objective of providing quality water, management within the Sumpter and Wallowa watersheds emphasizes timber production.

Minerals

Of the areas of known mineral potential 195,000 acres are open to mineral entry with normal coordination requirements, 34,400 acres have restricted entry, mineral rights are privately held on 13,860 acres, and 194,000 acres are closed to new mineral entry

DESIRED FUTURE CONDITION OF THE FOREST

It is likely to be more than four decades before effects of management, as directed by this plan, are evident over the entire Forest Through future plans, the direction may change The following remarks describe the Forest after ten and fifty years, assuming the direction from this plan remains constant.

The Forest in Ten Years

Although in some areas the Forest will have a more managed appearance, it will generally have retained its present character. Many of the lodgepole pine sites on Baker and La Grande Districts which were clearcut in the 1980's as a result of the mountain pine beetle epidemic will be occupied by thrifty young stands. There will be newer clearcuts but these will have been blended into the landscape so as to not be readily apparent from major travel routes and viewpoints.

The discerning eye will notice that there has been a reduction in large trees in those portions of the Forest managed emphasizing timber production. Quality stands of old-growth timber will be dispersed across the landscape Large blocks of old growth will continue to exist in wilderness and other areas not managed for timber production. Of the current 173,000 acres of old-growth trees on the Forest, 164,000 are expected to remain

Portions of some roadless areas will have been entered for timber harvest although those which are the most important for recreational purposes will remain unchanged Of the 484,443 acres of roadless area existing today, 410,000 acres are expected to remain roadless in ten years.

In general, providing for recreational users of the forest will receive increased emphasis as compared to the current situation. The range of recreation opportunities currently available on the Forest will be still available, although there will be changes in the amount and location of some opportunities.

Some semiprimitive recreation opportunities will have been lost to development, but quality semiprimitive areas will remain and will be adequate to meet demand

Construction, reconstruction, and maintenance of the Forest trail system will be tailored to recreation demands and protecting other resources Trails will be emphasized in wilderness, the HCNRA, and semiprimitive areas, but opportunities for trail-related recreation within other management areas will be available.

Development within the Hells Canyon National Recreation Area will have substantially increased recreation site capacity in the area and improved recreational access. Major changes will include improvement of the road to Hat Point, construction of a new campground and improved access to Pittsburg Landing, and a new viewpoint near McGraw Creek. Other developed sites on the Forest will have been maintained or improved, with capacity added as needed

Dispersed recreation sites, such as hunter camps, will retain their desired character although surrounding lands will often have changed significantly as a result of management activities.

Providing fuelwood to Forest users will be a major consideration in decisions such as road management and slash treatment. Although substantial quantities of wood will continue to be available, competition is likely to make it more difficult to obtain Fuelwood is likely to be of poorer quality.

The principal access roads will be readily identifiable They will have paved or gravelled surfaces and look suitable for passenger car use. Signs assist the travelers in finding their destinations. The other roads appear less inviting for use. They look rough or primitive, but many of these will be available for use. Some roads will be closed or blocked to standard vehicle use by physical barricades, gates, or signs.

Most traffic management will be accomplished by physical barricades, rather than more restrictive measures such a promulgated closures. Promulgated closures will be used primarily to accomplish seasonal closures, or where total prohibition of traffic is essential to accomplishment of objectives

Range resources will show noticeable improvement as allotment management plans are developed and implemented. Implementation of Forest Plan utilization standards will have resulted in reduced use levels in riparian areas so that many of the riparian systems show definite signs of recovery. Permitted numbers of livestock and/or seasons of use will have declined slightly in response to the utilization standards and resolution of resource conflicts

Anadromous and resident fish populations will have climbed, both as a result of investments in fish habitat improvements and because of improved overall riparian condition.

Bald eagle and peregrine falcon populations will have increased. Elk populations will have stabilized at the State management objective levels, while deer numbers will have increased substantially from previous lows

The Forest in Fifty Years

This plan will be reviewed every 5 years and normally revised every 10-15 years. The following describes the Forest in 50 years as it is expected to be if the management described in this plan continues to that time

Of the 484,000 acres of roadless area existing today, 380,000 acres are expected to remain roadless in fifty years Wilderness and roadless recreation areas (Management Area 6) will be unchanged from the present except for subtle vegetational changes The same will be true of Management Areas 8, 9, and 10 within the Hells Canyon National Recreation Area. Management Area 11 in Hells Canyon NRA will appear managed to the discerning eye, but will retain a high degree of naturalness Research natural areas will appear relatively unchanged, as will utility corridors Many developed recreation sites will have high quality facilities, providing a large variety of recreational opportunities There will

be private sector participation in the operation of many sites Environmental education and interpretive opportunities are evident.

Most of the principal road system is completed. These roads will have paved or improved surfaces A few may have State Highway designations Most other roads are either visually inviting only to high clearance type vehicles used by the more seasoned forest traveler, or are closed or blocked to standard vehicle use. A total of 11,500 miles of road are expected to exist.

Most traffic management is accomplished by physical barricades, rather than more restrictive measures such as promulgated closures Promulgated closures will be used primarily to accomplish seasonal closures, or where total prohibition of traffic is essential to accomplishment of objectives

Nontimbered areas will remain unchanged in appearance, and where forest and openings are interspersed, the general character, as seen from a distance, will be similar to today.

The most noticeable changes will occur in the areas designated for timber management outside the Hells Canyon NRA (Management Areas 1, and 3 and 18), especially in areas where no harvest has previously occurred It will be apparent that many areas are being managed for high levels of timber production; e g , tree stands of different ages; trees within stands the same size and spaced for rapid growth, the forest floor relatively free of fallen trees; and few large dead trees (snags) Stand ages will vary from 0 to 90 years with regeneration units (recent clearcuts, shelterwood, or seed tree harvest units) more evident than at present

The foregoing tends to give the picture of a mosaic pattern of even-aged stands in Management Areas 1, 3 and 18; a "tree farmed" appearance. There will, however, be many conditions that will disrupt this mosaic, and the managed Forest will still contain many of its present characteristics These conditions include 36,750 acres of designated old-growth groves, dispersed through Management Areas 1, 3, and 18, and ranging size from 30 to 600 acres Nearly 100,000 acres of timbered land unsuitable for timber production will be interspersed in patches of several acres to hundreds of acres in size An additional 19,000 acres of riparian vegetation (along live and intermittent streams) and 49,000 acres of particularly sensitive visual management areas (visual foreground) are intermixed through the intensively managed lands The riparian and visual management objectives will retain or emphasize their special resource values, and will result in their retaining a natural appearance even when viewed from close distances. The proximity of old-growth groves, unsuited lands, riparian zones, and key visual management areas to intensively managed areas will create variety over the area as a whole Of the 173,000 acres of old-growth forest existing today, 161,000 acres are expected to remain.

Within Management Areas 3 and 18, conversion of timbered areas to a managed condition will have taken place more slowly. Some lands considered suitable for timber production will not have been entered by the year 2030, being maintained as mature timber stands for wildlife cover.

In summary, the forested areas where timber management occurs (approximately one-half of the forest) will appear more dominated by human activities than at present, but there will also be many similarities to today's conditions.

The range of recreation opportunities currently available will still be available, but competition for each will be much greater. Opportunity for recreation in a primitive (wilderness-like) setting will be similar to the present. Opportunities for motorized and nonmotorized recreation in a semiprimitive ("backcountry") setting will be reduced, while opportunities for recreation in a roaded modified setting will increase.

Fuelwood from the Forest will no longer be available as a primary source of home heating for most local area homes

Range resources will show a dramatic improvement with areas of resource conflict being small in size and few in number To accomplish this, it is likely that livestock numbers will be lower All allotments will be operating under approved allotment management plans Both upland and riparian soils and vegetation are at or nearing natural potential conditions as improvements in management and implementation of utilization standards maintain livestock use at acceptable levels and insure adequate control over timing and duration of use.

Whereas sightings of bald eagles are now a rarity on the Forest, there will be more sightings, especially near large lakes and streams. Salmon will be present in the Grande Ronde River system in much higher numbers than today and will be slightly increased in the North Fork John Day River system Elk will remain near present levels, deer will recover from recent lows.

A description of each management area is provided in a subsequent section of this chapter

Proposed and Possible Management Activities by Management Area

Tables 4-4 and 4-5 display the acreages of the various management areas (described later in this chapter) and the proposed and probable management practices to occur within each management area Details of timber management activities for each management area are found in Appendix C, the Ten-Year Timber Sale Action Plan.

Table 4-4
MANAGEMENT AREA ACREAGES

Management Area		Acres
1	Timber Emphasis	716,245
3,3a	Big Game Habitat Emphasis	382,113
4	Wilderness	582,700 3/
5	Phillips Lake Area	4,967
6	Roadless Recreation (backcountry)	122,788
7	Wild and Scenic River	26,909 4/
8	HCNRA Snake River Corridor	14,355
9	HCNRA Disp Rec /Nat Veg	161,078
10	HCNRA Forage	123,029
11	HCNRA Disp Rec/Tmbr. Mgt.	70,706
12	Research Natural Areas	15,160 2/
13	Homestead Further Planning Area 1/	5,733
14	Starkey Exp For & Range	27,051
15	Old-Growth Forest	36,750
16	Administrative and Recreation Sites	5,744
17	Utility Corridors	6,594
18		59,743
	Total	2,349,215

1/ If the Homestead Further Planning Area does not become wilderness, 3,708 acres would become part of Management Area 10 with the remaining acres being within Management Areas 1 and 3
2/ 12,450 acres within wilderness, Snake River Corridor, Dispersed Recreation/Native Vegetation, or further planning allocation
3/ Includes 23,760 within wilderness that have been designated in the Oregon Omnibus Wild and Scenic Rivers Act of 1988
4/ Includes 9,140 acres along the Imnaha River within the Hells Canyon National Recreation Area

TABLE 4-5

PROPOSED AND PROBABLE MANAGEMENT PRACTICES BY MANAGEMENT AREA 1/
(Annual Values by Decade)

Management Practice of Activity	Units	Total Proposed (Decade 1)	Total Probable (Decade 2)	MA 1	MA 3	MA 4	MA 5	MA 6	MA 7	MA 8	MA 9	MA 10	MA 11	MA 12	MA 13	MA 14	MA 15	MA 16	MA 17	MA 18
Recreation Site Construction	PAOT	700	0							X	X	X	X					X		
Recreation Site Reconstruction	PAOT	50	50				X			X	X	X	X					X		
Primitive Recreation Use	MRVDs	7	7								X	X								
Semiprimitive Nonmotorized Recreation Use	MRVDs	140	157					X		X	X	X			X					
Semiprimitive Motorized Recreation Use	MRVDs	308	344					X		X	X	X								
Roaded Recreation Use	MRVDs	1,019	1,139	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rural Recreation Use	MRVDs	122	136				X											X		
Wilderness Recreation Use	MRVDs	140	153			X														
Trail Construction & Reconstruction	Miles	4	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Wildlife Habitat Improvement	Acres	1,000	1,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X
Timber Harvest 2/																				
Commercial Thinning	MAcres	39	22	X	X		X		X							X				X
Clearcutting	MAcres	44	44	X	X				X							X				X
Shelterwood	MAcres	84	63	X	X		X		X				X			X				X
Selection	MAcres	65	25	X	X		X		X				X			X				X
Overwood Removal	MAcres	12	68	X	X		X	X					X			X	X			X
Reforestation (Planting)	MAcres	47	40	X	X		X		X				X			X				X
Timber Stand Improvement	MAcres	74	91	X	X		X		X				X			X				X
Arterial & Collector Road Construction and Reconstruction	Miles	69	59	X	X			X	X	X	X	X	X			X	X	X	X	X
Local Road Construction and Reconstruction	Miles	180	123	X	X		X	X	X	X	X	X	X			X	X	X	X	X
Temporary Road Construction	Miles	100	107	X	X		X		X				X			X			X	X
Treatment of Activity Fuels	MAcres	224	192	X	X		X		X				X			X				X
Watershed Improvement	Acres	1,000	1,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Permitted Grazing Use	MAUMs	186	160	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X

1/ "X" indicates that activity is likely to occur within this management area
2/ Also see Appendix C

FOREST-WIDE STANDARDS AND GUIDELINES

The following standards, guidelines, and management area direction are to be used in conjunction with direction from Forest Service Manuals and Handbooks and the Regional Guide for the Pacific Northwest Region. It is not intended that they conflict with applicable State and Federal laws. Except as noted, the standards and guidelines are common to all management areas Where direction for a specific management area differs from the Forest-wide standards and guidelines, this direction is specified in the direction for that management area Each category is preceded by a Forest-wide goal for that resource or activity

The appropriate setting for each Management Area is determined by the area goals, desired conditions and suitability of the area to achieve these conditions When an allowable project would result in conditions that do not meet the setting criteria, the need for changing the designated setting will be addressed as part of the environmental analysis process This would include evaluation of factors such as activity extent, duration of impact, season of operation, sight or sound impacts and feasibility of rehabilitation.

Following are the categories of Standards and Guidelines and Management Area descriptions

CIVIL RIGHTS

Goal

To provide all persons equal opportunity regardless of race, color, creed, sex, marital status, age, handicap, religion, or national origin

Standards and Guidelines

1 **Barriers.** Manage the Forest to minimize social and administrative barriers to its use

2 **Affirmative Action.** Maintain and implement an affirmative action plan for hiring, supervisory, and contracting procedures.

3 **Employing the Handicapped.** Actively pursue the employment of the handicapped and ensure that the needs of the handicapped are considered in the design of Forest facilities

4 **Compliance Reviews.** Conduct compliance reviews as required by Title VI of the Civil Rights Act of 1964, within standards established by the Forest Service.

5 **Informing the Public.** Inform the general public, including minorities and the underprivileged, of benefits they are eligible to receive from Forest programs Techniques and the media best suited to increase awareness and participation will be used

6 **Ceded Lands.** *Consider and appropriately provide for the ceded land rights and privileges of* the Walla Walla, Cayuse, Umatilla, and Nez Perce Indian Tribes, under the treaties of 1855 in all Forest activities *

7. **Access.** Provide all Native American Indians access to sites, use and possession of sacred objects, and their freedom to worship through ceremonial and traditional rights as specified in the American Indian Religious Freedom Act (P. L 95-341). Appropriate management consideration of these areas will be coordinated with the leaders of the Nez Perce Tribe, and the Confederated Tribes of the Umatilla Indian Reservation, the Northern Paiute Tribe, and the Shoshone Tribe.

8 **Coordination.** Coordinate with American Indians whenever a site that is sacred to any Native American group may be affected by management activities.

9. **Site Protection.** Meet the standards of 36 CFR 296.7. If an activity of the agency will harm or destroy a prehistoric site, the appropriate Indian tribe must be notified at least 30 days before.

10. Complete the Section 106 process (of the National Historic Preservation Act) for every potentially impacting Forest Service undertaking This includes notification of interested Native American groups and tribes (36 CFR 800.1 (i) III

CULTURAL RESOURCES

Goal

To provide for the identification, protection, preservation, enhancement and interpretation of prehistoric and historic sites, buildings, objects, and antiquities of local, regional or National significance so as to preserve their historical, cultural, and scientific values for the benefit of the public.

Standards and Guidelines

1 **Overview** Maintain a Forest-wide cultural resources overview that summarizes and compiles known cultural resource information

2 **Research Design** Maintain a Forest research design to guide cultural resource surveys, establish site significance, and establish priorities for scientific investigation and opportunities for interpretation

*Certain rights and privileges are afforded members of the Nez Perce and the Umatilla Confederated Indian Tribes by virtue of the treaties of 1855 These treaties resulted in cession by the Indians to the United States of a large territory which includes approximately two-thirds of what is now the Wallowa-Whitman National Forest The treaties provide that the Indians will continue to have the rights of taking fish in streams running through and bordering the reservations and at all other usual and accustomed stations in common with other citizens of the United States and of erecting suitable buildings for fish curing, the privilege of hunting, gathering roots and berries, and pasturing stock on unclaimed lands These rights will be considered through the management of appropriate resources such as fish, wildlife, and riparian areas

3 **Inventory** Conduct Forest-wide cultural resource inventories (survey and site recordation) according to strategies and consultation procedures established on the Forest. Emphasize areas where ground disturbing activities are planned, to ensure discovery of all reasonably locatable cultural resources Inventories of other areas (e g , wilderness and National Recreation Area) will be accomplished as needed to protect resources in high use areas. These inventories will be designed and supervised by a cultural resource professional.

4 **Evaluation** Evaluate cultural resources that may be affected by project activities Evaluate against the criteria for eligibility to the National Register of Historic Places Develop a plan to evaluate all other cultural resources by theme groups, agreements, or other cost-effective means as Forest-wide inventory nears completion.

5 **Nomination** Nominate cultural resources that meet the appropriate criteria to the National Register of Historic Places Nominations will be scheduled incidentally until completion of the Forest-wide inventory of cultural resources.

6 **Protection.** Protect the resources considered eligible for the National Register of Historic Places by making reasonable efforts to avoid adverse impacts to the resources or develop a procedure to conserve the values through proper scientific methods and study

7 Consider the effects of all Forest Service undertakings on significant cultural resources and avoid or mitigate any adverse affects.

8. Protect eligible cultural resources from human depredation and natural destruction Protection plans may include physical protection such as fences and barriers, scientific study and collection, patrol and site monitoring, proper use or removal of signs, maintaining site anonymity, and gaining public understanding and support through education.

9 Protect and maintain eligible historic sites and structures based on an analysis of utility, interpretive value, and public interest, existing site or area allocation, funding sources, existing agreements, etc

10. **Resource Enhancement** Interpret suitable cultural resource properties for the recreational use and educational benefit of the general public. The measure of suitability should be based on accessibility to the public, with other resource management activities within or adjacent to the area, thematic representation, and value to public groups. Interpretive service and facilities should be compatible with the nature, qualities, and integrity of the cultural sites selected for enhancement Preferred methods include brochures, signs, and self-guided tours Handicapped access to interpreted sites will be provided wherever practicable.

11 Provide opportunities for scholarly/scientific use of designated historic and prehistoric sites, after coordinating selection of appropriate prehistoric sites with the relevant Native American groups This may require "banking" of sites for future use, processing of antiquities permits for testing, and excavation of sites by qualified professionals

12 Protect, enhance, and interpret both archaeological and historic resources, for the public benefit and knowledge, insofar as it is compatible with protection, in accordance with PL 94-199, the act establishing the Hells Canyon National Recreation Area

13 **Conflicts with Other Activities.** When other resource management activities conflict with the protection and management of cultural resource properties, the sites will be evaluated to determine their significance Depending on the nature of the project, the activity may be redesigned to avoid damage or disturbance to a significant site, or damage otherwise mitigat-

ed In instances where avoidance is not possible, the value of the property may be conserved through a professionally-acceptable data recovery program

14 **Coordination** Coordinate management of cultural resources with other agencies including the State Historic Preservation Offices and the Advisory Council on Historic Preservation, as required by Federal and State historic preservation laws and regulations

15. Management of traditional religious sites will be coordinated with American Indian groups.

16. Present information about planned project activities to American Indian groups for coordination about effects on traditional religious sites

17 **Site Developing.** Develop cultural resources for educational, scientific, or recreational purposes including interpretation, as long as the integrity of the resource is maintained where appropriate.

18 Ensure that cultural resource properties and their records are protected to prevent unauthorized uses and degradation.

19 **Monitoring** Monitor public use of cultural properties to prevent degradation or as specified in a management plan for the property

SOILS

Goal

To maintain or enhance soil productivity.

Standards and Guidelines

1. **Conflicts with Other Uses.** Give maintenance of soil productivity and stability priority over uses described or implied in all other management direction, standards, or guidelines. Exceptions may occur for such things as campgrounds or transportation facilities when it is determined, through environmental analysis, to be in the public interest.

2. **Protection.** Minimize detrimental soil conditions with total acreage detrimentally impacted not to exceed 20 percent of the total acreage within the activity area including landings and system roads. Where detrimental conditions (see glossary) affect 20 percent or more of the activity area, restoration treatments will be considered. Detrimental soil conditions include compaction, puddling, displacement, and severe burning

3 Give special consideration to scablands or other lands having shallow soils during project analysis Such analysis will especially consider the fragile nature of the soils involved and, as necessary, provide protection and other mitigation measures.

4. Use approved skid trails, logging over snow or frozen ground, or some equivalent system for limiting the impact and areal extent of skid trails and landings and to prevent cumulative increases from multiple entries in tractor logging areas.

5. Re-establish vegetation following wild fire or management activities where necessary to prevent excessive erosion.

WATERSHED, (INCLUDING RIPARIAN ECOSYSTEMS, STREAMSIDE MANAGEMENT UNITS, FLOODPLAINS, WETLANDS, WATER RIGHTS, AND FISH HABITAT)

Goal

To maintain or enhance the unique and valuable characteristics of riparian areas and to maintain or improve water quality, streamflows, wildlife habitat, and fish habitat Design and conduct all management activities in all streamside management units to maintain or improve water quality and associated beneficial uses in SMU Class I and II streams. Management indicator species for riparian habitat include steelhead and resident trout

Standards and Guidelines

1. **Conflicts With Other Uses.** Give management and enhancement of water quality, protection of watercourses and streamside management units, and fish habitat priority over uses described or implied in all other management standards or guidelines

2 **Water Quality Standards and BMP's** Meet Water Quality Standards for waters of the States of Oregon (Oregon Administrative Rules, Chapter 340-41) and Idaho through planning, application, and monitoring of Best Management Practices (BMP's) in conformance with the Clean Water Act, regulations, and federal guidance issued thereto

3 Use the following process in cooperation with the States of Oregon and Idaho

   a Select and design BMP's based on site-specific conditions, technical, economic, and institutional feasibility, and the water quality standards for those waters potentially impacted (See Watershed Management Practices Guide for Achieving Soil and Water Objectives, Wallowa-Whitman NF)

   b Implement and enforce BMP's

   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 BMP's do not perform as expected

   f Adjust BMP design standards and application when it is found that beneficial uses are not being protected and water quality standards are not being achieved to the desired level. Evaluate the appropriateness of water quality criteria for reasonably assuring protection of beneficial uses Where appropriate, consider recommending adjustment of water quality standards

4 **State Water Quality Management Plans.** Implement (Oregon) State Water Quality Management Plans on lands administered by the USDA Forest Service as described in Memoranda of Understanding between The Oregon Department of Environmental Quality and U S Department of Agriculture, Forest Service (2/12/79 and 12/7/82), and "Attachments A and B" referred to in this MOU (Implementation Plan for Water Quality Planning on National Forest lands in the Pacific Northwest 12/78 and Best Management Practices for Range and Grazing Activities on Federal Lands, respectively)

5. **Mitigation.** Mitigate negative impacts causing reduction in water quality to return water quality to previous levels in as short a time as possible (It is recognized that short-term reductions in water quality may result from some activities For example, turbidity may increase for several days following bridge or culvert installation)

6 **Timber Management.** Harvest will not occur, on a scheduled basis, within 100 feet of the high water line on either side of Class I and II streams Harvest may occur along these streams, for other than timber management purposes, when doing so would maintain or enhance water quality, fish habitat, and wildlife habitat Along Class III and IV streams, manage tree stands to maintain the vegetative characteristics needed for water quality protection or improvement and to maintain or enhance stream channel stability Only those treatments that maintain or enhance water and riparian quality and are consistent with riparian management and fish habitat goals will be applied Actual harvest levels will be determined on a site-specific basis and will be governed by needs to protect and improve the riparian-dependent resources

7 **Stream Temperatures.** Prevent measurable temperature increases in Class I Streams (less than a 0 5 degree Fahrenheit change). Temperature increases on SMU Class II (and fish-bearing SMU Class III) streams will be limited to the criteria in State standards. Temperatures on other streams may be increased only to the extent that water quality goals on downstream, fish-bearing streams will still be met Normally stream shade management on Class III streams will differ little from treatment on Class II streams

8. **Channel Stability.** Maintain natural large woody debris, plus trees needed for a future supply, to protect or enhance stream channel and bank structure, enhance water quality, and provide structural fish habitat within all SMU classes Quantities and sizes will be determined on a case-by-case basis

9 Enhance streambank vegetation and/or large woody debris where it can be effective in improving channel stability or fish habitat

10 Give areas in which water quality or channel stability are being adversely impacted high priority for treatment to minimize the effects of the impact or to correct the impacting activity

11. **Conduct Cumulative Effects Analyses.** When project scoping identifies an issue or concern regarding the cumulative effects of activities on water quality, stream channels, or fish habitat a cumulative effects assessment of these effects will be made This will include land in all ownerships in the watershed Activities on National Forest System lands in these watersheds should be dispersed in time and space to the extent practicable, and at least to the extent necessary to meet management requirements On intermingled ownerships, coordinate scheduling efforts to the extent practicable

NOTE· Individual, general Best Management Practices are described in *General Water Quality Best Management Practices*, Pacific Northwest Region, 11/88 This provides guidance but is not a direction document Also included in this document is a description of the process and limitations and use of these BMP's. Each BMP listed includes the Title, Objectives, Explanation, Implementation and Responsibility, and Monitoring Evaluations of ability to implement and estimate effectiveness are made at the project level Not all of the general BMP's listed will normally apply to a given project, and there may be specific BMP's which are not represented by a general BMP in this document The sensitivity of the project determines whether the site-specific BMP prescriptions are included in the environmental assessment, environmental impact statement or in the sale/project plan, or in the analysis files For a more complete explanation of the above, refer to Appendix O in the FEIS, "Best Management Practices."

12 Alter watershed conditions only to the extent that aquatic and riparian goals will still be met and other valid water uses, such as irrigation, will not be adversely affected When planned projects are likely to adversely affect watershed conditions, a hydrologic analysis will be conducted considering past, present, and future activities If the results of this analysis indicate that the proposed project would adversely affect watershed condition, the project will be altered This may include such things as deleting or rearranging harvest units in timber sales, selecting different silvicultural prescriptions, or delaying activities for one or more decades

13 **Groundwater.** All projects or activities (including but not limited to pesticide application, fertilizer application, or storage of potentially hazardous volumes of fuels and other chemicals on National Forest System land) with the potential to adversely affect surface or ground waters, will include constraints and/or mitigation measures designed to prevent contamination, and will include a plan for dealing with accidental spills

14 **Floodplains.** Address in all project environmental analyses the presence of, and potential impacts, to any floodplain within the project area.

15 Invest in major structures, roads, or other facilities within floodplains only if no feasible alternative site outside the floodplain exists

16 Permit short-term adverse impacts on floodplains only in conjunction with specific mitigation measures designed to minimize the impacts Where activities adversely affect natural floodplains, the floodplains will be restored, to the extent practicable, shortly after the activity has ceased.

17 **Wetlands** Address in all project environmental analyses the presence of, and potential impacts to, any wetlands within the project area Particular attention will be paid to protection of springs during road location, timber sale plans, and range allotment management plans. Adverse impacts to wetlands will be avoided or mitigated

18 **Roads and Skid Trails.** Do not construct roads through the length of riparian areas Roads crossing riparian areas will not alter stream or ground water flow characteristics to a degree which will impact the riparian characteristics

19 Design and maintain road drainage to prevent the influx of significant amounts of road sediment runoff into streamcourses

20 Manage roads currently located in riparian areas or streamside management units to minimize impacts to water quality and wildlife habitat In some instances, this will require higher levels of maintenance, road surfacing, or drainage than would normally be justified on the basis of road use alone Roads may be closed, obliterated, and rehabilitated when it is determined, through an environmental analysis considering all resources, to be the best alternative.

