

# **Appendix H**

**Wilderness Plans**

# **Appendix I**

**Management of  
Wild Horses**

# Appendix H

## Wilderness Plans

The Ochoco National Forest has three wildernesses classified under the Oregon Wilderness Act of 1984. They are: Black Canyon - 13,400 acres, Bridge Creek - 5,400 acres, and Mill Creek - 17,400 acres (see management area map, Alternative I, or Chapter 4 maps). Legal map boundaries for the wildernesses are on file at the Forest and District headquarters responsible for administration of the area. The purpose of the plans is to:

- identify the unique characteristics of the wildernesses;
- identify concerns and issues related to the wildernesses and their management;
- establish management objectives;
- guide the allocation of the wildernesses into different opportunity, wilderness resource spectrum, (WRS) classes, and
- establish standards and guidelines and area-specific management direction.

### Legislative and Regulatory Requirements

The management direction for wildernesses focuses on delivery and preservation of those wilderness-related benefits specified in the Wilderness Act of 1964, the National Forest Management Act of 1976, and in the Department of Agriculture and Forest Service policy guidelines. Selected excerpts from these laws and management guidelines follow.

#### A. Wilderness Act of 1964

(P.L. 88-577)

“...shall be administered for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character...”(Section 2a) “...wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use.” (Section 4b)

## B. Department of Agriculture Regulations

(36 CFR 293)

“...In carrying out such purposes, National Forest Wilderness resources shall be managed to promote, perpetuate, and, where necessary, restore the wilderness character of the land and its specific values of solitude, physical and mental challenges, scientific study, inspiration, and primitive recreation. To that end: (a) Natural ecological succession will be allowed to operate freely to the extent feasible. (b) Wilderness will be made available for human use to the optimum extent consistent with the maintenance of primitive conditions. (c) In resolving conflicts in resource use, wilderness values will be dominant to the extent not limited by the Wilderness Act, subsequent establishing legislation, or the regulations in this part.” (36 CFR 293.2)

## C. National Forest Management Act of 1976

(P.L. 94-588)

“In developing, maintaining, and revising plans for units of the National Forest System pursuant to this section, the Secretary shall assure that such plans -- (1) provide for multiple use and sustained yield of the products and services obtained therefrom... and, in particular, include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness;...” (Section 6e)

## D. Department of Agriculture Regulations

(36 CFR 219)

“...Provide for limiting and distributing visitor use of specific portions in accord with periodic estimates of the maximum levels of use that allow natural processes to operate fully and that do not impair the values for which wilderness areas were created...” (219.18(a))

## E. Forest Service Manual

Chapter 2320 (4/86)

The manager, then, must face the paradox of wilderness as described by Congress, as seen or felt by those whose values vary, and the uses and activities permitted and prohibited in those areas by the Wilderness Act. They must solve the problem of use of the area while still keeping these parts of the natural world intact. They must:

“...Manage the wilderness resource to ensure its character and values are dominant and enduring. Its management must be consistent over time and between areas to ensure its present and future availability and enjoyment as wilderness. Manage wilderness to ensure that human influence does not impede the free play of natural forces or interfere with natural successions in the ecosystems and to ensure that each wilderness offers outstanding opportunities for solitude or a primitive and unconfined type of recreation. Manage wilderness as one resource rather than a series of separate resources.”

## F. Forest Service Manual

### Chapter 2320.2 - Objectives

- “1. Maintain and perpetuate the ... resource of wilderness as one of the multiple uses of National Forest System land.
2. Maintain wilderness in such a manner that ecosystems are relatively unaffected by human manipulation and influences so that plants and animals develop and respond to natural forces.
3. Minimize the impact of those kinds of uses and activities generally prohibited by the Wilderness Act, but specifically excepted by the Act or subsequent legislation.
4. Protect and perpetuate wilderness character and public values including, but not limited to, opportunities for scientific study, education, solitude, physical and mental challenge and stimulation, inspiration, and primitive recreation experiences.
5. Gather information and carry out research in a manner compatible with preserving the wilderness environment to increase understanding of wilderness ecology, wilderness uses, management opportunities, and visitor behavior.”

## G. Forest Service Manual

### Chapter 2320.3 - Policy

- “1. Where there are alternatives among management decisions, wilderness values shall dominate over all other considerations except where limited by the Wilderness Act, subsequent legislation, or regulations.
2. Manage the use of other resources in wilderness in a manner compatible with wilderness resource management objectives.
3. In wilderness where the establishing legislation permits resource uses and activities that are nonconforming exceptions to the definition of wilderness as described in the Wilderness Act, manage these nonconforming uses and activities in such a manner as to minimize their effect on the wilderness resource.
4. Cease uses and activities and remove existing structures not essential to the administration, protection, or management of wilderness for wilderness purposes or not provided for in the establishing legislation.
5. Because wilderness does not exist as a vacuum, consider activities on both sides of wilderness boundaries during planning and articulate management goals and the blending of diverse resources in forest plans ..Use the Recreation Opportunity Spectrum (ROS) (FSM 2310) as a tool to plan adjacent land management.
6. Manage each wilderness as a total unit and coordinate management direction when they cross other administrative boundaries.
7. Use interdisciplinary skills in planning for wilderness use and administration.

8. Gather necessary information and carry out research programs in a manner that is compatible with the preservation of the wilderness environment.
9. Whenever and wherever possible, acquire non-Federal lands located within wildernesses, as well as non-Federal lands within those areas recommended for inclusion in the system.
10. Inform wilderness visitors that they face inherent risks of adverse weather conditions, isolation, physical hazards, and lack of rapid communications, and that search and rescue may not be as rapid as expected in an urban setting, in publications and personal contacts.”

## **Wilderness Fire Management Policy**

Due to the importance of fire as a natural force in shaping local ecosystems, the Forest Service Manual direction on management of fire in these wildernesses is important to consider. The following are excerpts from the pertinent sections.

### **Forest Service Manual**

#### **Chapter 2324.2 - Management of Fire**

##### **2324.21 - Objectives**

- “1. Permit lightning caused fires to play, as nearly as possible, their natural ecological role within wilderness.
2. Reduce, to an acceptable level, the risks and consequences of wildfire within wilderness or escaping from wilderness.”

##### **2324.22 - Policy**

Summarized: Natural ignitions may be allowed to burn under prescribed conditions or human ignition prescribed fire may be used when unacceptable risks exist to life and property within wilderness or to life, property, and resources outside of wilderness from use of natural ignition prescribed fire.

Until such time as management plans for prescribed fire use can be developed and approved for each wilderness, all ignitions will be considered wildfire and will continue to be suppressed using appropriate suppression strategies.

## **Land and Resources Management Plan Direction**

Standards and guidelines for wilderness management are contained in FSM 2322.03 -- 6-25, R-6 Supp.81. The desired condition, and standards and guidelines specific to the Ochoco National Forest's wilderness are given in Chapter 4 of the Forest Plan. The schedules and monitoring (Appendix A-13) are also part of the wilderness plans.

# Black Canyon Wilderness

(MA-F1)

## Description

Black Canyon Wilderness contains approximately 13,400 acres. Black Canyon Creek drains into the South Fork of the John Day River and falls from 6,000 feet to 2,800 feet in elevation. The Wilderness is characterized by steep sideslopes and numerous north-south ridges with rolling to flat benches on the edges. Wolf Mountain and Dry Corner are on the south side. Bearskull Mountain is on the north side.

The north facing slopes are covered with mixed conifers; the south facing slopes are predominantly ponderosa pine and juniper. Other tree species include, white-fir, Douglas-fir, western larch, lodgepole pine, alder and aspen. The mixed conifer forest type accounts for approximately half of the total forest acreage in the Wilderness

Approximately fifty to sixty percent of the total timbered land within the Wilderness boundaries is considered to be in old growth condition.

The water produced by the watershed is used by livestock, wildlife, anadromous fish, and irrigation from the John Day River. Riparian condition class is provided in the Forest Plan, Section 3.

## Management Situation

### Access

Black Canyon was managed as a roadless area prior to wilderness classification. There are no improved roads in the wilderness area; there is a jeep trail that commences from the south side of Humphrey's camp on Forest Road 3800 in the SW 1/4, NW 1/4, of Section 16, T.14 S., R.25 E., and ends at Owl Creek. The upper end of the road has been closed but needs further work to be obliterated. There are approximately ten roads that dead end at the Wilderness, which have been closed at the boundary.

### Cultural Resources

A cultural resource survey has been conducted in the Wilderness in the burned area east of the South Prong Canyon to the South Fork of the John Day River. There are some recorded pictographs in Black Canyon that will need protection if their location becomes well known. There have been no cultural surveys conducted in Black Canyon west of South Prong Canyon (there are no known sites in the area).

The only known structure in the Wilderness is a partially constructed log cabin on Owl Creek. Management direction is to eliminate this structure.

## Fire

Black Canyon averages two to four fires a year with one large fire (500 acres or greater) every 10 years under current situations. Major fires in the Wilderness will be prone to escape the boundaries. There are heavy fuels in the west end and light flashy fuels in the east half. The steep ground is unsafe for firefighters.

There are remnants of a fire camp and firelines left from the Young's Butte Fire in the late 70's.

## Forage

Permitted livestock use is outlined in Table 1.

**Table 1**

<b>Allotment</b>	<b>Permittee</b>	<b>Permitted Numbers</b>	<b>Season</b>	<b>Animal Months</b>
Dry Corner	C. Leland Hall	100 Cattle	5/15-8/15	300
Bearskull/ Cottonwood	Bob and Virginia Humphreys	50 Cattle 900 Sheep	7/1-9/30	150
Wind Creek	Ronald and Rosalee Palmer	175 Cattle	6/15-9/25	595
Wind Creek	Sheep Mountain Cattle Company	200 Cattle	6/15-9/25	680

The majority of Black Canyon Wilderness is within the Bearskull-Cottonwood Allotment, but the Wilderness also overlaps into the north end of Wind Creek and Dry Corner Allotments. Very little of the Wilderness is actually grazed by livestock because of the steep terrain and heavy timber. Sheep from the Bearskull-Cottonwood Allotment make some use of the fringes of the north and west sides of the Wilderness, but are not taken down into the canyon. Cattle from the Dry Corner Allotment use the area around Lost Indian Reservoir on the fringe of the Wilderness, and cattle from the Wind Creek Allotment similarly use the area around South Prong Reservoir, Crow Bar Spring, and South Prong Troughs. There are parts of the boundary that are fenced on the north ends of the Wind Creek and Dry Corner Allotments.

Historically, the canyon bottom has received some unauthorized use, primarily from cattle coming up the creek from the South Fork and off of private land from the Sunstrum place. Since the fence between the Sunstrum Place and Black Canyon Creek has been rebuilt, that access to unauthorized cattle has been fairly well eliminated. A drift fence on the lower end of the canyon will keep cattle from coming up the canyon from the South Fork if the gate is kept closed.

## Forest Health

**Insects and Disease** - Western spruce budworm populations have been building for years, and are epidemic in some areas of the Wilderness, where damage from defoliation is extensive. The outbreak is primarily concentrated in the mixed conifer timber types; stands containing a heavy component of fir are most susceptible. The absence of fire in these types of stands has encouraged a dramatic increase in the amount of fir in the forest understory, which has prompted the outbreak and extended the natural cycle of the spruce budworm.

Other damaging agents include mountain pine beetle, western pine beetle, Douglas-fir tussock moth, fir engraver beetles, stem decays, dwarf mistletoes, and root rots.

## Minerals

No known mining activities or mineral deposits exist.

There are no known gas or oil leases.

## Recreation and Wilderness Use

Visitor use is undocumented.

There are two dispersed recreation sites at Big Ford; Kelsey Springs and Owl Creek each have one site. Mud Springs, a semi-developed campground, is on the south rim outside the Wilderness where the trailhead of the South Prong trail is located. There is a dispersed recreation site at Dusty Well, where the Black Canyon trailhead is located. There are three or four sites at Humphrey Camp.

Hunting is the major use of the wilderness; big game hunting is considered to have a short-term impact each year in Black Canyon Wilderness. Other uses are fishing in Black Canyon Creek in the spring and summer, and hiking and trail riding in the spring, summer and fall. There has been no interest in outfitter/guide services, but hunter camps do exist along the boundary.

**Trails** - The Black Canyon Wilderness has four designated trails in the area. The following is a list of trails, the trail numbers, and the maintenance levels:

Table 2

	Miles	Maintenance Level
820 Black Canyon Trail	11.6	2
820A Boeing Field Trail	0.5	2
820D Payten Trail	1.4	1
821 South Prong Trail	5.4	2
<b>Total Miles</b>	<b>18.9</b>	



**Trailheads and Signage** - There are no trailhead developments. There are some metal trail mileage markers and some wooden trail signs.

**Wilderness Boundary** - The wilderness area boundary has been partially located and posted on the ground. Most of Black Canyon Wilderness is bounded by the Ochoco National Forest except for the east end. Steuber's Black Canyon Ranch borders the wilderness area for 2.75 miles, and BLM land borders the wilderness for 2.75 miles.

## Specific Management Direction

**Facilities** - Eliminate nonconforming uses, hunter caches, and the cabin at Owl Creek.

**Forage** - Manage livestock grazing allotments according to their existing plans. Update allotment plans to reflect wilderness resource requirements. Maintain fences and developments according to wilderness and allotment management plans. Investigate and take action to prevent livestock trespass. Consider Mud Springs for development as a Horse Camp. In allotment planning, figure recreational stock forage needs as well as permitted livestock.

**Recreation** - Complete a wilderness resource spectrum (WRS) survey and inventory information on visitor use, using code-a-site methods.

Develop a "Limits of Acceptable Change" plan to serve as a monitoring guide for management of the wilderness.

**Soil** - Develop a plan to rehabilitate firelines and remove debris from Young's Butte Fire Camp.

**Water** - Have a fisheries biologist and/or Forest hydrologist inventory Black Canyon Creek to acquire baseline data and collect water baseline data.

## Bridge Creek Wilderness

(MA-F2)

### Description

The 5,400-acre Bridge Creek Wilderness is located in the Ochoco Mountains in Wheeler County, central Oregon.

The topography of the Wilderness is characterized by a steep dissected drainage along Bridge Creek, with rolling open meadows on the side slopes. Two high peaks, East Point and North Point, reach elevations of 6,625 feet and 6,607 feet respectively. The lowest point along the northern edge of Bridge Creek is 4,000 feet in elevation. Rolling high mountain meadows characterize the south por-

tion of the area, while dense, suppressed white fir and lodgepole pine thickets, aging 70-90 years old, characterize most of the center core of the Wilderness. The far northern section also contains old growth ponderosa pine and Douglas-fir stands. There are small pockets of mountain mahogany, alder, and juniper.

Bridge Creek and Maxwell Creek are within the Wilderness. There are also five springs: Thompson, Pisgah, Masterson, Nelson, and Maxwell springs. Maxwell Reservoir is a small, three-acre lake sometimes used for irrigation.

## **Management Situation**

### **Wilderness Resource Spectrum**

Although the Wilderness is small, it can be managed in two Wilderness Resource Spectrum (WRS) classes. Map A outlines the two areas, one of which will be managed to meet primitive wilderness guidelines, and the other will be managed as semiprimitive. The primitive area encompasses the core of the Wilderness and consists of 3,000 acres. The surrounding area will be managed as semiprimitive, and encompasses the areas where man's influence is evident and can not be mitigated due to pre-existing special uses such as the flume and irrigation ditch. In the semiprimitive area, outside management activities will have some influence visually and experience-wise for the wilderness visitor. This area is 2,400 acres.

### **Access**

Primary access routes to the Wilderness are Forest Roads 2630, 2630-450, and 2360-750. These roads are maintained at a low level. An old road leads from Forest Road 2360 up to the Old Tree Lookout on North Point; although the road is blocked, it is very evident. The center is revegetating naturally but the two ruts are compacted and very visible.

There are a series of fire roads along the ridge on North Point which are evident. A logging road owned by Prineville Sawmill was built into the Wilderness in the NW 1/4 of Section 1, T.13 S., R.12 E., and has since been closed and obliterated. An old jeep trail and road enter the Wilderness on the north boundary from the 450 spur; although they are blocked, they are evident. Other roads are planned for adjacent timber sales which adjoin the Wilderness boundary.

There is private land on the north boundary of the Wilderness.

### **Biological Diversity**

Vegetation occurs in three basic zones: 1) There are riparian zones along Bridge Creek and Maxwell Creek characterized by aspen stands interspersed with meadows dominated by grasses and forbs. 2) The north slopes of the Bridge Creek drainage are characterized by open mountain meadows with mountain mahogany and a profusion of wildflowers. 3) The remainder of the Wilderness (65 percent) is white fir and lodgepole pine stands. The stands are stagnant and dense with little floor cover or grasses. Areas of compaction may exist from cattle

trails. Recreational use has not appeared to effect any vegetation. No known threatened or endangered plants have been located in the area, however, a survey has not been undertaken.

## Cultural Resources

Although the central portions of the Wilderness have not been formally surveyed for cultural resources, the northern and southern perimeters have. In Northside # 2 (Johnson, 1980) and Northpole (Bedortha, 1982) timber sale areas, both Euro-American (historic) and Native American (prehistoric) sites were found.

Mitchell Water Development (Gowan, 1985) failed to turn up notes, but resulted in a more intensive look at one of the prehistoric sites recorded by Johnson in 1980.

