

RESOURCE SUMMARIES

Introduction

The resource summaries section contains supplementary narrative information about management objectives and planned activities necessary to produce the outputs and effects displayed in Table 4-1. The planned activities will become the foundation for developing the annual program of work and the Forest budget. The section also provides some information and data necessary for people implementing resource projects on the ground.

RECREATION

RECREATION SITES

Demand for use of the water-related campgrounds will continue to be high; these facilities are expected to be used near capacity on most weekends. Therefore, priorities for managing camping facilities will be directed toward water-related sites. The other campgrounds will be managed to accommodate occasional use during the summer months. All open facilities are expected to be filled during the hunting season. Facilities will be maintained to be safe, sanitary, and pleasant in appearance.

Fee collection will be implemented on sites which meet basic criteria, and where it can be administered efficiently to recover a portion of the operational costs. Concessionaires will be allowed to operate campgrounds where economics and ability to serve the public are favorable. The Campground Host program will be continued to help improve service to the public and reduce costs

Recreation use will be closely monitored to assist in determining need for change. Capacity will be expanded at sites where monitoring shows that regional standards for occupancy rates are degraded and physical attributes of the area. Priority will be placed on upgrading facilities to appropriate standards before significant expansion is implemented. Potential recreation developments and the schedule of activities are displayed in Appendix A.

Many small developed sites will continue to exist, but as facilities deteriorate, only improvements to provide minimum health, safety, and resource protection will be made and maintained. Some of the minor sites may be converted to occupancy spots, to be used primarily during the hunting season.

Vegetative management plans will be made for recreation sites at Development Scale 3 and above, in order to maintain or improve the natural environment. Small timber sales may be used to accomplish the vegetative manipulation necessary to keep the trees thrifty and safe. Knutson-Vandenburg (K-V) funds may be used to accomplish resource treatment projects.

Recreation residences and the Buck Creek group camp will continue through the term specified in their use authorizations. The Slickear tract will terminate on December 31, 2003, all other recreation residences run through December 31, 2008. Future use determinations will be made prior to their termination dates to evaluate reissue of the permits.

The two downhill ski areas will continue to operate according to their master plans. Ski Bluewood has room for considerable expansion within its permitted area. Spout Springs expansion would require area enlargement. Both areas will receive an environmental analysis to evaluate any proposed expansions.

The Forest will rely heavily on state programs to provide facilities for snowmobile, OHV, and ATV activities. User groups will be involved in planning and operating the programs.

Trailhead facilities will be increased and improved to provide auxiliary facilities for semi-primitive opportunities. The facilities will accommodate the various transportation modes appropriate for

the setting; i.e., stock, OHV, snowmobile, backpacker, etc. Timber sale activities and Forest road and trail funds will be used where possible to benefit trail facilities

DISPERSED AREAS

Five primary recreation opportunity (ROS) classes have been identified for the Forest Plan Primitive, Semi-primitive Nonmotorized, Semi-primitive Motorized, Roded Natural, and Roded Modified. Management will be directed toward meeting the, desired standards for each of the identified ROS types described in management areas and prescriptions and ROS Users Guide. Monitoring will be used to assure that settings are being maintained and not degraded.

Primitive and Primitive and semi-primitive recreation opportunities will be provided in the Semi-Primitive wildernesses and remaining roadless areas. Primitive recreation opportunities will be Recreation expanded in the Wenaha-Tucannon and North Fork John Day wildernesses to a total of about 128,000 acres. Eleven roadless areas will remain essentially unroaded and will still qualify as roadless areas. Of these, 7 areas totaling about 55,000 acres will be managed with emphasis on semi-primitive dispersed recreation and scenic values, as shown in Table 4-2. Also included is the Hells Half Acre/Bald Mtn. area that qualifies for semi-primitive recreation, but was not analyzed as a roadless area due to its insufficient size.

TABLE 4-2. MANAGEMENT AREA - SEMI-PRIMITIVE RECREATION EMPHASIS

Umatilla National Forest

<u>Area</u>	<u>Management Area</u>	<u>Umatilla NF M Acres</u>	<u>Total M Acres</u>
UPPER TUCANNON	A1	4.9	4.9
WENATCHEE	A1	15.1	15.1
SPANGLER	A2	4.1	4.1
LOOKINGGLASS	A1	3.2	3.2
GRANDERONDE	A8, A7	11.2	16.5 ¹
HELLS HALF ACRES/BALD MTN. ³	A1	2.8	2.8
VINEGAR HILL-INDIAN ROCK (GREENHORN MTN)	A8	8.1	24.9 ²
JUMP-OFF JOE	A8	5.5	5.5

1 includes Wallowa-Whitman NF

2 includes Malheur NF and Wallowa-Whitman NF

3 Not a roadless area based on size requirement

Four other areas totaling about 142,000 acres are managed in an unroaded status for wildlife or water values, but will be available for and provide semi-primitive and roded natural recreation opportunities. Table 4-3 shows the areas and management direction. Five of the areas will be managed under Management Area C8 (Grass-tree Mosaic) which permits existing roads. However, the expectation is that the roadless portion of the GTM areas will remain roadless. Most of the Walla Walla River Watershed will also be managed in an unroaded condition. The Mill Creek Municipal Watershed is the one excepted roadless area, because dispersed recreation use will be limited to protect water quality.

TABLE 4-3. MANAGEMENT AREAS - SEMI-PRIMITIVE RECREATION OPPORTUNITIES

Umatilla National Forest

<u>Area</u>	<u>Management Area</u>	<u>Total Roadless Acres</u>
ASOTIN	C8	11.9
WALLA WALLA RIVER	F4	33.1
HELLHOLE	C8	48.2
HORSESHOE	C8	6.2
SKOOKUM	C8	6.0
POTAMUS	C8	5.2

Roaded Opportunities

Nearly 14 percent of the Forest, outside the wildernesses, will provide recreation in a roaded natural setting. The remaining portion of the Forest will feature roaded recreation in modified settings. Ample roads will be available to access all portions of the Forest, however, about half the roads will be closed to motorized use, thereby providing walk-in hunting and other nonmotorized opportunities.

Off-Highway Vehicle Use

Opportunities for off-highway vehicle (including all-terrain vehicle) recreation will be increased. OHV routes for loop trips will be emphasized in roadless and roaded natural areas. An area of slightly over 300,000 acres will be managed to provide quality OHV opportunities. About 62 percent of the nonwilderness, unroaded lands will be available for semi-primitive motorized recreation. Base facilities will be provided at sites that have good access for support vehicles and that are convenient for the Forest to administer. Management prescriptions indicate whether or not OHV use will be allowed in the various management areas. Timber sale planning will incorporate post sale OHV and other trail use considerations in sale design and sale area improvement.

Trails

The Forest motorized access and travel management plans (to be developed) will be used to determine the areas, roads, and trails where motorized use is appropriate, thus promoting user safety, preventing resource damage, and minimizing resource and user conflicts. The plans will also be designed to be helpful to the public so they can determine which areas, roads, and trails meet their general needs. Public involvement will be emphasized during review and revision of the motorized access and travel management plans. Areas, roads, and trails will be posted to give the public notice of the closure 1 year before the closure is to be in effect.

Trail system management will be directed toward meeting objectives of the ROS classes shown in the management areas in this chapter. A trail management activity plan will be developed to make decisions about standards for specific trails or trail systems, maintenance schedules, funding, management of trail use, and priorities for construction and reconstruction. The plan will provide a network of loop routes for OHV's, as well as identify opportunities for other types of users. The plan will be considered in the context of logical land units rather than single trails.

Trails may be constructed to distribute recreation use, accommodate new activities, improve the recreation opportunity, or provide additional capacity. Where resource management activities impact trail routes, the trail will be protected, rebuilt, relocated, or replaced in another setting. The proposed trail construction and reconstruction schedule is shown in Appendix A. Trail facilities will be maintained to standards appropriate for the recreation setting. Some trails will be considered for inclusion in the National Recreation Trail System (NRT). Emphasis will be given to completing the Blue Mountain Trail. Trails will have priority for NRT designation if they have

differing activities, are available for a long season of use, traverse through natural or near-natural appearing landscapes, and have good road access.

Dispersed campsites (occupancy spots), especially those used recurrently by hunters, will receive special consideration and protection. Project planning and implementation will provide for the protection and enhancement of hunter camps where compatible with other resource management objectives. Road construction and timber harvest project considerations for recreation use sites will include maintenance, improvement of site character, visual quality, and provision for future recreation use.