21 Locate skid trails and roads to avoid paralleling stream channels in streamside management units Log landings will not be placed in riparian areas Skidding logs down streamcourses or ephemeral draws will not occur

22 Avoid the use of heavy equipment (such as crawler tractors and skidders) within riparian ecosystems When such use is unavoidable (as in the construction of bridges or other stream crossing devices or during the construction of stream channel improvements) the activity will include mitigation measures designed to minimize adverse effects on the riparian zone and downstream values Ground disturbing activities will normally be limited to 10 percent exposed soil or less within riparian ecosystems

23. Manage recreation activities to prevent site deterioration within riparian areas. Trails will be designed and maintained to minimize riparian impacts

24 **Fuel Treatment.** Remove slash created as the result of an activity within the normal high water zone of Class I and II streams unless needed for soil protection or other purposes Slash removal from other streams may be required where resource damage would otherwise result Slash piles normally will not be located within riparian areas

25 **Sewage Disposal.** Dispose of sewage effluent from campgrounds, administrative sites, and other developed areas in a manner which will prevent the contamination of surface or subsurface water. Sewage disposal practices will comply with State of Oregon requirements for sites in Oregon and State of Idaho requirements for sites in Idaho

26 **Mining Activities.** Protect watershed values to the fullest extent possible under existing laws in evaluating and developing mineral operating plans

27 When areas within 100 feet of Class I, II, or III streams or other perennial water bodies are disturbed by mining activities, they shall later be restored by the operator to equal or comparable condition. This restoration will occur whenever the operator is finished with an area that is large enough to logically restore An inventory of existing conditions should be performed by Forest Service before approval of the operating plan is given. If this is not possible, then the inventory shall be performed before mining operations begin, with an amendment made to the operating plan This inventory will determine

(a) Densities of trees, riparian brush (alders, willows, etc), nonriparian brush, and herbaceous vegetation.

(b) Fish habitat suitability (expressed as percent of habitat optimum). The inventory method used will be Cow-Fish 1/ or a similar one

28 Require the mining operator, as part of the restoration process to

(a) Plant trees and riparian brush at spacings that will achieve the original densities of these types This spacing will at least be equal to what existed originally, except when the original densities were too great for good growth

(b) Plant grass to achieve a density equal to or greater than the total of the original herbaceous plus nonriparian brush types--greater densities may be required if needed for erosion control

29 Require the mining operator, as part of the restoration process, to (where appropriate):

(a) Construct a temporary fence to exclude livestock from the planted area if needed for protection from livestock grazing.

(b) Place whole trees, construct habitat enhancement structures, or perform comparable improvements within the stream channel at a density required to bring the fish habitat suitability index up to the same value that existed before the mining operations began This is needed if instream work has disrupted the fish habitat suitability index by five or more percentage units.

1/Lloyd, James R Cow-Fish Habitat Capability Model USDA Forest Service, Northern Region, Box 7669, Missoula, Montana 59807 June 1986

The estimated costs of the above operator requirements shall be incorporated into the value of the operator performance bond

30 Evaluate and restore all other surface areas impacted by mining as in the previous paragraphs except for those items dealing with fish habitat

31 **Water Rights and Instream Flows** File for water rights in accord with State law and FSM 2500

32 Protect instream flow on National Forest System lands through critical analysis (via NEPA) of proposed water uses, diversions, and transmission applications and renewal of permits Protection may be achieved through filing protests with States where applications are made that adversely affect National Forest resources, asserting claims for this water under Federal or State laws where applicable, inserting protection measures into special use permits, or reaching formal agreements over use Purchase of water rights and impoundments are other means for reducing these impacts (Also see Standards and Guidelines for Livestock Grazing and Wildlife).

MUNICIPAL WATERSHEDS

Goal

All domestic supply watersheds will be managed to maintain or improve water quality and streamflows so that with adequate treatment by the purveyor a safe and satisfactory water supply will result

Standards and Guidelines Applicable to All Domestic Supply Watersheds

1 **Logging and Transportation Systems.** Design and develop logging and transportation systems to protect water quality

2 **Project Analysis.** Site-specific analysis under the Forest Service NEPA process will be completed for all projects and activities proposed within the watersheds having the potential to affect water quantity or quality This analysis will include consultation with the city served by the watershed In the case of vegetation manipulation, this analysis may include evaluation of opportunities for improving streamflow volume and timing

3 **Monitoring.** Monitor activities having the potential to affect water quality to determine if objectives are met If not, on-site corrective measures within the municipal watershed, will be immediately initiated by the Forest Service.

4 **Use of Chemicals.** Use fertilizers and pesticides (chemical or biological) within the watersheds only in emergency situations, and then only following close coordination with the City.

5 Avoid use of fire retardants within domestic supply watersheds when other effective measures of fire control are available When the use of fire retardants within domestic supply watersheds is necessary, all reasonable efforts will be made to avoid direct application into live streams Only fertilizer-based retardants will be used

6 **Fire Camps and Timber Sale Operations.** Locate fire camps only outside of municipal supply watersheds When timber sales or other operations are located within a municipal watershed, wastes (including domestic, human, oil from machinery, etc) will be transported outside the watershed for disposal

7 **Other Practices.** Where practices other than those specified in management area direction better serve the multi-resource objectives of the watersheds, and these practices will serve to protect or enhance water quality, quantity, or timing, these practices may be used

Standards and Guidelines Specific to the Baker City Watershed

8 **Secretary of Agriculture Agreement.** Comply with the 1912 Cooperative Agreement between the Secretary of Agriculture and the City of Baker as supplemented. The agreement between the City of Baker and the Secretary of Agriculture requires that use of land within the domestic supply watershed will not be permitted without the approval of the City of Baker except for measures necessary for the proper protection and care of the forests. These measures include timber management activities which are not detrimental to the water supply, construction activities consistent with the objectives of the agreement and rights-of-way acquired under Acts of Congress

9. **Roads.** Analyze the existing road system in Elk Creek drainage at the project level to determine future use

10. Construct timber harvest roads to minimize impacts to water quality This will include prompt seeding of stabilizing vegetation on cuts and fills and upon closure of the roads, stabilization seeding on the roadbed, unless otherwise agreed to with the City of Baker Selected roads may be gated to provide access for wildfire control and other administrative purposes.

11. Marble Creek Road (Road 6510) will normally remain open to public use

12. **Monitoring.** Monitor all activities having the potential to affect water quality to determine if objectives are met

13 **Livestock.** Limit grazing of domestic livestock to pack stock associated with recreation. Use of recreational livestock will be limited to Forest Service trails

14 **Additional Development.** Approve proposals for development, expansion and improvement of domestic supply facilities subject to site-specific analysis

Standards and Guidelines Specific to the La Grande Watershed

15 **Secretary of Agriculture Agreement.** Comply with the 1935 Cooperative Agreement between the Secretary of Agriculture and the City of La Grande as supplemented, until such time as the agreement is amended or terminated under the stipulations found therein. The agreement with the City of La Grande includes the following requirements.

(1) That before entering into any agreement for the cutting of timber or removal of other forest products from National Forest lands within the area, the officials of the City of La Grande will be consulted and full consideration will be given to any requirements the City of La Grande may desire to impose as necessary for the safeguarding of the water supply.

(2) That in permitting the use of said lands for timber cutting or other purposes, full consideration shall be given to the preservation of the volume and purity of the city water supply, and if the proper State or Federal agencies shall determine, after due study and investigation, that the city water supply is being or will be diminished, contaminated or polluted through permitted operations upon said lands, and there is no other more practicable remedy for the situation, the Secretary, so far as he has the legal authority

to do so, will cause such permitted operations to be restricted, modified or discontinued.

(3) Grazing of livestock on National Forest lands in the watershed will not be authorized by the Forest Service except with the consent of the officials of the City of La Grande. Any fencing or other improvements found necessary to effectively exclude livestock from the watershed or to aid in safeguarding the water supply will be constructed and maintained by the City under special use permit to be issued by the Forest Supervisor.

(4) So far as practicable with the means at his disposal, the Secretary of Agriculture will extend and improve the forests upon these lands by seeding and planting, and by the most approved methods of silviculture and forest management

(5) The Forest Service will administer and protect the area in connection with adjoining National Forest lands. Should the City of La Grande desire any special measures not provided by the regular Forest Service administration, they may be obtained at the expense of the City of La Grande by the appointment of additional employees to be appointed by and to be directly responsible to the Forest Supervisor of the Whitman National Forest, but their compensation will be paid by the said City at the same rate as men employed by the Forest Service on similar duties

16 **Roads.** Manage the watershed to provide water of a quality which is consistent with current levels of purity. Activities will be designed with the objective to maintain or improve water quality and streamflows Maintaining the water quality and quantity will be the major factors in designing and developing logging and transportation systems

17. **Project Analysis.** All projects and activities proposed within the watershed, having the potential to affect water quantity or quality, will receive site-specific environmental analysis under the Forest Service NEPA process This analysis will include consultation with the City and consideration of any constraints or mitigation measures the city proposes

18. **Monitoring.** Monitor activities having the potential to affect water quality and quantity to determine if objectives are met.

19. **Access.** Continue closure to camping of the area immediately adjacent to the reservoir and domestic supply intakes, consisting of approximately 3,500 acres. If the City desires to further limit use and access to the watershed, a written request to the Forest Service will be acted upon under the Forest Service NEPA process.

20 Manage roads within the watershed to limit public access, provide for fire prevention and suppression, to facilitate Forest management by the USDA Forest Service, and administration by the City

21. **Access.** Close the watershed to off-road vehicle use except for over-snow vehicles operating on 18 or more inches of snow in designated areas

22 Keep the entire watershed open to nonmotorized types of dispersed recreation including hiking and hunting.

23. Continue closure of the Beaver Creek Reservoir and intakes to fishing, swimming, wading or other activities which include substantial contact with the water

24. Continue access by the City to the reservoir area and other facilities as has been established or as approved by agreement with the Forest Service in order to maintain, repair, replace, or

otherwise maintain the caretaker facility, reservoir, intakes, pipelines, and other water facility structures.

Standards and Guidelines Specific to the Sumpter Watershed

25 **Roads.** Keep Road 7300900 (McCully Fork Road) closed to public motorized vehicle use within the watershed but open to administrative use by the Forest Service and the city officials.

AIR QUALITY

Goal

To maintain air quality at a level that is adequate for the protection and use of National Forest resources, and that meets or exceeds applicable Federal and State standards and regulations

Standards and Guidelines

1 **Wilderness.** Minimize the impact of prescribed burning on smoke-sensitive areas as designated in State smoke management plans and meet the air quality related requirements of Federal Class I areas (Also see Memorandum of Understanding between USDA Forest Service and Idaho Department of Health and Welfare dated February 5, 1988.)

2. Manage visibility factors to the extent possible to keep them within limits of acceptable change (L.A C.)

3 Manage areas designated as wilderness by the Oregon Wilderness Act of 1984 as Class II areas until formal studies are completed.

4 **Prescribed Burning.** Use the following prescribed burning techniques, where appropriate, to minimize smoke emissions and assure that emission objectives are met·

(a) *Avoid burning when air stagnation advisories are in effect, during pollution episodes,* or when temperature inversions exist

(b) Design burning activities to utilize climatic conditions which favor rapid smoke dispersion.

(c) Burn under favorable moisture conditions, utilizing guides developed by Pacific Northwest Forest Fire Science Laboratory

(d) Accomplish mop-up quickly to reduce residual smoke

NOTE· Mandatory Class I areas were established by the Environmental Protection Agency on November 30, 1979. On the Wallowa-Whitman Class I areas include the Eagle Cap and Hells Canyon Wildernesses as they existed on that date. No intrusions of smoke from prescribed burning into Class I areas will occur during the period between July 4 and Labor Day. By law, the Hells Canyon National Recreation Area cannot be designated for Management below Class II, although State Implementation Plans may specify that it be managed as Class I. Smoke from all wildfires and from naturally-occurring prescribed fires within wilderness areas will not be considered a violation of class I air quality standards.

(e) Design ignition method and firing technique to aid dispersion

(f) Use smoke models to predict impacts including plume trajectory

(g) Use rake-type dozer blades to keep soil out of piles and windrows

(h) Keep fire from spreading into decks of cull logs

DIVERSITY

Goal

Maintain native and desirable introduced or historic plant and animal species and communities Provide for all seral stages of terrestrial and aquatic plant associations in a distribution and abundance to accomplish this goal Maintain or enhance ecosystem function to provide for long-term integrity and productivity of biological communities.

Standards and Guidelines

1. **Project Analysis.** Develop, during project planning, site-specific management prescriptions the goals for diversity and ecosystem function

2 **Vegetation Manipulation.** Provide and maintain developing an ecologically sound distribution and abundance of plant and animal communities and species at the forest stand, basin, and Forest level. This distribution should contribute to the goal of maintaining all native and desirable introduced species and communities (see discussion in EIS Appendix G).

3 Base tree species used in planting harvest units on the potential of the site as indicated by plant associations Consideration should be given to regenerating and maintaining a mixture of tree species, where appropriate for the site

4 Retain, through precommercial and commercial thinning, a diversity of tree species based on site potential

5 Allow for all natural species to function following vegetation manipulation. None should be eliminated from the site

THREATENED, ENDANGERED AND SENSITIVE SPECIES

Goal

To protect and manage habitat for the perpetuation and recovery of plants and animals which are listed as threatened, endangered, or sensitive. (A list of these species can be found in the Forest Plan EIS) To assure that management activities do not jeopardize the continued existence of sensitive species or result in adverse modification of their essential habitat

Standards and Guidelines

1 **Reviews/Biological Evaluations.** Review all actions and programs, authorized, funded, or carried out by the Forest Service, to determine their potential effects on threatened, endan-

gered, and sensitive species. Conduct these reviews, including biological evaluations, per direction in FSM 2670 and appropriate R-6 manual supplements

2 Prepare a biological evaluation during the environmental analysis of each project to determine possible effects of the proposed activity on threatened, endangered, and sensitive species

3. **Other Activities.** Restrict or prohibit other activities (e g , off road vehicles impacting plants or habitats) and monitor activities where necessary to protect threatened, endangered, or sensitive species

4. **Cooperation With Other Agencies.** Cooperate with the States of Oregon, Washington, and Idaho in all aspects of sensitive plant management under the auspices of the Master Memoranda of Understanding The Oregon Natural Heritage Data Base and the Washington Natural Heritage Program will be contacted regarding sensitive species information

5. Cooperate with the U.S Fish and Wildlife Service, the States of Oregon, Washington, and Idaho and the Oregon Natural Heritage Data Base and the Washington Natural Heritage Program in the development of Species Management Guides for sensitive species adversely affected by standard management practices

6. Cooperate with the same agencies/organizations in the development and implementation of recovery plans for threatened and endangered species Where such plans conflict with other management direction, the recovery plans will take precedence

7. **Inventory** Inventory, by 1991, areas on the Forest identified in any existing recovery plans as having high potential as habitat for threatened or endangered species will be inventoried by 1991, or within three years of the publication of such plan Features of habitat necessary to support the objective number of individuals will be identified Corrective measures to avoid possible adverse effects on recovery of populations will be implemented

8. **Collection.** Allow collection of threatened, endangered, and sensitive species only under permit in accordance with FSM 2673.

9 **Data Bases.** Maintain the Forest data base for threatened, endangered, or sensitive plant sitings and inventory information at the Supervisor's Office in Baker. In addition, all sitings will be documented and provided to the Natural Heritage Program managers and to the U.S. Fish and Wildlife Service as appropriate

10 **Monitoring.** Monitor known populations of sensitive species and their habitats in accordance with the Forest Monitoring Plan.

SPECIAL USES

Goal

To provide for the use and occupancy of the National Forest by private individuals or Federal, State, and local governments when such use is consistent with Forest management objectives and is in the public interest.

Standards and Guidelines

1 **Private Development.** Make National Forest land available for support facilities for private development when suitable private land is not available for such needs

2 **Hydrometeorological Sites.** Manage and protect snow survey and other hydrometeorological sites in accord with the Memorandum of Understanding between the Forest Service and the Soil Conservation Service

3 **Recreation Residences.** Recreation residence permits will neither be issued for currently unoccupied lots nor will they be issued for lots which become vacant during the period this plan is in effect Current recreation residences are under permit through 1999. Extensions beyond that time will be considered in the next Forest Land and Resource Management Plan.

4 **Crop Production.** Deny permits for crop production unless granting such permits is clearly in the public interest Existing permits which are not within this intent will be terminated as the opportunity arises

5 **Outfitters and Guides.** Authorize and permit outfitter and guide operations where FSM 2720 criteria are met and when supported by an environmental analysis.

6 **Priority.** Give the needs of the general public priority over those of the applicant in considering special use applications

7. **Permit Process.** Special use evaluation, permit issuance, and administration will be in accordance with Forest Service Manual 2700

ENERGY RESOURCES (OIL, GAS, GEOTHERMAL) AND POWER TRANSMISSION FACILITIES

Goal

To provide for exploration, development, and production of energy resources on the Forest in coordination with other resource values and environmental considerations To encourage and assist, whenever possible, in the continuation of regional geologic mapping and mineral resource studies on the Forest, in cooperation with other natural resource agencies Also to provide for utility facilities on National Forest lands.

Standards and Guidelines

1. **Mineral Leasing.** Recommend, based on environmental analyses, minerals leasing in management areas where the activity is compatible with management area goals and where mitigation will provide a reasonable degree of compatibility.

2 Apply appropriate special stipulations to leases when necessary to protect surface resources

3 In accordance with interagency agreements, post-leasing activity will include joint review by the Forest Service and Bureau of Land Management of detailed operating plans concerning activities in a site-specific area

4 **Hydropower.** Recognize existing water power withdrawals to the extent required by law.

5 Encourage hydroelectric production unless precluded or further limited by specific management area direction Planning, construction, and operation of hydroelectric projects will be

consistent with the Federal Power Act and requirements of the Federal Energy Regulatory Commission.

6 **Utility Corridors** When applications for rights-of-way for utilities are received, the Forest's first priority will be to utilize residual capacity in existing rights-of-way

Remove utility facilities which are presently in avoidance or exclusion areas as it becomes practical to do so

MINERALS

Goal

To provide for exploration, development, and production of a variety of minerals on the Forest in coordination with other resource objectives, environmental considerations and mining laws To encourage and assist, whenever possible, the continuation of regional geologic mapping and mineral resource studies on the Forest in cooperation with other natural resource agencies.

Standards and Guidelines

1 **Access.** Permit claimants reasonable access to their claims as specified in United States Mining Laws.

2 **Operating Plans.** Require operating plans, in accordance with 36 CFR 228 Subpart A, when operations are proposed which involve significant disturbance of the surface resources.

3 Operating plans will include reasonable and operationally feasible requirements to minimize adverse environmental impacts on surface resources

4. Analyze operating plan proposals and alternatives, including alternatives for access, reclamation, and mitigation, using the Forest Service NEPA process.

5. **Reclamation.** Develop reclamation standards using an interdisciplinary process to ensure lands are in productive condition to the extent reasonable and operationally feasible Reasonable opportunities to enhance other resources will be considered Concurrent reclamation will be stressed. Reclamation bonds will be based on actual reclamation costs and formulated using technical and other resource input (Also see Standards and Guidelines for Watershed)

6 **Withdrawals.** Review all existing withdrawals by 1991 in accord with Section 204(1) of the Federal Land Policy and Management Act (FLPMA) of 1976, except as provided otherwise by law.

7 Recommend areas with minerals potential for mineral withdrawal only when mitigation measures would not adequately protect other resource values which are of greater public benefit.

8 Conform with Section 204 of FLPMA in withdrawals from entry under general mining laws.

9 **Common Minerals.** Give priority to use of currently developed common mineral (natural gravel and hard rock) material sources over undeveloped sources Exceptions will be made when existing sources are unable to economically supply the quality and quantity of material needed or when conflicts with other resource uses are found to be unacceptable.

10. Development of mineral material sites will be done in accordance with 36 CFR 228, Subpart C

TRANSPORTATION SYSTEM

Goal

To provide safe, efficient, environmentally sound access for the movement of people and materials involved in the use and management of the National Forest lands

Standards and Guidelines

1 **Planning and Development.** Plan and develop the transportation system to serve long-term multiple resource needs rather than short-term individual project proposals.

2 Provide the minimum system necessary for the specific activities authorized under the management area direction.

3 Where appropriate, develop the system in stages as various resource activities occur.

4. Design, construct, operate and maintain roads and trails of the Forest transportation system based on resource objectives and intended uses, considering safety, total cost of transportation, and impacts on the land

5 All road designs and management actions will be based on specific road management objectives that document the need for and planned uses of a road. These objectives will state whether or not there is a need for the road to be open for use by the public or others between project activities

6 Manage road and trail uses to protect resources, accommodate or restrict conflicting uses, provide reasonable safety, and prevent damage to the facilities Roads and trails may be made available for different user groups at different times, or otherwise restricted through the Forest Travel Management Plan Closed roads may be converted to other uses such as special purpose trails

7 **Protecting Water Quality.** Protect water quality in all aspects of road and trail system management Use practices which will avoid or minimize sediment production from new road construction and will correct existing sediment sources

8 **Safety.** Conform with Forest Service manuals and handbooks regarding adequacy and safety of the transportation system

9 **Access Management.** Accept or encourage access to historical dispersed recreation sites by standard vehicles when this is compatible with management area direction and overall road management objectives Some recreation traffic may be discouraged or eliminated on logging roads during timber hauling operations

10 If a road is not at an adequate and safe standard for the traffic expected to use it, reconstruct the road or restrict traffic to a level for which the existing road is adequate

11. Manage traffic as needed due to structural limitations of the road or limitations imposed by other resources, such as wildlife or recreation

12 **Trails and Helispots.** Construct and maintain trails to provide a recreation experience as well as a transportation route Provide trails to meet specific management objectives and to achieve prescribed difficulty levels

13 Trails and helispots may be constructed in all management areas unless excluded or constrained by management area direction.

14 Manage National Recreation Trails according to the direction in their individual management plans

15 Emphasize trail retention, maintenance and improvement (and additions where there is a valid need) in Management Areas 4-11,13, 15 and 16

16 Evaluate the need for trails within the other management areas and perpetuate, or move to a new location, those trails which will serve a continuing purpose and which appear likely to be used 1/

17 **Open-Road Density** Meet the specific open-road density guidelines found in the direction for individual management areas unless a specific exception is determined, through the Forest Service NEPA process, to be needed to meet management objectives 2/ 3/

1/ The following trails appear likely to be retained
- trails in Joseph Canyon,
- much of the Lake Fork Trail System,
- trails that lead into the Elkhorn Ridge area and the North Fork John Day Wilderness,
- most of the Bear Creek Trail accessing the Eagle Cap Wilderness from the north, and
- the Five Points Trail on the La Grande Ranger District

This direction provides for retaining approximately 50 miles of trail in Management Areas 1,3, & 18 leaving a total of approximately 124 miles that may be eliminated by project activities

2/ Total road density (closed and open roads) is not restricted except as stated in the standards and guidelines for soils

3/ The method used for calculating open road densities is an important factor The average road density is calculated by dividing an area by the number of miles of open roads within that specific area If the area is too large, the average becomes meaningless, conversely, if the area is too small, the resulting figures may not provide useful information For the purpose of implementing this direction, open road density will normally be calculated on the basis of subwatersheds The area of each Management Area contained in each subwatershed will be calculated, and the open roads within that management area/subwatershed will also be calculated to determine the open road density The acreage and road mileage included in the calculation will include all acres (NF and private) within the major proclaimed boundaries of the National Forest, but will exclude private land acreage outside the major proclaimed boundaries "Islands" of proclaimed National Forest which are outside the major proclaimed boundaries will be included in the calculations if they are still under National Forest management Decisions to leave open road densities greater than the guidelines are expected be the exception rather than the rule

18 Implement open road density guidelines as opportunities arise. Normally this will be following a timber sale project, but may also include special projects aimed at reducing open road densities in key areas

19. Analyze projects which will require construction of new roads or which require opening old roads, with the intent of meeting specific management area road density guidelines during the activity If the analysis indicates that meeting these guidelines during project activity is important in meeting the resource management objectives, and if the project will require an open road density in excess of the guideline, then mitigation of the effects of adding open roads will take place where practical. Mitigation may include efforts such as closing other roads in the analysis area, scheduling projects and activities to minimize impacts, or managing timber sale activities so activity is limited to part of the sale at one time The practicability of mitigation will be analyzed and decisions documented as part of the project decision.

20 Although the open road densities prescribed for each management area will normally be sufficient for management purposes, the guidelines are not intended to place restrictions on emergency uses such as wildfire control, search and rescue, etc

21. **All-Terrain and Off-Road Vehicles.** Permit all-terrain vehicle (ATV) use and over-the-snow vehicle use on blocked or closed roads unless this use is found to be incompatible with resource management objectives. These types of uses are generally felt to be an acceptable form of recreation except where site specific analysis shows them to be incompatible due to resource management problems This determination will be made through the Forest Travel Management Plan

22 **Forest Access and Travel Management Plan.** A plan will be maintained identifying road, trail and off-road vehicle (ORV) restrictions for wildlife protection, recreation, and other purposes This travel plan will be consistent with management direction for individual management areas and with other standards and guidelines herein (See also standards and guidelines for Recreation)

23 **Road Obliteration.** Obliterate roads not needed for future management (as determined by resource management objectives) at the end of project use and return them to resource production based on management area direction Complete obliteration of roads within ten years after termination of the contracts, leases or permits.

24. Reestablish vegetative cover on obliterated roads by natural processes, where possible, or supplement by such means as scarifying, ditching, contouring, and seeding

25 **Special Areas.** Manage the Joseph Canyon Roadless Area (as described in Appendix C of the FEIS) so as to retain an "essentially roadless" character

26 Block or close to standard vehicles all new roads constructed within the Upper Five Points Creek drainage following project completion New logging roads will be closed to public use during all project activities Specific areas may be opened to the public for purposes of firewood removal for a period of 1-3 years following completion of a timber sale

FIRE AND FUELS MANAGEMENT

Goal

To provide well-planned and executed fire protection and fire use programs that are cost-efficient and responsive to land and resource management goals and objectives

Standards and Guidelines

(Also see Forest-wide standards and guidelines for air quality.)

1. **Wildfire Control Priorities.** Give wildfires that threaten life, private property, public safety, improvements, or investments the highest priority for aggressive suppression action.

2 **Escaped Fire Situation Analysis.** *Prepare an escaped fire situation analysis if a wildfire* escapes initial action and threatens to exceed established limits for individual management areas.

3 **Prescribed Fire.** In meeting the total resource objectives of Forest management, the role and potential of fire as an integral part of the forest and rangeland will be considered where it furthers the management objectives of the various management areas

4. Prepare burning plans in advance of ignitions for each prescribed fire The prescribed burning will conform to air quality guidelines. Burning plans will define what an escaped fire is, when it will be declared a wildfire, and when an escaped fire situation analysis will be prepared

5. Unplanned ignitions from both natural and human causes may be used for prescribed fires *outside of wilderness if a prescribed fire plan has been approved and a fire is burning within* prescription Exceptions will be noted for specific management areas.