Historic activity in the Wilderness began in the late 1800's and centered around the water resources of Bridge Creek. Three historic sites are associated with this activity. Both Maxwell reservoir and Maxwell ditch (EA 68) were constructed by Maxwell in 1894. The water was used for irrigation on his private land holdings north of the Forest boundary. Prior to 1917, the Cole family (descendants of Maxwell) built a wagon road (EA 66) to Maxwell reservoir to gain access to the irrigation system and, presumably, to drive sheep and later cattle into the area for summer grazing. Around the turn of the century, the Forest Service began to develop the area to administer and protect resources in the area. The rest of the documented historic sites in the Wilderness are reflective of this new activity. First, the Summit Trail was built, between 1907 and 1909, to provide a travel system for Forest Rangers, stockmen, and their herds of sheep or cattle. This trail provided the main thoroughfare through the Forest and set up the first lines of communication. It runs along the southern boundary of the Wilderness and roughly corresponds to Forest Road 2630. It has been thoroughly documented by A. Gowan (1986), and has been determined eligible for nomination to the National Register of Historic Places. A trail from Pisgah Lookout to Bridge Creek, is one of the ancillary trails that tied into the Summit Trail. A series of guard stations to house the rangers and fire lookouts was established along the Summit Trail after its construction. Pisgah Guard Station (no longer standing) and North Point Lookout Tree are examples of these activities. These were linked together by magnetic phone lines around 1910 and provided much quicker communication throughout the Forest. The phone lines generally followed the transportation routes and are present in the Wilderness; the line from North Point Lookout Tree to Pisgah Guard Station is an example. Additional possible historic developments dating to this period are log troughs, slat logs, fence lines and stock driveways.

Three prehistoric sites are located within or near the Wilderness area; Native American (NA) 123 and NA 124 are located just north of the Wilderness; NA 128 is located at the upper end of Bridge Creek. All of these sites are located on nearly level ground near water sources or wet meadows. All are lithic scatters and have stone tools and debris from tool manufacture. They indicate that hunting

for big game occurred in the Wilderness area. The projectile points found at these sites indicate that activity began 5000 years ago.

## Facilities

There are presently no Forest Service facilities within the wilderness except range fencing and an old historic tree lookout.

## Fire

Historically fire has played major role within the Wilderness. Old growth larch patches indicate fire scars. These scars show that fires occur in 100-400 year cycles, with larch ages ranging from 70-300 years old. Fire size ranges from small, 30-acre burns to 200-plus acres. It appears that fire suppression has not greatly affected much of the natural ecological cycle. Many of the timber stands are 70-100 years old, with dense thickets of lodgepole pine, white fir, and heavy fuel loading. Mt. Pisgah Lookout is located directly south of the Wilderness and is still used for fire detection purposes.

## Forage

Two grazing permits exist in the Wilderness. Approximately 440 acres of the Wilderness are within the Badger Allotment, of which a total of 290 acres are suitable for grazing. This allotment is located in the northwest corner of the Badger Creek pasture. The allotment is managed as eight pastures. Five of these pastures are managed on a deferred basis, and three of the pastures are in riparian areas. Of these three riparian pastures, two are managed on a two year rotation. Badger Creek pasture produces about 22 percent of the total production, or 450 animal unit months (AUM's). The pasture is utilized at alternate times of the year, for 40-60 days for approximately 220 head. The portion of the Wilderness within this pasture is small; the range condition is good.

The Elkhorn Allotment includes much of the Wilderness. Approximately 80 percent of the north pasture in this allotment is in the Wilderness. There are currently two permittees. Pat Clark is permitted to graze 50 yearlings for two months, and John Lillicrop is permitted 290 pair for 30-40 days. The allotment is under a deferred rotation grazing system; usually this pasture is utilized in the later part of the grazing season.

## Forest Health

**Insects and Disease** - The pine bark beetle infestation is on the decline in the lodgepole pine (LP). Spruce budworm is currently infesting trees in the area. Stand exams conducted in 1979 found that about 60 percent of the white fir and lodgepole pine were infected. Recent aerial photos show that about 80 percent of the stand is affected.

## Recreation and Wilderness Use

Accurate records of recreational use are not available. It is estimated that the area receives less than 100 recreation visitor days (RVD's) of use during the non-

hunting season. Hunters use the area during the day, and camp on the boundary, contributing approximately another estimated 600 RVD's of use, for a total use figure of about 700 RVD's per year. Horse use is minimal since travel through the area is difficult.

Carrying capacity estimates were made. The primitive WRS class may handle 0.6 RVD/Ac/Yr and the semiprimitive class 0.75 RVD/Ac/Yr. However many of the areas in the Wilderness are not readily accessible due to dense forest stands, and they were not considered in the carrying capacity estimates.

Table 3 shows how the carrying capacity for each WRS zone was calculated. These calculations show that the Wilderness is not used to its estimated capacity.

**Table 3 Carrying Capacity Estimates by WRS Zone for Bridge Creek Wilderness**

WRS Zone	Acreage	Navigable Acreage	Capacity Factor(RVD/Ac/Yr)	Calculated Capacity
Primitive	3,000	60%	0.6	1,440 RVD's
Semiprimitive	2,400	80%	0.75	980 RVD's
<b>Total Capacity</b>				<b>2,420 RVD's</b>

Four fire rings have been found in the Wilderness near North Point; fire rings have not been found elsewhere.

Hunting use in the Bridge Creek area is heavy and will continue to increase yearly. On opening day of archery season in 1987 began with 18 people counted; now (1989) approximately 20-25 people will hunt within the wilderness daily during archery season. On opening day of deer hunting season there were over 50 people hunting the area, and about 20-25 people daily during elk hunting season.

Road access into the area is blocked by snow from about mid-November to mid-June each year. Snowmobilers have been seen using the meadows inside the Wilderness just off Forest Road 2630 by Bridge Creek.

Carrol Camp is a historic camping area used by the Ochoco National Forest since it was founded in 1907. The camp is located on the mid-southern boundary of the Wilderness. It has a spring with potable water, one vault toilet and level camping places for no more than two parties. There are many dispersed hunter camps located around the periphery of the area, used primarily during the three week span of elk and deer hunting seasons.

**Trails** - There are no maintained trails within the Wilderness. An old 3.5 mile trail runs along the west side of Bridge Creek from the south boundary to Maxwell Reservoir. It is unsigned, has not been maintained for many years, and is difficult to find and follow in many places. The old road from Mt. Pisgah to the Old Lookout Tree on North Point is unsigned, and is now used as a trail by many

hunters and some hikers. There is also an old jeep trail maintenance road on the northern boundary that is used as hiking access into the Wilderness. An easily followed unsigned trail/road goes along the irrigation ditch, flume and pipe along Maxwell Creek and Bridge Creek.

**Trailheads** - There are no maintained trailheads for Bridge Creek Wilderness. The major entry route is near the wilderness sign by Bridge Creek where it crosses Forest Road 2360.

**Signing** - Bridge Creek Wilderness is signed with two large wilderness signs, and there are boundary signs posted about every 200 feet.

## Scenic Resources

The visual quality within the Wilderness area is in a near natural state. Alterations are minor and include some old cattle fences, and the flume and irrigation ditch. Views from North Point and East Point present a vast 360 degree view of middleground and background. Present intrusions in the middleground include a few clearcuts on the northeast side of the District, but there are several timber sales planned in the areas near the Wilderness in the 1990's. Many of these clearcuts will be visible in mid- to foreground views from East Point and North Point.

The Old Summit Trail follows Forest Road 2630 for a large portion of the south Wilderness boundary. A visual resource management plan for the road has been developed.

## Water Resources

The Lillicrop family has existing water rights in the Wilderness. Their permit includes maintaining an irrigation ditch, a wooden flume, reservoir and access road. It is located in T.12 S., R.21 E., Sections 27 and 34. The ditch is one and one-half miles long, 18 inches wide and 10 inches deep. The originating point for the ditch is a rubble/log dam in Bridge Creek, NE 1/4 Section 3, T.13 S., R.21 E. The wooden flume is one-fourth mile long, 14 inches wide and eight inches deep. The reservoir holds three-acre feet of water and covers one acre of land. The unimproved road is three-fourths mile long and eight feet wide. The wooden flume and some of the pipe and road are not within the Wilderness boundaries. A portion of the dam and flume are within the Wilderness. A review of this permit in 1986, revealed resource damage due to poor maintenance of the flume and ditch, including sluffing of head walls and creek erosion. The review required these problems to be corrected.

The city of Mitchell uses three springs just north of the Wilderness boundary for its water supply. Although these springs are not within the Wilderness, the citizens are concerned with any action in the Bridge Creek Wilderness that may affect their water supply (i.e. quality or quantity of water from their springs).

**Fisheries** - Bridge Creek is a tributary of the North Fork of the John Day River. It is a Class I stream with anadromous (steelhead) and resident rainbow trout spawning and rearing within the area. The stream is presently in good shape and

relatively unaffected by man-induced impacts with the exception of past livestock grazing in the first one-half to one mile below Pisgah springs. In the areas of higher gradient below the wet meadow (one mile south of Pisgah springs) for approximately one-half mile, livestock grazing has significantly altered the site potential and reduced stream condition to poor. When the stream drops into a deep narrow V-shaped profile, cattle grazing impacts are less, and the creek is in generally good condition down to the Wilderness boundary.

## Wildlife

The Wilderness provides habitat for old growth dependent species. The area has good structural diversity with multiple canopy layers and open meadows. Edge effect is very prominent in many areas and will be increased by logging around the periphery of the Wilderness. Cover and security will become increasingly important in the Wilderness as other areas of the Forest are modified. Snags are very prominent and provide habitat for cavity dependent species.

## Specific Management Direction

**Forage** - Currently there is no allotment plan for Elkhorn Allotment; Badger Allotment does have a current plan, which will be revised to incorporate guidelines in Forest Service Manual (FSM) 2323.2. Grazing impact on stream quality of Bridge Creek and Maxwell Creek will be monitored. An allotment management plan for Elkhorn will be completed within this planning period and incorporate wilderness grazing guidelines.

**Recreation** - The old road to North Point Lookout may still serve as a trail, but it will not be signed or put on the wilderness map.

If monitoring shows that recreational use is increasing and cross-country travel routes are affecting meadows and other wilderness characteristics, a trail system will be planned for the area.

Add one large wilderness sign by the fence, at the end of the old East Point road at the base of East Point.

Improve wilderness boundary signs along the Maxwell Reservoir area.

Maintain Carrol Camp as a minimally developed recreation site.

Collect better use data by constructing a registration box or installing a sensor at the information board.

Create a wilderness information board at the junction of Forest Road 2630 and the 450 spur. This will include a map of the wilderness, to be used as an education place. The untrailed character of the area will be explained, as well as safety and cross-country travel tips for the user.

**Scenic Resources** - The visual management plan for the Old Summit Trail along Forest Road 2630 will address removal of hazard trees along the road corridor while continuing to maintain retention objectives in the long term. Removal of hazard trees and firewood may mean that retention objectives might not be met in the short term since the present condition of the stand is very poor.

Foreground and middleground views from North Point and East Point will be addressed in timber sale environmental assessments.

**Transportation** - The old Forest Service road that accesses North Point Lookout will be obliterated after consultation and approval from the State Historic Preservation Office (SHPO). Proper photos and other necessary documentation will be submitted.

Any roads built adjacent to the Wilderness boundary as a result of new timber sales will be closed off when use is completed. They should be blocked within no less than one mile of the Wilderness boundary.

All roads now within the Wilderness will be blocked and revegetated. Ruts will be tilled along all old firelines, fire roads, jeep trails and logging roads. The North Point Lookout road will be analyzed for historic significance; if it is found to be insignificant, it will be obliterated.

Forest Road 2630 from the junction of Forest Road 2630-450, and also Forest Road 2630-450 on the northern boundary, will be maintained for high clearance vehicles.

**Water** - The flume and irrigation ditch present some erosion problems along Bridge Creek. Permittees maintenance of permit structures will continue to be monitored. If preventable resource deterioration occurs, permittees must improve the structures within the Wilderness; in some cases bank stabilization will be needed.

Stream surveys will be conducted to determine the condition of the stream channel. Recommendations made by the State of Oregon and ODFW will also be sought within the wilderness context.



## LIMITS OF ACCEPTABLE CHANGE

The following monitoring plan implements the concept of Limits of Acceptable Change. It is designed to assess human-caused impacts on the wilderness resource, and sets parameters for management actions.

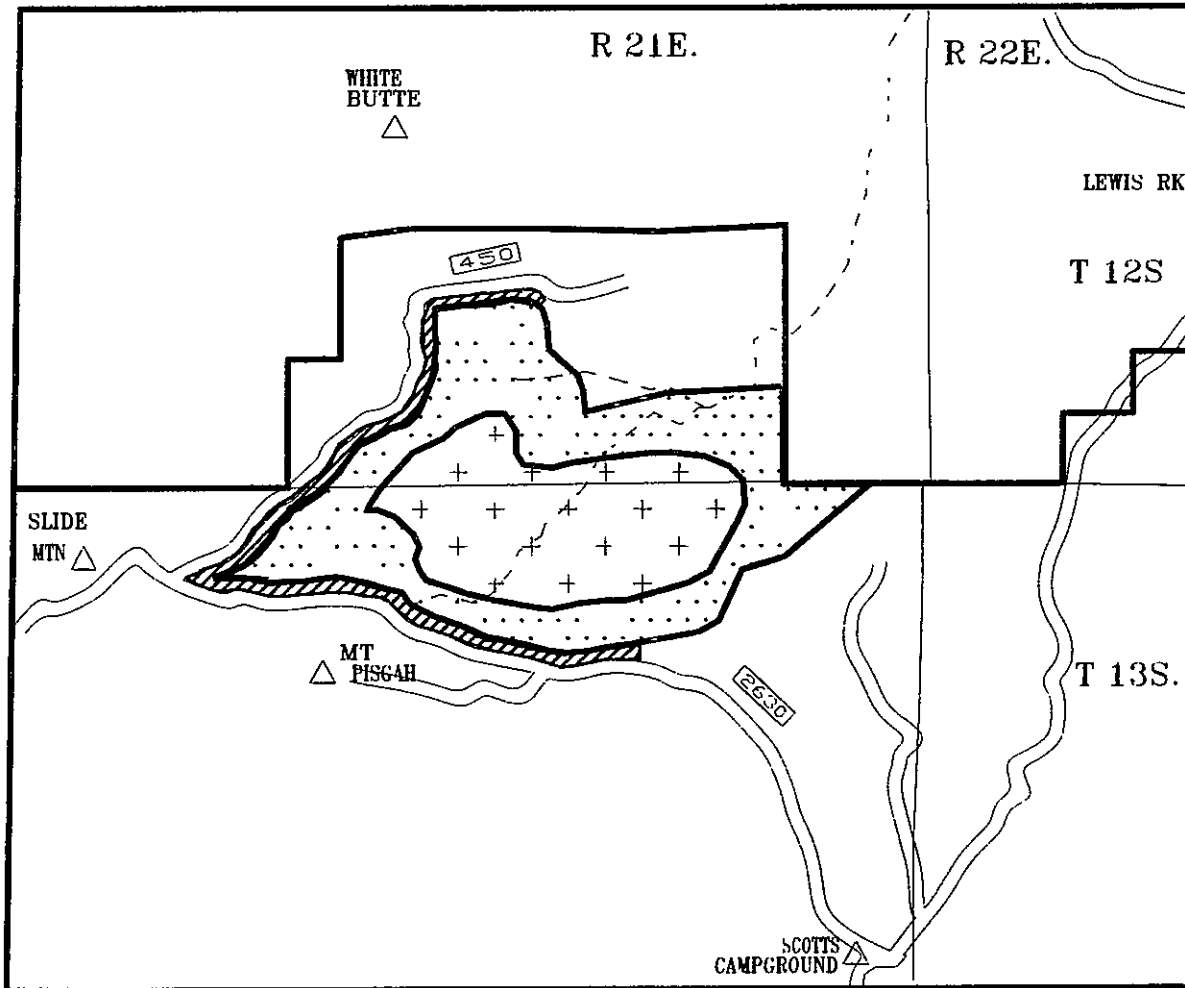
**TABLE 4**  
**Limits of Acceptable Change Monitoring Guidelines**  
**for**  
**Bridge Creek Wilderness**

FACTOR	OPPORTUNITY CLASS	LAC INDICATOR	STANDARD	SAMPLING PROCEDURE
Air Quality	SP, P	visibility	views up to 150 miles of Mt Adams	visual inspection from North Point 3x/yr, photo benchmark
Range Condition	SP, P	% utilization of meadows & riparian areas		range condition analysis at beginning and end of grazing
Water Quality	SP, P	+/- 0.1% change in water PH	biologist to set baseline	sample Bridge Creek annually
Wildlife	SP, P	# hunting parties using wilderness	to be set by biologist	statistical counts hunting season
Campsite Solitude	SP	# camps per 500 acres	8 or less sites/500 acres, 2 or less in sight or sound of another	visual count on patrol / 3 times year
	P	# camps per 500 acres	4 or less sites/500 acres, 1 or less in sight or sound of another	visual count on patrol / 3 times year
Hiking Solitude	SP	# encounters while hiking	less than 10 per day	visual count on patrol / 3 times year
	P	# encounters while hiking	less than 7 per day	visual count on patrol / 3 times year
Party Size	SP	group size	max of 10 per group	visual count on patrol / 3 times year
	P	group size	max of 6-10 per group	visual count on patrol / 3 times year
Trail Condition	SP	evidence of trails	less than 8 mile/640 acres	visual observation of meadows, ridges and major travel routes
	P	evidence of human-made trails	none present	visual observation of meadows, ridges and major travel routes
Threatened and Endangered Species	SP, P	population trends	set by district wildlife biologist	monitored semi-annually
Recreation Use	SP	RVD's	use does not exceed 1440 RVD's	visitor registration and road counts
	P	RVD's	use does not exceed 980 RVD's	visitor registration and road counts







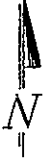
SP - Semiprimitive  
P - Primitive

Figure H-1

# BRIDGE CREEK WILDERNESS WILDERNESS CATEGORIES



## LEGEND

-  ROADS
  -  CREEKS
  -  FOREST BOUNDARY
  -  SEMI-PRIMITIVE
  -  PRIMITIVE
  -  VISUAL CORRIDOR
-   
N

H-17

## Mill Creek Wilderness

(MA-F3)

### Description

Eighty-five percent of the Wilderness lies within the Mill Creek watershed, with the remainder in the Marks Creek watershed; both are tributaries of Ochocho Creek. Although generally southerly-oriented, all exposures are represented. Parts of Desolation Canyon and the west slope of Wildcat Ridge exceed 100 percent side slopes, with rock outcrops. Two-thirds of the area has slopes greater than 30 percent gradient. In sharp contrast, the meadows, prairies, and lodgepole pine thickets in the north end are nearly flat. Fifteen percent of the Wilderness is in openings, mostly barren ridge tops and some high-elevation meadows. The west half of the Wilderness is mostly high rolling hills. Elevations range from 3,725 feet at Wildcat Campground to 6,240 feet at the northeast corner of Viewpoint Lookout. The terrain varies from the rugged, rocky cliffs of Desolation Canyon to the flat meadows of Bingham Prairie. Spectacular rock outcrops are present at Twin Pillars and Whistler Point. Twin Pillars is a 200-foot tall lava tower, the remaining plug of an eroded volcano. A rhyolite ash deposit welded together to form the resistant tuff outcropping at Whistler Point.