Operations

Management emphasis will be placed on providing 'Recreation Opportunity Guides' and other information services to disperse use and reduce resource impacts. Basic information goals will be to help the public receive a satisfying recreation experience, and to improve the land ethic of Forest users. User groups will be heavily involved in the planning and operating of facilities and activities for their respective interests.

Permits for outfitters and guides will be issued where public need and demand is apparent. Services for rafting and hunting will continue near present levels while opportunities for pack trips and nature studies could increase. Opportunities for outfitted winter treks are available.

Wild and Scenic Rivers

The Omnibus Oregon Wild and Scenic Rivers Act of 1988 designated the classification of the three rivers (Grande Ronde, North Fork John Day, and Wenaha), as shown in Table 4-4. Actual corridor boundaries and joint multiagency management plans are to be completed by October 1991 by an ad hoc task group representing the Umatilla and Wallowa-Whitman National Forests, the BLM, and others. Interim river management will follow direction in Management Area A7. The Forest Plan will be amended to incorporate each river management plan when completed.

TABLE 4-4. WILD AND SCENIC RIVERS - MILES

Umatilla National Forest

River/Segment	Classification			Total (Miles)
	Wild	Scenic	Recreational	
GRANDE RONDE				18.9
Wallowa River to Forest Boundary			1.5	
Forest Boundary to Forest Boundary	1.74			
NORTH FORK JOHN DAY				43.7
Forest Boundary to Trail Creek			0.6	
North Fork John Day Wilderness	24.3			
NJFD Wilderness to Texas Bar Creek		10.5	8.3 ¹	
Texas Bar Creek to Camas Creek				
WENAHA				21.4
S. Fork/N. Fork Jct. To Forest Boundary	18.7			
Forest Boundary to Grande Ronde	—	—	2.7	—
TOTALS	60.4	10.5	13.7	84.0

¹ Texas bar Creek to Forest Boundary is 3.9 miles; non-National Forest portion, Boundary to Camas Creek, is 4.4 miles.

Special Areas

In addition, the Fremont Historic District, Greenhorn Townsite, Target Meadows, Big Sink, and 10 overlooks will be developed and managed as special interest areas. Six proposed botanical areas will also be available to provide educational opportunities. Management plans will be developed for these areas and 10 viewpoints shown in Table 4-2 (also see Appendix A)

Visual Resource

In total, about 26 percent of the Forest, outside of wildernesses, will be managed to provide a natural to slightly altered visual appearance. This equates to a partial retention visual standard, as described in the Landscape Management Handbook. Lands managed to meet the standards include unroaded areas, old growth stands, and some riparian areas where timber harvest is restricted. Other areas are viewsheds and some riparian areas where timber management and harvest are designed to maintain or produce a large-tree appearance. All wildernesses will be managed to the visual quality standard of preservation.

The visual quality objectives of retention and partial retention are emphasized in viewshed, which include state highways, key Forest travel routes, and major water features. In the viewsheds, modification may be used on the background distance zones which have minimal variety. Viewsheds will be managed to the specifications of the A3 and A4 Management Areas as identified on the Forest Plan map. Table 4-5 displays visual management intent for each inventoried viewshed.

Viewshed corridor management plans for sensitivity level 1 and 2 viewsheds will be developed according to direction, and will specify vegetative manipulation guidelines to attain the desired forest character. The plans will indicate scheduling and amounts of timber harvest needed to maintain or enhance long-term visual characteristics.

Although about two-thirds of the Forest, outside the wildernesses, will eventually be modified, activities will be designed to borrow from naturally established form, line, color, and texture so that the affected areas may eventually resemble natural occurring ones. Modified silvicultural systems and techniques will also be used to help minimize impacts to visual quality. The Forest Landscape Management Plan will be updated, based on allocations and decisions in the Forest Plan.

The principles contained in Volumes 1 and 2 of the National Forest Landscape Management Handbook, and other published handbooks within the Visual Management System (Utilities, Range, Roads, Timber, Fire, and Ski Areas) will be used to manage the visual resource.

TABLE 4-5. VIEWSHED MANAGEMENT*

Umatilla National Forest

<u>No.</u>	<u>Name of Viewshed</u>	<u>Acreage</u>	<u>Sensitivity Level</u>	<u>Visual Quality Objectives</u>	
				<u>Fg¹</u>	<u>Mg²</u>
1	Desolation Creek Road #10	39,625	2	PR ³	M ⁴
2	Granite Creek Trail #3016	229	1	R	R
3	Highway #395	6,936	1	R ⁵	PR
4	North Fork John Day River	3,649	1	R	PR
5	Winom Creek Trail #3153	791	1	P ⁶	P
6	Big Creek Trail #3151	75	1	P	P
7	Ukiah-Granite Road #52	23,537	1	R	PR
8	Tower	3,728	2	M	M
9	Highway #244	9,073	1	R	PR
10	Pearson Creek Road #54	11,182	2	PR	M
11	Western Route Road #53	11,540	2	PR	M
12	Tupper Road #21	2,079	2	PR	M

<u>No.</u>	<u>Name of Viewshed</u>	<u>Acreage</u>	<u>Sensitivity Level</u>	<u>Visual Quality Objectives</u>	
				<u>Fg¹</u>	<u>Mg²</u>
13	Highway #207	8,579	1	R	PR
14	Bull Prairie Road #2039	1,393	2	PR	M
15	Penland Lake Road #2084	2,084	2	PR	M
16	Meacham Creek	12,103	2	PR	M
17	Summit Road #31	34,982	2	PR	M
18	Umatilla River Road #32	8,728	2	PR	M
19	Highay #204	10,155	1	R	PR
20	Buck Creek Trail #3073	57	1	P	P
21	NF Umatilla River Trail #3083	53	2	PR	M
22	Jubilee Road #64	8,438	1	R	PR
23	Skyine Road #6403	8,074	2	PR	M
24	Jarboe Road #63 and #62	41,897	3	M	M
25	Grande Ronde Road Scenic Area	14,088	1	R	PR
26	Wenaha River Trail #3106	1,480	1	R	PR
27	S. Fork Walla Walla Trail #3225	13,7708	1	R	PR
28	Tiger Creek Road #65	8,333	2	PR	M
29	Touchet Road #64	8,874	1	R	PR
30	Godman Road #46	15,433	3	M	M
31	Grouse Flat Road #40	39,422	2	PR	M
32	Tucannon Road #47	8,654	1	R	PR
33	Target Meadow Road #6401	<u>1,035</u>	2	PR	M
	Total	360,014			
	Viewsheds with 1 or 2 Sensitivity (Number)			23	
	VQO Retention (1,000 Acre)		103		
	VQO Partial Retention (1,000 Acre)		<u>167</u>		
	Subtotal		270		
	Modification or Maximum Modification (1,000 acre)			89	

Abbreviations:

- | | |
|------------------------------------|--------------------|
| 1 fg – Foreground Distance Zone | 4 M – Modification |
| 2 mg – Middle Ground Distance Zone | 5 R – Retention |
| 3 PR – Partial Retention | 6 P – Preservation |

* See glossary for definition of terms in the table.

CULTURAL RESOURCES

The Forest-wide Standards and Guidelines incorporate appropriate historic preservation laws, regulations, and policies, and will direct future management decisions on cultural resources.

Cultural resource inventory and evaluation will be guided by the Cultural Resources Inventory Plan (June 1989). Under the direction of a cultural resource professional, inventory and evaluation will precede all ground-disturbing projects. During the next several years, about 50,000 acres will be surveyed each year, but in the following years between 25,000 and 30,000 acres will be surveyed and evaluated annually. The number of acres surveyed annually will depend, in large part, upon the location and total acres included within projected timber sale areas. Information collected during these inventories will be used to refine the cultural resource sampling strategy used on the Forest. Approximately 10 percent of the inventoried acres will require further investigation due to known site distributions or due to high cultural resource sensitivity. Emphasis will be placed on monitoring these areas.

Federal legislation requires, and some publics have identified, a need to inventory Forest acres not affected by project activities. Depending on the level of available funding, priorities for a nonproject related inventory will be:

- a. Statistical sample:
- b. areas experiencing degradation through natural processes or intensive public use;
- c. areas of reported, but unverified sites; and
- d. areas of high cultural resource sensitivity as identified in the Forest Cultural Resource Inventory Plan.

All sites located during a survey will be documented to Regional standards. As time and funding permit, records will also be prepared for the current backlog of unrecorded or insufficiently recorded sites.