6. **Fuel Treatment.** Use resource objectives to guide levels and methods of fuel treatment within each management area, using the most cost-efficient method

7 **Fire Prevention.** Emphasize the difference between unwanted human-caused fires and prescribed fires which help meet management objectives in fire prevention efforts.

8. Target cost-effective plans for the prevention of human-caused fires at specific risks determined by ongoing monitoring of current and recent fire reports

9 **Fire Detection.** Review the mix of aerial and ground detection activities periodically to maintain the most cost-efficient combination.

FUELWOOD

Goal

To provide fuelwood of all species as a renewable energy resource for personal and commercial uses

Standards and Guidelines

1 **Providing Fuelwood Opportunities.** Make fuelwood available to the public in a manner which is compatible with other resource values. The following will be considered

a Providing access to potential fuelwood or bringing the fuelwood to convenient points in timber sale or thinning areas through the utilization of appropriate timber sale contract clauses or the modification of fuels management prescriptions

b. Using commercial fuelwood contracts or personal use permits for slash disposal, thinning, and site preparation.

c Managing timber sales so that timber sale operators can be relieved of obligations in sale subdivisions as soon as possible in order to make the fuelwood within them available

d Opening certain slash areas to fuelwood gathering prior to traditional disposal

e Leaving slash as a fuelwood source for several seasons after it has been piled or rearranged to break the fuel continuity.

f Maintenance of adequate numbers and distribution of standing dead trees for snag-dependent wildlife species.

2 Consider season of year, access, and responsiveness to public needs when implementing a fuelwood program

3 **Controlling Use.** Cutting or removal of ponderosa pine wood for fuelwood will generally be prohibited. Exceptions will be by special permit or as specified in personal-use fuelwood permits

4 Control fuelwood cutting as necessary to meet resource objectives. Fuelwood cutting may be controlled by a variety of methods including signing, encouraging fuelwood cutters to cut in specific area, and closing some areas to cutting

RECREATION

Goal

In coordination with and awareness of recreational opportunities on other lands, provide a wide variety of recreation opportunities in an attractive setting, and make those opportunities available to all segments of society

Standards and Guidelines

1 **Recreation Opportunity Spectrum.** Provide a full range of recreation opportunities, except urban, as described in the Recreation Opportunity Spectrum (ROS) and outlined in the National Recreation Strategy

2 Provide for interpretation and environmental education as an important part of outdoor recreation in all ROS classes. Promote a better understanding of the long-term compatibility of people living in harmony with nature as well as our natural and cultural history resources.

3. Encourage innovation, creativity, and partnership arrangements will be in all ROS settings to establish and sustain a balanced range of recreational services and facilities that are responsive to changing recreation demands on the Wallowa-Whitman National Forest.

4 Meet the goals for setting and experience opportunities for each ROS class as outlined below.

Primitive. Timber harvest is not appropriate Access must be nonmotorized with high to moderate degrees of challenge and risk to the pedestrian or equestrian user through a matching variety of trailless areas and different levels of trails.* Site development scale is Level 1 or less.

Restrictions and controls on the user are not evident after entry Use densities of PAOT (persons at one time) per acre should range from 001 to 025 depending on the landscape's ability to absorb the sights and sounds of humans. Road management objectives are to prohibit use of any existing primitive roads by any motorized user No roads may be built. Any existing primitive roads will be regraded and/or revegetated to natural-appearing conditions. The compatible visual quality level is preservation Interpretation is through self-discovery, possibly augmented by books or guides, with no on-site facilities

Semiprimitive Nonmotorized Unscheduled timber harvest may occur for salvage of dead timber resulting from catastrophic events or to improve and maintain a healthy, attractive, semiprimitive setting No new roads may be built Motorized harvesting and mineral exploration should be done in the low public use season and in not more than half of any decade. All activities must meet "foreground retention" visual quality objectives Road management objectives are to eliminate or prohibit public motorized use of any existing primitive roads or trails No facilities except for trail shelters, limited signing, sanitary and safety needs will be installed All facilities will be made from native-like, rustic materials. Site development scale is level 2 or less. Use densities of PAOT per acre should range between .004 and .08 depending on the landscape's ability to absorb the sights and sounds of humans. Interpretation is through self-discovery, augmented by books, guides and maps, with no on-site facilities.

Semiprimitive Motorized Vegetation management may range from no timber harvest to limited unscheduled regeneration cutting and sanitation salvage for the purpose of maintaining a healthy, attractive semiprimitive setting Harvest units must meet "foreground partial retention" visual quality objectives

Motorized harvesting and mineral exploration may be done over "primitive" road systems primarily in the low public use season. Public access is by trails and primitive roads ranging in challenge from most difficult to easiest.* Road management objectives are to encourage high clearance 4-wheel drive vehicles and trail bikes, but discourage highway vehicles. Primitive roads are maintained at Level II Site development scale is Level 2 or less Interpretation is through very limited on-site facilities, maps, brochures, guides, and other portable media

*See Trails Handbook (FSH 2309 18) for definition of difficulty levels.

Facilities are limited to shelters, signs, sanitary, and safety needs in native-like, rustic materials Use densities of PAOT per acre should range between 004 and 08 depending on the landscape's ability to absorb the sights and sounds of humans

Roaded Natural

Timber harvest may be scheduled (see VQO direction under Visual Resource Management) and should meet "retention" or partial retention" as seen from roads and trails Access is generally single- or double-lane dirt or gravel roads Road management objectives are to generally accept or encourage use by dispersed recreationists in highway vehicles On some logging spurs or other single-purpose roads, this use may be discouraged or eliminated. Dispersed area facilities should be level 2 or less and may include shelters, boat ramps, sanitary facilities, interpretive facilities, and safety needs in native, rustic materials Use densities of PAOT per acre should range between 04 and 2 5 depending on the landscape's ability to absorb the sights and sounds of humans Density range includes averaging in developed sites. The norm for developed sites should be development scale 3. Mineral exploration and extraction may be appropriate but meeting adopted VQO Interpretation is through signs and other structures, such as overlooks, decks and boardwalks, using native-like materials with some refinement in design, printed and other portable materials, and limited interpretation by Forest staff

Roaded Modified·

Timber harvest is dominant but carried out within the NFMA regulation of being shaped and blended with the terrain Stumps, skid roads, landings, and clearcut forms all may be dominant to the user Road management objectives for local roads would often provide a complete mix of opportunities Access to recreation campsites, berry fields, wood gathering areas, etc , is encouraged Some roads will be managed to permit use by high-clearance vehicles and trail bikes while discouraging use by highway vehicles. Use on others by all vehicles may be restricted or prohibited to meet wildlife, safety, or other objectives User-established sites will be recognized and prescriptions for timber harvest, slash cleanup, site preparation and other silvicultural practices will consider the environmental setting and recreational attractions. The attempt will be made to retain a significant measure of this character after treatment Such sites will also be considered in grazing plans and the timing of when livestock are on the sites

Interpretation is through simple on-site facilities such as signs or numbered posts made of native-like rustic materials, printed or other portable material Facilities may include shelters for winter use by ski tourers or snowmobiles Use densities of PAOT per acre should range between .008 and 1 2

Rural

Management directions for the small area of rural ROS on the Forest are included under Management Areas 5 and 16

5 Discourage use where actual use densities exceed desirable levels or encourage use in other areas These actions may include such things as recommending little-used areas to the public, limiting or increasing trailhead parking, maintaining or increasing difficult access, or separating uses (e g , motorized and nonmotorized, or pedestrian and equestrian)

6 **Winter Recreation.** Develop and maintain opportunities for winter recreation where needed

7 Provide networks of marked groomed snowmobile routes through agreement with snowmobile clubs.

8. Develop Nordic ski routes where there is an identified need. Grooming may be provided by cooperating groups.

9. Provide parking through cooperative arrangement with the State and counties

10. Mark snowmobile and Nordic ski routes to minimize the likelihood of conflict.

11. **Recreation Site Development.** Develop recreation sites, by ROS class, using the descriptions found in Table 4-6.

12 Encourage users and the general public to volunteer their efforts toward cleanup, maintenance, and development of recreation sites and facilities.

Table 4-6
APPROPRIATE RECREATION SITE DEVELOPMENT
BY RECREATION OPPORTUNITY SPECTRUM CLASS

Recreation Opportunity Spectrum Class	Development Scale	Description
Primitive	1	Minimum site modification. Rustic or rudimentary improvements designed for protection of the site rather than comfort of the users. Use of synthetic materials excluded Minimum controls are subtle No obvious regimentation. Spacing informal and extended to minimize contacts between users Motorized access not provided or permitted
Semiprimitive	2	Little site modification Rustic or rudimentary site rather than for the comfort of the users Use of synthetic materials avoided Minimum controls are subtle Little obvious regimentation Spacing informal and extended to minimize contacts between users. Motorized access provided or permitted. Primary access over primitive roads Interpretive services informal, almost subliminal
Roaded Natural	3	Site modification moderate. Facilities about equal for protection of site and comfort of users. Contemporary/rustic design of improvements is usually based on use of native materials Inconspicuous vehicular traffic controls usually provided. Roads may be hard surfaced and trails formalized Development density about 3 family units per acre. Primary access may be over high standard roads Interpretive services informal, but generally direct.

Rural	4	Site heavily modified Some facilities designed strictly for comfort and convenience of users Luxury facilities not provided. Facility design may incorporate synthetic materials. Extensive use of artificial surfacing of roads and trails Vehicular traffic control usually obvious Primary access usually over paved roads Development density 3-5 family units per acre. Plant materials usually native Interpretive services often formal or structured
Urban	5	High degree of site modification Facilities mostly designed for comfort and convenience of users and usually include flush toilets; may include showers, bathhouses, laundry facilities, and electrical hookups Synthetic materials commonly used Formal walks or surfaced trails Regimentation of users is obvious Access usually by high-speed highways Development density 5 or more family units per acre Plant materials may be foreign to the environment Formal interpretive services usually available Designs formalized and architecture may be contemporary Mowed lawns and clipped shrubs not unusual

13 **Outfitters and Guide.** Outfitter guide activities may be considered within any management area, although outfitter camps will not be located within research natural areas

14 **Special Areas.** Protect special places on the Wallowa-Whitman National Forest; e g , dispersed recreation sites, water features, rock or unique landform features, areas of unique vegetation, historic sites, or other places which are special to Forest users commensurate with other Forest management objectives.

15 **Road, Trail, and Area Closures** Road, trail, and area closures and off-road vehicle use will be in accordance with the Forest Travel Management Plan and 36 CFR 295 This plan will be reviewed annually and revised as necessary, considering management needs and public desires

LANDSCAPE MANAGEMENT

Goal

To manage all National Forest lands to obtain the highest possible visual quality, commensurate with other appropriate public uses, costs and benefits

Standards and Guidelines

1 **VQO's.** Meet visual quality objectives through management techniques described in National Forest Landscape Management, Volumes 1 and 2, and the Wallowa-Whitman National Forest Visual Management Plan - Desired Visual Model (maps showing visual objectives are available at the Forest Headquarters in Baker) See also maps of Level I and Level II viewsheds in the FEIS

2 **Retention Foreground.** In retention foregrounds the area regenerated per decade should not exceed 7 percent* or be less than 3 percent* of the suitable forest land within the viewshed. Maximum seen area disturbed at any one time should not exceed 10 percent* within any viewshed Limit regeneration unit size to that which meets retention and desired character including consideration of future entries and regrowth The approximate range of sizes necessary to accomplish this is 1/2 to 2 acres in the immediate foreground (less than 500 feet) and 3 to 5 acres in the foreground greater than 500 feet from the road or trail Units against road or trail edges should be shelterwoods or selection cuts rather than clearcuts Target tree size is 36 inches where biologically feasible.

3 **Partial Retention Foreground and Retention Middleground.** In partial retention foreground and retention middleground, the area regenerated per decade should not exceed 9 percent* or be less than 5 percent* of the suitable forest land within any viewshed The maximum seen area disturbed at any one time should not exceed 14 percent* of any viewshed Limit regeneration unit size to that which meets partial retention and desired character including consideration of future entries and regrowth The approximate range of sizes necessary to accomplish this is 1/2 to 2 acres in the immediate foreground (less than 500 feet) and 3 to 5 acres in the foreground greater than 500 feet from the road or trail Target size tree in foreground is 26 inches, where biologically feasible

FIGURE 4-2

VISUAL QUALITY OBJECTIVES

		Sensitivity Level						
		fg1	mg1	bg1	fg 2	mg 2	bg2	3
Variety Class	class A	R	R	R	PR	PR	PR	PR
	class B	R	PR	PR	PR	M	M	M 1/ / MM
	class C	PR	PR	M	M	M	MM	MM

1/ If a 3B area is adjacent to RETENTION or PARTIAL RETENTION visual quality objective, select the MODIFICATION visual quality objective If adjacent to MODIFICATION or MAXIMUM MODIFICATION objective areas, select MAXIMUM MODIFICATION

* Applies to regeneration harvest Not applicable to intermediate cuts, overstory removals, or individual tree selection harvest

4 **Partial Retention Middleground.** In partial retention middlegrounds, the area regenerated per decade should range between 8 and 10 percent*. Limit maximum regeneration unit size to 10 acres. Maximum area disturbed at any one time should not exceed 20 percent*

5. **Created Openings.** Consider a created opening is to no longer be an opening, visually, when trees reach 20 feet in height. Rotation periods will be sufficient to grow large tree character in viewshed foregrounds

6 **Resolving Conflicts.** Where conflicts develop between visual quality objectives and timber or range management objectives, these conflicts will be resolved in favor of meeting the visual objectives Where conflicts occur between old-growth objectives and visual objectives, old-growth will have priority.

7. **Viewshed Plans.** Plans will be prepared for all Level I viewsheds that will refine boundaries, establish project design criteria, identify opportunities for scenic enhancememt, and set entry priorities and timing

WILDLIFE

Goal

To provide habitat for viable populations of all existing native and desired nonnative vertebrate wildlife species and to maintain or enhance the overall quality of wildlife habitat across the Forest

Standards and Guidelines

1. **Riparian.** Manage riparian habitat consistent with Forest Service Manuals 2500 and 2600. Where natural stream characteristics permit, the management (as described in Managing Riparian Ecosystem (Zones) for Fish and Wildlife in Eastern Oregon and Eastern Washington 1/) will provide for 60-100 percent shade on live streams, 80 percent or more of the total lineal distance of streambank in a stable condition, limiting fine inorganic sediment covering stream substrate to 15 percent, and 80 percent or more of the potential grass-forb, shrub and tree cover.

2. Give preferential consideration to resources such as fish, certain wildlife and vegetation, and water which are dependent upon riparian areas over other resources in actions within or affecting riparian areas

3. Where timber is managed in riparian areas, and in other parts of the SMU directly affecting riparian conditions, harvest will generally be by selection or by group selection techniques These areas will normally require a longer timber stand rotation than is used on areas managed more intensely for timber In situations where even-aged silviculture will better meet riparian area objectives, its application is acceptable (Also see direction under Watershed Standards and Guidelines)

1/ Riparian habitat subcommittee of the Oregon/Washington Interagency Committee. Managing Riparian Ecosystems (Zones) for Fish and Wildlife in Eastern Oregon and Washington, March 1979

* Applies to regeneration harvest. Not applicable to intermediate cuts, overstory removals, or individual tree selection harvest

4 Manage timber stands in riparian areas to provide habitat for snag-dependent wildlife species at not less than the 60 percent level of the optimum habitat (including snags of all sizes) as described in Wildlife Habitats in Managed Forests (Thomas, 1979)

5. Manage existing and proposed populations of wild bighorn sheep according to Wild Bighorn Sheep Conflicts with Domestic Livestock and other Wildlife Ungulates on the Wallowa-Whitman Forest - A Summary Status Report and Interim Program Direction (January 1982 - on file at Forest Headquarters)

6 Consider introductions of other native or nonnative wildlife species, such as the Rocky Mountain goat, on a case-by-case basis through the NEPA process

40 (ROD pg 21-22)

7 **Snag Management.** Maintain at least the 20 percent level (the management requirement level) of snags 10 to 20 inches in diameter wherever higher levels are not specified and where doing so would not conflict with the primary management area objective Exceptions include

a. Management Area 16 (Administrative and Recreation Sites).

b Management Area 17 (Utility Corridors) if use of the corridor for its designated purpose requires clearing of vegetation

c Areas where safe use of helicopter and other systems for log yarding will require snag falling Short-term snag shortages may occur following these harvest activities Sufficient green trees will be left in these situations so that adequate numbers of snags can be created

d Areas where catastrophic mortality such as from fire, disease, or insect epidemic precludes the leaving of green replacement trees.

e Areas where harvest is occurring to treat an insect or disease situation (such as dwarf mistletoe or root rot) and leaving green replacement trees would significantly reduce the effectiveness of the treatment

8 Provide specified snag levels within land areas that are generally no larger than a normal harvest unit (40 acres), the intent being not to average snag levels over large areas

9 Where adequate numbers of snags are not present and cannot be created, higher snag levels may be managed in adjacent areas and averaged with the low levels in deficient areas to meet the specified levels However, averaging should be done over a small an area as possible, and replacement snags should be planned for the deficient areas to meet the distribution requirements as soon as possible

10 Provide snags either in patches or distributed across the landscape, reflecting safety, biological effectiveness, and operational feasibility

11 Retain existing and naturally-occurring snags at the 40 percent level unless higher levels are established in specific management area direction

12 Leave green replacement trees, where needed, to assure that the 20 percent snag level is met through time (i e , at all times during a stands rotation) Do not leave additional green trees to provide for levels higher than 20 percent (except in riparian) unless established by specific management area direction

13 **Dead and Down Material.** Provide dead and down woody material to meet habitat requirements for those species of wildlife, insects, fungi, and other microscopic plant and animal species associated with this type of habitat Actions to provide this habitat may include such things as leaving one or more concentrations of slash per acre of small mammals and ground-nesting birds, leaving unmerchantable logs on-site in various stages of decay, and activities needed to protect this debris to prescribed fire and fuelwood cutting.

14. **Raptor Nest Sites.** Protect all raptor nest sites in use Protect other nesting sites, important roosting, or special foraging habitats where it can be accomplished without adversely affecting long-term timber production or unreasonably complicating timber sale preparation and related activities Such means could include adjustments in unit boundaries, operating seasons, of harvest scheduling.

15 **Managing Bald Eagle and Peregrine Falcon Habitat.** Manage northern bald eagle and peregrine falcon habitat as described in the section of this chapter entitled "Threatened, Endangered, and Sensitive Species"

16 **Pileated Woodpecker Feeding Areas.** Provide a 300-acre pileated woodpecker feeding area within 0.7 miles of any designated old-growth patch (MA 15) approximately 300 acres or larger This will normally be a contiguous block although it may be arranged in blocks of 50 acres or larger nor more than 0.25 miles apart Within these feeding areas, maintain at least two hard snags ten inches in d b h or larger

17 Locate pileated feeding areas in areas such as wilderness, MA 6, or other areas without scheduled timber harvest, when available

18 **Unique Habitats.** Avoid alteration of unique habitats such as cliffs and talus slopes. Decisions to alter or disturb these habitats will only be made following site-specific NEPA analysis including identification of suitable mitigation measures

19. **Coordination.** Coordinate activities that affect fish or wildlife resources with the appropriate State wildlife management agency in accordance with formal agreement. This may include State involvement during scoping and at other stages of decision making under the Forest Service NEPA process.

20 **Indian Treaty Rights.** Recognize the hunting and fishing rights of the Indian tribes in habitat management activities

21 **Predator Control.** Permit predator control as necessary to achieve management objectives in coordination and cooperation with the Animal and Plant Health Inspection Service (APHIS), the Oregon Department of Fish and Wildlife, and the Idaho Fish and Game Department. Such control will be in accordance with Forest Service Manuals 2600 and 2300.

CAVE MANAGEMENT

To secure, protect, and preserve significant caves on Federal lands for the perpetual use, enjoyment and benefit of all people To foster increased cooperation and exchange of information between land managers and those who use caves located on Federal lands for scientific, educational, or recreational purposes (Also see Public Law 100-691, the Federal Cave Resources Protection Act of 1988)

Standards and Guidelines

1. **Inventory and Classification.** Complete a Forest-wide, comprehensive cave inventory including a cultural resource inventory, as described in the Federal Cave Resources Protection Act of 1988 (FCRPA) and subsequent regulations. Evaluate and propose significant caves for listing on the National Significant Caves List. Unless otherwise directed in regulations subsequent to the FCRPA, caves will be classified and managed as follows:

   Class 1' Sensitive Caves - Caves considered unsuitable for exploration by the general public either because of their pristine condition, unique natural features, significant cultural resources, or extreme safety hazards. They may contain natural or cultural features that would be impacted by low levels of visitation These caves are not shown on maps or discussed in publications intended for general public use such as guides, brochures and magazines.

   Class 2: Undeveloped Caves - Caves that are undeveloped or contain unmaintained or minimal developments and that are suitable for exploration by persons who are properly prepared. Although these caves contain features that generally resist degradation by recreational use, public use will not be directed toward them

   Class 3 Directed Access Caves - Caves with directed public access and developed for public use. These caves are shown on maps or have signs directing visitor access; frequently have guided tours and artificial lighting. Regardless of the level of development, public visitation is encouraged The caves may have sensitive features that are protected.

2. Manage newly-discovered caves as Class 1 until an analysis of natural and cultural values is made

3. **Management Plans.** Prepare individual cave management plans for caves with high natural, cultural, educational or recreational values, caves with hazardous conditions, or caves which receive heavy use Cave management planning will be coordinated with non-Forest Service organizations and individuals (Also see Memorandum of Understanding between the USDA Forest Service and the National Speleological Society, September 29, 1988.) The public will be encouraged to help in cave management planning

4. **Protection and Management.** Protect significant caves from activities which would adversely affect their recreational, biological, geological, hydrological, mineralogical, paleontological, or cultural values Protection will be based on the classification and natural and cultural values

5 Restrict logging, road construction, and other uses of heavy equipment above or in the vicinity of a cave with a thin roof, or the course of such a cave, if there is a potential for damage.

6. Retain vegetation in the vicinity of a cave or cave course if it is required to protect the cave's microenvironment

7 Fell trees away from the cave and its course if timber harvesting is permitted in the vicinity of a cave.

8 Cave entrances will not be altered or used as disposal sites for slash, spoils, or other refuse and no action will be taken to prevent or hinder ingress or egress of cave-dependent wildlife.

9 Management activities will not be permitted within any area draining into a cave if they are likely to affect the cave ecosystem through sedimentation, soil sterilization, the addition of nutrients or other chemicals (including pesticides, herbicides, and fertilizers) or through change the cave's natural hydrology

10 Surface drainage will not be diverted into caves.

11 **Public Access.** Limit public access if required to prevent damage to cave features Access may also be limited if there are safety hazards. (Specific location information of Significant Caves is exempt from disclosure to the general public)

12. Action will be taken to inform the public of the values of caves, actions being taken to protect cave values, and opportunities for public use

13 **Scientific or Educational Use.** Scientific or educational use of caves may be allowed under permit

TIMBER MANAGEMENT

Goal

To provide for production of wood fiber consistent with various resource objectives, environmental requirements and economic efficiency

Standards and Guidelines

1. **Soil Stabilization.** Stabilize lands disturbed as a result of timber management activities or road construction to control soil erosion and enhance forage and browse production, where appropriate. Stabilization methods and timing will recognize site-specific needs and objectives and will be decided through the NEPA process for individual projects or activities. (Also see Standards and Guidelines for Soils and Watershed)

2. **Silvicultural Systems.** Prepare silvicultural prescriptions prior to all harvest activities These prescriptions will be reviewed by a certified silviculturist.

3. Select silvicultural systems which will, to the extent possible and within the intent of the land management objectives:

    a Permit the production of a volume of marketable trees sufficient to utilize all trees that meet utilization standards and are designated for harvest.

    b. Permit the use of an available and acceptable logging method that can remove logs and other products without excessive damage to the identified desirable residual vegetation.

    c. Be capable of providing special conditions, such as a continuous canopy or continuous high density live root mats, when required by critical soil conditions or as needed to achieve particular management objectives, such as streamside protection, wildlife needs, and visual enhancement

    d. Permit control of vegetation to establish desired numbers and rates of growth of trees, as well as vegetation needed to achieve other management objectives identified in site-specific silvicultural prescriptions

    e Promote a stand structure and species composition that minimizes serious risk of damage caused by mammals, insects, disease, or wildfire, and will allow treatment of existing insect, disease, or fuel conditions

f Be capable of achieving management objectives such as those for streamside protection, wildlife needs, and visual resources

g. Develop manageable stands of at least five acres in size having a single future cultural treatment.

h Consider dispersion of future regeneration harvest units in the treatment of existing stands. Where appropriate to achieving dispersion objectives for other resources, prescriptions will provide for regeneration harvest of portions of large stands which might otherwise be treated with a single commercial thinning

i Include consideration of fuel treatment commensurate with resource needs

j. Be the most economical system to meet the desired objectives

4. Use clearcutting only where analysis by a certified silviculturist shows that it is clearly preferable to other cutting methods for achieving management objectives Selection of cutting methods will be made as a part of protect-level analysis

5 Make waste wood residue from timber harvesting available for fuelwood gathering. Where this is impractical, residues in excess of those needed on-site will be disposed of by burying, broadcast burning, crushing, or other means, depending upon site-specific analysis. Economic and resource conditions may dictate several methods within one timber sale area

6 Limit forest openings created by the application of even-aged harvest methods 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 as much as 50 percent 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 and when any one of the following four criteria is met

a When a larger created 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 dwarfmistletoe 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

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 the Forest Plan.

7. Separate created openings by blocks of land that generally 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 the Forest

Plan Resource requirements may include wildlife habitat, watershed, landscape management, and others. Contiguous harvest units (cornering or otherwise touching) are not precluded, but together must be considered as a single opening which must be created within requirements for size, exception procedures, and justification

8 The total area of created openings contiguous to 30-acre or larger natural openings should normally be limited to an area not exceeding one-third the size of the natural opening and not occupying more than one-third of the natural opening perimeter. Openings 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 values and visual quality objectives The determination of adequate vegetation will be made by an appropriate interdisciplinary team.

9 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 instructions, indicate prescribed tree stocking that is at least 4 1/2 feet high and free to grow When other resource management considerations (such as wildlife habitat, watershed needs, or visual requirements) prevail, a created opening will no longer be considered an opening when the vegetation in it meets a particular management objective stated in the applicable management strategy.

10 Any harvests (regeneration or intermediate cuttings) which reduce stocking below the minimum crop tree stocking level will be considered a regeneration harvest. They will, therefore, require provisions for establishing new stands and be subject to created-opening spacing constraints

11 Slopes 30 percent or less will normally be harvested using ground-based logging equipment (tractors, rubber-tired skidders, low ground pressure equipment, etc.). Slopes greater than 30 percent will normally be harvested using short-reach cable systems, long-reach cable systems, or aerial systems

12 Precommercial thinning in future regenerated stands will normally be accomplished before cut stems exceed two inches in diameter at ground level in order to avoid the need for slash disposal.

13 In some instances, notably naturally-regenerated ponderosa pine and Douglas-fir, the timber volume remaining following a shelterwood or seed tree regeneration harvest may not be adequate to cover the expense of a subsequent overstory removal. Where this occurs the remaining overstory may be harvested at the time of the next commercial entry.