There are 5.1 miles of Class I stream (East Fork Mill Creek); 3.9 miles of Class II streams (Belknap, Brogan, Buck, McGinnis, Reilly, Cornez, and Hamilton Creeks); 8.9 miles of Class III streams; and 10.2 miles of Class IV streams in the Wilderness.

The Wilderness has a variety of plant communities, including mixed conifer-pinegrass, white fir-twinflower, juniper-bunchgrass, ponderosa pine-wheatgrass, lodgepole pine-pinegrass, and meadow-shrub associations. Most of the forested area has a ponderosa pine overstory (greater than 200 years old) with a Douglas-fir and white fir understory (less than 100 years old).

Specimens of little grape fern (*Botrychium simplex*), a sensitive plant species, have been found in moist meadows within Bingham and Moccasin Prairies and Trail Meadow.

### Management Situation

#### Access

The Wilderness is 15 miles northeast of Prineville. Access is provided by Forest Road 27 on the north and Forest Roads 33 and 3350-300 on the south. It is the most readily accessible wilderness on the Forest Road access is blocked by snow except at the southern access point from about mid-November to June. The northeast area can be accessible by skung from an adjacent cross-country skiing trail system at Bandit Springs off Highway 26.

## Cultural Resources

A cultural resource survey of the trail system has been completed and no cultural resources have been identified on the trails. Throughout portions of the Wilderness, clusters of obsidian and agate tools have been located. Subsurface sites have been found along the Mill Creek drainage, with a high probability that Native Americans camped in the area. Known historic features include early lookouts (Wildcat Mountain, Viewpoint, Whistler Point), sheep camps, and gold robber campsite.

## Facilities

**Nonconforming Structures** - As a result of recent and past activities, many nonconforming structures still exist, including concrete water tanks, nonfunctioning fences, a shelter, obvious campsites with fire rings, rustic wooden tables, benches, bridges, and old vehicle trails.

## Fire, Insects and Disease

Fuel loading varies from less than one ton per acre in meadows, to up to 45 tons per acre in decadent lodgepole pine stands. Old growth ponderosa pine stands with ground fuels and ladder fuels comprise a majority of the area. Fuel accumulation is increasing due to insect and disease and the exclusion of fire. Fire hazard is rising throughout the Wilderness, particularly in the lodgepole pine stands in the northern portions. Fire occurrence is every 15 to 30 years. The natural fires are primarily caused by lightning; one strike per year is usual.

Fire suppression has largely influenced the amount and distribution of insects and disease. Mountain pine beetle populations have just passed cycle peaks in the decadent lodgepole pine stands and are peaking in the ponderosa pine stands. Root-rot and spruce budworms are common in mixed-conifer stands, with the latter declining from peak populations. There is high likelihood of spread within the Wilderness and moderate potential for the spread of these species to outside areas.

## Forage

The Wilderness lies within the Mill Creek and Bear Creek (Prineville Ranger District) and Wildcat (Big Summit Ranger District) Allotments. About 535 cow-calf pairs graze in various periods during June through September. Both allotments are under deferred-rotation grazing systems and show good livestock distribution and stable trends. Range improvements include about 10.5 miles of wire fence, five spring developments, and one stock pond. Access to, and maintenance of these improvements has traditionally been accomplished via mechanized means (with Forest Supervisor approval), or by horseback.

## Minerals

Substantial deposits of agate and thundereggs are the focal points for nine unpatented mining claims. The Wilderness has been withdrawn from any mineral or energy development. Table 5 contains a list of claims.

**Table 5**

<b>Name</b>	<b>Approximate Location</b>
Thundereggs #1	T.12 S., R.19 E., Section 28
Bear Springs	T.12 S., R.19 E., Section 30, 31
Two Dogs	T.12 S., R.19 E., Section 30
Tamarack	T.12 S., R.19 E., Section 30
Fly Ridge	T.12 S., R.19 E., Section 30
Lavish Lady	T.12 S., R.19 E., Section 31
Smokey Blue	T.12 S., R.19 E., Section 31
Little Smokey Blue	T.12 S., R.19 E., Section 31
Sleeping Beauty	T.13 S., R.18 E., Section 10

These roads are currently authorized for mining operations: Forest Road 33-205 (1.2 miles), Forest Road 27-300 (2.3 miles), and Forest Road 27-301 (.6 mile).

### **Recreation and Wilderness Use**

Opportunities for solitude are very high during the winter. During the main summer-use season, opportunities for solitude are moderate to high within the Wilderness interior. The opportunity for solitude is low in many areas due to roads close to or on the boundary.

Popular campsites are located primarily along the northern Wilderness boundary due to easy road access. The most frequented interior camping area is at the junction of Twin Pillars and Belknap Creek Trails. Many campsites are evident immediately adjacent to the lower two miles of the Twin Pillars Trail.

Wilderness use approximates 500 to 1,000 recreation visitor-days (RVD's) per year. Most use is day-use. Minor change in the traditional types or amounts of recreational use has occurred since the Wilderness designation, however there has been increased horseback riding and hunting. Although concrete data is lacking, observations suggest use occurrence/significance is in the following order:

- Hiking
- Horseback Riding
- Hunting
- Fishing
- Camping/Backpacking
- Nature Study
- Cross-country Sking
- Rockhounding
- Gold Panning

Most recreational use focuses on the East Fork Mill Creek corridor between Wildcat Campground and Belknap Creek, and between Bingham Prairie and Twin Pillars. Users generally park or camp at Wildcat Campground (and, to a lesser extent, at dispersed sites at Whistler Spring, White Rock, or Bingham Prairie) before beginning their treks.

Horseback riders usually park and camp at Wildcat Campground, resulting in periodic congestion of people and stock on the adjacent Twin Pillars Trail.

Hunting use is moderate to heavy, with about 10 to 40 groups of two to eight regularly observed at the developed and dispersed campsites adjacent to the Wilderness.

The only recently-issued special-use permit provides for handicapped recreation along the Twin Pillars Trail near Wildcat Campground. No inquiries have been received from outfitter/guide or related organizations.

There are no encumbers or private lands within the Wilderness.

**Trails** - There are 18 miles of maintained trails which include two north-south routes - Twin Pillars and Wildcat Mountain Trail. There is one connector trail, the Belknap Creek Trail (three miles). Twin Pillars Trail (seven miles) covers the route from Wildcat Campground to Bingham Prairie, via Twin Pillars. Wildcat Mountain Trail (eight miles) covers the eastern ridge. Maintained trail density is about .8 trail miles per square mile. Remnants of old trails are intermittent along the East Fork Mill Creek, Desolation Canyon, and in the vicinity of Whistler Spring. There are 3.5 miles of the historic Summit Stock Driveway in the northeastern portion.

**Trailheads** - Four trailheads are available out of the campgrounds or dispersed sited outside of the Wilderness. Wildcat Campground and Bingham Prairie are trailheads for both ends of the Twin Pillars Trail. White Rock and Whistler Dispersed Campgrounds are trailheads for both ends of the Wildcat Mountain Trail. Parking capacity is displayed in Table 6.

**Table 6**

<b>Trailhead</b>	<b>Single Vehicle Capacity</b>	<b>OR</b>	<b>Vehicle with Trailer Capacity</b>
Bingham	8		4
Whistler	8		4
Wildcat	18		8
White Rock	10		5

About 16 miles of old tracks or roads also exist, with 32 access points; most of these have not been rehabilitated. Nearly all of these tracks or roads are passable by motorcycles and similar single-passenger vehicles, and many by four-wheel drive vehicles. Historic use has been by mining claimants, grazing permittees, hunters, and off-road vehicle (ORV) enthusiasts. Most roads were constructed

by mining claimants or fence contractors. A “Baseline Inventory Report” summarizes road accessibility, manageability, and condition. Entrance management, i.e., blocking, has been initiated on all of these except where use is otherwise authorized, e.g., mining claims.

**Signing** - Boundary signs have been posted around all the trail and road access points. Trail signs are present at trailheads and junctions. Some signs display more information than specified by the FSM, and some are made of synthetic materials.

## Water Resources

**Riparian Condition** - About 12.5 miles of stream are in acceptable riparian condition, with about seven miles in a degraded condition. Deciduous shrubs provide intermittent shading along portions of East Fork Mill Creek. Portions are devoid of adequate shade due to lack of potential and past grazing practices, although shrub density and cover is increasing in response to management change. Recreational use has been concentrated in some campsites, particularly along East Fork Mill Creek, resulting in reduced ground cover.

## Wildlife and Vegetation

The Wilderness is deer summer range, and elk summer and winter range. Although below potential, much of the area is in an old growth condition and provides excellent habitat for wildlife such as pileated woodpecker and marten. The wide diversity of habitats, including the abundant riparian zones, cliffs, and forest and meadow “edges,” provide for many wildlife species.

East Fork Mill and Buck Creeks support rainbow trout and are managed as put-and-take fisheries. Due to low summer/fall flows and low levels of shading and instream woody material in some areas, habitat is below potential.

## Specific Management Direction

**Cultural Resources** - Manage the Summit Stock Driveway to retain its historical features.

**Fire** - Allow no more than 1,500 acres burned at Fire Intensity Level III per decade. Allow no more than 5,000 total acres burned per decade by wildfire or prescribed fire.

Use both natural and planned ignitions to re-introduce a natural fire cycle over 20 percent of the Wilderness (about 3,500 acres) each decade.

**Forage** - Schedule grazing use to minimize conflict with periods of heavy recreational use (especially July, August, October, and November) if physical resource protection objectives can be achieved.

Inform users when livestock are in the Wilderness to reduce conflicts.

Require the burial, removal, or disposal of any carcass that presents a potential for spreading disease, by a methods approved in advance by the District Ranger. Leave no carcass within 500 feet of any spring, pond, creek, trail, campsite, or vantage point.

Pack all salt in by horseback. Place salt at least .25 miles from vantage points, campsites, and designated trails.

Allow vegetation/litter cover change on no more than 10 percent of the Wilderness (1,740 acres) in any 10-year period.

Allow no more than a 50 percent loss of the ground cover within the general area of a fire circle and tent location. Allow no more than three percent of any campsite area to lose vegetative cover in any 10-year period.

In primitive areas, allow vegetative loss on no more than one percent of any acre. Allow four or fewer trees with exposed roots per impacted site.

In semiprimitive areas, allow vegetative loss on no more than 1.5 percent of any acre. Allow six or fewer trees with exposed roots per impacted site.

**Recreation - Manage for the primitive and semiprimitive WRS.**

In primitive WRS areas, provide no more than one sign with a maximum of two route indicators at a trail junction.

In semiprimitive WRS areas, provide no more than two directional signs with a maximum of two route indicators at a trail junction.

Allow no marking of nordic trail routes.

Limit signing to directional signs at trail junctions and necessary temporary administrative signs. Provide no distance or destination signing. Provide no signing of geographic features.

Limit recreation visitor days (RVD's) to the carrying capacity of 12,690 RVD's in the primitive area during the summer use season, and 4,690 RVD's in the winter season.

Limit RVD's to the carrying capacity of 3,700 in the semiprimitive area during the summer use season, and 670 RVD's in the winter season.

Require that pets be under physical restraint. Pets can be banned for protection of wildlife and to decrease resource impacts

Provide information at trailheads and Forest Service offices, including resource protection information, wilderness ethics, wilderness safety, and maps.

Set up registration systems at trailheads as needed.

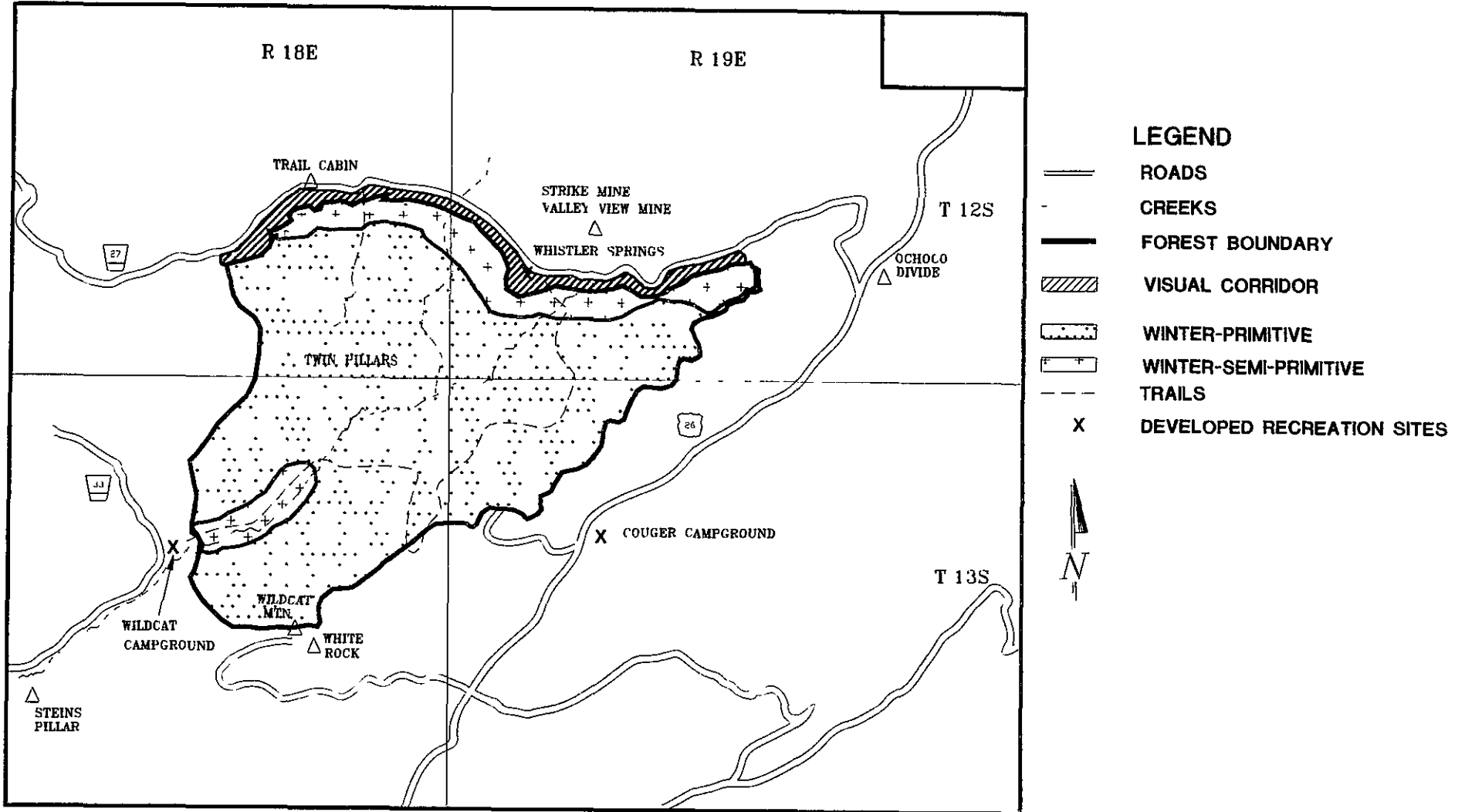
Avoid low Visual Absorption Capability (VAC) areas for campsites, trailheads, and trails where possible. VAC is the relative ability of the land to be impacted by human activities without being adversely affected visually.



Figure H-2

# MILL CREEK WILDERNESS WILDERNESS CATEGORIES

H-24



# Wilderness Plan Standards and Guidelines

## Management Area Standards and Guidelines

### Resource - Cultural Resources

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#### **Practice**

Enhancement and Interpretation

#### **Standard and Guideline**

On-site interpretation and enhancement of cultural resources will not be done. Off-site interpretation and enhancement is permissible.

#### **Applicable Management Area**

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness

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#### **Practice**

Structures

#### **Standard and Guideline**

Structures, such as old fences, that do not qualify for the National Register of Historic Places, will be removed or allowed to deteriorate naturally.

#### **Applicable Management Area**

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness

## Management Area Standards and Guidelines

### Resource - Facilities

---

#### **Practice**

Construction, Reconstruction and Maintenance of Administrative Buildings and Structures

#### **Standard and Guideline**

No administrative buildings or structures allowed.

#### **Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

---

#### **Practice**

Nonconforming Structures

#### **Standard and Guideline**

Remove, eliminate, or disguise all nonconforming structures. Retain existing bridges until unusable, then remove without any replacement structures.