An 'evaluation of significance' will precede implementation of any activity that may affect an identified site. Such an assessment is vital to the management of cultural resources, to the selection of resources for in-place preservation, and to the mitigation of adverse effects through data recovery projects. Sites will be treated as individual properties, thematic groups, or historic districts. Cultural resource management strategies will be developed for selected National Register sites and structures.

Significant sites will be nominated to the National Register at the rate of approximately two per year. In the next decade this may be limited to nomination of the already evaluated depression-era administrative sites, but in ensuing decades additional site types such as the ridge-top lithic scatters on the Pomeroy Ranger District, lookout towers and mining districts will be included.

Enhancement projects will be undertaken in conjunction with the inventory and evaluation programs. Initially, stabilization and public interpretation of the Fremont Powerhouse will be accomplished over the next few years. Other possible interpretation opportunities include Greenhorn Townsite, Target Meadows, and the Summit Guard Station. Scientific evaluation may be undertaken at specific sites on all ranger districts after consultation with the appropriate SHPO and interested Native American tribes. This evaluation will be encouraged in order to better understand information which is recorded during inventory and to advance our knowledge of past lifeways.

Protection of historic and prehistoric sites will continue to be vigorously pursued on the Forest. Sites subject to disturbance, either by project related activities or unauthorized excavation, will be monitored on a regular basis. Emphasis will be placed on apprehending and prosecuting looters.

WILDERNESS

Wilderness direction for the three Forest wildernesses is provided in Management Area (Strategy) BI, and in the three wilderness activity plans (1986) which are summarized in Appendix B. No additional areas are considered for wilderness in this Forest Plan.

Increased emphasis will be placed on implementing and refining the wilderness activity plans. Public information and education will be instrumental in improving wilderness ethics and 'leave no trace' techniques.

The Limits of Acceptable Change (LAC) process, incorporating public participation, will be used to determine needs for limiting and distributing visitor use. The initial LAC indicators and standards will need to be verified and refined for each wilderness.

The amount of wilderness land which meets standards for the 'Primitive' wilderness resource spectrum will increase to about 128,000 acres as past impacts of use are reduced, trails are managed to wilderness standards, and the LAC process is fully implemented. Remaining

wilderness acres will be managed to the Semi-primitive recreation opportunity class. Attention to nonconforming uses will improve the overall wilderness resource, especially with regard to the North Fork John Day Wilderness mining impacts and the Wenaha-Tucannon Wilderness permanent hunting camp structures.

Permitted livestock grazing use in wilderness is as follows. These AUM figures may be adjusted upon completion of updated allotment plans.

TABLE 4-6. LIVESTOCK GRAZING IN WILDERNESS

Umatilla National Forest

<u>Wilderness</u>	<u>Domestic Grazing Permits</u>			<u>Recreation (Horse)</u>
	<u>Kind</u>	<u>No.</u>	<u>AUM's</u>	<u>AUM's</u>
Wenaha-Tucannon	Cattle & Horses	485	425	400
North Fork Umatilla	Sheep & Goats	1,000	450	1
North Fork John Day	Cattle & Horses	412	544	72
	Sheep & Goats	<u>850</u>	<u>172</u>	
Total		2,747	1,591	473

The area surrounding the wildernesses will be managed so as not to adversely effect the adjacent wilderness resource.

Implementation actions will be coordinated with adjacent forests and agencies. Coordination will assure consistency in wilderness management actions.

WILDLIFE

The implementation of wildlife direction and emphasis is achieved primarily through coordination with other resources, especially timber, road, recreation, fish, and range management, in order to maintain or improve habitat for wildlife. Specific direction is summarized in the Forest-wide Standards and Guidelines and in the management areas. In general, management areas emphasizing wildlife (C1, C2, C3, C3A, C4, C5, and C8) will provide high quality habitat conditions for wildlife indicator species and other represented wildlife. Other management area direction and the Forest-wide Standards and Guidelines will assure that at least minimum acceptable habitat conditions are provided. Proper implementation of all area direction and standards and guidelines is an important aspect to providing for the needs of wildlife.

The Forest Plan supersedes and replaces all previous wildlife management plans including: Umatilla Wildlife Management Unit Plan (February 1971), and Old Growth Wildlife Habitat on the Umatilla National Forest (August 1980). Two big game winter range management plans, Bridge Creek Biological Unit Management Plan (June 1978), and Lower Meacham Creek Winter Range Habitat Improvement Plan (November 1985), are incorporated by reference into the Forest Plan until superseded by a comprehensive big game winter range management plan (to be developed).

Nongame Wildlife Species Habitat

With the implementation of the Forest Plan, old growth and mature tree habitats will occur in dedicated units in the mixed conifer and ponderosa pine habitat types and in managed units in the lodgepole types. A total of 52,600 acres of habitat will be maintained outside of wilderness. The dedicated old growth/mature tree units in the mixed conifer habitats have been identified and mapped and are shown on the Forest Plan maps as Management Area C1. Feeding areas surrounding dedicated units will be considered and implemented in project activities. Table 4-7 summarizes the nonwilderness old growth areas by type and for each of the management indicator wildlife species.

TABLE 4-7. SUMMARY OF MIXED CONIFER/PONDEROSA PINE OLD GROWTH

Umatilla National Forest

Management Indicator Species	Old Growth Habitat Condition ¹	Nonwilderness	
		Number of Units	Acres
Pileated woodpecker	Suitable	63	24,665
	Capable	63	11,610
Pine marten	Suitable	26	6,280
	Capable	2	370
Pileated woodpecker and Pine Marten	Suitable	16	5,640
	Capable		
Northern three-toed woodpecker	Suitable	26	2,255
	Capable	<u>18</u>	<u>1,780</u>
	Totals	184	52,600
Other Existing Inventoried Old Growth Habitat			83,040

¹ Suitable - Existing old growth tree habitat now meeting the minimum Regional definition.

Capable - Acres or areas identified as being capable of becoming old growth in time, but not now meeting the Regional old growth tree habitat definition. These areas were selected to meet distribution requirements.

Lodgepole pine habitat units will be managed to meet the specifications listed in Management Area C2. The lodgepole units will change location with time; the initial existing units have been located on the ground. Based on acres of lodgepole pine, the following numbers of units and minimum acres by Ranger District (outside of wilderness) have been identified and will be managed on the ground.

TABLE 4-8. SUMMARY OF LODGEPOLE PINE OLD GROWTH

Umatilla National Forest

Ranger District	Percent of Lodgepole Pine Acres	Number of 75-Acre Old Growth Units	Acres	
			0-40 Years	40-80 Years
Heppner	11.2	7	585	585
North Fork John Day	79.8	32	3,000	3,000
Pomeroy	4.7	2	150	150
Walla Walla	5.3	3	300	300
Total	100.0	44	4,035	4,035

An estimated 38,500 acres of existing old growth/mature tree habitat occur in roadless, riparian, and other suitable habitat areas, outside of wilderness. Old growth in each of these areas (Management Areas A1, A2, A7, A8, C3A, C7, C8, D2, F2, and F4) will be protected. Therefore, a combined total of about 91,100 acres of dedicated and other contributing old growth/mature tree habitat will be provided on the Forest, outside of wilderness. This important habitat component will be dedicated or managed for pileated woodpeckers, pine martens, northern three-toed woodpeckers, and other wildlife species heavily dependent on this habitat type.

Dead and down tree habitat under the Forest Plan also will be managed under Forest-wide Standards and Guidelines and management area direction. Populations of the wildlife indicator species will be maintained at about 65 percent of potential population level Forestwide. An average estimated snag density of about 1.5 snags per acre will be maintained. Replacement snags will be planned for and provided in project activities. Areas with restricted timber harvest are expected to contain natural levels of dead and down trees.

Big Game Wildlife Species Habitat

Quality big game habitat will be achieved through vegetation and road management techniques with emphasis on habitat components of cover, forage, and roads. Achieving big game habitat objectives will require meeting HEI and cover standards for Management Areas A10, C4, C5, C7, EI, E2, and F4 and the following:

- Maintaining, enhancing, or developing satisfactory and marginal cover where timber management is used.
- Enhancing forage, particularly on big game winter ranges, using a variety of techniques.
- Effectively closing roads according to district motorized access and travel management plans.
- Coordinating timber and road management project plans and implementation actions.
- Managing key big game habitats including riparian areas, migration corridors, and calving areas.