14 **Reforestation.** Selection of reforestation methods will be made on a site-by-site basis during project-level analysis This analysis will always consider the option of natural regeneration Design harvest and regeneration practices so that there is reasonable assurance of adequate restocking within five years after final harvest

15 **Re-evaluation of Unsuited Lands.** Re-evaluate areas which were identified during the Forest planning process as unproductive or technically unsuited for timber management during site-specific analysis of adjoining lands When this analysis shows these lands to be suitable for timber management they will be managed with the adjoining lands, consistent with the applicable management area direction Conversely, when site-specific analyses show additional lands to be unproductive or unsuitable, timber management on these lands will not occur.

16 **Harvest on Unsuited Lands.** Permit commercial timber harvest on lands identified as technically unsuited or unproductive (within management areas where harvest is not precluded) only for the following purposes.

a Salvage or sanitation harvesting of trees or stands substantially damaged by fire, windthrow, or other catastrophe or which are in imminent danger from insect or disease attack.

b Cutting of individual trees or stands to test logging systems, to conduct experiments, or for the purpose of gathering information about tree growth, insect or disease organisms, or the effect of such harvesting on other resources.

c. Cutting of trees to promote the safety of Forest users. This includes hazard tree removal in camp and picnic grounds, in administrative sites, and along roads open to the public.

d. Harvesting to meet habitat objectives for threatened or endangered animal or plant species or to maintain or improve habitat for other wildlife or fish management indicator species.

e Harvesting to improve the scenic resource by opening scenic vistas or by improving visual variety.

f. Harvesting of fuelwood and Christmas trees

g Harvesting to provide for access; for example road construction

h To permit the construction of recreation or administrative sites, roads, trails, or other facilities needed for the management of the Forest

17. **Utilization Standards.** Use timber utilization standards specified in the Regional Guide.

18 **Culmination of Mean Annual Increment.** Even-aged stands scheduled for regeneration harvest will generally have achieved culmination of mean annual increment on a cubic foot basis

19. **Harvest of Catastrophic Mortality.** In cases of catastrophic timber mortality such as from fire, insect epidemic, or windthrow, efforts will be made to salvage the affected timber as quickly as possible within the objectives of the affected management areas

RANGE

Goal

To manage range ecosystems to ensure that the basic needs of the forage and soil resources are met. To make available forage production, above that needed for maintenance or improvement of the basic resources, to wildlife (within Management Objective levels) and permitted domestic livestock under standards and guidelines that will assure continued maintenance or improvement of the resource

Standards and Guidelines

1 **Forage Allocation.** Allocate forage resources on an allotment and/or management area specific basis to meet the basic plant and soils needs as the first priority. Forage production

above that needed for basic resource needs may be allocated to wildlife (as provided for in agreed upon Management Objectives) and permitted livestock.

2 **Utilization Standards.** Apply utilization standards to all management areas as shown in Tables 4-7 and 4-8 These standards provide for maximum utilization levels regardless of which species of animal uses the forage or browse.

TABLE 4-7

Allowable Use of Available Forage
in Riparian Areas 1/

Range Resource Management Level	Maximum annual utilization (percent) Grass & Grasslike 2/ Sat. Cond. 4/	Unsat. Cond. 5/	Shrubs 3/ Sat Cond. 4/	Unsat Con 5/
Livestock use managed within current grazing capacity by riding, herding, and salting. Cost-effective improvements used only to maintain stewardship of range	40	0-30	30	0-25
Livestock managed to achieve full utilization of allocated forage Management systems designed to obtain distribution and maintain plant vigor include fencing and water development	45	0-35	40	0-30
Livestock managed to optimize forage production and utilization Cost-effectiveness culture practices improving forage supply, forage use and livestock distribution may be combined with fencing and water development to implement complex grazing systems.	50	0-40	50	0-35

1/ This will be incorporated in allotment management plans and will be implemented in accordance with the Allotment Management Planning Schedule. Allotment management plans may include utilization standards which vary from the above guidelines when associated with management systems and integrated resource objectives which will meet desired future condition objectives of the riparian dependent resources, Includes cumulative annual use by big game and livestock.

2/ Utilization is based on percent of annual production removed by weight

3/ Utilization based on measurement of weight and/or twig length of current available leader growth.

4/ Satisfactory Range Condition - see glossary (satisfactory range condition is determined by allotment classification and/or forage condition).

5/ Unsatisfactory Range Condition - see glossary (anything not "satisfactory")

Table 4-8

Allowable Use of Available Forage
on Suitable Ranges other than Riparian 1/

Range Resource Management Level	Maximum annual utilization (percent) 2/ Forest Sat. 3/	Forest Unsat Cond 4/	Grassland Sat 3/	Grassland Unsat Cond 4/	Shrubland Sat. 3/	Shrubland Unsat. Cond. 4/
Livestock use managed within current grazing capacity by riding, herding and salting. Cost-effective improvements used only to maintain stewardship of range	40	0-30	50	0-30	40	0-25
Livestock managed to achieve full utilization of allocated forage. Management systems designed to obtain distribution and maintain plant vigor include fencing and water development	45	0-35	55	0-35	45	0-30
Livestock managed to optimize forage production and utilization. cost-effective culture practices improving forage supply, forage use and livestock distribution may be combined with fencing and water development to implement complex grazing systems.	*50*	*0-40*	*60*	*0-40*	*50*	*0-35*

1/ This will be incorporated in allotment management plans and will be implemented in accordance with the Allotment Management Planning Schedule. Allotment management plans may include utilization standards which vary from the above guidelines when associated with management systems and integrated resource objectives which will meet desired future condition objectives for the riparian dependent resources. Includes cumulative annual use by big game and livestock

2/ Utilization based on percent removed by weight for grass, grasslike, and forbs and by twig length, weight measurements, or incidence of use, for shrubs

3/ Satisfactory Range Condition - See glossary (satisfactory condition is determined by allotment classification and/or forage condition).

4/ Unsatisfactory Range Condition - see glossary (anything not "satisfactory")

3 **Allotment Management Planning.** Include in range allotment management plans 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

4 Identify management actions needed to meet riparian objectives within the specific time frame. Measurable objectives will be set for key parameters, such as stream surface shaded, streambank stability, and shrub cover. This process is described in "Managing Riparian Ecosystems (Zones) for Fish and Wildlife in Eastern Oregon and Eastern Washington" (1979)

5. Address the monitoring needed to determine if the desired rate of improvement is occurring. Allotment management plans currently not consistent with this direction will be developed or revised on a priority basis under a schedule established by the Forest Supervisor (see Appendix C). Some grazing allotments with riparian areas in unsatisfactory range condition (see glossary), and which do not have approved or functioning management plans, have been identified and are displayed in Table 4-9 This list may be supplemented as additional areas are identified

6 Identify suitable lands in unsatisfactory range condition (see glossary). Allotment plans with specific objectives for these lands will be developed on a priority basis under a schedule established by the Forest Supervisor. These objectives will define a desired future condition based on existing and potential values for all resources

7. The allotment plan will include. (a) a time schedule for improvement, (b) activities needed to meet forage objectives, and (c) a range project effectiveness analysis

Table 4-9
Range Allotments With Identified Riparian Problems

Log Creek	Hells Canyon NRA
Grouseline	Hells Canyon NRA
Marr Flat	Wallowa Valley Ranger District
Chesnimnus	Wallowa Valley Ranger District
Doe Creek	Wallowa Valley Ranger District
Swamp Creek	Wallowa Valley Ranger District
Lockhart	Baker Ranger District
Bullrun	Unity Ranger District
Camp Creek	Unity Ranger District
Ironside	Unity Ranger District
North Burnt River	Unity Ranger District
South Burnt River	Unity Ranger District
Whipple Gulch	Unity Ranger District
Pole Creek	La Grande Ranger District
Dark-Ensign	La Grande Ranger District
Whitehorse	La Grande Ranger District
Pine Valley	Pine Ranger District

INSECTS AND DISEASE (PESTS)

Goal

Control Forest pests to levels that are compatible with resource objectives

Standards and Guidelines

1. **Integrated Pest Management.** Use Integrated Pest Management (IPM) strategies for early detection, suppression and prevention of Forest pests and to manage pests within the constraints of laws and regulations IPM strategies include manual, mechanical, cultural, biological, chemical, prescribed fire, and regulatory means Strategy selection will be based on environmental analysis *

2. **Control of Noxious Weeds.** Aggressively pursue control of identified noxious weeds on lands where such activities are not precluded by management area direction This will be accomplished through Forest activities and through coordination with county, State and other Federal agencies as funds permit.*

3. When the need to control noxious weeds or competing vegetation is identified, the selection of any particular treatment method will be made at the project level based on a site-specific analysis of the relative effectiveness, environmental effects (including human health), and costs of the feasible alternatives. Herbicides will be selected only if their use is essential to meet management objectives

4. Cooperate with the Animal and Plant Health Inspection Service (APHIS) in accord with the Memorandum of Understanding between APHIS and the USDA Forest Service.

5 **Monitoring.** Develop monitoring and enforcement plans for site-specific projects as described in the environmental analyses for these projects

SPECIAL AREAS

Goal

To provide for establishment of specially-designated areas, for recreational or other purposes, as needed to achieve the multiple-use objectives of the Forest

Standards and Guidelines

1. Designate or recommend designation of special areas if, during the life of this plan, proposals are made for the establishment of special areas (e.g , scenic byways, botanical areas) or the need for such areas becomes apparent.

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*Plans for control of competing vegetation and noxious weed control (including use of herbicides) will be tiered to the Programmatic FEIS for Managing Competing and Unwanted Vegetation, USDA Forest Service, Pacific Northwest Region, December 1988 or subsequent NEPA documents.

MISCELLANEOUS

Standards and Guidelines

1 **Catastrophes.** Catastrophes, such as those caused by insect epidemics, fire, floods or weather disturbances will not change the land allocation The intent is still to achieve the conditions described for the management area A catastrophe may result in the need for different methods or alter the time frame for achieving the objectives, but the objectives remain the same

2 **Tree Encroachment.** Recognize natural grasslands and meadows primarily for the forage value and habitat they provide Encroachment of trees on meadows and other high forage-producing nontimbered sites may be prevented if such action is warranted based on site-specific analysis including consideration of other resource objectives

3 **Other Resource Needs.** The accommodation of other resource needs is encouraged within the intent of the primary resource objectives and budgetary constraints.

MANAGEMENT DIRECTION SPECIFIC TO INDIVIDUAL MANAGEMENT AREAS

INTRODUCTION

Management area descriptions provide the multiple-use direction for managing specific areas Each management area is described in terms of 1) a description which defines management objectives and specifies resource priorities, 2) direction, and 3) planning assumptions 1/

MANAGEMENT AREA 1 (716,245 ACRES) (Timber Production Emphasis)

Description

Management emphasizes wood fiber production on suitable timber lands while providing relatively high levels of forage and recreational opportunities. Temporary forage increases result from silvicultural activities. Timber is managed according to Forest-wide standards and guidelines

Timber management normally provides a mixture of even-aged stands up to 40 acres in size These stands are to be managed at intensities promoting vigorous, healthy trees commensurate with the productive potential of the sites Regeneration harvest units will be separated by uncut stands containing one or more logical logging units This mixture of stand ages and sizes provides a degree of diversity for big game and other wildlife and a high level of wood fiber and forage production Open roads are normally limited to 2 5 miles per square mile

1/ Planning assumptions are not intended as direction but provide background information on the expected results of the management direction as well as assumptions that were made in developing the planning model An evaluation of the accuracy of the assumptions will be valuable for developing the next Forest Plan

This management area contributes to the Forest's allowable sale quantity

Direction

1. **Watershed.** Apply Forest-wide standards and guidelines.

2. **Wildlife** Maintain at least 30 percent of the forest land within a project area (such as a timber sale) as cover, including both marginal and satisfactory cover. In addition, in timber sale planning, attempt to achieve a habitat effectiveness index of 0 5 or greater where this can be done without reducing timber harvest volumes Other adjacent areas which provide cover, such as riparian areas, old-growth (MA 15) or backcountry (MA 6) will be considered in this calculation

3 **Timber.** Use timber management to convert unmanaged natural stands to vigorous managed stands.

4. Even-aged management will normally be employed with tree spacing maintained to permit optimum growth toward the desired tree size This may include precommercial thinning on regenerated stands. Where it is determined through project-level environmental analysis that use of uneven-aged management methods are advantageous and practical, as is sometimes the case in ponderosa pine and other forest types, these methods may be used. Even-aged regeneration practices may be by clearcut, shelterwood, or seed tree methods.

5. Silvicultural techniques will not normally include fertilization or irrigation although such practices are permitted, within budget constraints, if an analysis shows them to be desirable

6. Regeneration will be by planting, natural means, or a combination of the two, depending upon the needs and capabilities of individual sites.

7 A harvest area of commercial forest land will be considered a created opening until minimum stocking level is reached and this stock consists of trees 4 1/2 feet, or greater, in height.

8. Created openings will generally not exceed 40 acres in size and will be separated by blocks of land that generally are not classed as created openings and that contain one or more logical harvest units Contiguous harvest units (cornering or otherwise touching) are not precluded, but must be considered as a single opening which must be created within requirements for size, exception procedures, and justification

9. The total area of created openings contiguous to 30-acre 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.

10. All even-aged stands scheduled to be harvested will generally have reached the culmination of mean annual increment of growth, expressed in cubic measure.

11. **Transportation** The transportation system will be designed, built, and maintained primarily for management of the timber resource, but will consider all intended uses. The locations and numbers of roads will be determined by the logging systems which will provide the most

suitable means of timber harvest During commercial hauling activities, public access will be discouraged or prohibited on many local roads.

12. Close local roads and collector roads, permanently or seasonally, between timber sale projects as needed to provide for soil and water protection, fire protection, wildlife habitat, recreation and other purposes Open road densities will generally not exceed 2 5 miles per square mile Where densities are projected to exceed 2 5 miles per square mile of open road during timber sale activities, analyses will be made to document that resource objectives will be met with the higher densities

13 Manage the transportation system on that portion of Management Area 1 within the identified elk winter range as described in Management Area 3, including limiting open road density to 1 5 miles per square mile

14. Provide public access for removal of fuelwood within the overall guidelines of 2.5 miles per square mile of open roads

15 Analyze trail needs. Those trails that serve a continuing purpose and appear likely to be used will be protected and maintained for future use

16. **Range** Provide for protection of erosion seeding and tree plantations through changes in livestock management In some instances, nonuse, fencing, or other means of control will be needed

17 **Recreation.** Recognize undeveloped campsites, hunter camps, or areas where concentrated recreation use occurs as being significant in producing and utilizing dispersed recreation opportunities Prescriptions for timber harvesting, cleanup, site preparation, and thinning will consider the environmental setting that contributes to the attraction of these sites for recreation purposes The attempt will be made to retain this attractive character during and after treatments.

18 Provide roaded natural and roaded modified recreation opportunities

19 **Landscape Management.** Apply Forest-wide standards and guidelines

20 **Insects and Diseases** Prevent and/or suppress insects and diseases using integrated pest management techniques when outbreaks threaten resource management objectives. Activities might include stump treatment for root rots, application of pesticides for defoliators and cone insects, early harvest, stocking control, and species control The most cost-effective strategy may be no action, which will be considered in project analyses.

21 **Landownership.** Consolidate National Forest ownership where this will result in more efficient management and administration, acquisition will be primarily by exchange and should be planned so as not to substantially reduce timber outputs from (or, productivity of) the Forest

22 **Minerals** Apply Forest-wide standards and guidelines

23. **Fire.** Use prescribed burning from planned ignitions to accomplish fire protection, site preparation, silvicultural, wildlife, and livestock objectives. In ecosystems where fire is not a useful treatment tool, fuel treatments other than burning will be used to reduce fuel accumulations to meet resource management objectives

24. Use slash management, as needed, to provide for free movement of livestock throughout the area and prepare sites for reforestation

25 The lowest cost fuel treatment option which meets the resource management objectives will normally be selected

26 Prescribed fire from unplanned ignitions will not be used due to the high resource values and the difficulty in controlling ignitions

27. Design suppression practices to protect the investment in managed tree stands and to prevent losses of large acreages to wildfire. This area is high priority for suppression of wildfires

28. Emphasize industrial operations contacts and inspections. Industrial closures will be utilized as needed, based upon local fire weather conditions

29 Avoid felling snags that do not present a hazard to life or a threat to successful suppression action.

30 The minimum acceptable suppression response for wildfires at all fire intensity levels will be "contain" (see glossary).

Planning Assumptions

Timber

- Lodgepole pine dominated stands will regenerate naturally, though instances of artificial regeneration may occur

- Site preparation will occur prior to planting on 25 percent of tractor logged areas and 100 percent of other areas.

- Rodent control will be needed on 50 percent of the planted acres This will normally be accomplished through trapping or poisoning.

- The time span between the regeneration harvest of a shelterwood and the final harvest is assumed to be ten years Project-specific conditions may indicate the need for earlier or later removals. In the case of seed tree harvest, removal of the overwood may be delayed until the time of commercial harvest of the regenerated stand

- In managed, even-aged stands culmination of mean annual increment will be at 40-50 years for lodgepole pine and 80-100 years for other commercial species.

- It is assumed that site preparation and planting will be required in order to reestablish trees on sites where competition from ninebark is a problem.

- Genetically superior planting stock will be available

Wildlife

- Long-term cover/forage ratios will provide high quality big-game habitat although habitat effectiveness will be reduced by the roads needed for timber management. In the short-term, cover shortages will substantially reduce habitat quality in some areas.

- Management of this area will result in an average elk habitat effectiveness index of ~~62~~ 50 ROD percent (long-term average) of potential (including discounting for roads), although individual sites may have higher or lower values

- A high degree of wood fiber utilization will provide few down logs available for use by wildlife

- Because of the relatively short rotation periods, snags larger than 21 inches in diameter will be rare in managed stands. Snags 12 to 18 inches in diameter will usually exceed 40 percent of the optimum habitat levels for cavity nesters through natural mortality in managed stands

Watershed

- Timber harvest will result in temporary increases in streamflow

- Timber harvest, road construction, and grazing will result in some reduction in water quality below natural conditions This will be mitigated as described in the Forest-wide standards and guidelines

Recreation

- Trails will normally become unnecessary due to road access, but may be retained or added through site-specific analysis

Range

- Satisfactory range condition will be achieved, as range allotment management plans are completed and implemented

Fire

- All techniques and equipment are appropriate for use in suppressing wildfire, dependent upon the fire intensity level and protection needs of the timber stand

- The broadest application of prescribed fire will be in ponderosa pine stands

- Some slash and larger dead material will be left as ground cover for soil protection, microclimates for the establishment of trees, and small mammal habitat

MANAGEMENT AREA 3, 3a (382,113 ACRES)
(Wildlife/Timber)

Description

Similar to Management Area 1, this management area provides a broad array of Forest uses and outputs with emphasis on timber production However, timber management is designed to provide near-optimum cover and forage conditions on big game winter ranges (Management Area 3) and selected summer ranges (Management Area 3a)

When in a managed condition, timbered areas are normally a mosaic of even-aged stands, 40 acres or less in size These stands are of different ages and are dispersed to provide a mixture of forage areas, satisfactory cover, and marginal cover Regenerated trees must be ten feet tall before harvesting adjacent units Special restrictions apply to any harvest which reduces cover This is done to achieve optimum distribution of cover for elk Open public road access is generally not more than 1 5 miles per square mile during the time that the areas are being used by big game On summer ranges this will require physically closing roads On winter ranges adequate road closure will normally result from snow Improved forage area and cover distributions will help maintain or enhance elk herd productivity Road access will be held at a low level as needed to maintain habitat quality and

recreation values The availability of big-game escape opportunities along with a low level of road access on summer ranges will provide a big-game hunting challenge not found in Management Area 1.

This management area contributes to the Forest's allowable sale quantity

Direction

1 **Watershed.** Apply Forest-wide standards and guidelines.

2. **Timber** Timber management will be similar to that of Management Area 1 but constrained to meet wildlife objectives. Where it is determined through project-level environmental analysis that use of uneven-aged management methods are practical, and better meet the objectives of Management Area 3, these methods may be used

3. **Wildlife.** Vegetation manipulation (precommercial thinning, regeneration harvest, and overstory removal) which converts a site from satisfactory or marginal cover to a forage status will be designed so that

   Summer Range - At least 80 percent of the treated area is 1) within 600 feet of a satisfactory or marginal cover patch at least 6 acres in size, and 2) within 900 feet of a satisfactory cover patch at least 40 acres in size

   Winter Range - At least 80 percent of the treated area is within 600 feet of a satisfactory cover patch at least 40 acres in size.

4 Consider a harvested area of commercial forest land a created opening until minimum stocking level is reached and this stock consists of trees 10 feet or greater in height

5. Isolated timber parcels which, because of the distance to other timbered parcels, cannot be managed within the above criteria will be managed to maintain or enhance their big-game cover values

6. Because of low site productivity some sites do not have the potential to provide thermal cover as defined in the glossary In these situations, stands which are functioning as thermal cover, even though they do not meet the strict definition, will be considered thermal cover in project design

7 **Transportation.** Design, build, and maintain the transportation system for the management of the timber resource but recognize all intended uses The locations and numbers of roads will be determined by the logging systems providing the most suitable means of timber removal considering all resources of the area.

8 Close local roads and some collector roads, seasonally or permanently, as needed to provide soil or water protection or if needed to meet biological requirements of big game. They may also be seasonally closed in accordance with the Forest Travel Management Plan for recreation, fire protection, or other purposes

NOTE: The preceding constraints are not intended to prevent the regeneration harvest of a hiding cover stand if doing so is necessary to create a quality cover forage mosaic or to rejuvenate a stagnant hiding cover stand, hastening the development of thermal cover where and when it otherwise would not develop

9. In general, roads left open year long on summer ranges will be limited to 1.5 miles per square mile although in some areas local conditions will necessitate higher densities In some instances, less than 1 5 miles per square mile will be feasible.

10. Where snow normally will provide an adequate level of road closure on winter ranges, additional closures to meet the 1 5 mile per square mile standard will not be necessary

11 Close winter ranges to over-snow vehicles if necessary to prevent conflicts with big game using winter range.

12. Recognize and allow for public removal of fuelwood within the overall density guideline of 1.5 miles per square mile

13. Where harvest entries are relatively infrequent, local roads which are not needed for other activities between harvest periods will be closed Roads not needed in the foreseeable future for timber management will be closed and obliterated following timber sales, with the land being returned to production

14. Protect and maintain existing trails that serve a continuing purpose and appear likely to be used in the future

15 **Range.** Give preference to big game where definite conflicts for forage are determined to exist between big game and livestock, and big game numbers are at or below State management objective levels.

16 **Recreation** Apply standards and guidelines from Management Area 1

17. **Landscape Management** Apply Forest-wide standards and guidelines

18 **Insects and Diseases.** Apply standards and guidelines from Management Area 1

19 **Landownership** Apply standards and guidelines from Management Area 1

20. **Minerals.** Apply Forest-wide standards and guidelines

21 **Fire** Favor prescribed fire slash treatment methods when feasible Prescribed fire from planned or unplanned ignitions will be used to achieve winter range management objectives, and maintain diversity within plant communities

22 The minimum acceptable suppression response will be "confine" on FIL 1-2-3, and "contain" on FIL 4 and greater.

23. Avoid felling snags that do not present a hazard to life or a threat to successful suppression

Planning Assumptions

Timber

- The thermal and hiding cover requirements in this management area will delay commercial harvest of some timber stands for one to seven decades, even though silvicultural need would indicate earlier entry

- In some instances the need for thermal and hiding cover will delay or prevent precommercial thinning of *existing* stands; however, it is not expected that precommercial thinning of *managed* stands will be affected

- Cover constraints will be most restrictive in earlier decades, becoming easier to meet as stands enter a managed condition

- It is assumed that site preparation and planting will be required in order to reestablish trees on sites where competition with ninebark occurs

Wildlife

- Application of this direction will result in an average elk habitat effectiveness index of 74 percent (long-term average) of potential (including discounting for roads), although individual sites may have higher or lower values

- Because of the relatively short timber rotation periods, snags larger than 21 inches in diameter will be rare in managed stands Snags 12 to 18 inches in diameter will usually exceed 40 percent of optimum habitat levels for cavity nesters through natural mortality in managed stands.

Transportation

- Snow will effectively close most winter range areas to access by wheeled vehicles during the winter months. Consequently, road closures more restrictive than those applied to Management Area 1 will not normally be necessary on winter ranges

Watershed

- Timber harvest will result in temporary increases in streamflows.

- Timber harvest, road construction, and grazing will result in some reduction in water quality below natural conditions This will be mitigated as described in the Forest-wide standards and guidelines

Range

- Satisfactory range conditions will be achieved as range allotment management plans are completed and implemented.

Fire

- No change from Management Area 1

MANAGEMENT AREA 4 (582,700 ACRES) (WILDERNESS)

Description

The intent is to preserve the wilderness qualities of these areas These areas will be managed in accordance with the Wilderness Act of 1964, P. L. 94-199 (establishing the Hells Canyon Wilderness), the Oregon Wilderness Act of 1984, and the 2320 section of the Forest Service Manual

The intent of the Wilderness Act is to preserve and protect the natural condition and characteristics of designated lands and to provide for current and future public enjoyment of these areas and their wilderness character These areas are to remain essentially unaltered and undisturbed by man, with natural ecological processes (including the natural role of fire) permitted to operate with a minimum of human interference

This management area does not contribute to the Forest's allowable sale quantity.

Direction

1. **Watershed.** Apply Forest-wide standards and guidelines

2. **Wildlife.** Wilderness designation precludes most types of wildlife habitat manipulation (see FSM 2300).

3. Permit fish stocking and wildlife reintroduction only where compatible with overall wilderness objectives.

4 **Trees** Trees will not be sold or cut for nonwilderness purposes except under specific conditions on valid mining claims.

5 **Transportation.** Limit the transportation system within wilderness to trails intended for nonmotorized use.

6 Access by motorized vehicle will normally be limited to emergencies Entries for other purposes as provided by the Wilderness Act will be handled on a case-by-case basis Helispot construction will not occur without Regional Forester approval.

7. Design and maintain system trails to Regional trail standards Selected trails may be abandoned. New trail construction and relocation will be considered for resource protection, visitor safety, and to provide a variety of wilderness experiences

8. **Range.** Grazing by domestic livestock may occur where established prior to the Wilderness Act. Manage consistent with the Wilderness Act Range improvements (fences, water troughs, ponds, etc.) will be managed as described in FSM 2320

9. Restrict grazing of livestock and recreational animals, as needed, in areas that receive heavy recreation use.

10. Manage grazing of recreational livestock to prevent site degradation

11. Identify sensitive riparian ecosystems, such as lakeshores and adjacent terrain and wet meadows, in each allotment management plan Develop prescriptions, including utilization standards, to maintain or enhance them

12 **Recreation** Constrain user group sizes, use of recreational livestock, camp site locations, and certain other activities, as needed, to protect resources and wilderness values This may include closure of some areas to horse traffic, and limiting the number of persons allowed to enter the area if other techniques for controlling resource damage prove unsuccessful

13 Outfitter guide services will continue.

14. Hold meetings with wilderness user groups and outfitter guide associations as needed to keep these organizations informed of wilderness management problems

15 Provide primitive recreation opportunities

16 **Landscape Management** The visual quality objective is preservation

17 **Insects and Diseases.** Monitor the levels and activities of pests normally associated with wilderness and old-growth ecosystems Most insect and disease agents do not normally pose threats to adjacent lands, effects of endemic levels will be accepted as naturally-occurring phenomena

18 Suppression activities for insect and disease outbreaks may be permitted with approval (Chief of the Forest Service) to prevent loss within wilderness and/or unacceptable resource damage to resources in adjacent areas. Favor biological methods when available Management of insects and diseases will follow direction in FSM 2324 1

19 **Cultural Resources** Conduct cultural resource inventory within the wilderness using an intuitively-based predictive model designed to provide an inventory of the obvious sites that will likely be affected by wilderness use Inventory priorities will focus on finding and recording sites threatened by loss or serious deterioration during the next decade.