#### **Applicable Management Area**

MA-F3 Mill Creek Wilderness

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## Management Area Standards and Guidelines

### Resource - Fire

---

#### **Practice**

Fire Suppression (P04)

#### **Standard and Guideline**

Confine and contain will be the principle suppression strategies on most natural ignition (lightning) fires. Control strategy will be invoked when lightning fires threaten to escape the Wilderness Areas or pose unacceptable risks to life or wilderness values. Use the "light hand on the land" techniques.

Suppression activities should minimize disturbances of the land surface.

Use of chainsaws, helicopters, air tankers, or pumps must be approved by the Forest Supervisor. Allow no helispot construction for initial attack.

*Crawler tractors will not be used without prior approval from the Regional Forester.*

**Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

---

**Practice**

Treatment of Natural Fuels (P12)

**Standard and Guideline**

Naturally caused ignitions may be allowed to burn if they meet conditions in an approved prescribed burn plan, and funds and necessary staffing are available.

Planned ignitions may be used within wilderness areas if that is the best way of returning fire to its natural role. This is accomplished by reducing the fuels profile to natural levels and with less risk of damaging the wilderness resource. Planned ignitions within the Wilderness are also permitted if there is no other practical and economic way to lessen the likelihood of the escape of damaging wildfire from the Wilderness.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

---

**Practice**

Fuel Break Construction and Maintenance (P13, P14)

**Standard and Guideline**

Limited shaded fuelbreak segments may be constructed along boundaries to take advantage of logical natural terrain features aiding in the prevention of fire spread across management area boundaries. The majority of such fuel break systems will be outside of the area.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

## Management Area Standards and Guidelines

### Resource - Forage

---

#### Practice

Forage Utilization

#### Standard and Guideline

Follow Primary Range Utilization Table in the Forest Plan.

#### Applicable Management Area

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness

---

#### Practice

Nonstructural Improvements

#### Standard and Guideline

Seeding for forage improvement prohibited.

#### Applicable Management Area

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness

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#### Practice

Structural Improvements

#### Standard and Guideline

Maintain existing developments. New developments can be constructed only to protect the wilderness resource or to alleviate problems or conflicts, and only with the approval of the Regional Forester. Use of power equipment for maintaining range improvements will be for exceptional needs only, and approved on a case-by-case basis by the Forest Supervisor (for chainsaws, etc.), and Regional Forester for mechanized equipment (tractors, backhoes, etc.). Use native or natural appearing materials and design improvements to blend into the surrounding landscape.

#### Applicable Management Area

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness

---

**Practice**

Use of Motorized Equipment for Improvements and Maintenance

**Standard and Guideline**

Require permittees to maintain improvements with nonmotorized equipment except where requests to use motorized equipment (chainsaws, etc.) have been approved by the Forest Supervisor, or mechanized equipment (tractors, back-hoes, etc.) by the Regional Forester, on a case by case basis.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

## Management Area Standards and Guidelines

### Resource - Forest Health

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**Practice**

Allowable Treatment Options for Major Pest Groups

**Standard and Guideline**

Insect and disease outbreaks will not be controlled unless treatment is necessary to prevent unacceptable damage to resources on adjacent lands or an unnatural loss to the wilderness resource due to exotic pests. FSM 2324.12(1)

Management of insects and diseases in wilderness will follow direction in FSM 2324.1.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

## Management Area Standards and Guidelines

### Resource - Forest Residues

---

#### Practice

##### Residue Management

#### Standard and Guideline

Manage residues through the natural processes of accumulation and decomposition (including natural fire). Activity fuel residues shall be treated to a level consistent with the immediate surroundings in the wilderness and which will protect wilderness values.

#### Applicable Management Area

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness

---

#### Standard and Guideline

Reduce fuel loading to natural conditions on 20 percent of the Wilderness (about 3,500 acres) each decade when feasible.

#### Applicable Management Area

MA-F3 Mill Creek Wilderness

## Management Area Standards and Guidelines

### Resource - Fuelwood

---

#### Practice

##### Commercial and Personal Gathering

#### Standard and Guideline

Commercial use prohibited, personal use of down material for on-site use only.

#### Applicable Management Area

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness

# Management Area Standards and Guidelines

## Resource - Lands

---

### Practice

Special Use Permits

#### Standard and Guideline

Compatible uses, such as nondestructive research projects, may be permitted with Regional Forester approval. Land occupancy permits are prohibited. Terminate existing noncompatible permits as opportunities arise. Award outfitter guide permits only when it will meet management objectives to provide a needed wilderness opportunity.

#### Applicable Management Area

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness

---

### Practice

Land Ownership and Adjustment

#### Standard and Guideline

Retain and acquire lands that are necessary to maintain or enhance the management emphasis of the specific areas.

#### Applicable Management Area

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness

---

### Practice

Rights-of-Way Grants for Roads and Trails, Cost-Share Agreements

#### Standard and Guideline

Grant no rights-of-way, nor enter into cost-share agreements, except as prescribed by law.

#### Applicable Management Area

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness



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**Practice**

Utility and Transport Corridors

**Standard and Guideline**

Exclusion Areas for utility corridors; significant barriers in which legislation exists to preclude establishment and use.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness

## Management Area Standards and Guidelines

### Resource - Minerals and Energy

---

**Practice**

Oil And Gas Leasing

**Standard and Guideline**

Issue no leases.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness

---

**Practice**

Locatable Minerals (Mining Claims)

**Standard and Guideline**

The following areas are withdrawn from mineral entry under the mining laws. Prospecting for minor recreational purposes will be allowed if conducted in a manner compatible with the wilderness environment.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness Area (except existing valid claims)

---

**Standard and Guideline**

Include reasonable measures in operating plans in order to meet management emphasis for the specific areas.

**Applicable Management Area**

MA-F3 Mill Creek Wilderness (existing claims)

---

**Practice**

Common Variety Minerals

**Standard and Guideline**

Do not develop material sources.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

## Management Area Standards and Guidelines

### Resource - Recreation

---

**Practice**

Wilderness Recreation Spectrum (WRS)

**Standard and Guideline**

Primitive and Semiprimitive.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

---

**Practice**

Developed Recreation

**Standard and Guideline**

Develop no interpretive, demonstration, or recreational sites.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness.

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

---

**Practice**

Dispersed Recreation

**Standard and Guideline**

**Camp Sites**

Discourage development of “permanent” dispersed campsites or facilities. Disguise, obliterate, or rehabilitate such campsites when found.

Allow no caching of camping supplies.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

---

**Standard and Guideline**

No more than two campsites will be visible or audible from any other campsite (within 500 feet).

**Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

---

**Standard and Guideline**

**Encounters**

Primitive Area, encounters per day 80 percent of the time:

7 or less

7 or less

6 or less

**Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

---

**Standard and Guideline**

Semiprimitive Area, encounters per day 80 percent of the time:

10 or less

12 or less

**Applicable Management Area**

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

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## **Standard and Guideline**

### **Group Size**

Maximum permissible group size:

12 people

10 people

12 people \*

\* In Mill Creek Wilderness, "12" includes people and livestock in any combination

### **Applicable Management Area**

MA-F3 Mill Creek Wilderness

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

---

## **Practice**

Search and Rescue

### **Standard and Guideline**

Use of motorized vehicles for search and rescue must be approved by the Forest Supervisor.

### **Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

---

## **Practice**

Signing

### **Standard and Guideline**

Use minimum natural appearing signing identifying destinations, and trail names where needed, but not mileages.

### **Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

---

## **Practice**

Trails

### **Standard and Guideline**

Emphasize these areas with a nontrailed objective.

### **Applicable Management Area**

MA-F2 Bridge Creek Wilderness

---

**Standard and Guideline**

Coordinate trail and trailhead planning to disperse users and offer a range of challenges. Design trails to blend with landscape, and construct with native materials.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F3 Mill Creek Wilderness \*

\* No new trails will be developed in Mill Creek Wilderness

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**Standard and Guideline**

No motorized or mechanized use allowed on trails.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

## **Management Area Standards and Guidelines**

### **Resource - Scenic Resources**

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**Practice**

Visual Quality Objective (VQO)

**Standard and Guideline**

Preservation.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

## Management Area Standards and Guidelines

### Resource - Soil

---

#### Practice

Soil Conditions

#### Standard and Guideline

Limit displacement and erosion to a rate that approximates natural processes. Soil compaction should not exceed limits that prevent plant establishment except at some campsites and in designated trail tread.

Locate, relocate, or close campsites to prevent excess soil erosion and compaction when necessary.

Correct areas of human-caused soil instability which contribute to resource degradation, utilizing measures compatible with the Wilderness objectives.

#### Applicable Management Area

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

## Management Area Standards and Guidelines

### Resource - Timber

---

#### Practice

Scheduled Harvest

#### Standard and Guideline

No timber harvest allowed (including salvage).

#### Applicable Management Area

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

## Management Area Standards and Guidelines

### Resource - Transportation System

---

**Practice**

Construction and Reconstruction

**Standard and Guideline**

None allowed.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness

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**Practice**

Operations and Maintenance

**Standard and Guideline**

Obliterate and revegetate all existing roads except those authorized for mining operations. Where appropriate, utilize old road system for a nonmotorized trail.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness

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**Practice**

Traffic Management

**Standard and Guideline**

No access permitted except for authorized mining calms.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness  
MA-F2 Bridge Creek Wilderness  
MA-F3 Mill Creek Wilderness

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**Practice**

Off-Road Use

**Standard and Guideline**

No motorized use allowed.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

## Management Area Standards and Guidelines

### Resource - Water

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**Practice**

Water Quality Improvement Projects

**Standard and Guideline**

Use of mechanized equipment for water improvement projects will be approved by the Regional Forester on a case-by-case basis. Power equipment such as chainsaws can be used with Forest Supervisor approval on a case-by-case basis.

Construction of structural improvements can be done with approval of the Chief of the Forest Service.

**Applicable Management Area**

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

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**Standard and Guideline**

Use of mechanized equipment for maintaining existing improvements will be approved by the Regional Forester. Power equipment such as chainsaws can be used with Forest Supervisor approval on a case-by-case basis.

**Applicable Management Area**

MA-F2 Bridge Creek Wilderness



## Management Area Standards and Guidelines

### Resource - Wildlife and Fish

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#### Practice

##### Habitat Management

#### Standard and Guideline

##### General

Manipulation of habitat to sustain the value of wilderness or to perpetuate a Threatened and Endangered wildlife species may be allowed with approval of the Chief of the Forest Service.

##### Applicable Management Area

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

#### Standard and Guideline

##### Cavity Nester Habitat

Strive to provide snag habitat at recommended levels (100 percent for all wilderness), while meeting the primary management emphasis for the specific area.

##### Applicable Management Area

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

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#### Practice

##### Species Management

Native animal species will be maintained. Allow no intentional introduction of non-native wildlife species.

##### Applicable Management Area

MA-F1 Black Canyon Wilderness

MA-F2 Bridge Creek Wilderness

MA-F3 Mill Creek Wilderness

# Appendix I

## Management of Wild Horses

### Objectives

The objective of managing wild and free roaming horses on the Ochoco National Forest is to provide for their protection, management, and control in a manner consistent with the Wild and Free Roaming Horse and Burro Act of 1971 and subsequent amendments.

These horses will be managed under the authority of Public Law 92-195 (85 Stat. 649, 16 USC 1331-1340). Other laws applicable to National Forest System lands also apply to the administration of these animals. Management actions must be consistent with the intent of the Multiple Use-Sustained Yield Act of 1960 (74 Stat. 215, 16 USC 528-531).

### Operations

The bands of horses within the original territory will be managed at a maximum of 60 head. When horse numbers exceed this level removal of excess horses will be required. The Forest has experienced difficulty in getting horses from this territory adopted because of their undesirable size and conformation. In order to improve the adoptability factor over the next few years, excess animals will be selectively removed. Initially, animals to be retained in the herd will be selected on the basis of physical soundness, quality of conformation, and young breeding age. This will result in a base herd which is healthy, vigorous, and of a quality that will produce adoptable offspring.

Horses that establish new territories beyond those which they inhabited prior to December 1971 are designated excess animals in accordance with the 1971 Act. These horses will be first priority for removal, and will be captured and put up for adoption.

Excess horses removed from the territory will be disposed of through horse adoption procedures in accordance with the Interagency Agreement between the Bureau of Land Management and the Forest Service signed in December 1988.

Management will be directed toward the overall herd as a viable unit, instead of toward certain bands or individuals within the herd.

Various practices will be used in removing excess horses. Included are the use of roundups, tranquilizer darts, and catch pens. The use of aircraft will be limited to locating and inventorying animals, and in observing approved removal efforts.

Excess animals which are too old, too lame, or permanently injured may be removed using lethal doses from tranquilizer guns. Judgement will be exercised in these cases. All disposal activities will be in accordance with State Health codes.

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# **Abbreviations and Acronyms**

## ABBREVIATIONS AND ACRONYMS

\* Term is defined in the Glossary

Acronym	Definition
"8A"	Contracts set aside for Minority Contractors
A	Alternative A
A	Acres
ACF	Acre Foot *
ACHP	Advisory Council on Historic Preservation *
ADRV	Air Quality Related Values
AFDC	Aid for Dependent Children
AIRFA	American Indian Religious Freedom Act
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 *
B-MOD	B-Modified Alternative
BD	Brush Disposal
BG	Big Game Habitat (Area Management Objective) *
BLM	Bureau of Land Management
BMP	Best Management Practices *
BOR	Bureau of Reclamation
<i>B.t.</i>	<i>Bacillus thuringiensis</i> *
BTU	British Thermal Units
C-MOD	C-Modified Alternative
CCC	Civilian Conservation Corps
CEQ	Council on Environmental Quality
CFL	Commercial Forest Land *
CFR	Code of Federal Regulations
CMAI	Culmination of Mean Annual Increment *
CRITFC	Columbia River Inter-Tribal Fish Commission
CRNG	Crooked River National Grassland
DBH	Diameter Breast Height *
DC/SF	Deschutes Canyon/Steelhead Falls
DEIS	Draft Environmental Impact Statement *
DEP	Departure *
DEQ	Oregon Department of Environmental Quality
DF	Douglas Fir
DIB	Diameter Inside Bark
DOGAMI	Oregon Department of Geology and Mineral Industries
E-DEP	E-Departure Alternative
EA	Environmental Assessment *
EA	Euro-American (Cultural Resources)
ECA	Equivalent Clearcut Area *
EEO	Equal Employment Opportunity
EFSA	Escaped Fire Situation Analysis
EHA	Equivalent Harvest Area *
EHE	Earned Harvest Effect *
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
FDR	Forest Development Road *
FEIS	Final Environmental Impact Statement *

FIA	Forest Influence Area
FMEI	Fire Management Effectiveness Index *
FORPLAN	Forest Planning Model
FPFO	Forestry Program for Oregon *
FRES	Forest and Range Environment Study
FS	Forest Service
FS	Forest Supervisor
FSH	Forest Service Handbook
FSM	Forest Service Manual
FUD	Fishing User Days
FWS	U S Fish and Wildlife Service
FY	Fiscal Year *
HE	Habitat Effectiveness *
HEI	Habitat Effectiveness Index
HCI	Habitat Capability Index *
I	Alternative I
ICO	Issues, Concerns, and Opportunities
ID	Interdisciplinary
IDT	Interdisciplinary Team (ID Team) *
IMPLAN	Forest Service Input-Output Economic Model *
IPM	Integrated Pest Management *
K-V	Knutson - Vandenberg Act of 1924 *
KV	Kilovolt
LIDES	Local Interactive Digitizing and Editing System
LMP	Land Management Planning
LP	Lodgepole Pine
LP	Linear Programming
LRMP	Land and Resource Management Plan
LTSYC	Long Term Sustained Yield Capacity *
M	Roman Numeral for 1000 *
MA	Management Area *
MA-D1-14	Management Area-Draft Plan, Areas 1-14
MA-F1-28	Management Area-Forest Plan, Areas 1-28
MA-G1-16	Management Area-Grassland Plan, Areas 1-16
MAI	Mean Annual Increment *
MAR	Management Attainment Report
MAX	Maximum Viable Population
MBF	Thousand Board Feet *
MC	Mixed Conifer *
MCF	Thousand Cubic Feet
MIS	Management Indicator Species *
MM	Million *
MMBF	Million Board Feet
MMCF	Million Cubic Feet
MO	Management Objective
MOA	Memorandum of Agreement *
MOU	Memorandum of Understanding
MR	Management Requirement *
MRVD	Thousand Recreation Visitor Days
MVP	Minimum Viable Population *
NA	Native American
NC	No Change Alternative
NEPA	National Environmental Policy Act *
NFCR	North Fork Crooked River
NFDRS	National Fire Danger Rating System
NFF	National Forest Fund *
NFMA	National Forest Management Act *
NFS	National Forest System Land *

NIRP	National Information Requirements Project
NWPS	National Wilderness Preservation System
ODFW	Oregon Department of Fish and Wildlife
OHV	Off-Highway Vehicle •
ONF	Ochoco National Forest
ORV	Off-Road Vehicle *
OSWC	Oregon State Wildlife Commission (Now ODFW)
PAMARS	Program Accounting Management Attainment Reporting System
PAOT	Persons at One Time •
PL	Public Law (also P.L.)
PMOA	Programmatic Memorandum of Agreement
PNV	Present Net Value *
PNW	Pacific Northwest
PP	Ponderosa Pine
PSD	Prevention of Significant Deterioration
R	Rural (ROS Classification) *
R-6	Forest Service, Northwest Region
RAMIS	Range and Management Information System
RARE II	Roadless Area Review and Evaluation *
RIM	Recreation Information Management *
RMO	Road Management Objective
RN	Roaded Natural (ROS Classification) *
RNA	Research Natural Area *
RO	Regional Office
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum *
RPA	Forest and Rangeland Renewable Resources Planning Act of 1974
RVD	Recreation Visitor Days *
RWS	Recreation Wilderness Spectrum *
SCORP	State-wide Comprehensive Outdoor Recreation Plan
SEV	Soil Expectation Value
SHPO	State Historic Preservation Officer (or Office) *
SIP	State Implementation Plan (for Air Quality)
SMU	Streamside Management Units
SPM	Semiprimitive motorized (ROS Classification) *
SPNM	Semiprimitive Nonmotorized (ROS Classification) *
SRI	Soil Resource Inventory *
STARS	Sale Tracking and Reporting System.
S&G	Standards and Guidelines
T&E	Threatened and Endangered Species
T/R	Area to be developed for Timber/Forage Production
TIS	Transportation Inventory System
TRP	Timber Resource Plan
TSI	Timber Stand Improvement *
TSP	Total Suspended Particulates
TSPIRS	Timber Sale Program Information Reporting System
USDA	United States Department of Agriculture
USFS	United States Forest Service
VAC	Visual Absorption Capability
VIS	Visitor Information Service
VMS	National Forest Visual Management System
VQO	Visual Quality Objective
WFUD	Wildlife/Fish User Day •
WRS	Wilderness Resource Spectrum *
WS	Wild and Scenic Designation
WSA	Wilderness Study Area
WUD	Wildlife User Day

# Glossary



## GLOSSARY

These definitions apply to Forest Service land management and planning. Meanings may differ when used in another context. Some definitions were shortened, paraphrased or adapted to fit local conditions. Definitions of other terms used in resource management but not included in this glossary may be found in the following publications.