Big game winter range habitat conditions will also be maintained or improved by using specific directions summarized in the Forest-wide Standards and Guidelines and the Management Areas (Strategies) C3, C3A, C8, F4, and others. On winter ranges, directions provide for high levels of habitat effectiveness through maintenance and growth of satisfactory cover (the existing satisfactory cover or 10 percent, whichever is lower), marginal cover, improving forage, and providing fewer open roads. Uneven-aged management is emphasized. Prescribed burning is a principal program and technique used for winter range habitat maintenance, for forage enhancement, and to assist in keeping big game animals on the Forest during the winter.

As a result of the various big game management activities, elk populations are expected to be maintained and deer number will recover through the decade. Projects to enhance big game and other wildlife habitat conditions are scheduled and listed in Appendix A.

THREATENED/ ENDANGERED/ SENSITIVE PLANT AND ANIMAL SPECIES

There are no known federally-listed threatened or endangered plant species on the Forest. Twenty-two plant species found on the Forest have been listed on the Region 6 Sensitive Plant list (see Table 4-91). However, other species may be listed when they are located (or are suspected to be present) on adjacent areas (refer to Appendix L of the FEIS for a listing).

Before a project is initiated, inventories for population and distribution of threatened, endangered, and sensitive species will be conducted on a priority basis. Biological evaluations will be prepared. Each inventory will list all plant species found in the survey area. Previously surveyed areas can be checked for species occurrence when the Federal and regional plant list change. Currently, about 25 percent of the Forest acres have been surveyed for threatened, endangered, and sensitive plant species.

TABLE 4-9. SENSITIVE PLANT SPECIES DOCUMENTED ON THE FOREST

Umatilla National Forest

(AS OF DECEMBER 1988)

<u>Scientific Name</u>	<u>Common Name</u>
Allium campanulatum	Sierra Onion
Allium dictyon	Blue Mountain Onion
Allium madjdum	Swamp Onion
Allium tolmiei var. platyphyllum	Flat-leaved Onion
Aster sibiricus var. meritus	Arctic Aster
Astragalus anhuri	Arthur's Milkvetch
Astragalus diaphanus var. diaphanous	Transparent Milkvetch
Botrychium lunaria	Moonwort Grape-Fern
Carex limnophila	Pond Sedge
Cirsium utahense	Utah Thistle
Dryopteris hlix-mas	Male Fern
Lupinus sabinii	Sabin's Lupine
Lycopodium annotinum	Stiff Clubmoss
Mimulus clivicola	Bank Monkey-flower
Mimulus washingtonensis	Washington Monkey-flower
Physaria didymocarpa var. didymocarpa	Common Twinpod
Ranunculus oresterus	Blue Mountain Buttercup
Ribes cognatum	Umatilla Gooseberry
Ribes wolfii	Wenaha Currant
Silene scaposa var. scaposa	Scapose Catchfly
Spiraea densiflora var. splendens	Subalpine Spiraea

Eleven additional animal species are considered 'sensitive' in the Blue Mountain portion of the Region. Sensitive species are those that could become endangered within the state in the foreseeable future if no management action protects their habitats. These are also candidate species for Federal status. Table 4-10 summarizes the T/E/S and wildlife species occurring on the Forest.

TABLE 4-10. THREATENED, ENDANGERED AND SENSITIVE WILDLIFE SPECIES

Umatilla National Forest

<u>Common Name</u>	<u>Scientific Name</u>
A. BIRDS	
American peregrine falcon	Falco peregrinus anatum
Northern bald eagle	Haliaeetus leucocephalus
Ferruginus hawk	Buteo regalis
Long-billed curlew	Numenius americanus
B. MAMMALS	
Preble's shrew	Sorex preblei
Townsend's western big-eared bat	Plecotus townsendii townsendii
California wolverine	Gulo gulo luteus
Gray wolf	Canis lupus
North American lynx	Felis lynx Canadensis
California bighorn sheep	Ovis canadensis californiana
C. INVERTEBRATES	
Blue Mountain clyptochian	Cryptochia neosa
D. FISH	
Bull trout	Salvelinus confluentus
Redband trout	Oncorhynchus mykiss

Biological evaluation and any required surveys and inventories of all threatened, endangered, and sensitive species will be completed prior to all project activities to insure the protection and/or mitigation of all T/E/S species.

The Forest will coordinate closely with the U.S. Fish and Wildlife Service concerning all proposed management activities that have the potential to impact threatened or endangered species. The Forest will participate in the recovery objectives for both bald eagles and peregrine falcons outlined in Chapter III of the FEIS.

Monitoring will be used in the evaluation of estimated outputs in the FEIS and the anticipated habitat conditions described in the Forest-wide Standards and Guidelines, and in the management areas. The evaluation will determine if wildlife habitats and population trends occur as projected, and will form the basis for changing plan direction if necessary. Details of these monitoring actions are outlined in Chapter 5.

Six botanical areas that contain plants unique to the Blue Mountains are proposed in the Forest Plan. Topography and settings of each area are quite varied. The areas provide unique educational opportunities and scientific values. (See Table 4-11.)

TABLE 4-11. PROPOSED BOTANICAL AREAS

Umatilla National Forest

<u>Recommended Areas</u>		<u>Key Plant Species</u>
Charley Creek	50 acres	Wenaha Currant
Teal Spring	5 acres	Dusty Maiden Wenaha Currant
Woodward Campground	15 acres	Bracted Lousewort Early Coral-root
Ruckel Junction	5 acres	Sabine's Lupine
Sheep Creek Falls	500 acres	Male Fern Mountain Fern Maidenhair Fern Devil's Club
Shimmiehorn Canyon	140 acres	Oak Fern Maidenhair Fern Licorice Fern Lady Fern

RESEARCH NATURAL AREAS

Research Natural Areas (RNA's) are sites where some natural features are preserved for scientific and educational purposes and natural processes are allowed to dominate. Their main purposes are: (1) Preservation of examples of all significant natural ecosystems for comparison with those influenced by man; (2) provision of educational and research areas for ecological and environmental studies; and (3) preservation of gene pools for typical and rare and endangered plants and animals (USDA Forest Service 1975).

On the Forest, two RNA's are established and six others are proposed (see Table 4-10 and Appendix H of the FEIS for details). When suitable new areas are identified they will be considered for addition to the RNA inventory. Prior to establishment, a comprehensive formal

report will be made. For RNA's proposed on National Forest System lands, the report is submitted to the Chief of the Forest Service for approval. Upon establishment of each area, a Research Natural Area Management Plan will be prepared.

TABLE 4-12. EXISTING AND RECOMMENDED RESEARCH NATURAL AREAS

Umatilla National Forest

Name	Area (acres)	Location (District)	Plant Community Exemplified
EXISTING			
Pataha Bunchgrass	69	Pomeroy	Blue bunchgrass wheatgrass/ Sandberg's bluegrass
Rainbow Creek	576	Pomeroy ¹	Grand fir – white pine grand fir/thinleaf huckleberry, mixed conifer with larch dominance
RECOMMENDED			
Birch Creek Cove	410	North Fork John Day	Mid to high elevation Sedge and grass wetlands
Elk Flats Meadows	75	Walla Walla	Tufted hairgrass meadow aspen
Elk Flats-Wenaha Breaks	1,665	Pomeroy ¹	Grand fir – Pacific yew grand fir/twinflower lodgepole pine/thinleaf huckleberry, low elevation permanent pond
Kelly Creek Butte	80	Heppner	Stiff sagebrush/bunchgrass
Mill Creek Municipal Watershed	7,950	Walla Walla ²	Douglas-fir, ponderosa pine/snowberry mid-elevation stream
Vinegar Hill	410	North Fork John Day, Long Creek ³	Whitebark pine Subalpine sagebrush communities

1 Area located within the Wenaha-Tucannon Wilderness
 2 Area located within the Mill Creek Municipal Watershed
 3 Malheur National Forest

RIPARIAN/FISH

Projected increases in fish production (shown in Table 4-1) result from a combination of approaches including Forest riparian and other management practices, direct Forest improvement projects, and emphasis by a number of constituent groups working on downstream fish problems.

Coordinating implementation activities in and near streams will be emphasized. Timber harvest, related road building, livestock grazing, and mining are activities which have the potential to reduce fish habitat capability and impact riparian areas on the Forest. (See Chapter IV of the FEE for discussion.) Use of the Umatilla National Forest Best Management Practices (see Forest-wide Standards and Guidelines), Management Areas C5 and C7, and other management areas with no riparian harvest (A1, A2, A7, A8, B1, C1, C8, and F4) is expected to improve fish habitat capability across the Forest.