20 Protect cultural resource sites until evaluated Priorities will be set for site evaluations Those that are threatened with loss or deterioration will receive highest priority Other evaluations will be conducted in order to gain data relevant to the past use of the National Forest All evaluation work will preserve the wilderness resource

21. Carry out mitigation efforts on all eligible or listed cultural resources if the management prescription is active removal or benign neglect, according to the National Historic Preservation Act and its implementing regulations Priorities will be established for the mitigation of effects due to benign neglect based on the imminence of loss or deterioration of the affected resource.

22 Permit research within the wilderness only when it meets the following criteria

a) *Necessary to support the values set forth in Section 4(b) of the Wilderness Act* or cannot be accomplished outside the wilderness

b) Is done in compliance with the preservation ethic for the wilderness resource

23. Protect the works of humans within the wilderness only when they are

a) Necessary to support the values set forth in Section 4(b) of the Wilderness Act, or,

b) Serving administrative purposes as necessary for protection of the wilderness resource (Section 4(c)), or

c) Essential to cultural resource management

24 Nominate sites determined to be worthy of preservation and protection to the National Register of Historic Places.

NOTE Discussion of the wilderness recreation spectrum is found in FSM 2300 Maps of wilderness recreation spectrum are available for review at Wilderness District Offices

25 On-site interpretation of sites will not be done Interpretation may be done off-site through brochures and audiovisual programs

26 **Landownership** Retain all Federal land in Federal ownership and acquire non-Federal lands when available

27. **Minerals.** Designated wilderness is withdrawn from further mineral entry but mining on valid claims that existed prior to December 31, 1983, or establishment of the wilderness (whichever is later) may continue.

28 **Fire** The minimum suppression response for wildfires burning at all FIL's is "confine"

29 Consider any unplanned ignitions from natural causes (i e , lightning) that occur in a designated wilderness to be prescribed fire unless the decision is made to declare it a wildfire. This decision must be made on a case-by-case basis

30 Give primary consideration to maintenance of wilderness quality during suppression action on wildfires. Evidence of suppression action will be minimized and rehabilitated as discussed in FSM 2462. Suppression techniques will be based upon the guidelines contained in WW-5100-16 and the "light hand tactics" guide

Planning Assumptions

Timber

- No commercial timber harvest will occur

Watershed

- Water production is representative of that obtained from undeveloped areas Recreation activities will not significantly reduce watershed condition or associated water quality Some reduction in water quality below natural conditions will result from domestic livestock grazing

Wildlife

- Timbered landtypes within this allocation will provide high levels of habitat for snag-dependent and solitude-dependent wildlife species.

- Allowing natural fire to burn some acreage will increase habitat diversity

- Fish populations are likely to decrease in those lakes where fish stocking is discontinued

- Old-growth forest will continue to occur within wilderness at approximately current levels

Range

- Grazing of domestic livestock will continue at approximately current levels

  Satisfactory range conditions will be achieved as range allotment management plans are completed and implemented

Fire

- Additional smoke in the Class I airshed will result from returning fire to a more natural role

- Although most prescribed fires will be small in size, some are expected to substantially exceed historical average fire size in this area

MANAGEMENT AREA 5 (4,967 ACRES) (PHILLIPS LAKE AREA)

Description

This area includes Mason Dam, Phillips Lake, and surrounding lands, as described in the Reservoir Area Management Plan of March 1971 The area is to be managed recognizing a variety of resource values with emphasis on recreation opportunities

Timber resources are managed to provide an aesthetically pleasing forest for public enjoyment Timber stands are managed to retain a thrifty condition, with tree spacing providing a park-like appearance at least at some periods during a stand's life

This management area contributes to the Forest's allowable sale quantity

Direction

1. **Watershed** Apply Forest-wide standards and guidelines

2 **Wildlife** Follow habitat management guidelines found in "Wildlife Habitat and Development Plan for Phillips Lake Management", approved in 1978

3 **Timber** Manage timber stands as visual foreground retention Management will follow guidelines from National Forest Landscape Management, Volume 2, Chapter 5 Under a fully managed condition, the goal will be to have no more than 40 percent or less than 20 percent of the timber stands in any of the following stand conditions

Ponderosa Pine/Douglas-fir and Mixed Conifer·

Seedlings and Saplings	-	0	-	4 9 inches DBH
Poles	-	5	-	10 9 inches DBH
Mature Timber	-	11	-	29 9 inches DBH
Very Large Timber	-			30 + inches DBH

4 Shape and locate harvest units to retain or create irregular appearance and diversity consistent with foreground retention

5 **Transportation** All construction and reconstruction of roads within the area will recognize heavy recreational use and associated safety hazards where recreationists and log trucks are operating on the same road. These safety problems will be dealt with during design, or with restrictions during use

NOTE Some aspects of the landscape may not, at all times, meet retention standards For example, logging slash may be present for a short time after project completion Stumps, although cut low, will be visible to persons walking through the area

6 Design all roads to the standards described in the Reservoir Area Management Plan.

7 Close the area to off-road travel by motor vehicles

8. Construct and maintain trails to provide recreation access and experiences associated with the developed sites and opportunities offered by the area

9 **Range** Use of vegetation by livestock, either by livestock grazing or for hay production, may occur within the primary objective of improving habitat for wildlife

10 **Recreation** Manage recreation consistent with the Reservoir Area Management Plan

11 Interpretation will be through signs and other structures such as overlooks, decks and guided walks.

12 Use staff contacts at contact stations, principal attractions, and amphitheaters as needed

13 Provide rural recreation opportunities.

14 **Landscape Management** The visual quality objective outside developed sites is retention

15 **Insects and Diseases** Apply Forest-wide standards and guidelines

16 **Landownership** Retain ownership and acquire additional identified lands that enhance recreation, visual, fish and wildlife values as the opportunity occurs. Acquisition of less than fee title will be considered if direction and land management objectives can be met.

17 **Minerals** The area is withdrawn from mineral entry

18 **Fire.** Prescribed fire from planned ignition may be conducted for improving the sites Burning intervals will approximate the natural fire cycle in these groups Use of prescribed burning should not be readily apparent to the casual observer two years after occurrence

19. Suppress wildfires in a manner that minimizes heavy equipment use wherever possible

20 Use fuel treatment methods consistent with the guidelines found in the National Forest Landscape Management, Volume 2

21 The minimum acceptable suppression response for wildfires at all FIL's will be "contain"

22 Prescribed fire from unplanned ignitions will not be used

Planning Assumptions

Timber

- Timber stands will be maintained in a healthy, vigorous growing condition throughout most of their rotation, although some trees will be retained for 200 years or longer to provide a big-tree component

Wildlife

- Stands 120 years old and older will provide a level of habitat for wildlife dependent on large trees However, the level of human activity and salvage of dead trees will prevent these stands from functioning as true old-growth

Watershed

- Timber harvest will result in temporary increases in streamflow

- Timber harvest, road construction, and grazing will result in some reduction in water quality below natural conditions This will be mitigated as described in the management standards and guidelines

Fire

- Optimum fuel loading at developed and dispersed campground areas will resemble Photo Series PNW 52-1-PP-4-PC

- Fuel loading for areas outside developed and dispersed recreational influence zones will have more woody material on the ground than shown in PNW 52-1-PP-4-PC.

Range

- Satisfactory range conditions will be achieved as range allotment management plans are completed and implemented

MANAGEMENT AREA 6 (122,788 ACRES)
(Backcountry)

Description

Management emphasizes opportunities for those dispersed recreation activities usually recognized within the relatively high elevation areas (upper forest, subalpine, or alpine areas) The recreation activities usually involve combinations of viewing scenery, hunting, fishing, rock hunting, observing wildlife, snowshoeing, cross-country skiing, camping, hiking, backpacking, and harvesting of minor products such as mushrooms and berries

These areas are to remain relatively natural and undeveloped A road density level similar to 1985 levels will be maintained Although recreational site development is not precluded within this management area the intent is to emphasize semiprimitive recreation opportunities. These areas will be accessed largely by trail with some trails open to motorized use

This management area does not contribute to the Forest's allowable sale quantity

Direction

1 **Watershed** Apply Forest-wide standards and guidelines

2. **Wildlife.** Apply Forest-wide standards and guidelines.

3 **Timber** Timber harvest may occur in the event of a catastrophe such as a fire or insect outbreak when doing so would maintain or improve recreational or visual characteristics and meet the landscape management direction described herein. In addition, harvest may occur when analysis shows timber removal to be necessary to prevent spread of insects onto adjacent lands.

4 **Transportation.** Roads and helispots may be constructed under the following conditions.

a For mineral exploration and development as allowed under mining laws and regulations and to satisfy other valid existing rights.

b. For salvage of timber following catastrophic fire or insect outbreaks

c Incidental and minor portions of roads constructed to serve an adjacent management area

d To provide needed access to approved developments such as dams or utility corridors

5 Obliterate roads and helispots constructed under conditions (a) and (b) following use.

6 Existing roads may be maintained or have minor betterment that is necessary for resource protection and to provide for safe use by high clearance vehicles

7. Construct and maintain trails and trailheads as needed to provide semiprimitive recreation opportunities

8. Identify in the Forest Travel Management Plan what areas, roads, and trails will be open to motor vehicles.

9 **Range.** Apply Forest-wide standards and guidelines Any appropriate range management techniques may be used.

10. **Recreation** Semiprimitive nonmotorized and semiprimitive motorized recreation opportunities will be provided Minor amounts of roaded natural opportunities will occur at the edges of the areas

11 **Landscape Management** The visual quality objective is foreground retention, although measures to prevent insect spread may necessitate different short-term objectives.

12 **Landownership** Maintain Federal ownership and acquire lands, primarily by exchange, that enhance opportunities for dispersed recreation as the opportunity arises

13. **Minerals** Place extra emphasis on minimizing surface resource impacts and on high standard reclamation

14 **Fire.** The minimum acceptable suppression response in this area will be "confine" at all FIL's. Fire suppression will generally emphasize use of hand tools rather than heavy equipment

15. Use planned or unplanned ignitions to meet resource management objectives

16. Concentrate public contact on reaching the users prior to their entering the area A low level of fire prevention activity is appropriate within this area

17. Develop a program to treat natural fuels buildup with prescribed fire

18 **Insects and Diseases** Insect or disease outbreaks affecting trees will not be artificially controlled unless it is necessary to protect resources in adjacent management areas. Noxious weeds may be controlled where cost effective

Planning Assumptions

Timber

- Timber outputs will be negligible

Watershed

- Watershed impacts are expected to be primarily those associated with recreation activities, a few roads, and grazing activity. Impacts on watershed condition and water quality are expected to be small Mitigation of these activities will occur as described in the Forest-wide management standards and guidelines

Wildlife

- Natural tree mortality will provide snag habitat for snag-dependent species at nearly 100% of potential.

- Timber stands will continue to provide old-growth habitat at approximately current levels

Transportation

- Roading densities will remain essentially unchanged from 1985 levels

Range

- Satisfactory range conditions will be achieved as range allotment management plans are completed and implemented

Minerals

- Management of this area may make mineral exploration or extraction opportunities more difficult

Fire

- Fuel loading will consist of natural accumulations except as modified by prescribed fire.

- Optimum fuel loading will resemble Photo Series PNW 105-2-SA-4

MANAGEMENT AREA 7 (26,909 ACRES)
(WILD AND SCENIC RIVERS)

Description

Management is intended to preserve the special values of those rivers or river segments (meaning the river plus its associated corridor) which are part of the National Wild and Scenic Rivers System (See Table 4-10) Management of lands bordering or adjacent to the river (and its associated corridor) will not diminish the special values which caused the river to be included in the National Wild and Scenic Rivers System The objective is to maintain the characteristics which contributed to their classification (Also see Wild and Scenic Rivers Act, Public Law 90-542)

This section provides interim direction for management of those rivers added to the National Wild and Scenic Rivers System by the Omnibus Oregon Wild and Scenic Rivers Act of 1988 As specified by the Wild and Scenic Rivers Act (of 1968), individual management plans will be developed for these rivers These plans, to be developed through the NEPA process, may include management direction different from what is found in these interim guidelines, necessitating a Forest Plan amendment

This scenic and recreational river corridors of this management area contibute to the Forest's allowable sale quantity

Direction

1 **Watershed** Construction of water impoundments, diversions, straightening, riprapping, and other modification of the waterways will generally not be allowed Exceptions would include protection of major improvements (such as an existing bridge) and then only to the extent that they do not diminish the values that caused the river to be designated Instances where any construction activities are permitted are expected to be very rare and of small scale

2 **Wildlife** Apply Forest-wide standards and guidelines

3 **Timber Management** No commercial timber harvest will occur within wild river segments.

4 Permit salvage and scheduled timber harvest within scenic and recreational river segments, consistent with objectives for visual quality and recreation

5 **Range** Permit domestic livestock grazing to continue, consistent with the objectives for individual river segments

6 Make range management structures visually compatible with river classification.

7 **Landownership** Retain Federal ownership.

8 Consider acquisition of easements upon, or fee title to, those lands critical to maintaining the characteristics of the river segments

9. **Minerals** Formal designation by Congress as a wild river precludes further mineral entry but does not affect valid existing rights

10 Evaluate proposals for activities in scenic and recreational segments to prevent pollution and unnecessary impairment of scenic quality

11. Permit no new entry into study rivers pending study completion

12 **Insects and Diseases** Control forests pests in a manner compatible with the intent of the Act and management objectives of contiguous National Forest System lands (FSM 3400)

13 **Fire.** In order to preserve water quality, retardant and heavy equipment will not normally be used in the proximity of wild rivers Fire suppression activity along wild and scenic segments should protect the primitive nature of the area when possible

14 Prescribed fire from planned and unplanned ignitions may be used, consistent with management direction for adjacent management areas

The minimum acceptable suppression response to wildfires will be "confine" at FIL's 1-2-3, and "contain" for FIL 4 and greater

Table 4-10
Designated Wild, Scenic and Recreational Rivers

Established River/Stream	Segment	Miles	Class
Eagle Creek	Headwaters below Eagle Lake to Eagle Cap Wilderness boundary	4 0	W
	Eagle Cap Wilderness boundary to Paddy Creek	15 5	R
	Paddy Creek to Little Eagle Creek	6 0	S
	Little Eagle Creek to the National Forest boundary	1.5	R
Grande Ronde River	Confluence with the Wallowa River to Umatilla National Forest boundary	1 5	R
	Umatilla National Forest boundary to the Wallowa-Whitman National Forest boundary approximately 1/2 mile east of Grossman Creek	17 4	W
	Wallowa-Whitman National Forest approximately 1/2 mile east of Grossman Creek to Wildcat Creek	9 0	W*
	Wildcat Creek to the Oregon-Washington State line	15 9	R*
Imnaha River	From the confluence of the South and North Forks of the Imnaha River to Indian Crossing	6.0	W
	Indian Crossing to Cow Creek	58 0	R
	Cow Creek to its mouth	4 0	S
South Fork Imnaha River	From its headwaters to its confluence with the North Fork Imnaha River	9 0	W
Joseph Creek	From Joseph Creek Ranch, one mile downstream from Cougar Creek, to the Wallowa-Whitman National Forest boundary	8 6	W
Lostine River	From its headwaters to the Eagle Cap Wilderness boundary	5.0	W

* Administered by the United States Department of Interior

Table 4-10 (Cont)
Designated Wild, Scenic and Recreational Rivers

	Eagle Cap Wilderness boundary to the Wallowa-Whitman National Forest boundary at Silver Creek	11 0	R
Minam River	From its headwaters to the Eagle Cap Wilderness boundary one-half mile downstream from Cougar Creek	39.0	W
North Fork John Day River	From its headwaters to the North Fork John Day Wilderness boundary	3 5	W
	North Fork John Day Wilderness Boundary to Trail Creek	7 5	R
	Trail Creek to Big Creek	24 3	W*
	Big Creek to Texas Bar Creek	10 5	S*
	Texas Bar Creek to its confluence with Camas Creek	8 3	R*
North Powder River	From its headwaters to the Wallowa-Whitman National Forest boundary	6 0	S
Snake River	From Hells Canyon Dam to Pittsburg Landing	31.5	W
	From Pittsburg Landing downstream to the National Forest boundary	36 0	S
	See Management Area 8	67 5	W,S
Study River	**Segment**	**Miles**	
Wallowa River	From its confluence with the Minam River to its confluence with the Grande Ronde River	9 0	

* All or partially on the Umatilla National Forest

15 **Transportation** Develop and maintain the transportation system consistent with wild, scenic, and recreational river objectives Roads crossing or readily visible from *wild* river segments will not be constructed Roads may occasionally cross or parallel *scenic* river segments provided scenic river values are not significantly compromised Road construction and maintenance within *recreational* river segments will recognize the high scenic recreation and visual values associated with this classification.

16 Manage trails consistent with the objectives for individual river segments

17 Off-road vehicle use may be allowed to continue on existing routes New open routes or areas will not be established.

18 **Recreation** Permit only primitive recreation developments within *wild river* segments Primitive or nonprimitive development may occur along *scenic* and *recreational* segments

19 Maintain existing river access points No new accesses will be established until management plans for individual rivers are completed

20. Special use permits for outfitting and guiding may be issued If analysis indicates that use is nearing capacity, a temporary limit may be set, pending development of a management plan.

21 **Landscape Management** Meet the visual quality objectives of preservation along wild river segments, retention along scenic segments, and partial retention along recreational river segments.

22 Locate utility corridors so as to not be visible from river segments

Planning Assumptions

Watershed

- Watershed impacts will be insignificant in wild river segments Minor amounts of erosion and soil compaction will be experienced at campsites, along trails, and possibly from livestock grazing These will be mitigated as described in the management standards and guidelines

Wildlife

- Timber land types within this management area will provide quality habitat for snag dependent wildlife species.

- Timber stands currently in an old-growth condition will provide old-growth habitat through this planning period

Range

- Satisfactory range conditions will be achieved as range allotment management plans are completed and implemented.

Fire

- Appropriate suppression action will be taken on ignitions that threaten to burn into areas without authority for unplanned ignitions

MANAGEMENT AREA 8 (14,355 ACRES) (HCNRA SNAKE RIVER CORRIDOR)

Description

This area includes the wild and scenic river corridor along the Snake River within the Hells Canyon National Recreation Area. The primary emphasis is on maintaining the recreation experiences available at the time the area was established

This management area does not contribute to the Forest's allowable sale quantity.

Direction

(Note Also see the NRA Comprehensive Management Plan for detailed direction on management and administration)

1. **Watershed** Construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project work under the Federal Power Act will not be permitted, except for improvements required or used in connection with the operation and maintenance of projects in existence, or under construction, on the date that the Hells Canyon National Recreation Area was established

2. Construction of water impoundments, diversions, straightening, riprapping, and other modification of the waterways will generally not be allowed. Exceptions would include protection of major improvements (such as an existing bridge) and then only to the extent that they do not diminish the values that caused the river to be designated and are consistent with the act establishing the Hells Canyon National Recreation Area (Public Law 94-199) Instances where any construction activities are permitted are expected to be very rare and of small scale.

3 **Range** Permit livestock grazing to the extent that it is compatible with range and river management objectives

4. **Recreation.** Provide over-water semiprimitive motorized recreation opportunities. Over land (off-road) motorized use is prohibited

5 **Landscape Management** The visual quality objective is retention

6 **Timber** No standing trees may be felled (dead or live) except as necessary, in the judgment of the Forest Service, for safety purposes

7 **Transportation** Consider road and trail construction on a case-by-case basis to insure compatibility with wild and scenic river values.

8 **Insects and Diseases.** Apply Forest-wide standards and guidelines

9. **Wildlife** Apply Forest-wide standards and guidelines

10 **Landownership.** Maintain Federal land in Federal ownership

11. Acquire scenic easements within the river corridor. Land purchase may be required where scenic easements will not meet the direction established in the Wild and Scenic Rivers Act

12 **Minerals** This area is withdrawn from mineral entry

13. **Fire.** A fire management action plan will be prepared Suppress all wildfires that threaten life or property

14 Continue restriction of open fires during fire season.

15 The minimum acceptable suppression response to wildfires is "confine" at FIL's 1-2-3, and "contain" at FIL 4 and greater.

16. Use prescribed fire from unplanned ignitions consistent with management direction of adjacent areas.

17 Concentrate prevention efforts at launch sites and at river camp sites.

18 Conduct all fire management activities consistent with the maintenance of visual qualities as outlined in National Forest Landscape Management, Volume 2.

19. **Other** Dead logs or limbs lying on the ground or in the water may be used for campfires except for those that are specifically designated for retention

Planning Assumptions

Timber

- There will be no commercial timber harvest

Watershed

- Watershed impacts are expected to be minor, associated primarily with recreational activities and grazing These will be mitigated as described in the Forest-wide management standards and guidelines Impacts on water quality are expected to be negligible.

Wildlife

- Habitat for snag-dependent wildlife species will be provided at nearly 100 percent of potential (although there are relatively few timbered acres).

- Timber stands which are currently in an old-growth condition will continue to provide old-growth habitat through this planning period.

- Roost trees for wintering bald eagles will be retained.

Range

- Satisfactory range conditions will be achieved as range allotment management plans are completed and implemented.

MANAGEMENT AREA 9 (161,078 ACRES) (HCNRA DISPERSED RECREATION/NATIVE VEGETATION)

Description

In these areas all activities will be managed to provide ample opportunities for dispersed recreation and to enhance native vegetation It is envisioned that these areas will eventually be almost entirely occupied by native plant species Range will be managed to maintain satisfactory range condition which will be achieved and maintained primarily by nonstructural means These areas will provide a mix of primitive, semiprimitive nonmotorized and semiprimitive motorized recreation opportunities.

This management area does not contribute to the Forest's allowable sale quantity

Direction

(Note. See the NRA Comprehensive Management Plan for detailed direction on management and administration.)

1 **Watershed** Construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project work under the Federal Power Act will not be permitted, except for improvements required or used in connection with the operation and maintenance of projects in existence, or under construction, on the date that the Hells Canyon National Recreation Area was established

2 **Timber.** There will be no regulated timber harvest, however, measures necessary to protect timber on other public or private lands from disease or insects are permitted

3. **Transportation** Develop the road system consistent with the transportation needs for the HCNRA as a whole

4 Prohibit off-road vehicle travel, except for oversnow vehicles, subject to regulation under the Wallowa-Whitman Forest Travel Management Plan

5. **Range.** Continue livestock grazing consistent with native vegetation production objectives.

6 Enhance native vegetation through the use of appropriate range management techniques Management will be designed to favor native vegetation over non-native vegetation.

7 Although no attempt will be made to eradicate non-native species, further introduction will be avoided

8 **Recreation** Provide recreation opportunities as described in the semiprimitive motorized and semiprimitive nonmotorized, and primitive categories of the Recreation Opportunity Spectrum

9 **Landscape Management.** Apply Forest-wide standards and guidelines

10. **Insects and Diseases** Emphasize biological methods when necessary to control insects or noxious weeds, although abiotic methods are not prohibited.

11 **Landownership** Retain these lands in Federal ownership and acquire the remaining non-Federal lands as directed by Congress

12 **Minerals** This area is withdrawn from mineral entry.

13 **Fire** Prescribed fire from planned or unplanned ignitions may be used Fire suppression activities will be conducted to maintain primitive and semiprimitive recreation opportunities

14 Use fire, as needed, to provide forage diversity.

15. Minimum acceptable suppression response to wildfires will be "confine" at FIL's 1-2-3 and "contain" at FIL 4 and above

Planning Assumptions

Watershed

- Watershed impacts are expected to be minor, associated primarily with recreational activities and grazing. These will be mitigated as described in the Forest-wide Standards and Guidelines.

Wildlife

- Natural tree mortality will provide snag habitat for snag-dependent species at 100 percent of potential.

- Timber stands which are currently in an old-growth condition will continue to provide old-growth habitat through this planning period

Timber

- Commercial timber harvest will not occur.

Transportation

- Roading densities will remain essentially unchanged from 1982 levels

Range

- Satisfactory range conditions will be achieved as range allotment management plans are completed and implemented

MANAGEMENT AREA 10 (123,029 ACRES)
(HCNRA FORAGE PRODUCTION)

Description

This management area lies within grasslands interwoven with timbered stringers in the Hells Canyon National Recreation Area. The grassland portions of these areas will be managed to provide maximum forage production with ranges maintained in satisfactory condition (desired ecological status) and structural improvements being rustic in nature Timbered portions will provide old-growth habitat at approximately current levels

This management area does not contribute to the Forest's allowable sale quantity

Direction

(Note: See the NRA Comprehensive Management Plan for detailed direction on management and administration)

1 **Watershed** Construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project work under the Federal Power Act will not be permitted, except for improvements required or used in connection with the operation and maintenance of projects in existence, or under construction, on the date that the Hells Canyon National Recreation Area was established.

2. **Wildlife.** Timber stringers will be managed as old-growth habitat.

3 **Timber** Timber will be managed to maintain old-growth. Timber management, using selective harvest methods, may occur when desirable for wildlife habitat improvement, or to improve scenic or recreational values. All timber harvest will be part of the unregulated component of the timber base.

4 **Transportation.** Apply Forest-wide standards and guidelines

5 **Range** Use any appropriate range management techniques

6 Structural improvements will utilize native materials or will otherwise be made to blend in with the surrounding landscape.

7 **Recreation** Provide both semiprimitive motorized and semiprimitive nonmotorized opportunities.

8 **Landscape Management.** Apply Forest-wide standards and guidelines

9. **Insects and Diseases** Apply Forest-wide standards and guidelines.

10. **Landownership** Retain these lands in Federal ownership and acquire the remaining non-Federal lands as directed by Congress

11 **Minerals** This area is withdrawn from mineral entry.

12 **Fire** Use prescribed fire from planned and unplanned ignitions, where appropriate, to maximize forage production in nontimbered areas

13 In timbered areas being managed for old-growth, fire management direction is the same as in Management Area 15.

14 The minimum acceptable suppression response to wildfires is "confine" at FIL 1-2-3 and "contain" at FIL 4 and above

Planning Assumptions

Timber

- Commercial timber harvest will be negligible

Watershed

- Watershed impacts are expected primarily to be those associated with grazing These will be mitigated as described in the Forest-wide Management Standards and Guidelines.

Wildlife

- Natural tree mortality will provide snag habitat for snag-dependent species at 100 percent of potential

- Timber stands which are currently in an old-growth condition will continue to provide old-growth habitat.

Fire

- Fire-killed trees in old-growth areas will be left standing to create snag habitat

Range

- Satisfactory range conditions will be achieved as range allotment management plans are completed and implemented

MANAGEMENT AREA 11 (70,706 ACRES)
(HCNRA DISPERSED RECREATION/TIMBER MANAGEMENT)

Description

These areas combine dispersed recreation with timber management on the more productive sites within the NRA The objective is to provide a variety of tree species, a diversity of healthy timber stands and ample dispersed recreation opportunities This management area contributes to the Forests's allowable sale quantity.