- \* American Geological Institute; *Dictionary of Geological Terms*. Doubleday & Company Inc., New York; 1962.
- \* Kothman M M ; *A Glossary of Terms Used in Range Management*. Society for Range Management; 1974.
- Mifflin, Ronald W. and Hiton H. Lysons. *Glossary of Forest Engineering Terms*. USDA Forest Service, Pacific Northwest Forest and Range Experiment Station; 1979
- \* Schwarz, Charles F.; Thor, Edward C.; Elsner, Gary H. *Wildland Planning Glossary*. USDA Forest Service, Pacific Southwest Forest and Range Experiment Station, General Technical Report PSW-13; 1976

### A

**ACCEPTABLE RIPARIAN CONDITION** - A shady, brushy riparian condition with frequent amounts of tall overstory conifer trees and shorter hardwoods of alder, willow and aspen; the site has the potential to produce conifers and/or hardwood species. Moderately gentle bank slopes containing moderate to high plant densities, thick root masses, embedded angular boulders and old logs characterize these areas. Frequent channel scouring and deposition will largely be replaced by mossy aquatic growth on assorted sizes of tightly packed rocks.

**ACRE EQUIVALENT** - Used to adjust actual acres of habitat improvement or improvement structures to reflect overall habitat benefits derived. It reflects the zone of influence of the habitat improvement for the target species. For example, a single water development for upland game birds has an acre equivalent of 160, whereas a single water structure for big game has a value of 640 because it has a larger zone of influence for the more mobile big-game animals.

**ACRE FOOT (ACF)** - A unit for measuring a volume of water. Quantity of water required to cover 1 acre (43,560 square feet) to a depth of 1 foot.

**ACRES OF DEGRADED WATERSHED CONDITION** - represents existing soil/watershed areas which are degraded and contributing to loss in site productivity and/or creating water quality deterioration when hazardous events occur. The Soil/Water Restoration Inventory (1979) for the Ochoco National Forest (located at the Ranger District Offices) delineates these areas.

**ACTIVITY** - Actions, measures, or treatments that are undertaken that directly or indirectly produce, enhance, or maintain forest and rangeland outputs or achieve administrative or environmental quality objectives. Forest Service activity definitions, codes, and units of measure are contained in the Management Information Handbook (FSM 1309 11).

**ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP)** - An independent advisory body established by the National Historic Preservation Act of 1966. The mission of the Council is to advise the President and Congress on national historic preservation policies, to encourage private and public interest in historic preservation, and to review and comment on Federal undertakings that might have an effect on properties listed on or eligible for the National Register of Historic Places.

**ALL-TERRAIN VEHICLE (ATV)** - An abbreviation whose initials stand for All-Terrain Vehicle, which is any motorized off-highway vehicle 50 inches or less in width. ATV's usually have a dry weight of 600 pounds or less, traveling on three or more low pressure tires and having a seat designed to be straddled by the operator.

**AIRSHED** - A geographical area that, because of topography, meteorology, and climate, shares the same air.

**ALLOTMENT** - see Range Allotment

**ALLOWABLE SALE QUANTITY (ASQ)** - (Comparable to programmed allowable harvest used in previous plans). The quantity of timber that may be sold from the area of suitable land covered by the forest plan for a time period specified by the plan. This allowable sale quantity (ASQ) is usually expressed on an annual basis as the "average annual allowable sale quantity." (FSM 1900).

**ALL-TERRAIN VEHICLE (ATV)** - Any motorized, off-highway vehicle 50 inches or less in width, having a dry weight of 600 pounds or less that travels on three or more low pressure tires with a seat designed to be straddled by the operator. Low-pressure tires are 6 inches or more in width and designed for use on wheel rim diameters of 12 inches or less, utilizing an operating pressure of 10 pounds per square inch (psi) or less as recommended by the vehicle manufacturer.

**ALTERNATIVE** - One of several policies, plans, or projects proposed for decision making.

**AMENITY** - An object, feature, quality, or experience that gives pleasure or is pleasing to the mind or senses. Amenity value is typically used in land-use planning to describe those resource properties for which market values (or noncash values) are not or cannot be established, such as hiking or scenic viewing.

**ANADROMOUS FISH** - Those species of fish that mature in the sea and migrate into streams to spawn. Salmon, steelhead, and searun cutthroat trout are examples.

**ANALYSIS AREA** - An area of land (not necessarily contiguous) which for FORPLAN analysis purposes has homogeneous timber management costs and vegetative responses to timber management activities.

**ANALYSIS OF THE MANAGEMENT SITUATION (AMS)** - A step required under the National Forest Management Act in which the Forest determines its ability to supply goods and services to meet society's demand for them.

**ANIMAL UNIT (AU)** - An animal unit is a 1,000 pound mature cow, or its equivalent based on an average daily forage consumption of 26 pounds dry matter per day.

**ANIMAL UNIT MONTH (AUM)** - The amount of forage required by an animal unit for one month.

**ANNUAL PROGRAMMED HARVEST** - That part of the potential timber yield that is scheduled for harvest in a specific year.

**APPROPRIATE SUPPRESSION RESPONSE** - The kind, amount, and timing of suppression action on a wildfire which most efficiently meets fire management direction under current and expected burning conditions. The action may be from prompt control to confinement. (See definitions for confine, contain, and control.)

**AQUEOUS** - Of, relating to, or resembling water.

**ARCHAEOLOGY** - The scientific study of the physical characteristics of cultural resources in order to describe and explain former ways of life.

**ARTERIAL ROAD** - Roads comprising the basic access network for National Forest System administrative and management activities. These roads serve all resource elements to a substantial extent, and maintenance is not normally determined by the activities of any one element. They provide service to large land areas and usually connect with public highways or other Forest arterial roads to form an integrated network of primary

travel routes. The location and standards are often determined by a demand for maximum mobility and travel efficiency rather than by a specific resource management service. Usually they are developed and operated for long-term land and resource management purposes and constant service.

## B

***Bacillus thuringiensis (B.t.)*** - A biological agent used to initiate insecticidal treatments of the western spruce budworm populations.

**BACKGROUND** - The visible terrain beyond the foreground and middleground where individual trees are not visible, but are blended into the total fabric of the stand. (See "Foreground" and "Middleground.")

**BASALT** - A dark gray to black, fine-grained igneous rock.

**BENCHMARK** - An analysis of the supply potential of a particular resource, or of a set of resources subject to specific management objectives or constraints.

**BENEFIT COST RATIO** - An economic indicator of efficiency, computed by dividing total priced benefits by priced costs. Usually both benefits and costs are discounted so that the ratio reflects efficiency in terms of the present value of future benefits and costs.

**BEST MANAGEMENT PRACTICES (BMP)** - A specific activity, measure, course of action, or treatment.

**BIG GAME (BG)** - Those species of large mammals normally managed for sport hunting, generally elk, deer, and antelope.

**BIOLOGICAL DIVERSITY** - The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan.

**BIOLOGICAL POTENTIAL** - The maximum possible output of a given resource limited only by its inherent physical and biological characteristics.

**BOARD FOOT** - A unit of timber measurement equaling the amount of wood contained in an unfinished board 1 inch thick, 12 inches long, and 12 inches wide.

\*Board foot volume measurement varies with size of trees and is designed for certain product specifications and current technology. Young stands that have been regenerated cannot be measured in board foot or equivalent units of measurement, attempting to do so would underestimate the biological potential of timber producing lands and make future growth estimates impossible. See cubic foot.

**BRECCIA** - A rock made up of highly angular coarse fragments.

**BROADCAST BURN** - Allowing a prescribed fire to burn over a designated area within well-defined boundaries for reduction of fuel hazard or as silvicultural treatment, or both.

## C

**CANOPY CLOSURE** - The progressive reduction of space between crowns as they spread laterally, increasing the canopy density.

**CAPABILITY** - The potential of an area of land to produce resources, supply goods and services, and allow resource uses under an assumed set of management practices and at a given level of management intensity. Capability depends upon current conditions and site conditions such as climate, slope, landform, soils, and geology, as well as on the application of management practices, such as silviculture or protection from fire, insects, and disease.

**CAPITAL INVESTMENT COST** - Costs generally associated with construction such as trails, roads, and physical structures for range, recreation, and fish and wildlife. Other major functions include reforestation, timber stand improvement and prescribed burning

**CAVITY** - The hollow excavated in trees by birds or other natural phenomena, used for roosting and reproduction by many birds and mammals.

**CINNABAR** - A mineral (HgS) which is the principal ore of mercury

**CLEARCUTTING** - The harvesting in one cut of all trees on an area for the purpose of creating a new, even-aged stand. The area harvested may be a patch, strip, or stand large enough to be mapped or recorded as a separate class in planning for sustained yield.

**COLLECTOR ROAD** - Roads that serve smaller land areas than a Forest arterial road, and usually connected to a Forest arterial or public highway. Collect traffic from Forest local roads and/or terminal facilities. The location and standard are influenced by both long-term multiresource service needs, as well as travel efficiency. May be operated for either constant or intermittent service, depending on land use and resource management objectives for the area served by the facility.

**COMMERCIAL FOREST LAND (CFL)** - Forest land that is producing or is capable of producing crops of industrial wood and (a) has not been withdrawn by Congress, the Secretary, or the Chief; (b) existing technology and knowledge is available to ensure timber production without irreversible damage to soils productivity, or watershed conditions; and (c) existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that adequate restocking can be attained within 5 years after final harvesting.

**COMMERCIAL THINNING** - A cut in a stand under rotation age designed to remove excess merchantable trees. The objective is to place the growth capability of the site on the remaining leave trees.

**COMMODITY** - A transportable resource product with commercial value; all resource products that are articles of commerce.

**COMMON VARIETY MINERAL** - Saleable minerals

**COMMUNITY COHESION** - The degree of unity and cooperation evident in a community as it defines problems and attempts to resolve them

**COMMUNITY STABILITY** - A community's capacity to handle change without major hardships or disruptions to component groups or institutions. Measurement of community stability requires identification of the type and rate of proposed change and an assessment of the community's capacity to accommodate that level of change.

**COMPACTION, SOIL** - The packing together of soil particles by forces exerted at the soil surface, resulting in increased soil density.

**CONCERN** - A point, matter, or question raised by management that must be addressed in the planning process.

**CONFINE** - To limit fire spread within a predetermined area principally by use of natural or preconstructed barriers or environmental conditions. Suppression action may be minimal and limited to surveillance under appropriate conditions

**CONSTANT SERVICE** - A road developed and operated for continuous or annual recurrent service.

**CONTAIN** - To surround a fire, and any spot fires therefrom, with control line as needed, which can reasonably be expected to check the fire's spread under prevailing and predicted conditions

**CONTROL** - To complete the control line around a fire, any spot fires therefrom, and any interior islands to be saved; burn out any unburned area adjacent to the fire side of the control line; and cool down all hot spots that are immediate threats to the control line, until the line can reasonably be expected to hold under foreseeable conditions

**CONVERSION PERIOD** - A transition period during which an unregulated forest structure is converted to a regulated one. When regulated, the forest will have a distribution of stand age and size classes, providing approximately equal periodic harvests

**CORD** - A unit of volume measurement containing 128 cubic feet of solid wood. Generally a stack of round or split wood measuring 4 feet wide by 4 feet high by 8 feet long.

**CORRIDOR** - A linear strip of land identified for the present or future location of transportation or utility rights-of-way within its boundaries

**COST EFFICIENCY** - The usefulness of specified inputs (costs) to produce specified outputs (benefits). In measuring cost efficiency, some outputs, including environmental, economic, or social impacts, are not assigned monetary values, but are achieved at specified levels in the least cost manner. Cost efficiency is usually measured using present net value, although use of benefit-cost ratios and rates-of-return may be appropriate.

**COVER/FORAGE RATIO** - The ratio, in percent, of the amount of area in cover condition to that area in non-cover or forage condition; the criteria by which potential deer and elk use of an area is judged

**COVER** - Vegetation used by wildlife for protection from predators, to ameliorate conditions of weather, or in which to reproduce

**CUBIC FOOT** - In timber management a volume measured as a 1 foot cube of solid wood.

\*Growth and inventory of forest stands is measured in units of cubic foot volume because it is independent of numerous product requirements occurring within a locale, region, or the nation as a whole

**CULMINATION OF MEAN ANNUAL INCREMENT (CMAI)** - The age at which a stand of trees no longer increases in average annual growth

**CULTURAL RESOURCES** - The remains of sites, structures, or objects used by humans in the past--historical or archaeological.

**CULTURAL RESOURCES** - Physical remains of districts, sites, structures, buildings, networks, or objects used by humans in the past. They may be historic, prehistoric, archaeological, or architectural in nature. Cultural resources are land based and are nonrenewable

**CUMULATIVE EFFECTS** - The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

**CURRENT DIRECTION** - The direction contained within the following plans that has guided the recent management of the Forest and Grassland:

1. Ochoco-Crooked River Planning Unit Land Management Plan, 1979
2. Silvies-Malheur Planning Unit Land Management Plan, 1978
3. Crooked River National Grassland Land Management Plan, 1980

4. South Fork Planning Unit Land Management Plan, 1978
5. Timber Resource Plan Ochoco National Forest, 1979

## D

**DATA** - Any recorded measurements, facts, evidence, or observations reduced to written, graphical, tabular, or computer forms.

**DATA RECOVERY** - Collection of information through any of a variety of techniques (e.g., photography, mapping, archaeological excavation) conducted for purposes of No Adverse Effect or mitigating Adverse Effect. Data collection is designed to recover representative data from a cultural resource prior to its disturbance or destruction.

**DBH** - Diameter at *breast height*. Diameter of a tree 4 feet 6 inches above the ground.

**DECISION CRITERIA** - Essentially the rules or standards used to evaluate alternatives. They are measurements or indicators that are designed to assist a decisionmaker in identifying a preferred choice from an array of possible alternatives.

**DECISION VARIABLE** - A component of an alternative in which input costs, outputs and benefits are identified and used for analysis and decision making.

**DEMAND** - The amount of goods or services that will be consumed if offered over a given range of prices at a particular point in time.

**DEMOGRAPHIC** - Pertaining to the study of the characteristics of human populations, such as size, growth, density, distribution, and vital statistics.

**DEPARTURE (DEP)** - Timber harvest schedule which deviates from the principle of nondeclining even flow by exhibiting a planned decrease in the timber sale and harvest schedule in the future. A departure is characterized as a temporary increase over the base sale schedule without impairing the Forest's long-term sustained-yield.

**DETERMINATION OF ELIGIBILITY** - Formal determination by the Keeper of the National Register, Department of Interior, as to whether or not a cultural resource is eligible for listing on the National Register of Historic Places.

**DETERMINATION OF EFFECT** - Determination of the effect (No Effect, No Adverse Effect, Adverse Effect) a proposed undertaking will have on cultural resources listed on or eligible for the National Register of Historic Places. Requires consultation with the State Historic Preservation Officer and may require review by or consultation with the Advisory Council on Historic Preservation

**DEVELOPED RECREATION** - Recreation that requires facilities that, in turn, result in concentrated use of an area. Examples of recreation areas are campgrounds and ski areas, facilities in these areas might include roads, parking lots, picnic tables, toilets, drinking water, ski lifts, and buildings

**DISCOUNT RATE** - The interest rate used in plan formulation and evaluation for discounting future benefits and computing costs, or otherwise converting benefits to a common time basis.

**DISPERSED RECREATION** - A general term referring to recreation use outside a developed recreation site; this includes activities such as scenic driving, hunting, backpacking, and recreation in primitive environments

**DISPERSION** - To disperse the effects of timber harvest by distributing harvest units more or less uniformly throughout a drainage so that increased runoff and sediment from disturbed sites will be buffered by lower levels of runoff and sediment production from surrounding undisturbed lands

**DISTRICT** - See Ranger District.

**DIVERSITY** - The distribution and abundance of different plant and animal communities and species within the area.

**DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)** - The version of the statement of environmental effects required for major Federal actions under Section 102 of the National Environmental Policy Act (NEPA) and released to the public and other agencies for review and comment. It is a formal document which must follow the requirements of NEPA, the Council on Environmental Quality (CEQ) Guidelines, and directives of the agency responsible for the project proposal.

## E

**EARNED HARVEST EFFECT (EHE)** - An increase in the present harvest based on the expectation of increased yields in the future resulting from management practices such as planting genetically-improved stock and thinning.