The primary method for achieving riparian area objectives will be the application of the Forest-wide Standards and Guidelines and management area direction, as they relate to riparian area activities, stream surface shading, potential large woody material placement, riparian forage utilization, and floodplain management. Early in the planning process, the Forest recognized the importance of these resources through the mapping of anadromous and resident fish habitat streams, wetlands, and their associated riparian areas. Moreover, our knowledge of critical parameters relating to these areas should improve significantly over the next 10 years as instream habitat and coordinated riparian resource inventories are completed for Forest streams and wetlands. During the next decade, a classification system for riparian vegetation types will be completed which will become an integral part of riparian management and inventory efforts.

The focus will also be on improving habitat conditions for parameters that limit fish population size on the Forest. These include protecting and improving riparian vegetation to provide shade, reducing stream temperatures and sediment, and improving stream geomorphology (maintaining and adding large wood, developing pools and stream complexity, and stabilizing streambanks) to improve rearing habitat. Riparian vegetation condition and trend should continue to improve rapidly. Streambank and instream component improvement will occur but more slowly. Monitoring will be used to test effectiveness of standards and guidelines and management area direction as related to riparian and fish management.

Forest-wide fish habitat enhancement accounts for the bulk of the Forest related increases in fish production. During the next decade, emphasis will be placed on enhancement work in the North Fork John Day River system which has the greatest potential for increased fish production and the fewest downstream problems. Improvement work is also scheduled in the other Forest river systems. See Appendix A for the schedule of fish habitat improvement work. A combination of Knutson-Vandenburg (K-V) and Bonneville Power Administration (BPA) appropriated funds will be used on improvement projects. A portion of the K-V funds will be utilized for resident fish enhancement.

Two key assumptions in the Forest Plan are that various groups and agencies interested in water and fish problems will continue working to remove barriers to increased fish production, and that their efforts will be successful. The Forest will continue coordination and cooperation in these improvement efforts.

RANGE

Forage

Most of the projected forage production increases in the next 30 years will be a result of transitory range created by timber harvest. Improving range condition and trend across the Forest will also result in some forage increases. The forage increase will result in an increased potential grazing capacity, even after meeting big game forage needs.

During the next decade, permitted use will increase to 58,000 AUM's, about 6 percent above current levels (see Table 4-1), due to the expanded transitory forage base. Intensive grazing of clearcuts, shelterwoods, and other timber harvest areas is planned. Increased grazing on transitory ranges will most often require only improved management techniques such as riding, salting, and improvement construction to make use of available forage within existing allotments. Range management coordination will be required on the harvest areas and on adjacent riparian areas. Some adjustment in allotment boundaries also may be required.

The increase in forage should accommodate some increases in use by livestock and big game. Available forage will be 'split' between livestock and big game on a 40-60 basis. Some livestock grazing capacity on big game winter ranges will be allocated where forage for big game can be enhanced.

Utilizing the full range potential will require that several conditions be met. The agricultural industry is assumed to be able to provide the livestock necessary to utilize the increased forage production. Allotment management plans must be kept current with existing resource capacities and conditions. As shown in Appendix A, each allotment is scheduled to be updated, to the extent necessary, once every 10 years.

Updated or reanalyzed allotment management plans will fully implement forage utilization standards and any increased livestock numbers. The plans will also address improved range conditions, and provide specific schedules of range improvements. In addition, the allotment management plans will provide for coordination with other resources and with the various permittees.

With a few exceptions (A6, D2, F2), livestock grazing is permitted across the Forest in all management areas. On about 76 percent of the Forest, intensive to extensive (Range Strategy C and D) management will be practiced, and a moderate to high level of cost-effective improvements (such as fencing and water developments) is planned. About 5 percent of the Forest will receive extensive use (Range Strategy B) with the aid of few or no improvements, and the remaining 19 percent will not be available for use by livestock.

Noxious Weeds and Poisonous Plants

Noxious weeds now infest an estimated 6,000 acres of the Forest. Areas of infestation are associated with activities such as timber harvest, road construction, livestock grazing, and recreation. With the planned level of activity, the potential exists for expanded infestations of weeds on the Forest.

Control efforts will be initiated on the Forest. The Forest Noxious Weed Control Plan (November 1989) is incorporated into the Forest Plan by reference and provides direction for inventory and treatment of target species, interagency and landowner coordination, and funding. The methods of treatment will also be in accordance with the direction in Managing Competing and Unwanted Vegetation, FEIS, November 1988. Essentially, the forests are directed to emphasize prevention and natural ecosystem processes, and reduce reliance on herbicides. However, all treatment methods are available. Cost of treatments will vary greatly. Hand methods are approximately four to six times as expensive as chemical treatment, and will not keep up with the current level of infestation under the present budgets. If effective biological controls are found or herbicides used, the problem will be contained or lessened. Otherwise, the problem will get progressively worse. Presently, progress is being lost in all areas in the control of noxious weeds.

Several plant species not classed as noxious weeds (but as poisonous plants) have caused economic loss to livestock. Generally, control efforts have not been initiated on the Forest because these species have not been abundant and forage conditions have been favorable. No control efforts have been carried out in recent years, and none are planned for the future. See Table 4-13 for a list of Forest problem plants.

TABLE 4-13. PROBLEM PLANTS ON THE UMATILLA NATIONAL FOREST

Umatilla National Forest

PRIMARY NOXIOUS WEEDS OCCURRING ON THE FOREST	
Tansy ragwort	(Senecio jacobaea)
Yellowstar thistle	(Centaurea solstitialis)
Dalmation toadflax	(Linaria dalmatica)
Diffuse knapweed	(Centaurea diffusa)
Spotted knapweed	(Centaurea maculosa)
Canada thistle	(Cirsium arvense)
Scotch thistle	(Onopordum acanthium)
Common St Johnswort	(Hypericum perforatum)

SOME SPECIES OF POISONOUS PLANTS COMMON TO THE
UMATILLA NATIONAL FOREST

Deathcamas	(Zigadenus spp.)
Larkspur species	(Delphinium spp.)
Lupine species	(Lupinus spp.)*
Milkvetches or Locoweed species	(Astragalus spp.)**
Water hemlock	(Circuta douglasii)
Prunus (cherry) species	(Prunus spp.)
Wild red baneberry	(Actaea rubra)
Green false hellebore	(Veratrum viride)

* *Lupinus sabinii* is a documented Sensitive plant species on the Forest, *Lupinus biddiet* and *Lupinus cusickii* are suspected to occur on or near the Forest.

** *Astragalus arthuri* and *Astragalus diaphanus* are documented Sensitive plant species on the Forest, *Astragalus cusickii* is suspected to occur on or near the Forest

Under no circumstances would any proposed control efforts target documented or suspected Sensitive plant species.

On the Forest, 807,233 acres have been classified as tentatively suitable for timber production. Timber harvest is scheduled on 618,769 of these acres to facilitate wood fiber production and to achieve the following various multiple-use objectives:

<u>Management Emphasis</u>	<u>Management Area</u>
Visual	A3, A4, A5, A7 (part)
Wildlife	A10, C2, C3, C4, C5, E2, F4 (small part)
Fish	C5, C7
Timber/Forage	E1

TIMBER

Timber management will not be used on a scheduled basis on 188,464 acres in order to meet the following direction:

Provide old growth to meet Management Requirements (MR's). Criteria have been provided in Regional direction and are shown in the Forest-wide Standards and Guidelines.

Provide winter range satisfactory and marginal cover to achieve, insofar as possible, 'optimum' cover conditions on winter range. (This is a discretionary constraint identified and discussed in the FEIS, Chapter II and Appendix 8.)

Provide for Management Area direction in A1, A2, A6, A7 (part), A8, A9, C1, C3A, C7 (riparian), C8, D2, F2, and F4 (most part).

Various others areas were withdrawn from consideration for timber production including all wildernesses, forests with regeneration difficulty, and lands not capable of producing a crop of wood. Table 4-14 summarizes the Forest land classes. Table 4-15 displays a breakdown of the suitable and unsuitable lands by management area. Table 4-17 shows the potential growth as related to suitable lands.