Direction

(Note. See the NRA Comprehensive Management Plan for detailed direction on management and administration)

1. **Watershed** Construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project work under the Federal Power Act will not be permitted, except for improvements required or used in connection with the operation and maintenance of projects in existence, or under construction, on the date that the Hells Canyon National Recreation Area was established.

2 **Wildlife.** Manage snags of all sizes at a level providing habitat for snag-dependent species at 60 percent of optimum.

3 Retain 10 percent of the available commercial forest land in an old-growth condition

4 Maintain big-game habitat at no less than 60 percent of the optimum potential size and spacing of hiding cover for any one TRI compartment (or area of similar size).

5 **Timber.** Manage timber using selective harvest systems Acceptable silvicultural treatments include shelterwood* harvest, individual tree selection, group selection, sanitation and salvage

6. Permit precommercial and commercial thinnings, with individuals thinnings not exceeding two acres

7. Permit group selection for visual, recreation, wildlife, and tree regeneration purposes with a maximum opening size of two acres although exceptions may be permitted on a case-by-case basis

8 Provide a representation of five basic successional stages or age classes grass-forb, shrub-seedling, pole-sapling, young timber, and mature timber

9 **Transportation** Timber harvest roads will be the minimum necessary for haul of equipment and logs, consistent with protection of other resources

10 Timber harvest roads will be closed or left open as indicated by site-specific analysis considering all resources,

11 Skidding across meadows, scablands, and natural openings larger than one acre will rarely occur and will include rehabilitation measures necessary to protect site productivity.

12 **Range** All available range management techniques may be used to achieve satisfactory range conditions (desired ecological status).

13 **Recreation** Provide roaded natural recreation opportunities

14 **Landscape Management** Apply Forest-wide standards and guidelines

15 **Insects and Diseases** Apply Forest-wide standards and guidelines

16 **Landownership.** Retain these lands in Federal ownership and acquire the remaining non-Federal lands as directed or implied by Congress

17 **Minerals** This area is withdrawn from mineral entry

18 **Fire.** Prescribed fire from planned and unplanned ignitions may be used for slash disposal, site preparation, and habitat modification to meet recreation or other resource objectives.

19 The minimum acceptable suppression response to wildfires is "confine" at FIL 1-2-3 and "contain" at FIL 4 and above

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* In his appeal decision of April 27, 1984, John Crowell, Jr , Assistant Secretary of Agriculture for Natural Resources and Environment, determined that shelterwood harvest is a type of "selective cutting" as the term is used in PL 94-199.

Planning Assumptions

Timber

- Timber management will generally be by uneven-aged management techniques with an average entry period of 5-15 years for tractor ground and 15-25 years for steep ground requiring aerial logging systems. Except for old-growth, the entire area of available, capable, and suitable forest will be entered for the initial harvest within about 20 years, a rate of 5-7 percent per year Diameter distribution cutting in precommercial tree sizes will occur on 30 percent of the forested land area at the time of commercial entry.

Wildlife

- As stands enter a managed condition, wood fiber utilization will leave only a moderate number of down logs available for use by wildlife. Occasional slash piles will be retained for small animal use Optimum thermal cover for elk will be limited to old-growth timber stands within this management area (10 percent) Distribution of these old-growth patches may be less than optimum for elk thermal cover, though selective harvest will retain thermal cover values in many instances

Watershed

- Streamflow increases as a result of timber management activities will be insignificant

- Timber management, grazing, and road construction will result in water quality below natural levels. These will be mitigated as described in the management standards and guidelines

Fire

- Selective harvest methods will generally limit the use of underburning because of diverse stand conditions; however, some opportunities may exist in fire-tolerant stands

Range

- Satisfactory range conditions will be achieved as range allotment management plans are completed and implemented

MANAGEMENT AREA 12 (15,160 ACRES)
(RESEARCH NATURAL AREAS)

Description

The objectives for establishing RNA's are to preserve examples of all significant natural ecosystems for comparison with those influenced by humans, to provide educational and research areas for ecological and environmental studies, and to preserve gene pools for typical and rare and endangered plants and animals

RNA's typify important forest, shrubland, grassland, alpine, aquatic, and geologic types and other natural situations that have special and unique characteristics of scientific interest and importance Activities in RNA's are limited to research, study, observations, monitoring, and kinds of educational activities that are nondestructive and nonmanipulative.

A research natural area establishment report will be prepared for each recommended area These studies will determine the boundaries of the areas. Until the establishment reports are signed by the Chief of the Forest Service, the areas designated by this plan are recommendations. Proposed RNA's will be protected from uses which would reduce their suitability for RNA designation The Indian Creek RNA has been established by the Chief Following establishment, a management plan (approved by the District Ranger) will be developed for each RNA.

Additional RNA's may be proposed during the life of this Plan to fill RNA needs identified in Appendix H to the EIS

Direction

1 **Watershed.** Apply Forest-wide standards and guidelines.

2. **Wildlife.** Prevent the introduction of non-native species.

3. **Timber.** Timber harvest will not occur unless for research purposes

4. **Range.** Objectives for grazing will be defined in situations where grazing is needed to establish or maintain vegetative communities

5 In research natural areas were livestock grazing is not part of the management prescription, the Regional Forester and Station Director shall, as appropriate, establish a level of acceptable casual or incidental livestock use that can be tolerated and is consistent with the management prescription for the research natural area.

6 **Transportation.** Roads and trails will normally be the minimum necessary to provide access for research and education objectives

7. Off-road vehicle use will be prohibited.

8. **Research** Prepare establishment reports and management plans for each proposed RNA. In addition to the one existing research natural area, 18 areas are recommended for addition to the Research Natural Area System:

Lightning Creek
Alum Beds
Bob Creek
West Razz Pond and Razz Lake
Bills Creek
Duck Lake
Government Draw
Indian Creek (existing RNA)
Horse Pasture Ridge
Lake Fork
Pleasant Valley
Little Granite
Craig Mountain Lake
Mt. Joseph
Vance Knoll
Pt Prominence
Basin Creek
Haystack Rock
Cougar Meadow

9 **Recreation** Manage these areas to accommodate recreational use similar to the management areas surrounding them

10 Discourage public recreation use if levels become so high as to be incompatible with the primary objective

11 Where special orders are needed to limit, restrict, or control specific activities such as camping, seasons of use, or other uses, that are not compatible with the objectives of the research

natural area, the Forest Supervisor shall issue orders pursuant to 36 CFR 261, subpart B, to protect an area's features Any such orders shall incorporate the special closure provisions of 36 CFR 261.53

12 **Landscape Management.** Apply Forest-wide standards and guidelines.

13 **Landownership.** Retain these lands in Federal ownership and acquire private lands as opportunity or need occurs

14. **Minerals.** Recommend formally classified RNA's for withdrawal from mineral entry.

15 **Fire.** Design suppression activities to minimize site disturbance Prescribed fires will be used only in conjunction with approved research projects

16 The minimum acceptable suppression response will be "confine" at all FIL's.

17 **Insects and Diseases** The decision on treatment of Forest pests will be made on a case-by-case basis Where pest management activities are prescribed, they shall be as specific as possible against target organisms and induce minimal impact to other components of the ecosystem.

18. **Other.** Prohibit the gathering of fuelwood for commercial or home use

Planning Assumptions

Timber

- There will be no timber harvest

Watershed

- Watershed condition and water quality and quantity will approximate pristine conditions

Wildlife

- Timber stands which are currently in an old-growth condition will continue to provide old-growth habitat.

- Natural tree mortality will provide snag habitat for snag-dependent species at 100 percent of potential.

Fire

- No fuel treatment activity will occur unless compatible with RNA objectives

- Fuel will be allowed to accumulate at natural rates.

- Prescribed fires from unplanned ignitions will be used consistent with the management plans for specific RNA's.

MANAGEMENT AREA 13 (5,733 ACRES) (HOMESTEAD FURTHER PLANNING AREA)

Description

This management area includes that portion of the Homestead Further Planning Area under Forest Service administration. The USDI Bureau of Land Management administers the larger portion of the Homestead area and is responsible for preparing a recommendation to Congress either for wilderness or nonwilderness use This area will be managed to preserve wilderness characteristics until the detailed study can be completed.

This management area does not contribute to the Forest's allowable sale quantity.

Direction

1. **Watershed** Apply Forest-wide standards and guidelines

2 **Wildlife.** Wildlife habitat manipulation may be permitted provided it does not reduce the suitability or desirability of the area as wilderness.

3 **Timber.** Trees will not be sold or cut except under specific conditions on valid mining claims or under emergency conditions such as fire or insect and disease control

4 **Transportation** Maintain existing trails will be maintained.

5 No new roads will be constructed until the wilderness question is decided.

6 **Range.** Grazing of domestic livestock may occur under the same guidelines as in wilderness

7. Manage range improvements as described in FSM 2320

8. **Recreation.** Limit recreational uses to those which do not reduce the suitability of the area as wilderness.

9. Permit off-road vehicles consistent with the Forest Travel Management Plan.

10. Provide semiprimitive motorized and semiprimitive nonmotorized recreation opportunities

11. **Landscape Management** The visual quality objective is preservation, pending completion of the wilderness study by the Bureau of Land Management

12 **Landownership.** Retain in Federal ownership.

13 **Minerals** Apply Forest-wide standards and guidelines.

14 **Fire.** Design fire suppression activities to maintain future management options, prescribed fires from unplanned ignitions may be used to meet resource objectives

15. Use "No Trace" fire suppression standards will be as outlined in pamphlet WW-5100-16.

16 The minimum acceptable suppression response at all FIL's will be "confine."

17. **Insects and Diseases** Permit artificial control of Forest pests only to protect values outside the further planning area

Planning Assumptions

Timber

- No commercial timber harvest will occur

Watershed

- Water quality and quantity are representative of that obtained from undeveloped areas Recreation activities will not significantly reduce watershed condition or associated water quality Some reduction in water quality will result from domestic livestock grazing. These will be mitigated as described in the Forest-wide standards and guidelines.

Wildlife

- Timbered land types within this allocation will provide maximum potential habitat for snag-dependent and solitude dependent wildlife species

Fire

- Heavy equipment will rarely be used in fire suppression activities.

Range

- Satisfactory range conditions will be achieved as range allotment management plans are completed and implemented

MANAGEMENT AREA 14 (27,051 ACRES)
(STARKEY EXPERIMENTAL FOREST AND RANGE)

Description

This area includes the Starkey Experimental Forest and Range The area is allocated to research use and will be managed to protect existing research projects and provide for future research needs. In addition to its research contribution, the experimental forest is expected to provide a variety of other benefits including timber and livestock forage when compatible with research uses.

This management area does not contribute to the Forest's allowable sale quantity

Direction

(Note· It is expected that standards and guidelines applicable to all management areas will normally be applied. However, standards and guidelines are not intended to restrict research activities.)

1. **Watershed.** Apply Forest-wide standards and guidelines

2 **Wildlife** Apply Forest-wide standards and guidelines

3. **Timber.** Manage timber using customary silvicultural techniques, unless contrary to research objectives.

4 **Transportation.** Apply Forest-wide standards and guidelines

5 **Range.** Manage utilization of forage by domestic livestock and wildlife according to research needs.

6 **Recreation.** Provide roaded natural and roaded modified recreation opportunities.

7. **Landscape Management** Apply Forest-wide standards and guidelines.

8. **Insects and Diseases.** Apply Forest-wide standards and guidelines provided preventive and suppressive techniques are consistent with research purposes.

9 **Landownership** Retain in Federal ownership

10 **Minerals** Apply Forest-wide standards and guidelines.

11 **Fire.** Suppress wildfires using techniques consistent with research activities Retardant will be used for wildfire suppression only with direct approval from the research project leader

12. Prescribed burning may only occur when compatible with research needs

13 The minimum acceptable suppression response is "confine" at FIL 1-2-3 and "contain" at FIL 4 and above

14. **Other** To protect research, wood gathering for home heating will not normally be permitted Exceptions to this policy may occur in special situations.

(Note: Additional direction for managing experimental forests is found in the 4000 section of the Forest Service Manual)

Planning Assumptions

Timber

- Timber output is difficult to predict because of changing research needs, although some utilization will occur.

- Timber management techniques and harvest cycles will be highly variable

Watershed

- Timber harvest, livestock grazing, and other activities are likely to impact watershed condition although the degree, extent and frequency of impact are unknown

Wildlife

- The quality of wildlife habitat in the future is unknown and will vary with research needs Inherent characteristics of the area assure a high degree of habitat diversity and a relatively high level of big game hiding cover, thermal cover, and forage

Fire

- This area has high priority for suppression of wildfire.

MANAGEMENT AREA 15 (36,750 ACRES) (OLD-GROWTH PRESERVATION)

Description

These areas are intended to maintain habitat diversity, preserve aesthetic values, and to provide old-growth habitat for wildlife Old-growth stands contain mature and overmature trees in the overstory and are well into the mature growth stage and usually contain a multi-layered canopy and trees of several age classes Standing dead trees and down material are present. Evidence of human activities may be present but do not significantly alter the other characteristics and would be a subordinate factor in a description of such a stand

There are 20 animal species on the Wallowa-Whitman which indicate definite preference for mature or old-growth forest Management indicators of this type of habitat are the pine marten, pileated woodpecker, northern three-toed woodpecker, black-backed three-toed woodpecker, and goshawk Old-growth timber habitat represents the best habitat for these species. It is not known whether other habitats are sufficient to maintain viable populations of these species without an available reservoir of old-growth These areas include timber stands at widely ranging elevations and aspects, and in a variety of plant communities. It is intended that these stands will continue to provide the quality habitat needed by those wildlife species dependent upon mature and old-growth timber and will provide a balance of vegetative condition

This management area does not contribute to the Forest's allowable sale quantity

Direction

1. **Watershed.** Apply Forest-wide standards and guidelines

2 **Wildlife** Select alternative stands in instances where monitoring or project inventories indicate that stands allocated as old growth in this plan are not truly in an old growth condition Minor changes of this nature will generally be considered nonsignificant changes to this plan

3. Additional snags may be created if designated old growth stands are lacking necessary snags, but otherwise meet the old growth definition.

4. Use the following defintion in monitoring old growth and in identifying replacement stands as needed:

   An old-growth stand is defined as any stand of trees ten acres or greater generally containing the following characteristics·

   Ponderosa pine - The stands will contain at least ten mature to over-mature trees per acre with ponderosa pine or juniper representing 75 percent of the overstory canopy level. Stem size will be 21 inches or greater in the overstory tree layer. Broken-topped trees may be present Ponderosa pine bark will be furrowed and platy with color ranging from orange to yellow A minimum of one standing snag, 21 inches or larger, per acre and at least 5 tons of down material including three logs per acre (greater than 9 inches) will be present

Douglas-fir, white fir, spruce - These stands include both intolerant and tolerant species The stands will contain at least 15 trees per acre 21 inches or more in diameter, two snags and at least five tons of down material including three downed logs per acre (greater than 9 inches in diameter) Broken-topped trees may be present

5 Provide a 300-acre pileated woodpecker feeding area within 0 7 miles of any designated old-growth patch (MA 15) approximately 300 acres or larger This will normally be a contiguous block although it may be arranged in blocks of 50 acres or larger not more than 0 25 miles apart Within these feeding areas, maintain at least two hard snags ten inches dbh or larger per acre

6 Locate pileated feeding areas in areas such as wilderness, MA 6, or other areas without scheduled timber harvest, when available.

7. Reevaluate old-growth stands each planning period to determine whether or not they still meet old growth criteria When an old-growth stand no longer meets the criteria, select a new stand, returning the original stand to whatever management area surrounds it

8 Select replacement stands from sites having similar character, to the extent practical

9 **Timber** Areas allocated to old-growth timber will have no scheduled timber harvest although salvage may occur following catastrophic destruction if a more suitable replacement stand exists

10 **Transportation.** Avoid new road construction through old growth stands

11 When it is necessary to build a road through an old-growth area, or where a road already exists, the road will be managed to retain the old-growth characteristics of the area including solitude This will normally require seasonal or year-round road-use restrictions

12 Existing trails will be maintained and new trails may be constructed where they serve a valid purpose

13 **Range** Apply Forest-wide standards and guidelines.

14 **Recreation** Roaded natural and roaded modified recreation opportunities will be provided.

15 **Visuals.** Apply Forest-wide standards and guidelines

16. **Landownership** Retain in Federal ownership.

17 **Minerals** Avoid disturbance to the extent practical If old growth stands are lost due to mining activities, replacement stands will be selected

18. **Fuelwood** Close individual old-growth stands to fuelwood cutting as needed to retain snags or provide solitude

19 **Fire** The minimum acceptable suppression response is "contain" at all FIL's

20 Minimal use of heavy equipment for fire suppression and prescribed burning will occur in order to protect old-growth characteristics, specifically snags and downed logs.

21 Burned trees and snags should be cut only when they are a direct threat to personal safety or maintaining control

22 Obliterate machine firelines that would otherwise provide future access into old-growth areas

23. Photo Series PNW 105-8-PP-4 and PNW 105-1-MC-4 will be used as a guide.

24 **Insects and Diseases** Control of pests is encouraged where pests threaten destruction of an old-growth stand. Where destruction of the old-growth is not likely, artificial control of pests will occur only when this can be accomplished without adverse effects on old-growth values

25. **Other.** Where the presence of old-growth conflicts with visual resource objectives, old-growth will have priority

Planning Assumptions

Timber

- No timber harvest will be scheduled for these areas

Watershed

- No timber harvest-related watershed effects are expected Grazing by livestock is expected to cause some increase in erosion and sediment production above natural levels These will be mitigated as described in the Forest-wide standards and guidelines.

Wildlife

- Areas allocated to this management area are currently functioning as old-growth and will continue to do so through this planning period

- These stands will provide habitat for snag-dependent species at 100 percent of potential.

Insects and Diseases

- There will be a higher incidence of insects and disease than in managed stands

Recreation

- A high level of visual quality will normally be provided

Range

- Satisfactory range conditions will be achieved as range allotment management plans are completed and implemented

MANAGEMENT AREA 16 (5,744 ACRES)
(ADMINISTRATIVE AND RECREATION SITE RETENTION)

Description

These areas include sites such as work centers, fire lookouts, permitted ranch headquarters, campgrounds, seed orchards, and other areas which are occupied by facilities for administration, public recreation, or features of cultural significance. Also included are two summer home tracts.

This management area does not contribute to the Forest's allowable sale quantity

Direction

1. **Watershed.** *Apply Forest-wide standards and guidelines.*

2. **Wildlife** Manage wildlife habitat consistent with the primary administrative or recreational objectives.

3 **Timber.** Timber harvest may occur to facilitate recreational, administrative or other uses or for safety reasons

4. **Transportation** Construct roads, parking lots, trails, and aircraft and boat landing facilities as necessary to provide access to the sites or facilitate their use.

5 Manage roads to permit passenger car traffic when sites are open for use

6 **Range.** Domestic livestock grazing will not normally be permitted although administrative stock *may graze on some administrative sites*

7 **Recreation** Permit recreation activity on administrative sites which does not interfere with administrative or other uses for which the site is intended.

8. Interpretation will be through signs and other structures, such as overlooks, decks and guided walks. There may be staff contacts at contact stations, principal attractions and amphitheaters

9. Manage developed recreation sites according to FSM 2300

10 Manage recreation residences according to FSM 2700.

11 Provide roaded natural and rural recreation opportunities

12 ***Cultural Resources*** *Apply Forest-wide standards and guidelines.*

13 **Landscape Management** Apply Forest-wide standards and guidelines.

14 **Landownership.** Retain in Federal ownership as long as administrative use is warranted

15. **Minerals.** The sites will not normally be recommended for withdrawal from mineral entry

16 **Fire** The minimum acceptable suppression response is "contain" at all FIL's

17. Firelines constructed by hand will be favored over machine fireline.

18. Prescribed fire from unplanned ignitions will not be used in this management area.

19 *Prescribed fire from planned ignitions may be used to enhance the appearance of some sites* or to meet recreation objectives.

20. **Facilities.** Provide and manage administrative facilities sufficient to accomplish the land and resource management and protection objectives of the Forest

21 Prepare administrative site development plans for all forest administrative sites. Long-term development and maintenance costs will be a consideration in facilities planning

22 If, through an environmental analysis, it is determined that additional administrative or recreational sites are needed, additional areas may be added to Management Area 16 sufficient to meet the identified need. This change in land allocation will normally be considered a non-significant amendment to this Forest Plan because of the relatively small areas involved

23. Facilities will be planned, developed, maintained and operated for safe use, support of the Forest resource programs, and cost effectiveness The construction of new buildings or additions to existing buildings shall comply with approved site development plans.

24. **Other.** Permits for fuelwood removal will normally not be issued for these sites

25 **Insects and Diseases** Prevent insect and disease outbreaks including noxious weeds, with a minimum of disturbance to developments or users Favor biological and silvicultural treatments.

MANAGEMENT AREA 17 (6,594 ACRES) (POWER TRANSPORTATION FACILITY RETENTION)

Description

These areas are presently in use or proposed for the transport of gas, oil, or electricity Through proper design and management, optimum use will be made of those lands allocated to power facilities. To the extent possible use will be made compatible with other uses of the Forest including consideration of visual objectives One Existing Utility Corridor (see Figures 4-3 and 4-4) is designated in order to facilitate authorization of future utility rights-of-way It lies along Interstate Highway 84 west of La Grande and presently includes several facilities Exclusion areas and avoidance areas are also identified

This management area contributes to the Forest's allowable sale quantity

Direction

1. **Watershed** Apply Forest-wide standards and guidelines.

2. **Wildlife.** Apply Forest-wide standards and guidelines

3. **Timber** To the extent practicable, timber management will be planned as on adjacent lands. Timber harvest from suitable timberlands will contribute to the regulated timber harvest

4. **Transportation** Transportation systems will be designed and maintained primarily for the installation and maintenance of the structures associated with the utility corridor although these systems may also serve to access adjacent areas When not being used for these purposes, these roads will normally be closed. In all cases, roads will be the minimum needed for their intended purpose.

5. **Range.** Use of this forage within utility rights-of-way will be directed by the applicable allotment management plan

6. **Landscape Management.** Manage these areas as described in National Forest Landscape Management, Volume 2, Chapter 2 (USDA Agriculture Handbook 478).

7 **Cultural Resources.** Protection of the cultural resource values of the Oregon Trail will take priority over use as a utility corridor.

8 **Recreation.** Provide roaded modified recreation opportunities

9 **Landownership** Consolidate National Forest ownership where this will result in more efficient management or administration

10. **Minerals** Apply Forest-wide standards and guidelines

11. **Fire** Tailor slash disposal to meet utility corridor needs.

12. The minimum acceptable suppression response is "contain" at all FIL's.

13. Prescribed fire from unplanned ignition will not be used in this management area

14. **Insects and Diseases** Apply Forest-wide standards and guidelines

15. **Other.** Manage utilities to create the least impact on National Forest resources Wherever possible, utility rights-of-way will be designated to allow joint use of the rights-of-way.

16. *Additional utility rights-of-way or corridors may be identified and approved subject to site-*specific environmental analysis.

Planning Assumptions

Watershed

- Long-term effects on water quality and soil erosion will be minor, primarily associated with roads needed for installation and maintenance These will be mitigated as described in the management standards and guidelines.

- Long-term streamflow increases will result from those corridors where a substantial reduction in tree cover is maintained Since such a small acreage is involved the overall effect on Forest runoff is negligible.