**ECONOMIC EFFICIENCY** - See cost efficiency.

**ECOSYSTEM** - The interacting system of a biological community and its nonliving environment.

**EDGE** - The place where plant communities meet or where successional stages or vegetative conditions within plant communities come together. It often contains organisms from both communities as well as those restricted to the interface area. The number of species present is often greater than the surrounding communities.

**EFFECTS** - Environmental consequences as a result of a proposed action. Included are direct effects, which are caused by the action and occur at the same time and place, and indirect effects, which are caused by the action and are later in time or further removed in distance, but which are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. Effects and impacts as used in the FEIS are synonymous. Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic quality, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effects will be beneficial (40 CFR 1508.8).

**ELIGIBLE** - Cultural properties that meet the criteria for listing on the National Register of Historic Places.

**EMPIRICAL YIELD TABLE** - A table reflecting the existing standing timber volumes today and how they would grow in the future, under various timber management regimes

**ENDANGERED SPECIES** - Any species of animal or plant that is in danger of extinction throughout all or a significant portion of its range Plant or animal species identified by the Secretary of the Interior as endangered in accordance with the 1973 Endangered Species Act

**ENDEMIC** - A taxonomic category (e g , genus, species, variety) whose natural occurrence is confined to a certain region and whose distribution is relatively limited.

**ENDEMIC ORGANISM** - A taxonomic category (e g , genus, species, variety) whose natural occurrence is confined to a certain region and whose distribution is relatively limited

**ENHANCE** - To improve, reinforce, enrich or strengthen the existing condition, value, or beauty of a resource

**ENHANCEMENT** - Interpret cultural resources for the public benefit Cooperate with museums, universities, and other recognized institutions, agencies, and knowledgeable persons in planning and constructing cultural resource exhibits involving National Forest System cultural resources Coordinate these efforts with

interpretive Services people (FSM 2390). Enhancement efforts may include the full range of interpretive techniques. Because enhancement may affect the resource, comply with regulations set forth in FSM 2366. In all cases consider a determination of beneficial effect (FSM 2366 26)

**ENVIRONMENT** - The sum of all external conditions and influence affecting the life, development, and survival of an organism.

**ENVIRONMENTAL ANALYSIS** - An analysis of alternative actions and their predictable short- and long-term environmental effects, incorporating the physical, biological, economic, social, and environmental design arts and their interactions.

**ENVIRONMENTAL ASSESSMENT (EA)** - A concise public document required by the regulations implementing the National Environmental Policy Act.

**EPIDEMIC** - An outbreak of sudden rapid spread, growth, or development.

**EPITHERMAL MINERAL DEPOSIT** - A deposit formed in rocks of shallow depth from low-temperature hydrothermal solutions

**EQUIVALENT CLEARCUT AREA (ECA)** - That area which when harvested under any of the various silvicultural regimes produces hydrological effects similar to one acre of clearcut.

**EQUIVALENT HARVEST AREA (EHA)** - The same as Equivalent Clearcut Area (ECA)

**EROSION** - The processes whereby earthy or rocky material is worn away, loosened, dissolved and removed from any part of the earth's surface

**EVAPOTRANSPIRATION** - Process by which water moves from the soil to the atmosphere by evaporation from the soil or transpiration through plants

**EVEN-AGED MANAGEMENT** - The application of a combination of actions that results in the creation of stands in which trees of essentially the same age grow together. Managed even-aged forests are characterized by a distribution of stands of varying ages (and, therefore, tree sizes) throughout the forest area. The difference in age between trees forming the main canopy level of a stand usually does not exceed 20 percent of the age of the stand at harvest rotation age. Regeneration in a particular stand is obtained during a short period at or near the time that a stand has reached the desired age or size for regeneration and is harvested. Clearcut, shelterwood, or seed tree cutting methods produce even-aged stands

**EXCELLENT RIPARIAN CONDITIONS** - An extremely shady and brushy riparian condition with an abundance of tall overstory conifer trees and shorter hardwoods of alder, willow and aspen will be present, the site has the potential to produce conifer and/or hardwood species. Gentle bank slopes, high plant densities, thick root masses, embedded angular boulders and old logs characterize these areas. Channel scouring will be minimized with deposition replaced by mossy aquatic growth on assorted sizes of tightly packed rocks.

## F

**FAULT** A fracture or fracture zone along which there has been displacement of the sides relative to one another parallel to the fracture.

**FAWNING AREAS** - areas used regularly by female deer for fawning (and maintaining fawns for their first few days or weeks); optimum fawning habitat includes low shrubs or small trees under a tree overstory of about 50-percent closure, usually located on slopes of less than 15 percent where vegetation is succulent and plentiful in June and potable water is available within 183 meters (600 feet)

**FINAL ENVIRONMENTAL IMPACT STATEMENT (FEIS)** - The final version of the statement of environmental effects required for major Federal actions under Section 102 of the National Environmental Policy Act (NEPA). It is a revision of the Draft Environmental Impact Statement to include public and agency responses to the



draft. It is a formal document which must meet legal requirements and is the document used as a basis for judicial decisions concerning compliance with NEPA

**FIRE HAZARD REDUCTION** - The treatment of fuels and residues, which reduces the potential fire's rate of spread or intensity.

**FIRE MANAGEMENT EFFECTIVENESS INDEX (FMEI)** - A number derived by totaling the cost of a fire protection organization and fire suppression cost with the net value change and dividing that figure by 1000 acres.

**FIREWOOD** - Wood, either round, split or sawn, and burned primarily for heating purposes

**FISCAL YEAR (FY)** - October 1st to September 30th.

**FLOODPLAIN** - The lowland and relatively flat areas adjoining inland and coastal waters (including debris cones and floodprone areas of offshore islands) including, at a minimum, those areas subject to a one-percent or greater chance of flooding in any given year (100-year recurrence).

**FORAGE (LIVESTOCK)** - All grass and grass-like plants.

**FORAGE (WILDLIFE)** - All browse and herbaceous food that is available to wildlife for grazing.

#### **FORBS**

1. Any herbaceous plant other than those in the Gramineae (true grasses), Cyperaceae (sedges) and Juncaceae (rushes) families - i e , any nongrass-like plant having little or no woody material on it.
2. A palatable, broad-leaved, flowering herb whose stem (above ground) does not become woody and persistent

**FOREGROUND** - A term used in scenic management to describe the stand of trees immediately adjacent to a high-value scenic area, recreation facility, or forest highway. (See "Background" or "Middleground.")

**FOREST AND RANGELAND RENEWABLE RESOURCES PLANNING ACT OF 1974 (RPA)** - An Act requiring the preparation of a program for the management of the National Forests' renewable resources and of Land and Resource Management Plans for units of the National Forest System. It also requires a continuing inventory of all forest, rangelands, and renewable resources nation-wide.

**FOREST DEVELOPMENT ROADS (FDR)** - Roads that are part of the Forest transportation system, which includes all existing and planned roads, as well as other special and terminal facilities designed as Forest development transportation facilities.

**FOREST HEALTH** - A condition where biotic and abiotic influences on the Forest (i.e. insects, diseases, atmospheric deposition, silvicultural treatments, harvesting practices) do not threaten management objectives either now or in the future

**FOREST INVENTORY PLAN** - A plan, based on known cultural and environmental information, that delineates areas of varying degrees of suspected cultural resource potential.

**FOREST PLAN** - The National Forest Land and Resource Management Plan (Forest Plan) guides all natural resource management activities and establishes management standards and guidelines for the Forest. It describes resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management. It is prepared under the implementing regulations and requirements of NFMA

**FORESTRY PROGRAM FOR OREGON (FPFO)** - A comprehensive forest management program developed by the State of Oregon for all forest lands in the state regardless of ownership

**FOREST STANDARD** - A performance criterion indicating acceptable norms or specifications that actions must meet to maintain the minimum conditions for a particular resource. This type of standard applies to all areas of the Forest regardless of the other management area direction applied

**FOREST SUPERVISOR** - The official responsible for administering the National Forest System lands in a Forest Service administrative unit. He or she reports to the Regional Forester

**FORPLAN** - *The forest planning model* A linear programming software package used to analyze planning decisions regarding land use patterns, capital investment, and timber harvest scheduling.

**FUEL BREAK** - A strategically located strip of land, usually 100 to 500 feet wide, that has been altered by removal of flammable vegetation so that fires burning into it can be more readily extinguished.

**FUELS** - Anything within the Forest that will burn. Usually live and dead woody vegetation (e.g., grass, shrubs, trees).

**FUEL TREATMENT** - The rearrangement or disposal of fuels to reduce the fire hazard.

## G

**GEOMORPHIC** - Of, or pertaining to, the form of the earth, or its solid surface features.

**GEOHERMAL** - Of, or pertaining to, the heat of the earth's interior.

**GOAL** - A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principal basis from which objectives are developed.

**GOODS AND SERVICES** - The various outputs, including on-site uses, produced from forest and rangeland resources.

**GRAZING** - Consumption of range or pasture forage by animals.

**GRAZING SEASON** - 1. A period of grazing to obtain optimum use of the forage resource. 2 On public lands an established period for which grazing permits are issued.

**GREEN DOT SYSTEM** - A seasonal vehicular management program which visually indicates travel routes open to public use; roads not identified by the green dot, and cross-country travel, are closed to public use during the designated time period

**GROUND WATER** - Water in a saturated zone of a geologic stratum

**GROUP SELECTION** - A modification of the selection system in which trees are removed in small groups at a time.

**GUIDELINE** - An indication or outline of policy or conduct that is not a mandatory requirement (as opposed to a standard, which is mandatory).

## H

**HABITAT** - The sum total of environmental conditions of a specific place occupied by a wildlife or plant species or a population of such species.

**HABITAT CAPABILITY INDEX (HCI)** - A process used to determine habitat capability for big game by evaluating thermal cover and road density.

**HABITAT DIVERSITY INDEX** - A number that indicates the relative degree of diversity in habitat forest wide

**HABITAT EFFECTIVENESS (HE)** - A combination of both quantity and quality of habitat, including both natural and introduced factors, which produces a specific habitat condition that either limits or generates habitat use by a wildlife species.

**HARVEST CUTTING METHOD** - The combination of management practices used to manipulate forest vegetation resulting in forests of distinctive form and character. Harvest cutting methods are classified as even-aged and uneven-aged

**HEAP LEACH** - A mineral extraction process in which a solution (commonly cyanide solution) percolates through a pile (heap) of ore, dissolving the metal being extracted. The solution is collected after it percolates through the heap, and the metal is recovered from the solution. This is a common extraction process for low-grade deposits of gold, copper and silver.

**HERBACEOUS** - Having little or no woody tissue and persisting usually for a single growing season.

**HIGH CLEARANCE VEHICLES** - Motorized vehicles that can drive over minor obstacles because of their elevated frame.

**HISTORIC** - Refers to the period of time for which there are written records (after European contact). In Region 6, the historic era begins at roughly 1800 A.D., with the first explorers who kept journals.

**HYDROLOGIC** - Pertaining to the quantity, quality, and timing of water yield from forested lands.

**HYDROPHOBIC** - Lacking affinity for water.

**HYDROTHERMAL** - An adjective applied to heated or hot aqueous-rich solutions, to the process in which they are concerned, and to the rocks, ore deposits, and alteration products produced by them.

## I

**IGNEOUS ROCK** - Rock formed by the crystallization of once molten material called lava or magma.

**IMPLAN** - A Forest Service input-output model that is an economic model which predicts the behavior of an economy as certain portions of the economy are altered

**IMPROVED ROAD** - A constructed or maintained vehicle way for the use of highway-type vehicles having more than two wheels.

**INDICATOR SPECIES** - A plant or animal species so highly adapted to a particular kind of environment that its mere presence is sufficient indication that specific conditions are also present. (W-W DEIS).

**INTEGRATED PEST MANAGEMENT (IMP)** - A process for selecting strategies to regulate forest pests in which all aspects of a pest-host system are studied and weighed. The information considered in selecting appropriate strategies includes the impact of the unregulated pest population on various resource values, alternative regulatory tactics and strategies, and benefit/cost estimates for these alternative strategies. Regulatory strategies are based on sound silvicultural practices and ecology of the pest-host system and consist of a combination of tactics such as timber stand improvement plus selective use of pesticides. A basic principle in the choice of strategy is that it be ecologically compatible or acceptable.

**INTENSIVE FOREST MANAGEMENT** - A high investment level of timber management that envisions initial harvest, regeneration with genetically improved stock, control of competing vegetation, fill-in planting, pre-commercial thinning as needed for stocking control, one or more commercial thinnings, and final harvest

**INTERDISCIPLINARY TEAM** - A group of individuals with different training assembled to solve a problem or perform a task.

**INTERMINGLED OWNERSHIPS** - Lands within the National Forest boundaries or surrounded by National Forest lands that are owned by private interests or other government agencies. Because of early land grants, these lands frequently are in checkerboard ownership patterns.

**INTERMITTENT SERVICE** - A road developed and operated for periodic service and closed between periods of use.

**INTERPRETATION** - Educational activity which aims to reveal meaning and relationships of the natural and cultural environment through first-hand experience.

**IRRETRIEVABLE** - Applies to losses of production, harvest, or use of renewable natural resources. For example, some or all of the timber production from an area is irretrievably lost during the time an area is used as a winter sports site. If the use is changed, timber production can be resumed. The production lost is irretrievable, but the action is not irreversible.

**IRREVERSIBLE** - Applies primarily to the use of nonrenewable resources, such as minerals or cultural resources, or to those factors, such as soil productivity, that are renewable only over long periods. Irreversible also includes loss of future options.

**ISSUE** - A point, matter, or question of public discussion or interest to be addressed or decided through the planning process.

## J

**JASPEROID** - Agate, jasper, or thundereggs.

## K

**KNUTSON - VANDENBERG ACT OF 1924 (K-V)** - An act that allows for the use of receipts for National Forest timber to reforest, to conduct stand improvement work or to perform improvement projects for other resources on the area where timber was harvested.

## L

**LAND ALLOCATION** - The decision to use land for various resource management objectives in order to best satisfy the planning process issues, concerns, and opportunities, and meet assigned forest output targets.

**LAND EXCHANGE** - The conveyance of non-Federal land or interest in the land to the United States in exchange for National Forest System land or interest in the land.

**LANDLINE LOCATION** - Location of Forest property boundaries.

**LIFESTYLE** - A characteristic way of living which may be an individual variant within the cultural mainstream or may be an individual expression of a subculture.

**LEASABLE MINERALS** - Generally include minerals such as oil, gas, oil shale, coal, potassium, sodium, phosphates, sulphur, and geothermal.

**LOCAL ROADS** - Local roads are usually one-lane roads constructed to serve a dominant use or resource. Local roads do not access large land areas since they are more site specific than arterial and collector roads.

**LOCATABLE MINERALS** - These resources include gold, silver, lead, copper, and mercury, which are mined and processed for metals, and some uncommon nonmetallics.

## **LOGGING SYSTEMS -**

*Tractor Logging* - A system of log transportation in which logs are pulled from the woods to a landing by means of a crawler tractor, skidder, or similar ground-based equipment.

*High-Lead Logging* - A system of cable logging in which the working lines are elevated at the landing area by a rigged wooden tree or portable steel spar.

*Skyline Logging* - A system of cable logging in which all or part of the weight of the logs is supported during yarding by a suspended cable.

*Balloon Logging* - A system of cable logging in which the weight of the logs is counteracted by the lift provided by a lighter-than-air balloon.

*Helicopter Logging* - A system of transporting logs from the woods to a landing as an external load on a helicopter.

**LONG-TERM EFFECTS** - Those effects which will be significant beyond the RPA planning horizon of 50 years

**LONG-TERM SUSTAINED-YIELD TIMBER CAPACITY (LTSYC)** - The highest uniform wood yield from lands being managed for timber production that may be sustained under a specified management intensity consistent with multiple-use objectives.

## **M**

**M** - The Roman numeral for 1000.

**MBF** - One thousand board feet. Lumber or timber measurement.

**MM** - Million

**MANAGED STAND** - A stand of trees in which stocking level control is applied to achieve maximum growth

**MANAGED YIELD TABLE** - A table showing, for a given species (or species mix) on a given site, the progressive development of a managed stand at periodic intervals covering the greater part of its useful life. It usually includes average diameter, basal area, number of trees, standing volume, and harvest volumes for a specific timber management regime.

**MANAGEMENT AREA (MA)** - A unit of land allocated to emphasize a particular resource, based on the capability of the area.

**MANAGEMENT CONCERN** - An issue, problem or a condition which constrains the range of management practices identified by the Forest Service in the planning process.

**MANAGEMENT DIRECTION** - A statement of multiple-use and other goals and objectives, the associated management prescriptions, and standards and guidelines for attaining them.

**MANAGEMENT INDICATOR SPECIES (MIS)** - A wildlife species whose presence in a certain location or situation at a given population level indicates a particular environmental condition. Population changes are believed to indicate effects of management activities on a number of other wildlife species.

**MANAGEMENT INTENSITY** - A management practice or combination of management practices and associated costs designed to obtain different levels of goods and services

**MANAGEMENT PRESCRIPTION** - Management practices selected and scheduled for application on a specific area to attain multiple-use and other goals and objectives.

**MANAGEMENT REQUIREMENT (MR)** - Standards for resource protection, vegetation manipulation, silvicultural practices, even-aged management, riparian areas, soil and water and diversity, to be met in accomplishing National Forest System goals and objectives. (See 36 CFR 219 27 )

**MARGINAL COMPONENT** - The portion of the commercial forest land on which it is presently not feasible (economically or technologically) to manage for timber crops but on which it may be possible in the future.

**MASS-WASTING** - A general term for a variety of processes by which large masses of earth material are moved by gravity either slowly or quickly from one place to another. (Dictionary of Geological Terms) Also mass movement.