Forest Land Classification

TABLE 4-14. FOREST LAND CLASSIFICATION SUMMARY

Umatilla National Forest

<u>Classification</u>	<u>Acres</u>
Non-Forested land (includes water)	316,362
Forested land	1,086,113
Forested land withdrawn from timber production	236,431
Forested land not capable of producing crops of industrial wood	24,920
Forested land physically unsuitable:	
Irreversible damage likely to occur	0
Regeneration difficulty	17,529
Forested land--inadequate information	0
Tentatively Suitable Forest land	807,233
Forest land not allocated for timber production	188,464
Unsuitable Forest land	449,414
Total Suitable Forest land	618,769
Total National Forest land	1,402,467

TABLE 4-15. MANAGEMENT AREAS SUITABLE LANDS

Umatilla National Forest

	Management Areas	Suitable Lands	Unsuitable/ Nonselected Lands
A1	NONMOTORIZED DISPERSED RECREATION	0	27,319
A2	OHV RECREATION	0	7,523
A3	VIEWSHED1	19,772	23,942
A4	VIEWSHED2	15,007	13,673
A5	ROADED NATURAL	2,903	1,833
A6	DEVELOPED RECREATION	0	4,432
A7	WILD AND SCENIC RNER	3,344	4,261
A8	SCENIC AREAS	0	31,442
A9	SPECIAL INTEREST AREA	0	3,152
A10	WENAHA-TUCANNON SPECIAL AREA	2,547	747
81	WILDERNESS	0	304,400
C1	DEDICATED OLD GROWTH	0	41,184
C2	MANAGED OLD GROWTH	3,455	167
C3	BIG GAME WINTER RANGE	50,037	102,719
C3A	SENSITIVE BIG GAME WINTER RANGE	0	8,161
C4	WILDLIFE HABITAT EMPHASIS	202,431	56,447
C5	RIPARIAN/WILDLIFE	17,158	10,050
C7	SPECIAL FISH MANAGEMENT AREA	87,477	17,860
C8	GRASSTREE MOSAIC	0	96,471
D2	RESEARCH NATURAL AREA	0	1,586
E1	TIMBER/FORAGE	55,406	36,015
E2	TIMBER AND BIG GAME	154,970	44,579
F2	MILL CREEK MUNICIPAL WATERSHED	0	20,815
F3	HIGH RIDGE EVALUATION AREA	880	0
F4	WALLA WALLA RIVER WATERSHED	<u>3,382</u>	<u>31,568</u>
	TOTALS	618,769	892,345

Present and Future Forest Conditions

TABLE 4-16. PRESENT AND FUTURE FOREST CONDITIONS

Umatilla National Forest

	<u>Unit Measure</u>	<u>Suitable Land</u>
PRESENT FOREST		
Growing Stock	MMCF	1,220
	MMBF	6,932
Live cull	MMCF	6.8
	MMBF	37.0
Salvable Dead	MMCF	166.0
	MMBF	287.8
Annual Net Growth	MMCF	12.0
	MMBF	67.2
Annual Mortality	MMCF	10.7
		30.8
FUTURE FOREST:		
Growing Stock	MMCF	1,147.9
Annual Net Growth	MMCF	34.7
Rotation Age	YEARS 80 ¹ to 110	

AGE CLASS DISTRIBUTION	<u>Present Forest</u>		<u>Future Forest (150 Years)</u>	
	<u>Age Class</u>	<u>Suitable Forest Acres</u>	<u>Age Class</u>	<u>Suitable Forest Acres</u>
	0-10	54,117	0-10	
	11-20		11-20	
	21-30	26,086	21-30	
	31-40	16,352	31-40	58,081
	41-50		41-50	43,172
	51-60		51-60	51,969
	61-70		61-70	49,254
	71-80		71-80	55,840
	81-90		81-90	50,158
	91-100		91-100	37,327
	101-110	65,283	101-110	28,471
	111-120		111-120	21,068
	121-130	4,903	121-130	67,239
	131-140	48,203	131-140	31,178
	141-159	20,392	141-159	44,864
	151+	383,465	151-160	2,926
			161-170	2,133
			171-180	99
			181-190	75,027
			191+	

1 Average rotation age for regeneration stands on lands with timber emphasis by major forest types is 94.4 years (excludes areas with visual emphasis)

The distribution of age classes in Table 4-16 for the Present Forest are only a broad estimation based upon the 1981 Forest Inventory. The inventory did not provide estimates of age class distribution by acres, so an estimated age was assigned to the size classes in the inventory, and the distribution in Table 4-1 6 was derived. The figures for the Future Forest will more closely approximate the actual age class distributions found in year 150.

Only suitable lands are included in these age class distributions. Ages on nonsuitable forested lands will be considerably older than those for the suitable managed forest lands,

Timber Productivity

TABLE 4-17. TIMBER PRODUCTIVITY CLASSIFICATION

Umatilla National Forest

<u>Potential Growth</u> (Cubic Feet/Acre/Year)	<u>Suitable Lands</u> (Acres)	<u>Unsuitable Lands</u>
Less than 20	28,534	347,705
20-50	211,074	179,000
50-85	289,557	188,249
85-120	89,603	68,744
120+	<u>0</u>	<u>0</u>
SUBTOTAL	<u>618,769</u>	<u>783,398</u>
GRAND TOTAL	<u>1,402,467</u>	

Timber Sale Activities

During the next 10 years, the annual allowable sale quantity (ASQ) will average 124 million board feet (22 2 million cubic feet). The ASQ includes chargeable volume of green and recently dead timber meeting minimum utilization standards found in the Regional Guide. Figure 4-1 displays the ASQ (base sale schedule) and long-run sustained-yield capacity projected for the next 150 years. Additional nonchargeable volume which includes cull, chip material, firewood, and special products is at an annual total of 35 million board feet (6.2 million cubic feet).

FIGURE 4-1. BASE SALES SCHEDULE

Allowable Sale Quantity

Tables 4-18 and 4-19 present a summary of projected volumes and acres by silvicultural harvest system, logging methods, and species for the next decade. A more detailed presentation of year by year tentative planned sales, harvest activities and chargeable volume by management areas can be found in the Forest Plan Appendix A. Actual sale volumes, locations, and other pertinent information will be confirmed upon completion of field work.

TABLE 4-18. ALLOWABLE SALE QUANTITY AND TIMBER SALE PROGRAM QUANTITY¹
(ANNUAL AVERAGE FOR FIRST DECADE)
Umatilla National Forest

Harvest Method	Allowable Sale Quantity ²	
	<u>Sawtimber</u> (MMCF)	<u>Other Products</u> (MMCF)
Regeneration harvest:		
Clearcut	9.92	0
Shelterwood and seed tree	5.85	
Uneven-aged Management		
Group Selection	1.39	0
Single Tree Selection	0.20	0
Overstory Removal	4.76	0
Intermediate harvest:		
Commercial harvest:	.08	0
Salvage/sanitation	<u>0</u>	<u>0</u>
Totals	22.2	0
	Additional Sales ³	
	<u>Sawtimber</u> (MMCF)	<u>Other Products</u> (MMCF)
Total for all harvest methods	<u>0</u>	<u>6.2</u>
Allowable sale quantity 22.2 (MMCF), 124 (MMBF) ⁴		
Timber Sale program quantity ⁵ 28.4 (MMCF); 159.2 (MMBF) ⁴		

1 To be expressed to nearest .1 MM board and cubic feet

2 Only includes chargeable volumes from suitable lands

3 Only Includes nonchargeable volumes from suitable and/or unsuitable lands

4 Based on local unit of measure.

5 Total of allowable sale quantity and additional sales

TABLE 4-19. TEN-YEAR TIMBER SALE ACTION PLAN SUMMARIES—TOTAL FORESTUmatilla National Forest
Summary of Volumes¹ by Species

Species	10 Year Goals FY '90-99			Balance to be Programmed FY '95-99			5-Year Program FY '90-94		
	²	MMCF	MMBF	²	MMCF	MMBF	²	MMCF	MMBF
PP		40	225		19	107		21	118
I, DF		89	496		46	256		43	240
WF, S, Other Species		93	519		48	267		45	252
SUBTOTAL		222	1,240		113	630		109	610
Chip and Other ³		35	200		18	102		17	98
Firewood ⁴		27	150		14	77		13	73
GRAND TOTAL		284	1,590		145	809		139	781

Summary of Acres and Volumes⁵ by Silvicultural Method

Silvicultural Treatment	10 Year Goals FY '90-99			Balance to be Programmed FY '95-99			5-Year Program FY '90-94		
	M Acres	MMCF	MMBF	M Acres	MMCF	MMBF	M Acres	MMCF	MMBF
Clearcut	47.36	99	555	24.06	50	282	23.30	49	273
Uneven-aged	3.86	16	88	1.96	8	45	1.90	8	43
Shelterwood	24.41	58	327	12.41	29	166	12.00	29	161
Final Shelter/Overwood	13.56	48	266	6.89	25	135	6.67	23	133
Commer. Thin, Salvage	.71	1	4	.36	1	2	.35	-	2
TOTALS	89.90	222	1,240	45.68	113	630	44.22	109	610