Fire

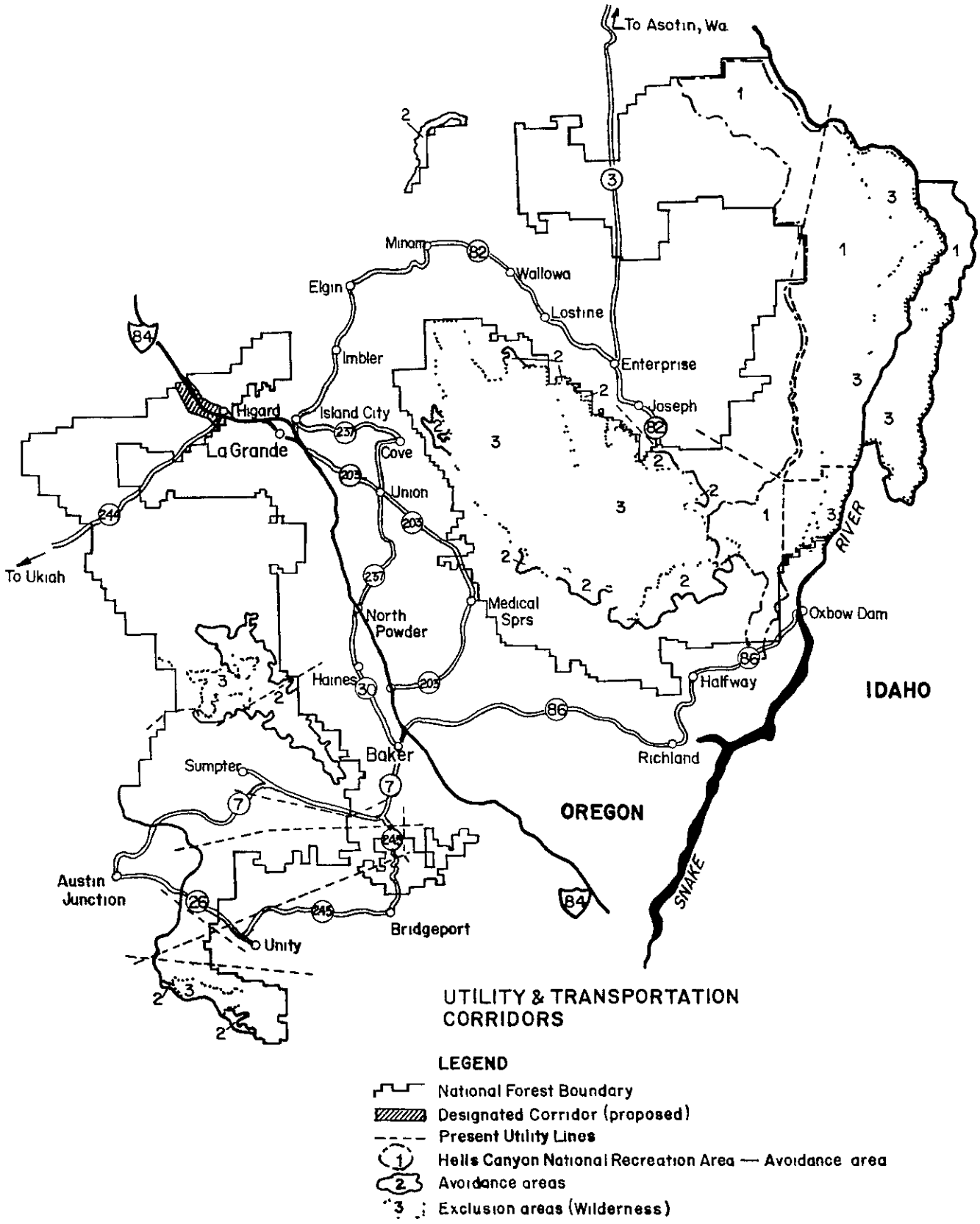
- Prescribed fire may not be feasible once the facility is in place

MANAGEMENT AREA 18 (59,743 ACRES)
(Anadromous Fish Emphasis)

Description

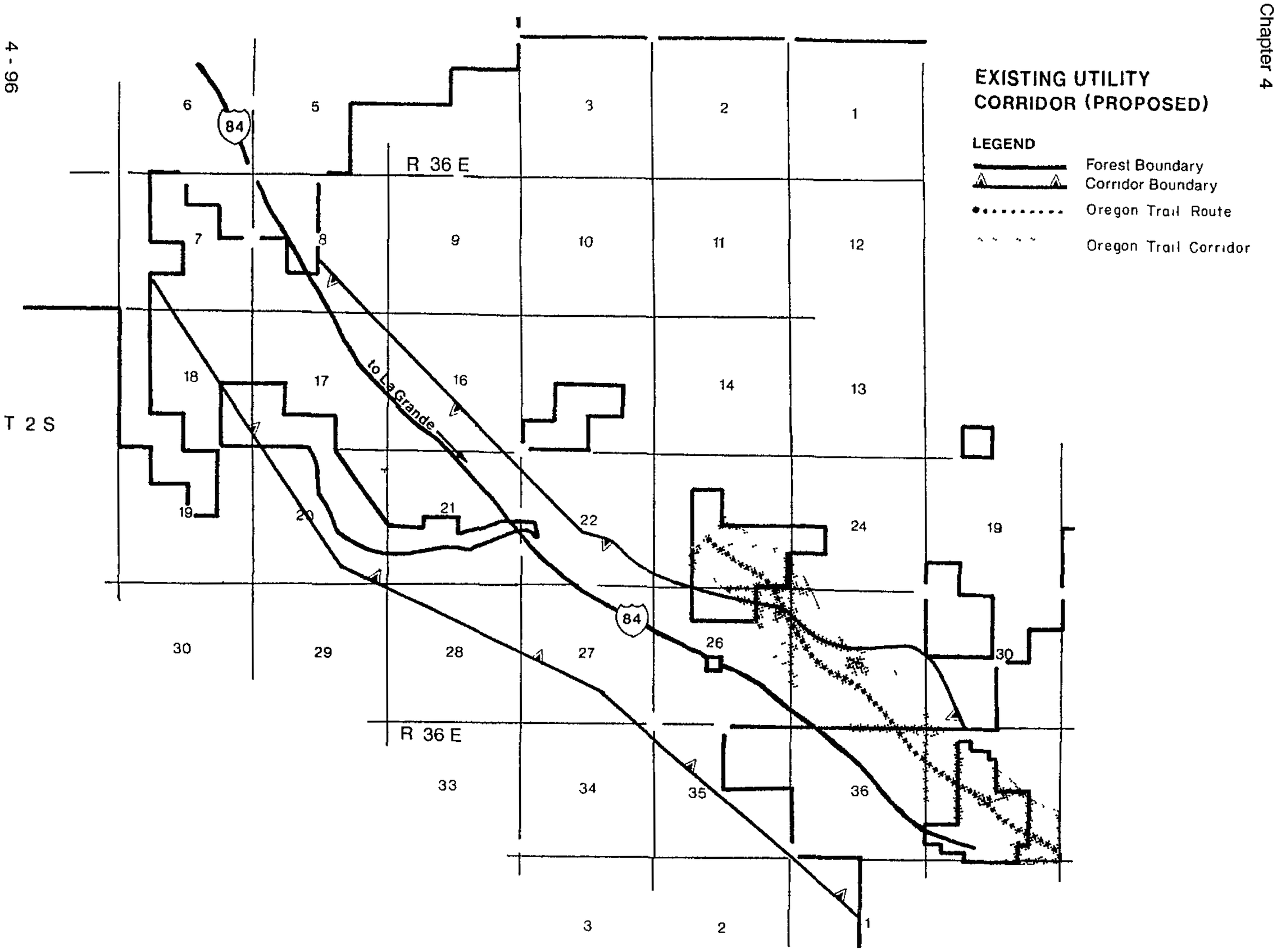
This area is intended to achieve and maintain optimum conditions for anadromous fish and provide near-optimum conditions for big game Emphasis is placed on providing anadromous fish habitat at, or near, the maximum potential of the watershed where this area is applied In most instances, it is expected that near-optimum habitat for big game can be provided simultaneously with anadromous fish habitat. Providing quality fish habitat takes priority over big-game habitat where conflicts occur

FIGURE 4-3



Information on present utility lines from Pacific Power & Light Company using data from the Western Regional Corridor Study of May 1980

FIGURE 4-4


EXISTING UTILITY CORRIDOR (PROPOSED)
LEGEND
Forest Boundary
Corridor Boundary
Oregon Trail Route
Oregon Trail Corridor
R 36 E
T 2 S
to La Grande
84
1
2
3
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The intent is not to maintain the watershed in a pristine condition, rather it is to manage all resources of the area using the most effective management techniques to assure that anadromous fisheries values are maintained or enhanced.

This management area contributes to the Forest's allowable sale quantity

Direction

1 Apply management direction from Management Area 3 except as follows

2 **Watershed** Apply Forest-wide standards and guidelines

3. **Wildlife** Manage riparian areas to achieve near-optimum conditions for fish

4 Enhancement and restoration will be practiced to produce anadromous fish habitat at the highest level practical. (Restoration efforts will strive to attain 90 percent of the original Smolt Habitat Capability Index found under natural conditions Restoration technology cannot fully restore streams to pristine condition) Practices may include boulder placement, bank riprapping, vegetation planting, and the construction of log and rock weirs, log and rock deflectors, adult holding pools and spawning beds

5 Retain trees immediately adjacent to perennial streams, as needed, for future instream habitat

6 **Timber** Design silvicultural prescriptions, reforestation methods, harvest schedules, and logging systems to achieve fisheries and wildlife objectives

7. **Transportation.** The major consideration in the design and maintenance of roads will be protection of fisheries values. Design, construction and maintenance will be adjusted, as needed, to protect fisheries values

8 Close local roads and collector roads permanently or seasonally as needed to provide soil and water protection, fire protection, wildlife habitat, recreation, and other purposes In general, open road density will be limited to a maximum of 1 5 miles per square mile, although in some areas local conditions may necessitate higher or permit lower densities

9 Provide public access for removal of firewood within the overall guideline of 1 5 miles per square mile of open road

10. Where harvest entries are relatively infrequent, local roads which are not needed for other activities between harvest will be closed Roads not needed in the foreseeable future for timber management or other activities will be closed and obliterated following timber harvests, with the land returned to production

11 Analyze trail needs. Those trails needed will be protected and maintained for future use New trails may be constructed to serve valid needs

12 **Range** Manage ranges to protect and improve riparian vegetation and fish habitat.

13 **Recreation** Provide roaded modified and roaded natural recreation opportunities

14 **Landscape Management** Apply Forest-wide standards and guidelines

15 **Landownership** Retain in Federal ownership

16 **Minerals** Protect fish habitat and habitat investments through reasonable provisions in plans of operation and in reclamation requirements

17. **Fire** The minimum acceptable suppression response is "contain" at all FIL's

18 Emphasize low-impact suppression techniques to minimize effects on soil and water

19 **Insects and Diseases** Practice high intensity prevention activities such as monitoring pest populations to be forewarned of outbreaks, stump removal for root rots, stocking control, species selection for plantings, timely salvage of weather-damaged timber, etc , where cost effective and consistent with fish habitat objectives Use pesticides only where this use can occur without adversely affecting fish habitat.

Planning Assumptions

Timber

- It is assumed that implementation of this area will result in a reduction in timber outputs of about 20 percent on those areas to which it is applied (Compared to Management Area 1)

- To provide for hydrologic recovery, watersheds which have been heavily harvested in recent years will have little or no additional harvesting for one or more decades

Wildlife

- Long-term cover/forage ratios will provide high quality big game habitat although habitat effectiveness will be reduced by the roads needed for timber management

- Management of this area will result in an average elk habitat effectiveness index of 74 percent of potential on summer ranges (including discounting for roads), although individual sites may have higher or lower values.

- Outside of riparian areas a high degree of wood fiber utilization will provide few down logs available for use by wildlife.

- Because of the short rotation periods, snags larger than 21 inches in diameter will be rare in managed stands Snags 12 to 18 inches in diameter will usually exceed 40 percent of the optimum habitat levels for cavity nesters through natural mortality in managed stands Large snags within riparian areas will approximate the 100 percent level.

Watershed

- Timber harvest will not result in increases in streamflow harmful to stream stability

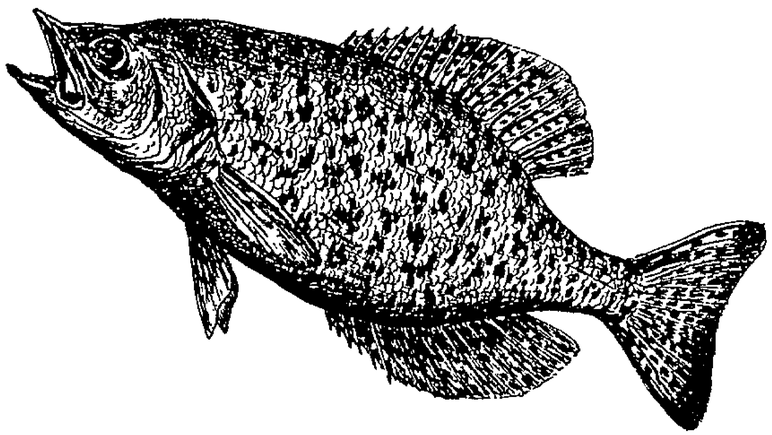
- Timber harvest, road construction and grazing will result in some reduction in water quality below natural conditions This will be mitigated as described in the Forest-wide standards and guidelines

Range

- Satisfactory range conditions will be achieved as range allotment management plans are completed and implemented

CHAPTER 5

Implementation of The Forest Plan



CHAPTER 5

IMPLEMENTATION OF THE FOREST PLAN

INTRODUCTION

Implementation of the Wallowa-Whitman 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, and objectives that provide a different way of addressing the issues and concerns people have voiced about Forest management. This Forest Plan establishes the direction for the Wallowa-Whitman National Forest for the next 10 to 15 years, when used in conjunction with Forest Service Manuals, Handbooks, and the Pacific Northwest Regional Guide

The remainder of this chapter explains how management of the Wallowa-Whitman National Forest moves from the Current Direction and Existing Situation to this Forest Plan, all described in the FEIS The following sections describe aspects of implementation that are influenced by previous management activities and objectives; 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 plan to be amended or revised.

IMPLEMENTATION DIRECTION

Project Scheduling

Implementation of the Forest Plan occurs through identification, selection, and 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

The schedule of proposed activities is contained in Appendix A of this document. Listings of possible projects to meet the ten-year management activity schedule are maintained by the unit managers These listings will routinely change as projects are implemented, or are removed from the listings for other reasons, and as new projects take their place Projects are scheduled in response to the planned output of goods and services and the annual budgeting process.

The identification and selection of management practices must meet the requirements of FSM 1922 4 and Chapter 5, FSH 1909 12 Scheduling of the practices is in response to the management direction in the Forest Plan and the near-term management needs and opportunities (an example of this scheduling is in the Ten-Year Timber Sale Schedule in Appendix C) Additional requirements for timber sale scheduling are found in FSH 2409.13. Execution is in response to the annual budget The Plan appendices contain ACTIVITY schedules These activity schedules represent a pool of possible projects from which IMPLEMENTATION schedules (specific, funded projects) are developed in conjunction with funding approvals

Consistency With Other Instruments

This Forest Plan serves as the single land management plan for the Wallowa-Whitman National Forest All other land management plans are replaced by the direction in this plan, a list of unit plans superseded by this plan are shown below

- Wallowa Valley
- Grande Ronde
- Burnt Powder
- Desolation
- Elgin

Also superseded are the present (1962 as amended) Timber Management Plan for the Wallowa-Whitman, those portions of the timber management plans for the Nez Perce and Payette National Forests which affect the Wallowa-Whitman administrative area, and interim guidelines for managing the Eagle Cap Wilderness

The Hells Canyon NRA Comprehensive Management Plan is incorporated into this Forest Plan.

All outstanding and future permits, contracts, cooperative agreements and other instruments for occupancy and use of lands included in the Forest Plan will be brought into agreement with this Forest Plan, subject to the valid existing rights of the parties involved, this will be done as soon as practicable, and generally within three years of the date of this Plan

Budget Proposals

The plan's scheduled projects are translated into multiyear program budget proposals that identify needed expenditures The schedule is used for requesting and allocating the funds needed to carry out the planned management direction Upon approval of a final budget for the Forest, the annual program of work is identified and carried out Accomplishment of the annual program is the incremental implementation of the management direction of the Forest Plan Outputs and activities in individual years may be significantly different from those shown in Chapter 4 depending on final budgets

Environmental Analysis

Projects and activities permitted through this Plan are subject to a site-specific environmental analysis under the NEPA process as they are planned for implementation. Site-specific project environmental analysis may rely on and utilize analyses and expected environmental effects from the FEIS and will be considered tiered to the Forest Plan. Such information or data may be incorporated by reference in project site-specific environmental assessments or environmental impact statements (EIS). Environmental analyses for some proposed actions meeting established FSM 1950 criteria may qualify to be exempted or categorically excluded from preparation of an environmental assessment or EIS. For most analyses, 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 EIS.

MONITORING AND EVALUATION PROGRAM

The Monitoring Action Summary, Table 5-1, identifies the key activities and outputs to be tracked during implementation of this plan to ensure that activities reasonably conform to the management area direction, and that outputs satisfy the objectives of the plan

At intervals established in this Forest Plan, implementation will be evaluated to determine how well objectives have been met, how accurate effects and cost projections are, and how closely management standards and guidelines have been applied. Based upon an evaluation of the monitoring results, the interdisciplinary team shall recommend to the Forest Supervisor such changes in management direction, revisions, or amendments to the Forest Plan as deemed necessary. The action prescribed by the Forest Supervisor will depend upon the significance of the monitoring results. The magnitude of the change from predicted conditions is an important factor, as is the risk associated with the change Procedures prescribed by the National Environmental Policy Act will be followed by the Forest Supervisor in determining the appropriate action

Action directed by the Forest Supervisor could include one or several of the following:

1. A determination that no action is need, that monitoring indicates goals, objectives, and standards are being achieved

2 District Ranger(s) may be directed to improve application of management area direction as projects are implemented Normally, this would involve a change in proposed project design, or a site-specific interpretation of management area direction In some instances, additional information or study may be required due to an inconclusive evaluation.

3. Management area direction may be modified as a Plan amendment. This would normally involve a question of the applicability of the direction to a specific geographic area, rather than forestwide for a particular management area

4 The allocation of a management prescription may be modified as a Plan amendment

5 The projected schedule of outputs may be amended

6 The needed action may singly or cumulatively result in a significant change to the Plan or initiate revision of the Plan

Monitoring and evaluation each have a distinctly different purpose and scope. In general, monitoring is designed to gather the data necessary for evaluation. During evaluation, data provided through monitoring are analyzed and interpreted This process will provide periodic summary data necessary to determine if implementation is within the bounds of the Forest Plan.

Figure 5-1, is a flow diagram displaying how the monitoring program will be carried out and how the results will be used Following Figure 5-1 are Forest Monitoring Plan worksheets which provide additional monitoring details

AMENDMENT AND REVISION

The Forest Plan incorporates legal mandates, professional judgement and the public's stated concerns into a future vision of the Forest. It charts a path for getting there by developing management goals and objectives and translating them into management direction in the form of standards and guidelines for management areas on the Forest. National Forest planning is a dynamic process, and the products--Forest Plans--are similarly dynamic. Forest Plans can and should be modified if conditions warrant. As management goals are applied on-the-ground or as new information is gained 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 do not apply direction in site-specific management

activities It would be unrealistic to try to identify, analyze, and schedule the myriad projects or activities that occur on a National forest. Instead, this type of site-specific planning occurs at the project-level planning stage, such as allotment management planning

The Forest Supervisor may amend the Forest Plan Based on an analysis of the 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 If the change resulting from the amendment is determined not to be significant for the purposes of the planning process, the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory completion of NEPA procedures.

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 RPA 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 the requirements for the development and approval of the Forest Plan The Forest Supervisor shall 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.

Table 5-1
MONITORING ACTION SUMMARY

Monitoring Item	Actions/Effects	Units	Variability Threshold	Suggested Methods	Who Will Monitor	Frequency/ Report Per	Location of Data	Estimated Annual Cost
GENERAL Project compliance with National Environmental Policy Act and Forest Plan	Assure compliance with NEPA requirements including cumulative effects analysis Assure project decisions are in accord with Forest Plan	Projects	Failure to meet NEPA requirements or Forest Plan Goals and Objectives	Review EA's and other environmental documents	Forest NEPA coordinator/ District NEPA coordinator	Each project/ annual	1950 files	$70,000
GENERAL Standards and Guidelines (S&G's)	Assure adherence to standards and guidelines not covered by a separate monitoring item	Standards and Guidelines	Failure to implement correctly or failure to meet goals and objectives	Review selected activities	District Ranger/SO Staff	Continuous/ Annual	1920 files	$30,000
TIMBER Insect and Disease Control	Avoid epidemic levels	——	Threat of epidemic infestation	Aerial surveys, ground surveys, and routine observation	RO Pest Mgt staff/Forest Timber Staff	Annual/Annual	3400 files	$1,500
TIMBER Timber Offered for Sale	Assure that allowable sale Quantity (ASQ) by species, and timber sale program quantity (TSPQ) are offered as planned	MMCF	+- 10% different from planned for the decade	Compare actual offerings with planned offerings using STARS data base, attainment reports	Timber Staff Officer	Annual/Annual	2400 files	$1,000

Monitoring Item	Actions/Effects	Units	Variability Threshold	Suggested Methods	Who Will Monitor	Frequency/ Report Per	Location of Data	Estimated Annual Cost
TIMBER Timber Harvest	Assure that harvest volumes by acreage, species group, harvest type, and management areas planned	Acres,MMCF	+- 20% different from planned for the decade	Compare harvest with planned offerings using STARS data base.	Timber Staff Officer	Annual/Annual	2400 files	$1,000
TIMBER Precommercial Thinning	Assure that planned levels of precommercial thinning are accomplished	Acres	+- 10% on a decadal basis	Compare planned level with attainment	Timber Staff Officer	Annual/3 years	2400 files GIS	$2,000
TIMBER Harvest Units	Assure that S&G's regarding size and dispersal of created openings are effective and implemented correctly	----	S&G not met	EA reviews, timber sale reviews	Timber Staff Officer	Continuous/ 3 years	1400 files	$1,000
TIMBER Reforestation	Assure that reforestation is occurring in a timely manner as provided in the Plan	Acres	Greater than 29% plantation failure or greater than 50% below prescribed stocking level	Program review, field sampling, silvicultural accomplishment reports	Timber Staff Officer	Annual/Annual	2400 files GIS	$3,000
TIMBER Lands Not Suited for Timber Management	Assure that lands are correctly identified as to their suitability for timber management	Acres	5% change in suited land base	Stand examinations, EA reviews, sale reviews	Timber Staff Officer, District Ranger	Contiuous/ 5 years	2400 files GIS	$2,000

Monitoring Item	Actions/Effects	Units	Variability Threshold	Suggested Methods	Who Will Monitor	Frequency/ Report Per	Location of Data	Estimated Annual Cost
TRANSPORTATION Roads and Trails	Assure that Forest Plan objectives for roads and trails are being met, including open road densities	—	Failure to meet objectives	Review EA's transportation system plans, and individual projects	Forest Engineer	Continuous/ 3 years	7700 files GIS	$1,500
RANGE MANAGE-MENT Range Outputs	Provide forage for permitted domestic live-stock and wildlife within constraints im-posed by basic plant and soil needs	AUM's	AUM'S fall more than 20% below permitted levels from preceding five years	Review annual grazing report and permit transactions	Range Staff Officer	Annual/5 years	2200 files	$1,000
RANGE MANAGE-MENT Forage Utilization	Assure range use standards and guidelines are correctly implemented	----	10% of reviewed allotments show use on key areas in excess of stand-ards	Field surveys, AMP reviews	District and SO Range Staff	Continuous/5 years	2200 files	$6,000
RANGE MANAGE-MENT Range Vegetative Conditions	Assure that ranges have satisfactory range condition or improving trend	----	Failure to achieve *satisfactory or* improving trend	Field reviews *photo monitor-*ing points	District and SO *Range Staff*	Continuous/5 years	2200 files	$6,000

Monitoring Item	Actions/Effects	Units	Variability Threshold	Suggested Methods	Who Will Monitor	Frequency/ Report Per	Location of Data	Estimated Annual Cost
RANGE MANAGEMENT Range Improvement	Assure that range improvements are accomplished as planned	Range improvements	10% below assigned level	Review annual budget and attainment	SO Range Staff	Annual/5 years	2200 files	$500
RANGE MANAGEMENT Allotment Management Planning	Assure that allotment management plans are completed and implemented on schedule	Plans	More than 10% of plans fall more than two years behind schedule	Review attainment reports, annual work plans, allotment management plans, and annual operating plans	Range Staff Officer	Annual/5 years	2200 files	$5,000
RANGE MANAGEMENT Noxious Weeds	Assure that noxious weeds are controlled according to Regional EA's, Forest Plan, and applicable laws and regulations	Acres	Assigned targets are not met by 10% or more	Attainment reports, budget requests, EA's	District and SO Range Staff	Annual/10 years	2200 files	$1,000
WATER Watershed Standards and Guidelines and BMP's	Assure that watershed S&G's and BMP's are implemented properly and are effective -	----	S&G's are BMP's not implemented correctly or not effective	Field reviews, stream sampling	District and SO Watershed Staff	Annual/Annual	2500 files	$13,600

Monitoring Item	Actions/Effects	Units	Variability Threshold	Suggested Methods	Who Will Monitor	Frequency/ Report Per	Location of Data	Estimated Annual Cost
WATER Riparian Area Cumulative Effects	Assure that riparian values are protected or improved	-----	Failure to maintain/improve riparian condition	Stream channel transects	Forest Hydrologist	Annual/Annual	2500 files	$1,600
WATER Summer Low Flow Cumulative Effects	Assure that May-September flows are not reduced	-----	Any management-related flow reduction	Review stream gage records	Forest Hydrologist	Annual/3 years	2500 files	$400
WATER Peakflow Cumulative Effects	Assure that damaging peak flows are avoided or reduced	-----	Failure to implement S&G's Management-related peak	Project reviews EA reviews stream channel sampling	Forest Hydrologist	Annual/Annual	2500 files	$1,500
SOIL Soil Productivity	Assure that productivity is being maintained	-----	Failure to meet standards	Field sample/ ocular estimates	Forest Soil Scientist	Continuous/ Annual	2500 files	$1,250
WILDLIFE Old-growth Forest	Assure that the amount, size, and distribution of old growth is maintained as specified in the Plan	Acres, distribution	Loss of designated old-growth stand	Inventory/visit designated and other old-growth stands	District Staff	Continuous/5 years	2600 files GIS	$22,500 (initially)
WILDLIFE Dead and Defective Tree habitat	Assure that adequate numbers and sizes of snags, logs, and replacement trees are provided	-----	More than 10% of surveyed areas have less than 90% of the prescribed levels	timber sale reviews, surveys of occupancy	District Timber and Wildlife Staff	Continuous/ 5 years	2600 files GIS	$8,000

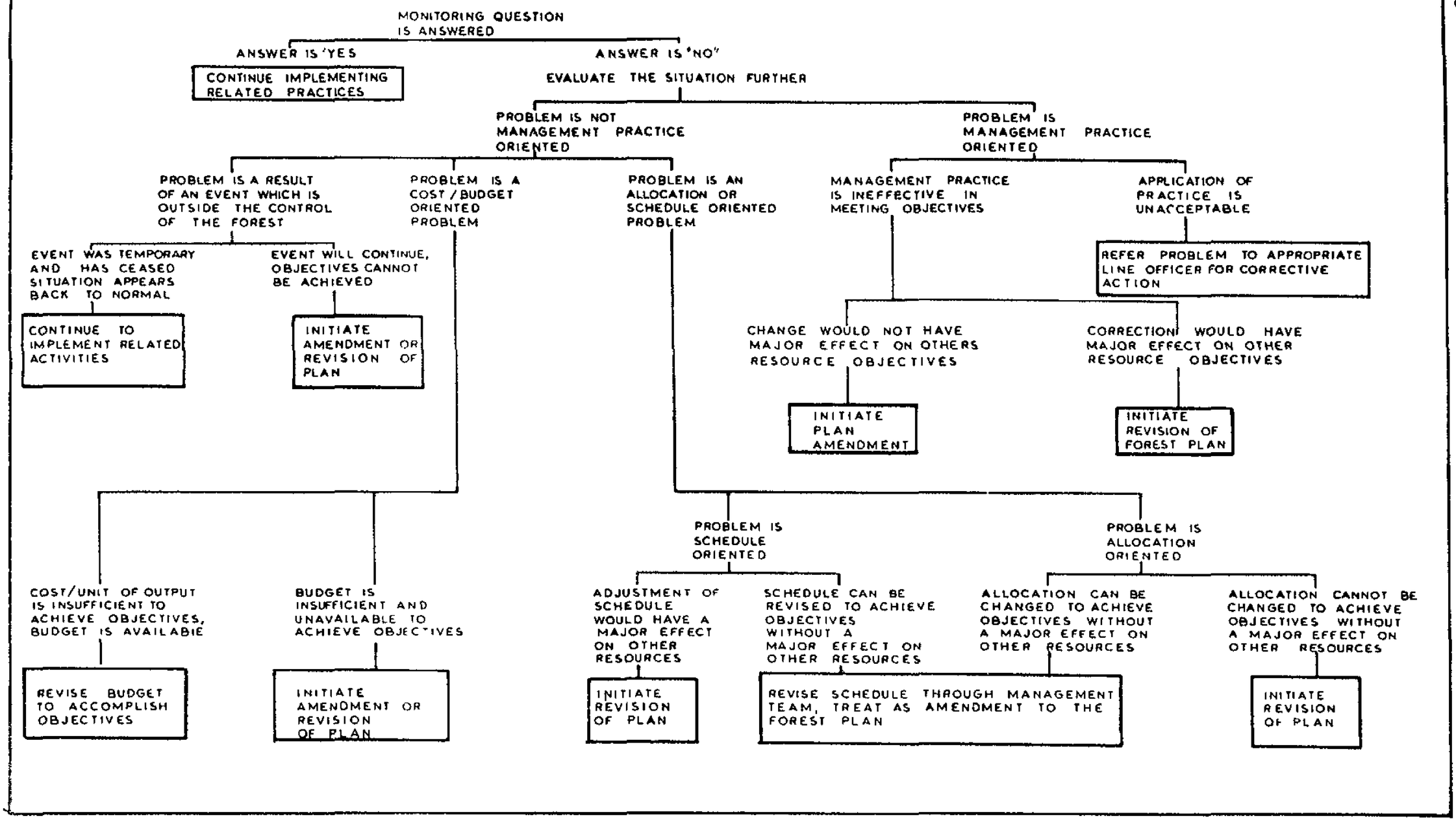
Monitoring Item	Actions/Effects	Units	Variability Threshold	Suggested Methods	Who Will Monitor	Frequency/ Report Per	Location of Data	Estimated Annual Cost
WILDLIFE Pileated Woodpecker Populations	Assure that viable (or higher) populations are maintained	Pairs	Greater than 10% variation below projected populations	Field sample population levels in suitable habitat	District and Zone Biologists	Annual/5 years	2600 files	$17,000 (initially)
WILDLIFE Goshawk	Assure that viable or higher populations are maintained	Pairs	Greater than 10% variation below expected population level	Field sample population levels in suitable habitat	District and Zone Biologists	Continuous/ Annual	2600 files	$7,000
WILDLIFE Pine Marten	Assure that viable or higher populations are maintained	Pairs	Greater than 10% of habitat unused	Field sample population levels in suitable habitat	District and Zone Biologists	Continuous/ Annual	2600 files	$7,000
WILDLIFE Elk Habitat/ Populations	Assure that prescribed habitat conditions are provided on winter ranges and selected summer ranges	—	Failure to implement standards and guidelines correctly	Timber sale reviews, EA reviews	District and Zone Biologists	Continuous/ Annual	2600 files	$5,000
T & E SPECIES Bald Eagles	Assure active participation in bald eagle recovery plans	—	Failure to meet requirements in recovery plan and Forest Plan S&G's	Roost and nest site observation, review of site plan development process	District and Zone Biologists	Continuous/ Annual	2600 files	Costs not differentiated from T&E Program costs
T & E SPECIES Peregrine Falcon	Assure active participation in peregrine falcon recovery plans	—	Failure to meet requirements in recovery plan and Forest Plan S&G's	Nest site observation Review progress in site management plan development and habitat development.	District and Zone Biologists	Continuous/ Annual	2600 files	Costs not differentiated from T&E Program costs