**MAXIMUM MODIFICATION** - See "Scenic quality Objectives "

**MEAN ANNUAL INCREMENT (MAI)** - The total increment up to a given age divided by that age

**MEMORANDUM OF AGREEMENT (MOA)** - A three-party agreement (responsible Forest Service Official, State Historic Preservation Officer, Executive Director of the Advisory Council on Historic Preservation) which documents an agreed-upon plan to mitigate a proposed project's adverse effect upon cultural resources listed on or eligible for the National Register of Historic Places

**METAMORPHIC ROCK** - Rocks changed by heat and pressure causing recrystallization and loss of original characteristics.

**MIDDLEGROUND** - The visible terrain beyond the foreground where individual trees are still visible, but do not stand out distinctly from the stand. (See "Foreground" and "Background.")

**MINERAL DEVELOPMENT** - The activities and facilities associated with extracting a proven mineral deposit

**MINERAL ENTRY** - Filing a mining claim on public land to obtain the right to any minerals it may contain.

**MINERAL EXPLORATION** - The search for valuable minerals on lands open to mineral entry.

**MINERAL RESERVE** - That portion of a mineral resource from which a mineral commodity can be economically and legally extracted.

**MINERAL RESOURCE** - A concentration of naturally occurring solid, liquid, or gaseous materials in or on the Earth's crust in such a form that economic extraction of a mineral resource is currently or potentially feasible (BLM Manual 3031).

**MINIMUM VIABLE POPULATION (MVP)** - The low end of the viable population range

**MITIGATION** - To moderate the force or intensity of environmental effects. To lessen or minimize an Adverse Effect upon a cultural resource listed on or eligible for the National Register of Historic Places The two categories of mitigation most often used are project modification and data recovery.

**MIXED CONIFER (MC)** - A stand of coniferous trees with a mixture of species Ponderosa pine will usually make up 25 percent to 75 percent of the species composition.

**MODIFICATION** - See "Scenic Quality Objectives."

**MONITORING** - A process of collecting significant data from defined sources to identify departures or deviations from expected plan outputs.

**MOUNTAIN PINE BEETLE** - A small insect (1/8 - 5/8 inch) that bores into the tree's cambium and deposits its eggs Larvae emerge from the eggs and feed upon the cambial layer and thus disrupt the tree's translocation of food Frequent attacks on the host tree result in the tree's mortality

**MORTALITY** - The volume of sound wood dying from natural causes during a specified period.

**MULTIPLE-AGED STANDS** - An intermediate form of stand structure between even-/ and uneven-aged stands. These stands generally have two or three distinct tree canopy levels occurring within a single stand

**MULTIPLE USE** - The management of all the various renewable surface resources of the National Forest System so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some lands will be used for less than all of the resources, and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.

## N

**NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 (NEPA)** - An act declaring a National policy to encourage productive harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment and the biosphere and stimulate the health and welfare of man, to enrich the understanding of the ecological systems and natural resources important to the Nation and to establish a Council on Environmental Quality.

**NATIONAL FOREST FUND (NFF)** - An account that includes all receipts (to the U.S. Treasury) from proclaimed National Forests for timber, grazing, land use, power, minerals, and user fees.

**NATIONAL FOREST MANAGEMENT ACT (NFMA)** - A law passed in 1976 that amends the Forest and Rangeland Renewable Resources Planning Act and requires the preparation of Forest plans.

**NATIONAL FOREST SYSTEM (NFS) LAND** - Federal lands that have been designated by Executive order or statute as National Forests, National Grasslands, or Purchase Units, and other lands under the administration of the Forest Service, including Experimental Areas and Bankhead-Jones Title III lands.

**NATIONAL RECREATION TRAILS** - Trails designated by the Secretary of the Interior or the Secretary of Agriculture as part of the national system of trails authorized by the National Trails System Act National Recreation Trails provide a variety of outdoor recreation uses in or reasonably accessible to urban areas

**NATIONAL REGISTER OF HISTORIC PLACES** - A register of cultural resources of national, state, or local significance, maintained by the Department of the Interior.

**NATIONAL WILD AND SCENIC RIVER SYSTEM** - Rivers with outstanding scenic, recreational, geological, fish and wildlife, historic, cultural, or other similar values designed by Congress under the Wild and Scenic Rivers Act for preservation of their free-flowing condition

**NET PUBLIC BENEFIT** - An expression used to signify the overall long-term value to the Nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not Net public benefits are measured by both quantitative and qualitative criteria rather than a single measure or index

**NO ACTION ALTERNATIVE (Alternative A)** - The most likely condition expected to exist in the future if current management direction were to continue unchanged.

**NONCOMMERCIAL SPECIES** - Species that have no economic values at this time nor anticipated timber value within the near future

**NONDECLINING EVEN FLOW** - A policy governing the volume of timber removed from a National Forest, which states that the volume planned for removal in each succeeding decade will equal or exceed that volume planned for removal in the previous decade

**NONFOREST LAND** - Land that has never supported forests and lands formerly forested but now developed for such nonforest uses as crops, improved pasture, etc.

**NONMARKET** - (Noncash economic benefits) Products derived from National Forest resources that do not have a well-established market value, for example, wilderness, wildlife.

**NONPRICED OUTPUTS** - Outputs for which there is no available market transaction evidence and no reasonable basis for estimating a dollar value commensurate with the market values associated with the priced outputs.

**NONSTRUCTURAL RANGE IMPROVEMENT** - Practices and treatments undertaken to improve range not involving construction of improvements (e.g., seeding, fertilizing, or prescribed burning).

## O

**OBJECTIVE** - A concise, time-specific statement of measurable planned results that respond to pre-established goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving identified goals.

**OBLITERATE** - The action needed to close an unneeded road and return the land to production.

**OFF-HIGHWAY TRAVEL MANAGEMENT OBJECTIVES** - These objectives relate to the recreation opportunities for off-highway use on areas and trails on National Forest lands. The objectives, which include off-highway travel criteria, are developed from management area direction and access management objectives.

**OFF-ROAD or OFF-HIGHWAY VEHICLES (ORV's or OHV's)** - Any vehicle, including ATV's, which is restricted by law from operating on public roads reserved for general motor vehicle traffic

**OLD GROWTH STAND** - An old-growth stand is defined as any stand of trees 10 acres or greater generally containing the following characteristics: 1) stands contain mature and overmature trees in the overstory and are well into the mature growth stage, 2) stands will usually contain a multilayered canopy and trees of several age classes; 3) standing dead trees and down material are present; and 4) evidence of man's activities may be present, but does not significantly alter the other characteristics and would be a subordinate factor in a description of such a stand.

**OPERATION AND MAINTENANCE COSTS** - Costs associated with operating and maintaining facilities, program management, and support costs associated with management of other resources

**ORE** - A mineral deposit which can be extracted at a profit.

**ORV CLOSURE** - An administration order closing a land area to specified types of off-road vehicle travel yearlong

**ORV RESTRICTION** - An administrative order restricting a land area to specified types of off-road vehicle travel during specific seasons or conditions

**OUTPUT** - The goods, end products, or services that are purchased, consumed, or used directly by people. Goods, services, products, and concerns produced by activities that are measurable and capable of being used to determine the effectiveness of programs and activities in meeting objectives. A broad term for describing any result, product, or service that a process or activity actually produces

**OVERMATURE** - The stage at which a tree declines in vigor and soundness, for example, height growth has usually stopped and probability of mortality is high



**OVERSTORY** - The portion of trees in a forest which forms the upper most layer of foliage

**OVERSTORY REMOVAL** - A type of harvest which is designed to remove all of the trees in the overstory. The objective is to release the acceptably stocked understory.

**OVERVIEW** - A report, based primarily on archival research, that organizes and summarizes cultural resource information from a particular National Forest or geographic area.

## P

**PACIFIC NORTHWEST REGION** - A Forest Service organizational unit consisting of all the National Forests in Oregon and Washington.

**PARTIAL CUT** - Any cutting other than a clearcut. This may include thinning, selection shelterwood or an overstory removal.

**PARTIAL RETENTION** - See "Scenic Quality Objectives."

**PERMITTED GRAZING** - Use of a National Forest range allotment under the terms of a grazing permit

**PERSONS-AT-ONE-TIME (PAOT)** - The number of people in an area or using a facility at the same time. Generally used as "maximum PAOT" to indicate the capacity of an area or facility to support peak usage within established user density standards and without degradation to biophysical resources.

**PHYSIOGRAPHIC** - *Pertaining to physical geography.*

**PHYSIOGRAPHIC PROVINCE** - Region of similar structure and climate that has had a unified geomorphic cycle.

**PLANNING HORIZON** - The overall time period considered in the planning process that spans all activities covered in the analysis or plan and all future conditions and effects of proposed actions which would influence the planning decisions.

**PLANNING PERIOD** - Generally one decade. The time interval within the planning horizon that is used to show incremental changes to yields, costs, effects, and benefits.

**PLANNING RECORDS** - A system that records decisions and activities that result from the process of developing a forest plan, revision, or significant amendment.

**PLANT ASSOCIATION** - Climax plant community type

**PLANT COMMUNITIES** - A homogeneous unit in respect to the number and relationship of plants in the tree, shrub, and ground cover strata

**POTENTIAL YIELD** - The maximum, perpetual, sustained-yield harvest attainable through intensive forestry on regulated areas considering the productivity of the land, conventional logging technology, standard cultural treatments, and interrelationships with other resource uses and the environment

**PRECOMMERCIAL THINNING** - The practice of removing some of the trees less than merchantable size from a stand so that the remaining trees will grow faster.

**PREHISTORIC** - Relating to the period of time before written records (prior to European contact). In Region 6, before 1800 A.D., or before the advent of written records

**PRESCRIBED BURNING** - Use of fire in forest management for hazard reduction and vegetative manipulation.

**PRESCRIBED FIRE** - A wildland fire burning under specified conditions which will accomplish certain planned objectives. The fire may result from either planned or unplanned ignitions. Plans for use of unplanned ignitions for this purpose must be approved by the Regional Forester.

**PRESENT NET VALUE (PNV)** - The difference between the discounted value (benefits) of all outputs to which monetary values or established market prices are assigned and the total discounted costs of managing the planning area.

**PRESERVATION** - See "Scenic Quality Objectives."

**PRIMARY CAVITY EXCAVATOR** - An animal that excavates a cavity in wood for nesting or roosting.

**PRIME FARMLAND** - All land which qualifies for rating as Class I or as Class II in the U.S. Soil Conservation Service land use capability classification.

**PRIMITIVE ROADS** - Roads constructed with no regard for grade control or designed drainage, sometimes by merely repeated driving over an area. These roads are single lane, usually with native surfacing and sometimes passable with 4-wheel drive vehicles only, especially in wet weather.

**PROGRAMMED ALLOWABLE HARVEST** - That part of the potential yield scheduled for harvest in a specific year. It is based on demand, funding, management needs and multiple use considerations and, as a consequence, may vary over time.

**PUMICE** - A volcanic glass full of cavities and very light in weight.

**PYROCLASTIC ROCK** - A rock consisting of unreworked solid material explosively or aurally ejected from a volcanic vent.

**PUBLIC ISSUE** - A subject or question of widespread public interest relating to management of National Forest System.

**PUBLIC PARTICIPATION** - Meetings, conferences, seminars, workshops, tours, written comments, responses to survey questionnaires, and similar activities designed and held to obtain comments from the public about Forest Service planning.

**PURCHASER CREDIT** - Credit earned by the purchaser of a National Forest timber sale by construction of contract-specified roads. Earned purchaser credit may be used by the purchaser as payment for National Forest timber removed.

## R

**RANGE ALLOTMENT** - A designated area available for livestock grazing upon which a specified number, kind of livestock and season of use may be grazed under a term grazing permit. The basic land unit used to facilitate management of the range resource on National Forest System and associated lands administered by the Forest Service.

**RANGE CONDITION** - The state or health of the range vegetation and soil to produce a stable biotic community based on the composition, density, and vigor of the vegetation and the physical characteristics of the soil. Condition is expressed as satisfactory or unsatisfactory.

**RANGE IMPROVEMENT** - Any structure or nonstructural improvement to facilitate management of rangelands or livestock.

**RANGELAND** - Land where the vegetation is predominantly grasses, grass-like plants, forbs, or shrubs suitable for livestock grazing and browsing.

**RANGE MANAGEMENT** - The art and science of planning and directing range use to obtain sustained maximum animal production, consistent with perpetuation of the natural resource

**RANGER DISTRICT** - Administrative subdivisions of the Forest supervised by a District Ranger who reports to the Forest Supervisor.

**RARE II** - See Roadless Area Review and Evaluation II.

**REAL DOLLAR VALUE** - A monetary value which compensates for the effects of inflation.

**RECONSTRUCTION** - Road or trail construction activities which take place on an existing road or trail and raise the standard of the road or trail This can include relocation of the facility in a completely new location

**RECREATION CAPACITY** - The number of people that can take advantage of the supply of a recreation opportunity during an established use period without substantially diminishing the quality of the recreation experience of the biophysical resources

**RECREATION INFORMATION MANAGEMENT (RIM)** - A computer oriented system for the organization and management of information concerning recreation use, occupancy, and management of National Forest land

**RECREATION OPPORTUNITY SPECTRUM (ROS)** - Land delineations that identify a variety of recreation experience opportunities categorized into six classes on a continuum from primitive to urban. Each class is defined in terms of the degree to which it satisfies certain recreation experience needs, based on the extent to which the natural environment has been modified, the type of facilities provided, the degree of outdoor skills needed to enjoy the area, and the relative density of recreation use. The six classes are:

1. *Primitive* - Area is characterized by an essentially unmodified natural environment of fairly large size Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted.
2. *Semiprimitive Nonmotorized (SPNM)* - Area is characterized by a predominantly natural or natural-appearing environment of moderate to large size Interaction between users is low, but there is often evidence of other uses The area is managed in such a way that minimum on-site controls and restrictions may be present, but would be subtle. Motorized recreation use is not permitted, but local roads used for other resource management activities may be present on a limited basis Use of such roads is restricted to minimize impacts on recreational experience opportunities.
3. *Semiprimitive Motorized (SPM)* - Area is characterized by a predominantly natural or natural-appearing environment of moderate to large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but would be subtle. Motorized recreation use of local primitive or collector roads with predominantly natural surfaces and trails suitable for motor bikes is permitted
4. *Roaded Natural (RN)* - Area is characterized by predominantly natural-appearing environments with moderate evidence of the sights and sounds of man. Such evidence usually harmonizes with the natural environment. Interaction between users may be moderate to high, with evidence of other users prevalent Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is allowed and incorporated into construction standards and design of facilities
5. *Rural (R)* - Area is characterized by a natural environment that has been substantially modified by development of structures, vegetative manipulation, or pastoral agricultural development. Resource modification and utilization practices may be used to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily

evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate user densities are present away from developed sites. Facilities for intensified motorized use and parking are available.

- 6 *Urban* - Area is characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Renewable resource modification and utilization practices are often used to enhance specific recreation activities. Vegetative cover is often exotic and manicured. Sights and sounds of humans are predominant on site. Large numbers of users can be expected both on site and in nearby areas. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to carry people throughout the site.

**RECREATION VISITOR DAY (RVD)** - A measure of recreational use of an area. One recreation visitor day consists of 12 hours of recreation use of a site or area. Recreation visitor days are used as a recreation production or output capacity measure.

**RECREATION WILDERNESS SPECTRUM (RWS)** - This is associated with the recreation opportunity spectrum (ROS), a system used to classify or differentiate areas within wilderness to provide for a variety of management possibilities and wilderness opportunities. The objective of all classifications is to provide wilderness opportunities but to different degrees, from pristine to the semiprimitive transition.

**REFORESTATION** - The natural or artificial restocking of an area usually to produce timber and other wood products, but also to protect watersheds, prevent soil erosion, and improve wildlife, recreation and other natural resources. Natural reforestation includes site preparation to reduce competing vegetation and provide a mineral seed bed for seed provided by seed trees. Artificial reforestation is the planting of seedlings, cuttings or seeds by hand or mechanical means and may include site preparation.

**REGENERATION CUT** - The removal of trees intended for the purpose of assisting regeneration already present or to make regeneration of the stand possible.

**REGION** - The standard administrative unit of the Forest Service administered by a Regional Forester.

**REGIONAL FORESTER** - The official responsible for administering a single Region and preparing a Regional Guide.

**REGIONAL GUIDE** - The plan developed to meet the requirements of the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended, that guides all natural resource management activities and establishes management standards and guidelines for the National Forest System lands of a given region. It also disaggregates the RPA objectives assigned to the Region and to the Forest within that region.

**REGULATIONS** - Generally refers to the Code of Federal Regulations, Title 36, Chapter II, which covers management of the Forest Service.

**REHABILITATION** - Actions taken to protect or enhance site productivity, water quality, or other values for a short period of time.

**RESEARCH NATURAL AREAS (RNA's)** - An area set aside by the Forest Service to preserve a representative sample of an ecological community; primarily for scientific and educational purposes. Commercial exploitation is not allowed and general public use is discouraged.

**RESOURCE** - An aspect of human environment which renders possible or facilitates the satisfaction of human wants and the attainment of social objectives.

**RESOURCE VALUES** - The tangible and intangible worth of forest resources.

**RESPONSIBLE LINE OFFICER** - The Forest Service employee who has the authority to select and/or carry out a specific planning action.

**RESTORATION** - The long-term placement of land back into its natural condition or state of productivity

**RETENTION** - A scenic quality objective which means human activities are not evident to the casual forest visitor.

**REVEGETATION** - The re-establishment and development of a plant cover. This may take place naturally through the reproductive processes of the existing flora or artificially through the direct action of man - reforestation or range reseeding.

**RIGHT-OF-WAY** - The right to pass through another person's land as obtained by condemnation or purchase

**RIM** - See Recreation Information Management.

**RIPARIAN AREAS** - The riparian ecosystem (area) is that land, next to water, where plants that are dependent on a perpetual source of water occur. Riparian sites include fluvial surfaces such as streambanks, active channel shelves, active floodplains, and overflow channels.