Summary of Acres and Volumes⁵ by Logging System

Logging System	10 Year Goals FY '90-99			Balance to be Programmed FY '95-99			5-Year Program FY '90-94		
	M Acres	MMCF	MMBF	M Acres	MMCF	MMBF	M Acres	MMCF	MMBF
Ground	55.45	130	726	28.45	68	379	27.00	62	347
Cable	30.10	84	468	16.53	48	238	13.57	41	230
Aerial	4.35	8	46	.70	2	13	3.65	6	33
TOTALS	89.90	222	1,240	45.68	113	630	44.22	109	610

1 Volumes are for material meeting sawlog merchantability standards, except the Chip and Other and the Firewood volumes listed under Species

2 Species overlaps preclude reliable estimates of acres by species.

3 Material other than personal use firewood which does not meet sawlog merchantability standards.

4 Personal use firewood

5 Volumes are for material meeting sawlog merchantability standards.

DEFINITIONS

PP – Ponderosa pine

L – Western Larch

DF – Douglas-fir

WF – White fir

S – Engelmann spruce

LP – Lodgepole pine

The full range of timber management activities and techniques will be used during the decade. Even-aged management, including clearcuts, shelterwoods, and modifications of these techniques, will be the principal system employed. Uneven-aged management practices (group and single tree selection) will also be used, primarily in riparian areas, viewsheds, winter ranges, ponderosa pine types, and other areas.

The determination of appropriate harvest methods is tentative and was based on criteria from the Regional Guide for the Pacific Northwest Region, the National Forest Management Act Regulations, and the professional judgment of Forest silviculturists. Site-specific conditions and considerations will be examined and analyzed prior to final determination of the appropriate harvest method used on the ground. Silvicultural practices will be designed and employed to

meet management objectives. For detailed discussion on determination of appropriate harvest methods for the Forest, see Appendix K of the FEIS.

Accomplishment of other timber management activities will be important in achieving all of the Forest multiple-use goals. Key activities include:

- Regeneration of forest stands,
- utilization of genetically improved stock,
- stocking level and species control, and
- animal, insect, and disease control.

TABLE 4-20. PROJECTED ANNUAL TIMBER MANAGEMENT ACTIVITIES

Umatilla National Forest

<u>Activity</u>	<u>Acres/year</u>
Planting	4,375
Natural Regeneration	3,145
Precommercial Thinning	2,620
Release	232

The Forest will continue to operate under direction of existing tree improvement plans. The June 1985 Umatilla Tree Improvement Plan is incorporated into the Forest Plan by reference.

Successful implementation of the Forest Plan requires and is dependent on a high level of internal resource coordination. The timber sale program provides the major vehicle through which coordination will be accomplished. The timber program affects, and is affected by, all the other Forest resources.

WATER/SOIL

Water and soil programs are designed to fulfill the Forest watershed goals of providing an undiminished flow of quality water and maintaining or enhancing soil productivity in order that resource and user needs be met. These programs focus on several actions (1) Coordinating with other resource activities to ensure protection of watershed values through application of Best Management Practices (BMPs); (2) monitoring the effects of planned activities and long-term changes in water quality and soil productivity; (3) studying the response of water yield and timing to timber harvest activities; (4) rehabilitating damaged soil and water resources where they occur; (5) inventorying basic water and soil and their conditions; (6) managing national forest water rights; and (7) coordinating with various agencies and interested parties on soil and water related issues.

WATER

Programs to protect and enhance water quality are a major aspect and emphasis of watershed management and will guide activities across the Forest. A 5-year action plan will be developed to aid in the implementation of the watershed direction in the Plan. Watershed program personnel will engage primarily in assisting in the assessment of water quality protection needs. They will be involved in development and implementation of BMP's, evaluation of BMP effectiveness, and in assisting and coordinating watershed management with timber, range,

minerals, and fish projects. Increased emphasis will also be given to water quality monitoring at both the ambient and project levels.

Potential impacts of forest management on water quantity will also be a focus of watershed program activities. The Forest will continue to study the effects of timber harvest activities on water quantity related parameters at the Umatilla Barometer Watershed. These parameters will include water yield, low flows, peak flows, and timing of flows. Information from these studies will be used to adjust Forest management policies and practices, if needed. Where water uses are sensitive to flow timing changes, the potential to affect such changes will be considered during project planning activities. Forest-wide Standards and Guidelines will be applied to insure that favorable conditions of flow are maintained.

Proper management of stream and riparian areas will also receive emphasis in the activities of the watershed program. The primary method for achieving riparian area objectives will be the application of Forest-wide Standards and Guidelines (also see Riparian/Fish discussion in this section). The Forest will adhere to all provisions of Executive Orders relating to wetland and floodplain management.

A moderate level of watershed improvement activity is planned for the next decade to restore degraded watershed areas and to improve the productivity of watersheds in general. Upgrading the watershed improvement needs inventory will be an emphasis in the early part of the planning period. The improvement will decline in the future since emphasis will be on prevention of adverse impacts to watershed condition rather than on restoration.

Special management emphasis will be given to water and related resources in certain critical watersheds throughout the planning period including. The Mill Creek Municipal Watershed (Management Area F2), where timber harvest and livestock grazing will be prohibited; large portions of the Walla Walla River Watershed (F4), which will preclude timber harvest; and within the riparian areas of the upper North Fork John Day (C7), which will also prohibit timber harvest.

The Forest has nearly completed the water rights applications process for obtaining the consumptive use rights needed to meet resource objectives. But up to half a dozen new cases per year are anticipated, primarily to meet the range program needs. Instream flow needs will be identified, quantified, and protected on a case-by-case basis as need arises.

As a result of emphasis on and management of water, water temperature regimes are expected to improve in areas where past activities have affected stream surface shading. And even though stream sedimentation is expected to increase on a localized basis, any water quality changes will be well within the acceptable levels prescribed by Oregon and Washington State standards. Also, given the assumption of little change in local precipitation patterns, future water yields are anticipated to be about the same as they have been in the past, averaging about 2.5 million acre-feet annually. Potential impacts to downstream water users and instream habitat should be low; water yields and low flows are not expected to change appreciably from current conditions.

SOIL

The Umatilla National Forest Soil Resource Inventory (USDA Forest Service 1978a) serves as the main document for program and project planning. It is supplemented and supported by the technical knowledge of forest resource experts. However, an updated soil inventory is planned for the next decade to provide more detailed and complete information on what the effects of each project will be upon the soil resource. The inventory will allow for better management of the soil resource, and will help maintain its basic productivity by giving Forest managers access to better information for decision making. Forest managers will be able to apply a better understanding of soils to such things as reforestation, site preparation, and potential regeneration success.

In the future, a major emphasis of the Forest soils program will be the maintenance of soil productivity. Programs and projects involving the soil resource will be evaluated in terms of the existing productive capacity and the potential changes to that capacity if the program or project is carried out. The objectives for potentially ground-disturbing projects are to prevent significant changes to soil productivity, and to mitigate or restore degraded soils to a preactivity condition if preventative measures cannot be applied during the project.

The Forest-wide Standards and Guidelines are designed to maintain a minimum of 80 percent of a project area (or cutting unit) in a nondetrimental soil condition with respect to the effects of compaction, displacement, and erosion. Threshold detrimental soil conditions are expressed in terms of bulk density levels, amount of bare ground, burned soil condition, mass failure rate, and displaced soil amount. If a project is expected to cause the threshold values of an area affected detrimentally to exceed the standard values, then the project is either altered to meet the standard or dropped. Monitoring studies will be conducted to identify trends and long-term effects, and to insure that Forest-wide Standards and Guidelines are being followed and met. The Forest plans to support and cooperate with research efforts which address long-term site productivity concerns.

MINERALS

Continuing interest is assumed in the mineral resources of the Forest although the actual amount and location of projected mineral activity are difficult to predict. In the interest of decreasing this uncertainty, and for the purpose of encouraging mineral development, the Forest will continue to support geologic mapping and mineral resource inventory programs.

The Forest will apply the Forest-wide Standards and Guidelines to regulate the surface resource impacts of mineral activities so that they are conducted in as compatible a manner as possible with other resource uses and environmental standards. The overall objective is to ensure that no unnecessary or undue degradation of the environment occurs, while ensuring that environmental protection stipulations and reclamation objectives are reasonable, enforceable, economical, and successful. When necessary, reclamation objectives will be ensured by adequate bonding.

Furthermore, ongoing reclamation projects, such as the one in place on Clear Creek near Granite, Oregon, will continue to receive emphasis. Riparian and fish habitat areas that have been degraded through mining activity in the past, or ones that have been damaged through more common forest practices, will undergo scheduled rehabilitation along with other such areas.