Monitoring Item	Actions/Effects	Units	Variability Threshold	Suggested Methods	Who Will Monitor	Frequency/ Report Per	Location of Data	Estimated Annual Cost
FISHERIES Anadromous and Resident Fish	Assure that habitat quality and populations are being maintained or improved	Stream miles/ numbers	Any reduction in habitat quality or population Failure to improve where needed	Field inventory of stream condition	Fisheries Biologist	Annual	2600 Files, TRI, GIS	$18,000
MINERALS Mineral Development and Rehabilitation	Assure that standards and guidelines for mineral operations and rehabilitation are reasonable, effective, and being implemented correctly	Operations	Standards and guidelines are ineffective or unreasonable	Review 50% of operating plans each year	Forest Minerals Geologist, District Rangers	Continuous/ 3 years	2800 files	$40,000
RECREATION Wilderness	Assure the Wilderness recreation opportunities are provided as specified in standards and guidelines	----	Failure to meet management direction	Annual field observations	District Rangers	Continuous/3 years	2300 files TRI, GIS	$15,000
RECREATION Wild and Scenic Rivers	Assure that river management objectives are being met	----	Failure to meet objectives	Annual observations, formal of each segment every five years	District Rangers	Continuous/5 years	2300 files	$15,000

Monitoring Item	Actions/Effects	Units	Variability Threshold	Suggested Methods	Who Will Monitor	Frequency/ Report Per	Location of Data	Estimated Annual Cost
RECREATION Recreation Setting	Assure that recreation opportunities are provided as directed in the Plan	Acres meeting ROS objectives	Failure to meet ROS criteria	Monitor recreation use by activity and compare with objectives	District Rangers	Continuous/ 2 years	2300 files TRI, GIS	$20,000
RECREATION Off-Road Vehicle Use	Assure that ORV opportunities are provided in a manner consistent with other resource objectives	----	ORV use shows unacceptable effects	Annual field observations	District Rangers	Continuous/ 2 years	2300 files TRI, GIS	$10,000
RECREATION Visual Resource Objectives	Assure that visual quality objectives are being met	-----	Failure to meet VQO's	Routine observations, formal project reviews, summary viewshed analysis	District Rangers/ Forest Landscape Architects	Continuous/ Annual	2300 files TRI, GIS	$10,000
CULTURAL RESOURCES Cultural and Historic Site Protection, Rehabilitation and Interpretation	Assure that sites are protected, stabilized, and/or rehabilitated as specified in the standards and guidelines	-----	Failure to meet standards and guidelines	Field review Review annual reports of condition	District Rangers/ Forest Archaeologists	Continuous/3 years	2300 files TRI, GIS	$50,000
ECONOMICS Budget	Assure that annual budgets and programs needed to implement the Forest Plan are being provided	Dollars	Budget is less than 90% of need -- 3 year average	Compare annual budget with budget needed for plan implementation	Forest Administrative Officer	Annual/Annual	6500 files	$1,000

Monitoring Item	Actions/Effects	Units	Variability Threshold	Suggested Methods	Who Will Monitor	Frequency/ Report Per	Location of Data	Estimated Annual Cost
Costs and Values	Verify that the major costs and values used in the Forest Plan Analysis are in line with actual costs and values	Dollars	+-25% difference based on a 3-year average	Compare actual costs and values with projection costs and values	Forest Economist	Annual/5 years	1900 files	$3,000
Community Effects	Verify that the projected economic and social effects of the Forest Plan are in line with actual effects	Dollars, population, social trends, employment	Actual Forest-related effects are +- 15% different from projected and are having significant, adverse community impacts	Compare projections with actual values	Forest Economist	Annual/5 years	1900 files	$5,000
Adjacent Lands	Assure no adverse effects on adjacent landowners	----	Indication of significant adverse effects	Interview local landowners, government officials, state and federal agency officials	Public Affairs Officer, Forest Staff	3 years/3 years	1900 files	$3,000

FIGURE 5-1
DECISION FLOW DIAGRAM FOR THE EVALUATION OF THE FOREST PLAN
WALLOWA-WHITMAN NATIONAL FOREST



FOREST MONITORING PLAN WORKSHEET

ISSUE: *Compliance with NEPA and Forest Plan*

FOREST GOALS, DESIRED FUTURE CONDITION, OUTPUTS *Comply with National Environmental Policy Act (NEPA) requirements, including cumulative effects analysis, during project-level decision-making*

MANAGEMENT AREAS AFFECTED. *All*

RISK ASSESSMENT COST OF ERROR *3* X LIKELIHOOD OF ERROR *2* = RISK INDEX *6*

MONITORING QUESTIONS

Are project-level decisions being made using appropriate NEPA procedures including analysis of cumulative effects?

Are project-level decisions tiered to, and in accord with, the Forest Plan?

THRESHOLD OF VARIABILITY: *Failure to use appropriate procedures or to meet Plan requirements*

SUGGESTED SAMPLING METHODS

Review all decisions for NEPA adequacy and tiering to Forest Plan

MONITORING FREQUENCY· *Continuous*

REPORTING FREQUENCY. *Annual*

MONITORING RESPONSIBILITY. *Forest NEPA Coordinator/District NEPA Coordinator*

REPORTING RESPONSIBILITY. *Forest NEPA Coordinator*

ESTIMATED COST OF MONITORING *$70,000 per year*

PRECISIION. *H*

RELIABILITY. *H*

FOREST MONITORING PLAN WORKSHEET

ISSUE *Standards and Guidelines - General*

FOREST GOALS, DESIRED FUTURE CONDITION, OUTPUTS. *Implement Forest-wide and management area guidelines for all resources*

MANAGEMENT AREAS AFFECTED: *All*

RISK ASSESSMENT: COST OF ERROR *3* X LIKELIHOOD OF ERROR *2* = RISK INDEX *6*

MONITORING QUESTIONS:

Are Forest Plan Standards and Guidelines being implemented and are they meeting stated goals and objectives?

THRESHOLD OF VARIABILITY: *Failure to implement correctly or failure of standards and guidelines to meet goals and objectives.*

SUGGESTED SAMPLING METHODS

Review selected activities in order to assess implementation of standards and guidelines not covered by other monitoring items in the Plan This will include timber sales, range allotments, road construction projects, and wildlife habitat improvement projects

MONITORING FREQUENCY. *Continuous*

REPORTING FREQUENCY: *Annual*

MONITORING RESPONSIBILITY: *District Rangers/S O Staff*

REPORTING RESPONSIBILITY *Planning Staff Officer*

ESTIMATED COST OF MONITORING: *$30,000 per year*

PRECISION: *M*

RELIABILITY *M*

FOREST MONITORING PLAN WORKSHEET

ISSUE: *Insect and Disease Control*

FOREST GOALS, DESIRED FUTURE CONDITION, OUTPUTS: *Control Forest pests to levels that are compatible with resource objectives*

MANAGEMENT AREAS AFFECTED *Forest-wide*

RISK ASSESSMENT: COST OF ERROR *3* X LIKELIHOOD OF ERROR *1* = RISK INDEX *3*

MONITORING QUESTIONS:

> *Are destructive insect and disease organisms remaining below potentially-damaging levels following management activities?*

THRESHOLD OF VARIABILITY: *Evidence of insect or disease buildups above endemic levels.*

SUGGESTED SAMPLING METHODS

Annual aerial survey by Regional specialists

Conduct annual review of insect and disease surveys

Conduct field evaluations as needed

MONITORING FREQUENCY: *Annual*

REPORTING FREQUENCY. *Annual*

MONITORING RESPONSIBILITY: *Regional Pest Mgmt Staff/Forest Timber Staff Offcr*

REPORTING RESPONSIBILITY: *Timber Staff Officer*

ESTIMATED COST OF MONITORING: *$1,500 per year*

PRECISION: *M*

RELIABILITY: *M*

REMARKS. *Required by NFMA regulations (36 CFR 219 12K)*

FOREST MONITORING PLAN WORKSHEET

ISSUE: *Timber Offered for Sale*

FOREST GOALS, DESIRED FUTURE CONDITION, OUTPUTS *To provide for production of wood fiber consistent with various resource objectives, environmental requirements, and economic efficiency To offer for sale up to an average of 144 MMBF ASQ annually and 27 7 MMBF TSPQ annually as averaged for the decade*

MANAGEMENT AREAS AFFECTED: *1, 3, 5, 7, 11, 18*

RISK ASSESSMENT. COST OF ERROR *3* X LIKELIHOOD OF ERROR *1* = RISK INDEX *3*

MONITORING QUESTIONS.

Is the Forest offering the cubic foot volume and species of chargeable timber established by the Plan ASQ?

Is the Forest offering the cubic foot volume and species of nonchargeable timber necessary to achieve the estimated TSPQ?

THRESHOLD OF VARIABILITY *Greater than 10% over or under the planned volume*

SUGGESTED SAMPLING METHODS

Use STARS system data base. Compare volume in MCF, per species group, annually to project decade trend Determine action required (Plan adjustment) based on significance of end-of-decade difference between projection and planned.

MONITORING FREQUENCY: *Annual*

REPORTING FREQUENCY: *Annual*

MONITORING RESPONSIBILITY: *Timber Staff Officer*

REPORTING RESPONSIBILITY: *Timber Staff Officer*

ESTIMATED COST OF MONITORING: *$1,000 per year*

PRECISION *H*

RELIABILITY: *H*

REMARKS *Required by NFMA to assure decadal ASQ is not exceeded To test assumption re TSPQ Also and R-6 issue*

FOREST MONITORING PLAN WORKSHEET

ISSUE *Timber Harvest*

FOREST GOALS, DESIRED FUTURE CONDITION, OUTPUTS: *Is the harvest by volume, by species group, management area, and harvest type as specified in the Plan*

MANAGEMENT AREAS AFFECTED *1, 3, 5, 7, 11, 18*

RISK ASSESSMENT. COST OF ERROR *1* X LIKELIHOOD OF ERROR *1* = RISK INDEX *1*

MONITORING QUESTIONS.

> *Is the harvest type (clearcut, shelterwood cut, overwood removal, etc), volume, and acreage per species group, as planned for each management area?*

THRESHOLD OF VARIABILITY: *Greater than 20% deviation from planned level in any category*

SUGGESTED SAMPLING METHODS:

STARS data base. Report of accomplishment Annual comparison with Plan to identify deviations and their significance.

MONITORING FREQUENCY: *Annual*

REPORTING FREQUENCY: *Annual*

MONITORING RESPONSIBILITY: *Timber Staff Officer*

REPORTING RESPONSIBILITY: *Timber Staff Officer*

ESTIMATED COST OF MONITORING: *$1,000*

PRECISION *H*

RELIABILITY *H*

REMARKS: *This is an R-6 and Forest issue re timber management as it affects other resources*

FOREST MONITORING PLAN WORKSHEET

ISSUE. *Silvicultural Practices -- Precommercial thinning*

FOREST GOALS, DESIRED FUTURE CONDITION, OUTPUTS *Achieve acres of precommercial thinning as specified in the Plan*

MANAGEMENT AREAS AFFECTED. *1, 3, 5, 7, 11, 18*

RISK ASSESSMENT. COST OF ERROR *2* X LIKELIHOOD OF ERROR *1* = RISK INDEX *3*

MONITORING QUESTIONS:

Has the planned acreage of precommercial thinning been accomplished?

THRESHOLD OF VARIABILITY *Accomplished acreage varies from planned acreage by 10% or more on a decadal basis.*

SUGGESTED SAMPLING METHODS·

Compare silvicultural attainment reports with planned levels

MONITORING FREQUENCY· *Annual*

REPORTING FREQUENCY· *3 years*

MONITORING RESPONSIBILITY· *Timber Staff Officer*

REPORTING RESPONSIBILITY: *Timber Staff Officer*

ESTIMATED COST OF MONITORING. *$2,000 per year*

PRECISION. *H*

RELIABILITY. *H*

REMARKS *R-6 issue re timber intensity, management cost, and acres affected Needed to ascertain plan implementation and support ASQ*

FOREST MONITORING PLAN WORKSHEET

ISSUE: *Timber Harvest Units*

FOREST GOALS, DESIRED FUTURE CONDITION, OUTPUTS: *Disperse harvest units and limit their size*

MANAGEMENT AREAS AFFECTED. *1, 3, 5, 7, 11, 18*

RISK ASSESSMENT: COST OF ERROR *2* X LIKELIHOOD OF ERROR *1* = RISK INDEX *2*

MONITORING QUESTIONS:

Are Forest Plan Standards and Guidelines regarding the size and dispersal of openings and state of vegetation being appropriately implemented?

Are these Standards and Guidelines effective in meeting the objectives for dispersal of created openings and state of vegetation as described in the EIS for the Regional Guide (Chapter 4)

THRESHOLD OF VARIABILITY. *Any identified failure to meet dispersion requirements*

SUGGESTED SAMPLING METHODS

Timber sale reviews, EA reviews

MONITORING FREQUENCY: *Continuous*

REPORTING FREQUENCY: *3 years*

MONITORING RESPONSIBILITY: *Timber Staff Officer*

REPORTING RESPONSIBILITY *Timber Staff Officer*

ESTIMATED COST OF MONITORING. *$1,000 per year*

PRECISION: *H*

RELIABILITY: *H*

REMARKS. *R-6 issue re clearcut size Check of standards and guidelines required by NFMA and established in Regional guide.*

FOREST MONITORING PLAN WORKSHEET

ISSUE. *Reforestation*

FOREST GOALS, DESIRED FUTURE CONDITION, OUTPUTS: *Achieve reforestation, by natural and artificial means at the stocking levels and within the timeframes assumed within the Forest Plan*

MANAGEMENT AREAS AFFECTED *1, 3, 5, 7, 11, 18*

RISK ASSESSMENT· COST OF ERROR *3* X LIKELIHOOD OF ERROR *2* = RISK INDEX *6*

MONITORING QUESTIONS:

> *Is stocking, for each management area and silvicultural method, within the timeframes assumed in the Forest Plan?*

THRESHOLD OF VARIABILITY· *Greater than 20% plantation failure or more than 50% below prescribed stocking levels*

SUGGESTED SAMPLING METHODS

Program review, field sampling, silvicultural accomplishment reports

MONITORING FREQUENCY: *Annual*

REPORTING FREQUENCY: *Annual*

MONITORING RESPONSIBILITY. *Timber Staff Officer, District Rangers*

REPORTING RESPONSIBILITY· *Timber Staff Officer*

ESTIMATED COST OF MONITORING. *$3,000 per year*

PRECISION: *H*

RELIABILITY· *M*

REMARKS *Costs are in addition to normal stocking surveys*

Forest and R-6 issue Information needed to test the premise supporting the planned ASQ.

FOREST MONITORING PLAN WORKSHEET

ISSUE: *Lands Not Suitable for Timber Management*

FOREST GOALS, DESIRED FUTURE CONDITION, OUTPUTS: *Assure that lands are correctly classified as to their suitability for timber management*

MANAGEMENT AREAS AFFECTED: *All except Management Area 4 (Wilderness)*

RISK ASSESSMENT COST OF ERROR 2 X LIKELIHOOD OF ERROR 3 = RISK INDEX 6

MONITORING QUESTIONS.

Are the forest lands correctly classified as to their suitability for timber management?

THRESHOLD OF VARIABILITY: *Suitable land base changes by 5% or more*

SUGGESTED SAMPLING METHODS

Stand examinations, EA reviews, sale reviews

MONITORING FREQUENCY. *Continuous*

REPORTING FREQUENCY: *5 years*

MONITORING RESPONSIBILITY *Timber Staff Officer, District Rangers*

REPORTING RESPONSIBILITY: *Timber Staff Officer*

ESTIMATED COST OF MONITORING *$2,000 per year*

PRECISION. *M*

RELIABILITY. *M*

REMARKS *Required by NFMA regulations (36 CFR 219 14d)*

FOREST MONITORING PLAN WORKSHEET

ISSUE: *Transportation System*

FOREST GOALS, DESIRED FUTURE CONDITION, OUTPUTS: *To provide road and trail systems is described in the "Desired Future Condition" section of the Forest Plan*

MANAGEMENT AREAS AFFECTED: *All*

RISK ASSESSMENT. COST OF ERROR *3* X LIKELIHOOD OF ERROR *2* = RISK INDEX *6*

MONITORING QUESTIONS:

Does the transportation system serve the management area resource objectives within Forest Plan projections, including open road density guidelines

THRESHOLD OF VARIABILITY: *System design road density, or maintenance fail to meet management area objectives.*

SUGGESTED SAMPLING METHODS

Review environmental assessments, transportation system plans, and individual projects Review trails, including location, design, and maintenance

MONITORING FREQUENCY *Forest Engineer*

REPORTING FREQUENCY. *Forest Engineer*

MONITORING RESPONSIBILITY *Forest Engineer*

REPORTING RESPONSIBILITY: *Forest Engineer*

ESTIMATED COST OF MONITORING: *$2,000 per year*

PRECISION. *H*

RELIABILITY: *M*

REMARKS: *Issue concerning the availability of roads available to the public*

FOREST MONITORING PLAN WORKSHEET

ISSUE. *Range Outputs*

FOREST GOALS, DESIRED FUTURE CONDITION, OUTPUTS: *Within the constraints imposed by basic plant and soil needs, provide forage for utilization by wildlife and permitted domestic livestock*

MANAGEMENT AREAS AFFECTED: *All*

RISK ASSESSMENT COST OF ERROR *2* X LIKELIHOOD OF ERROR *3* = RISK INDEX *6*

MONITORING QUESTIONS:

Are the outputs for permitted domestic livestock (AUM's) being achieved as projected in the Forest Plan?

To what degree are Forest Plan standards affecting permitted AUM's?

THRESHOLD OF VARIABILITY: *Annual outputs (AUM's) for permitted domestic livestock fall more than 20% below permitted levels from the beginning of the preceeding five years*

SUGGESTED SAMPLING METHODS:

Annual Grazing Statistical Report

Evaluation of permit transactions and adjustments to determine cause

INTENSITY: Sample full Annual Report, sample all permit adjustments

MONITORING FREQUENCY: *Annual*

REPORTING FREQUENCY: *5 years*

MONITORING RESPONSIBILITY. *Range Staff Officer*

REPORTING RESPONSIBILITY. *Range Staff Officer*

ESTIMATED COST OF MONITORING. *$1,000*

PRECISION *H*

RELIABILITY: *H*

REMARKS *36 CFR 219 12 (k)1*

FOREST MONITORING PLAN WORKSHEET

ISSUE: *Range Forage Utilization*

FOREST GOALS, DESIRED FUTURE CONDITION, OUTPUTS: *All allotments implement the Forest Plan utilization standards through Allotment Management Plans*

MANAGEMENT AREAS AFFECTED: *All*

RISK ASSESSMENT: COST OF ERROR *3* X LIKELIHOOD OF ERROR *3* = RISK INDEX *9*

MONITORING QUESTIONS:

Are Forest Plan utilization standards being implemented through the Allotment Management Plan and being enforced on the ground?

Are actual use levels within the Forest Plan utilization standards?

THRESHOLD OF VARIABILITY *More than 10% of the allotments reviewed experience utilization by any species of animal exceeding the Forest Plan or Allotment Plan standards by more than 5% as average of use key areas of an allotment.*

SUGGESTED SAMPLING METHODS:

Key Area measurements, Reconnaissance Utilization surveys, Utilization and Distribution studies

Reviews of AMP's and field reviews of actual utilization, emphasis on riparian utilization

INTENSITY· Sample at least 10% of allotments annually with emphasis on Priority I (riparian problem) allotments

MONITORING FREQUENCY: *Continuous*

REPORTING FREQUENCY: *5 years*

MONITORING RESPONSIBILITY. *District and SO Range Staff*

REPORTING RESPONSIBILITY. *Range Staff Officer*

ESTIMATED COST OF MONITORING. *$6,000*

PRECISION. *M*

RELIABILITY: *M*

REMARKS *36 CFR 219 12(k)*
This monitoring is in addition to and as a check of monitoring performed as a normal part of Allotment Management Plan monitoring

FOREST MONITORING PLAN WORKSHEET

ISSUE: *Range Vegetative Condition*

FOREST GOALS, DESIRED FUTURE CONDITION, OUTPUTS: *All significant areas of suitable primary and secondary range, including riparian areas, in satisfactory condition with a stable or upward trend (with satisfactory condition defined as. Forage conditions are fair or better with a stable trend and no allotments are classified as PC or PD*)*

MANAGEMENT AREAS AFFECTED *All*

RISK ASSESSMENT: COST OF ERROR *3* X LIKELIHOOD OF ERROR *3* = RISK INDEX *9*

MONITORING QUESTIONS:

1) *Are range vegetative conditions on suitable primary and secondary range, being improved to and maintained at a satisfactory condition?*

2) *Are range vegetative conditions within riparian areas being improved to and maintained at a satisfactory condition level?*

THRESHOLD OF VARIABILITY: *By year 2000, at least 85% of suitable primary and secondary range is in satisfactory range condition with no more than 5% of the allotments classified as PD*

By year 2000, no more than 5% of allotments are classified as PC indicating riparian problem allotments

Trends indicate the threshold described above will not be met

SUGGESTED SAMPLING METHODS

1) *Condition and Trend transects as per FSH 2209.21, Ecoplots*

   Permanent Camera Points as per FSH 2209.21 and "Recording the Changes, a Field Guide to Establishing and Maintaining Permanent Camera Point Systems (R6-10-095-1982)

   INTENSITY: Field reviews of all allotments classified as PC or PD, and at least 10% of the allotments on the Forest each year

2) *Permanent Camera Points (R6-10-095-1982).*

   Macroinvertebrate Sampling as per Aquatic Ecosystem Inventory, Macroinvertebrate Analysis, R-4 FSH 2609 23 1/

   Managing Riparian areas. in Eastern Oregon

   INTENSITY. Field review of all allotments classified as PC.

MONITORING FREQUENCY. *Continuous*

REPORTING FREQUENCY *5 years*

* See Glossary -- SATISFACTORY RANGE CONDITION

FOREST MONITORING PLAN WORKSHEET

MONITORING RESPONSIBILITY: *District and SO Range Staff*

1/ To be coordinated with fisheries and watershed monitoring.

REPORTING RESPONSIBILITY. *Range Staff Officer*

ISSUE: *Range Vegetative Condition*

PRECISION: *M*

RELIABILITY: *M*

ESTIMATED COST OF MONITORING *$6,000*

REMARKS *36 CFR 219 12(k)2, 219.20*
Monitoring to be shared with all affected resources including watershed, wildlife and timber management This monitoring is in addition to, and as a check of, the normal monitoring as prescribed in the Allotment Management Plans

FOREST MONITORING PLAN WORKSHEET

ISSUE: *Range Improvements*

FOREST GOALS, DESIRED FUTURE CONDITION, OUTPUTS *Allotment Management Plans, based on the Forest Plan, provide for a full development schedule (using all available funding sources) that contributes to satisfactory range conditions*

MANAGEMENT AREAS AFFECTED: *All*

RISK ASSESSMENT: COST OF ERROR *2* X LIKELIHOOD OF ERROR *2* = RISK INDEX *4*

MONITORING QUESTIONS.

Are range improvements planned in Allotment Management Plans, or other development plans such as Sale Area Improvement plans or Annual Operating Plans, being accomplished?

Are these improvements contributing to meeting Forest Plan objectives?

THRESHOLD OF VARIABILITY. *Accomplishment of annual range improvement targets falls more than 10% below the assigned output*

SUGGESTED SAMPLING METHODS

Review annual budget process and annual attainment reports

MONITORING FREQUENCY. *Annual*

REPORTING FREQUENCY: *5 years*

MONITORING RESPONSIBILITY *SO Range Staff*

REPORTING RESPONSIBILITY *Range Staff Officer*

ESTIMATED COST OF MONITORING. *$500*

PRECISION: *H*

RELIABILITY *H*

REMARKS: *(Describe research needs, other agency coordination, special skills needed, etc) 36 CFR 219 12(k)1*

FOREST MONITORING PLAN WORKSHEET

ISSUE: *Allotment Management Planning*

FOREST GOALS, DESIRED FUTURE CONDITION, OUTPUTS *All allotments have developed and implemented Allotment Management Plans that fully meet the standards and guides of the Forest Plan*

MANAGEMENT AREAS AFFECTED. *All*

RISK ASSESSMENT: COST OF ERROR *3* X LIKELIHOOD OF ERROR *3* = RISK INDEX *9*

MONITORING QUESTIONS.

1) *Are allotments containing significant areas of unsatisfactory condition range and/or allotments classified as PC or PD receiving priority emphasis for development and implementation of Allotment Management Plans?*

2) *Do AMP's fully meet Forest Plan standards and guidelines?*

3) *Are AMP's being implemented on the ground in a manner that meets Forest Plan direction?*

THRESHOLD OF VARIABILITY: *AMP planning schedule as developed by the Forest Supervisor varies by more than two years for 10% or more of the plans*

Any of the AMP's approved following approval of the Forest Plan fail to contain objectives and standards that fully implement the Forest Plan

More than 5% of the Annual Operating Plans and annual budget requests, KV Sale Area Improvement Plans, etc are not supported by standards or development schedules from Allotment Management Plans.

SUGGESTED SAMPLING METHODS·

Attainment reporting, annual work planning, to determine if planning schedule is being followed

Allotment Management Planning reviews, comparison with Forest Plan standards

Review of budget planning, SAI plans, and Annual Operating Plans, comparison with Allotment Management Plans.

MONITORING FREQUENCY: *Annual*

REPORTING FREQUENCY· *5 years*

MONITORING RESPONSIBILITY. *Range Staff Officer*

REPORTING RESPONSIBILITY· *Range Staff Officer*

FOREST MONITORING PLAN WORKSHEET

ESTIMATED COST OF MONITORING: *$5,000*

PRECISION *H*

RELIABILITY: *H*

REMARKS *Monitoring is to determine effectiveness of Allotment Management Planning and to monitor the implementation of the Forest Plan through the Allotment Management Plan.*