Withdrawals from mineral entry include congressionally mandated wildernesses, the Mill Creek Municipal Watershed, some key areas including RNA's, campgrounds, and administrative sites, and areas as determined necessary through an analysis of affected resource values. Existing and proposed withdrawals have been reviewed as specified in the Federal Land Policy and Management Act of 1976. The review was completed in 1990. As seen in Table 4-19, about 13 percent of the Forest, composed mainly of old growth, riparian, dispersed and developed recreation sites, and special areas, will be managed under increased access and resource protection restrictions. The remainder of the Forest (65 percent) will have normal restrictions through permits and operating plans.

TABLE 4-21. EFFECTS OF MANAGEMENT AREA DIRECTION ON MINERAL ACCESS BY MINERAL POTENTIAL

Umatilla National Forest

Access Restrictions	High	Moderate	Low/Unknown	Total	Percent + Net NF Acres
Withdrawn	-	30,000	323,273	353,273	25
High	3,500	1,000	20,100	24,600	2
Moderate	4,600	4,000	141,700	150,300	11
Low	-	-	872,034	872,034	62

Within withdrawn areas, valid existing rights must be confirmed before approving mineral development activities. However, once confirmed, the Forest will facilitate the mineral development activities authorized by those rights. In many withdrawn areas, prospecting activities can be conducted in a manner compatible with the purposes of the withdrawal. Such activities provide no rights to develop the mineral resources, so when proposed, they should be encouraged. The results of any such prospecting will be used when reviewing withdrawals, as required by FLPMA. If mineral resources are discovered, and mineral development is determined to be the best use for an area that is presently withdrawn, the withdrawal may be revoked.

Minerals are not subject to scheduling, and the Forest has little or no direct control over any utilization of the resource until a project or program has been proposed. Since proposals come from the public or other agencies, determination of where or when entry will be requested is impossible to plan for, and control over future mineral activity is a very difficult proposition.

However, as with other resources, program and project review will be an important part of management of the minerals program. Through the review procedures and strict adherence to FLPMA, NEPA, and NFMA, mineral management activities can be made more efficient, and reclamation techniques and objectives can be made more successful. The actual effects that mineral activities have on sensitive resources will also be evaluated. In addition, the mineral supply/demand situation will be studied and newly acquired mineral resource information will be evaluated for possible impact on the Forest and the Plan.

LANDS

Use of existing utility corridors will be continued. One potential new corridor extending from Blalock Mountain to Troy, Oregon, is identified and may be used pending an EIS.

Existing term special uses are expected to continue through the life of the Plan. Given adequate funding, inspection for pipelines (oil and gas transmission), power lines, and electronic sites will occur annually, at a minimum. All other inspection frequencies will follow schedules found in the Forest Service manuals.

Landownership guidance is provided in Forest-wide Standards and Guidelines and management area direction. Direction is also provided by the Land Ownership Adjustment Plan (May 1986), which is incorporated into the Forest Plan, by reference. Overall priorities for landownership adjustments are: (1) Those that make improved resource management possible, and (2) those that increase management efficiency and reduce management costs. The Landownership Adjustment Plan is found in Appendix B of the Forest Plan.

TRANSPORTATION

Roads

The Forest transportation system is (and will continue to be) planned, constructed, and managed to facilitate land and resource management objectives. Coordination with the objectives of wildlife, timber, range, recreation, fish, and water is essential. Specific direction for

transportation system planning, construction, and operation is summarized in the Forest-wide Standards and Guidelines and management areas.

New road construction will occur almost entirely as a result of timber harvest operations and will be limited to local roads. The arterial and collector roads are essentially in place. Arterials and collectors currently at standards lower than required to meet objectives will be reconstructed to an appropriate standard. Reconstruction will be required on some local roads for safety, economy of operations, and/or to meet resource objectives. Construction and reconstruction activities are shown in Table 4-1, and activity schedules for all classes of roads are listed in Appendix A of the Plan. The disaggregation of road construction between the Districts is shown in Table 4-22.

TABLE 4-22. MILES OF CONSTRUCTION BY DISTRICT PER DECADE

Umatilla National Forest

District/Decade	1	2	3	4	5
Heppner	215	75	34	19	7
North Fork John Day	406	168	79	42	18
Pomeroy	90	56	14	2	0
Walla Walla	259	88	37	22	7

Each ranger district will develop access management programs within 2 years in order to determine the nature and extent of road access that will best meet resource requirements as well as address the publics' desire for access to those resources. The access management programs will be developed through a NEPA process that involves interested and affected publics. Guidance for these programs will come from the management area direction in the Plan as well as Forest-wide Standards and Guidelines for meeting resource needs. The program will be developed into the district motorized access and travel management plan (also see Recreation and Wildlife). The effect of these programs will most likely be a reduction in the amount of open road available on the Forest.

Forest-wide, many roads will be closed, primarily in response to big game habitat and recreation requirements, but also to meet soil, water, and economic criteria. Some areas will have most roads open to provide a balance of recreation experiences. Open road densities will be managed and monitored on an allocation zone (subwatershed) or management area basis. A Forest-wide average open road density of 2.0 miles per square mile is anticipated to result from implementation of management area direction; open road density will vary between allocation zones in response to objectives. All of the arterial and about half the collector roads will be managed for passenger cars, and the remainder will be for high clearance vehicles as shown on the following page.

The total amounts of Forest roads managed for passenger and high clearance vehicles are as follows:

Roads managed for passenger cars - 900 miles, and roads managed for high clearance vehicles - 2,530 miles.

Trails

Amount of construction and reconstruction of planned trails is described in the recreation section and shown in Table 4-1 and Appendix A of the Plan.

AIR QUALITY

Air quality protection will be achieved by complying with Forest-wide Standards and Guidelines and direction in the Pacific Northwest Region FEIS, Managing Competing and Unwanted

Vegetation (Nov 1988). The Forest will also comply with state and local regulations and guidelines directed at preventing and controlling air pollution.

FIRE MANAGEMENT

The fire management program supports accomplishment of many of the land and resource objectives. A high level of cost-effective fire protection will be employed to protect resource values and investments. An appropriate suppression response of confine, contain, or control will be made on all wildfires commensurate with the objectives and standards and guidelines identified for each management area. Wildfire suppression, use of fire and fuel treatments will require coordination with resource managers in order for all programs to be successfully accomplished. Within the scope of the Forest Plan, a fire management plan will be developed to provide additional program detail and direction.

The National Fire Management Analysis System (NFMAS) will be used to monitor the protection programs that were developed on the basis of the fire-related needs of planned land and resource management objectives. The system will provide a consistent method for evaluating and comparing the effectiveness and efficiency of the fire management program. Efficiency will be measured using an economic criterion based on the total cost of the fire program, plus the net change in the value of planned resource outputs on the protection areas as a result of wildfire (cost and net value change).

Fire will be allowed to more fully play its natural role in the ecology of the Forest. Fire management in wilderness will be directed by the appropriate wilderness activity plans (includes fire management), which have been incorporated into the Forest Plan by reference. Natural fire occurring in wilderness will be treated as a prescribed fire until declared a wildfire. All human-caused fires occurring in wilderness require an appropriate suppression response.

Prescribed fire will be used as a management tool to reduce fire hazards created by management activities and naturally occurring fuels, to prepare sites for reforestation and to maintain and improve other resources such as range and wildlife. Prescribed burning will be the principal program and technique used for winter range habitat maintenance, for forage enhancement and to assist in keeping big game animals on the Forest during the winter.

FOREST-WIDE STANDARDS AND GUIDELINES AND MANAGEMENT AREAS

Introduction

The Forest-wide Standards and Guidelines and management areas have been developed according to Regional direction. Each document has been prepared for the purposes of:

1. Identifying direction for activities on the Umatilla National Forest.
2. Identifying management actions to resolve the issues, concerns, and opportunities (ICO's).

Forest-wide Standards and Guidelines are applicable to all areas of the Forest unless specifically stated in the management areas. Forest-wide Standards and Guidelines include management requirements (MR's) and other important direction. The management areas are designed to apply to specifically identified land areas. Both Forest-wide Standards and Guidelines and management areas contain goal statements reflecting the expected results for a Forest resource, activity, or land area. Each provides direction emphasis from the USDA Forest Service manuals, handbooks, and the Regional Guide. Each responds to Forest ICOs, appropriate laws including applicable state and local laws, regulations, existing direction, land capabilities, and professional judgment.