**RIPRAP** - A structure built of broken rock or other material used for protecting exposed soil from erosion along stream channels or road ditches.

**ROAD DENSITY** - The number of road miles per square mile of land area

**ROADLESS AREA** - An area of undeveloped Federal land within which there are no improved roads maintained for travel by means of motorized vehicles intended for highway use

**ROADLESS AREA REVIEW AND EVALUATION (RARE II)** - A comprehensive process directed by the Secretary of Agriculture to identify roadless and undeveloped land areas in the National Forest system and to determine their uses for either wilderness or other resource management and development and to determine areas that would require further planning to make such a decision.

**ROADLESS ISLANDS** - A roadless area that is surrounded by permanent waters, or that is markedly distinguished from surrounding lands by topographical or ecological factors such as precipices, canyons, thickets, or swamps.

**ROAD MANAGEMENT OBJECTIVES** - Road management objectives establish the intended purpose of an individual road based on management area direction and access management objectives. Road management objectives contain design criteria, operation criteria, and maintenance criteria

**ROS** - See Recreation Opportunity Spectrum.

**ROTATION AGE** - The age of a stand when regeneration harvest occurs.

**RPA** - Forest and Rangeland Renewable Resources Planning Act of 1974.

**ROCKHOUND** - An amateur rock and mineral collector.

**RVD** - See Recreation Visitor Day.

## S

**SALEABLE MINERALS** - Saleable minerals include common varieties of sand, stone, gravel, pumice, pumicite, cinders, and clay. In general, these minerals are of wide-spread occurrence and are of relatively low unit value. They are generally used for construction materials and for road building purposes. Saleable minerals, which have some property giving them distinct and special value, remain locatable. Before a deposit can be sold, a determination of "common variety" must be made by minerals staff and legal counsel

**SALVAGE HARVEST** - Removal of dead or dying trees resulting from insect and disease epidemics or wildfire.

**SANITATION HARVEST** - Removal of dead or dying trees to prevent spread of insects or disease

**SAWTIMBER** - Trees that will yield logs suitable in size and quality for the production of dimension lumber

**SCENIC QUALITY OBJECTIVES** - Categories of acceptable landscape alteration measured in degrees of deviation from the natural-appearing landscape

- 1 *Preservation* - Ecological change only.
2. *Retention* - Human activities are not evident to the casual Forest visitor
3. *Partial Retention* - Human activity may be evident, but must remain subordinate to the characteristic landscape.
- 4 *Modification* - Human activity may dominate the characteristic landscape, but must, at the same time, follow naturally established form, line, color, and texture. It should appear as a natural occurrence when viewed in foreground or middleground
- 5 *Maximum Modification* - Human activity may dominate the characteristic landscape, but should appear as a natural occurrence when viewed as background.

**SCENIC RESOURCE** - The composite of basic terrain, geologic features, water features, vegetative patterns, and land-use effects that typify a land unit and influence the visual appeal the unit may have for visitors

**SCOPING** - Determination of the significant issues to be addressed in an EIS.

**SEDIMENT** - Solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

**SEDIMENTARY ROCK** - A rock made up of sediment

**SEED CUT** - Removal of mature trees near rotation age in a shelterwood harvest to permanently open the stand and prepare the site for regeneration from the seed trees left for that purpose.

**SEEDLING/SAPLING** - A forest successional stage in which trees less than five inches in diameter are the predominant vegetation.

**SELECTION CUTTING** - The annual or periodic removal of trees (particularly the mature), individually or in small groups from an uneven-aged forest to achieve the balance among diameter classes needed for sustained yields, and in order to realize the yield, and establish a new crop of irregular constitution. NOTE: The improvement of the Forest is a primary consideration.

**SELECTION SYSTEM** - A silviculture system in which trees in an uneven-aged stand are removed individually, here and there, from a large area each year in order to achieve a balance among diameter classes needed for sustained yield by selection cutting - ideally over a whole forest or working circle, but from practical considerations almost always over the annual coupes of cutting series, regeneration mainly natural and crop ideally all-aged.

**SENSITIVE SPECIES** - Plant or animal species which are susceptible or vulnerable to activity impacts or habitat alterations. Those species that are recognized by the Regional Forester as needing special management to prevent placement on Federal or State lists.

**SERAL** - A plant and animal community which is transitional in stage of succession, being either short- or long-term. If left alone, the seral stage will pass, and another plant and animal community will replace it.

**SHELTERWOOD HARVEST** - Silvicultural system used to harvest mature trees at rotation age in a series of preparatory, seed and removal cuts designed to regenerate a new even-aged crop under the shelter of the old crop.

**SHORT-TERM EFFECTS** - For timber management planning, those effects which will not be significant beyond the RPA planning horizon of 50 years; for DEQ water quality, short-term effects are defined as two days or less. Generally, short-term effects are within the planning period.

**SIGNIFICANT** - Meeting the criteria for inclusion on the National Register of Historic Places (same as eligible)

**SILVICULTURAL SYSTEM** - A management process whereby forests are tended, harvested, and replaced, resulting in a forest of distinctive form. Systems are classified according to the method of carrying out the fellings that remove the mature crop and provide for regeneration and according to the type of forest thereby produced.

**SILVICULTURE** - The science and art of growing and tending crops of forest trees to attain the desired level of marketable and unmarketable products

**SITE INDEX** - A measure of the relative productive capacity of an area for growing wood. Measurement of site index is based on height of the dominant trees in a stand at a given age

**SITE PREPARATION** - Removing unwanted vegetation and debris from a site and preparing the soil before reforestation.

**SITE PRODUCTIVITY** - Production capability of specific areas of land

**SKYLINE LOGGING** - A system of cable logging in which all or part of the weight of the logs is supported during yarding by a suspended cable.

**SLASH** - Debris left after logging, pruning, thinning, or brush cutting, and large accumulations of debris resulting from windstorms. It includes logs, bark, branches, and stumps

**SMOLT HABITAT CAPABILITY INDEX (SHCI)** - Smolt refers to the life history stage of anadromous salmonids in which physiological changes are taking place to adapt them for ocean survival and they are either migrating or will shortly migrate seaward. The three levels associated with this index are:

1. Existing SHC - The number of smolt being produced at the present time with existing escapement levels in existing freshwater habitat
2. Potential SHC - The number of smolt that are capable of being produced assuming there is sufficient adult escapement to fully seed existing freshwater habitat
3. Potential SHC with Full Enhancement - The number of smolt that are capable of being produced, assuming sufficient capital investments have been made to maximize the freshwater habitats and there is sufficient adult escapement to fully seed the existing and enhanced habitat

**SNAG** - A nonliving standing tree. The interior of the snag may be sound or rotted

**SNAG LEVEL** - The number of snags per unit of area by d.b.h. class selected as a management goal, the level is predicted on the theoretical number of snags per unit of area by diameter class needed to support nesting populations of woodpeckers at a selected density

**SOCIOECONOMIC** - Pertaining to, or signifying the combination or interaction of, social and economic factors.

**SOIL EROSION** - The detachment and movement of soil from the land surface by wind, water, or gravity.

**SOIL COMPACTION** - Increase in soil bulk density.

**SOIL PRODUCTIVITY** - The capacity of a soil, in its normal environment, to produce a specific plant or sequence of plants under a specific system of management.

**SOIL RESOURCE INVENTORY (SRI)** - An inventory of the soil resource based on landform, vegetative characteristics, soil characteristics, and management potentials.

**SPECIAL COMPONENT** - The portion of the commercial forest land that needs special treatment of the timber resource to achieve other resource objectives (e.g., old growth, streamside protection, or visual corridors).

**SPECIAL USE PERMITS** - Permits and granting of easements (excluding road permits and highway easements) authorizing the occupancy and use of land.

**STAND** - An aggregation of trees occupying a specific area and sufficiently uniform in composition, age arrangement, and condition as to be distinguishable from the forest in adjoining areas.

**STANDARD** - Performance criteria indicating acceptable norms or specifications that actions must meet. A principle requiring a specific level of attainment, a rule to measure against.

**STANDARD COMPONENT** - The portion of the commercial forest land on which crops of industrial wood can be grown and harvested with adequate protection of the forest resources under the usual provisions of the timber sale contract.

**STATE HISTORIC PRESERVATION OFFICER (SHPO)** - An official appointed by the Governor of each State to direct implementation of the National Historic Preservation Act of 1966 and subsequent regulations and Executive Order. Responsibilities include: State-wide cultural resource inventory, development of a State Historic Preservation Plan, review of National Register of Historic Places nominations, administration of Federal historic preservation grants, and review of Federal undertakings which might affect cultural resources listed on or eligible for the National Register of Historic Places.

**STOCKING** - The degree of occupancy of land by trees as measured by basal area or number of trees and as compared to a stocking standard; that is, the basal area or number of trees required to fully use the growth potential of the land.

**STOCKING LEVEL CONTROL** - The process of maintaining the desirable number of trees to achieve optimum growth and management.

**STREAMFLOW** - The discharge of water from a watershed that occurs in a natural stream channel.

**STRUCTURAL RANGE IMPROVEMENT** - Improvement requiring construction or installation to improve the range, facilitate management, or control distribution and movement of livestock.

**SUITABILITY** - The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the alternative uses foregone. A unit of land may be suitable for a variety of individual or combined management practices.

**SUITABLE TIMBER LAND** - Forested lands that are available for timber management because they have not been withdrawn because of Law or Regulation, where irreversible damage would not occur, and where regeneration can be assured.

**SUMMER RANGE** - A portion of the total range on which big game animals normally find food and cover during summer months.



**SUNK FUNDS** - Monies already invested.

**SUPPRESSION** - The action of extinguishing or confining a fire.

**SUSTAINED YIELD** - The achievement and maintenance in perpetuity of a periodic output of the renewable resources without impairment of the productivity of the land.

## T

**TARGETS** - Objectives assigned to the Forest by the Regional Plan.

**TECTONIC** - Of, pertaining to, or designating the rock structure and external forms resulting from the deformation of the earth's crust.

**TEMPORARY ROADS** - Temporary roads are low-level roads constructed for a single purpose and short-term use. Once use of the road has been completed, it is obliterated, and the land it occupied is returned to production.

**THERMAL COVER** - Cover used by animals to lessen the effects of weather; for elk the types of cover are:

*Summer Range* - A stand of coniferous trees at least 40 feet tall with an average crown closure of 40 percent or more.

*Winter Range* - A stand of coniferous trees 10 feet or more tall with an average crown closure of 40 percent or more.

**THINNING** - The practice of removing some of the trees in a stand so that the remaining trees will grow faster due to reduced competition for nutrients, water, and sunlight. Thinning may be done at two different stages:

1. *Commercial thinning* - Removing trees that have reached sufficient size to be manufactured into a product.
2. *Precommercial thinning* - Removing trees that are too small to make a merchantable product.

**THREATENED SPECIES** - Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range and which has been designated in the Federal Register by the Secretary of the Interior as a threatened species.

**THRESHOLD** - The point or level of activity beyond which an undesirable set of responses begins to take place within a given resource system.

**TIERING** - Refers to the coverage of general matters in broad environmental impact statements (such as national program or policy statements) with subsequent narrower statements or environmental analyses (such as regional or basin wide program statements or ultimately site-specified statements), incorporating by reference the general discussions and concentrating solely on the issues specific to the statement in question.

**TIMBER** - A general term for the major woody growth of vegetation in a forest area.

**TIMBER CLASSIFICATION** - Forested land is classified under each of the land management alternatives according to how it relates to the management of the timber resource. The following are definitions of timber classifications used for this purpose.

1. *Nonforest* - Land that has never supported forests and land formerly forested where use for timber production is precluded by development or other uses.
2. *Forest* - Land at least 10-percent stocked (based on crown cover) by forest trees of any size, or formerly having had such tree cover and not currently developed for nonforest use.

- 3 *Suitable* - Land to be managed for timber production on a regulated basis
4. *Unsuitable* - Forest land withdrawn from timber utilization by statute or administrative regulation (for example, wilderness), or identified as not appropriate for timber production in the Forest planning process.
5. *Commercial Forest* - Forest land tentatively suitable for the production of continuous crops of timber and that has not been withdrawn

**TIMBER PRODUCTION** - The purposeful growing, tending, harvesting, and regeneration of regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use. The term "timber production" does not include production of fuelwood.

**TIMBER SALE PROGRAM QUANTITY** - This includes all volume expected to be offered for sale. This includes "green" material, salvage, firewood and miscellaneous products. This is used to measure attainment of RPA budgeted target.

**TIMBER STAND IMPROVEMENT (TSI)** - Management activities conducted in an immature stand to accelerate diameter growth and improve the form of the trees that remain.

**TOLERANCE** - The ability of a tree to grow satisfactorily in the shade of, and in competition with, other trees.

**TONS OF SUSPENDED PARTICULATES** - A measure of the amount of solid material contributed to the airshed by smoke.

**TRAILHEAD** - The parking, signing, and other facilities available at the terminus of a trail.

**TRAIL VEHICLE** - Vehicles designed for trail use that are 40 inches wide or less, such as bicycles, snowmobiles, trail bikes, trail scooters, and all-terrain vehicles.

**TRANSITORY RANGE** - Land that is suitable for grazing use of a nonenduring or temporary nature over a period of time. For example, on particular disturbed lands, grass may remain in the area for a period of time before being replaced by trees or shrubs not suitable for forage.

**TRANSPORTATION SYSTEM** - All existing and planned roads and trails needed to access the Forest.

**TUFF** - A rock formed of compacted volcanic fragments, generally smaller than 4mm in diameter.

## U

**UNDERSTORY VEGETATION** - Grass, small trees, shrubs, and other plants found beneath the overstory (the trees comprising the forest).

**UNEVEN-AGED MANAGEMENT** - The application of a combination of actions needed to simultaneously maintain continuous high-forest cover, recurring regeneration of desirable species, and the orderly growth and development of trees through a range of diameter or age classes to provide a sustained yield of forest products. Cutting is usually regulated by specifying the number or proportion of trees of particular sizes to retain within each area, thereby maintaining a planned distribution of size classes. Cutting methods that develop and maintain uneven-aged stands are single-tree selection and group selection.

**UNIT PLANS** - Land management plans prepared for multiple use management of land and resources on portions (units) of the National Forests, which do not necessarily fully incorporate NFMA requirements. "Units" do not always follow National Forest boundaries and, in some cases, include parts of two or more National Forests.

**UNPLANNED IGNITION** - A fire started at random by either natural or human causes, or a deliberate incendiary fire.

**UNREGULATED** - Timber land not managed on a sustained yield basis, such as administrative sites, campgrounds, and experimental forests.

**UTILITY AND TRANSMISSION CORRIDOR** - A strip of land designated for the transportation of energy, commodities, and communications by railroad, State highway, electrical power transmission (69 KV or above), oil and gas and coal slurry pipelines 10 inches in diameter and larger, and telecommunication cable and electronic sites for interstate use. Transportation of minor amounts of power for short distances, such as short feeder lines from small power projects including geothermal or wind, or to serve customer subservice substations along the line, are not to be treated within the Forest Plan effort.

**UTILIZATION STANDARDS** - Standards guiding the use and removal of timber, which is measured in terms of diameter at breast height (d b.h.), top diameter inside the bark (top d i b ), and percent "soundness" of the wood.

## V

**VIABLE POPULATION** - The number of individuals of a species required to ensure the long-term existence of the species in natural, self-sustaining populations adequately distributed throughout their region.

**VIEWSHED** - The total landscape seen or potentially seen from all or a logical part of a travel route, use area, or water body.

## W

**WATERSHED** - The area that contributes water to a drainage or stream.

**WETLANDS** - Areas that are inundated by surface water or groundwater with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetation or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction (Executive Order 11990).

**WILD AND SCENIC RIVERS** - Those rivers or sections of rivers designated as such by congressional actions under the 1968 Wild and Scenic Rivers Act, as wild, scenic, or recreational by an act of the Legislature of the State or States through which they flow. Wild and scenic rivers may be classified and administered under one or more of the following categories:

1. *Wild River Areas* - Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America
2. *Scenic River Areas* - Those rivers or sections of rivers that are free of impoundments, with watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads
3. *Recreational River Areas* - Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

**WILDERNESS** - Areas designated by congressional action under the 1964 Wilderness Act. Wilderness is defined as undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation. Wilderness areas are protected and managed to preserve their natural conditions, which generally appear to have been affected primarily by the forces of nature, with the imprint of human activity substantially unnoticeable; have outstanding opportunities for solitude or for a primitive and confined type of recreation; include at least 5,000 acres or are of sufficient size to make practical their preservation, enjoyment, and use in an unimpaired condition; and may contain features of scientific, educational, scenic, or historical value as well as ecologic and geologic interest.

**WILDERNESS ACT** - Establishes a National Wilderness Preservation System to be composed of Federally-owned areas designated by Congress, administered for use and enjoyment as Wilderness, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as Wilderness.

**WILDERNESS RESOURCE SPECTRUM (WRS)** - Classification used to further divide a wilderness into zones based on degrees of primitiveness. Areas of the Ochoco Wilderness will be managed under two classes of the WRS system:

1. *Primitive* - characterized by an essentially unmodified environment. Concentration of users is low and evidence of human use is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls
2. *Semiprimitive* - characterized by a predominately unmodified natural environment of moderate size. The concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle

**WILDFIRE** - Any wildland fire that is not a prescribed fire. All wildfires require suppression.

**WILDLIFE** - All nondomesticated mammals, birds, reptiles, and amphibians living in a natural environment, including both game species and nongame species. Animals or their progeny, which once were domesticated but escaped captivity and are running wild (i.e., feral animals), such as horses, burros, and hogs, are not considered wildlife.

**WILDLIFE AND FISH USER DAY (WFUD)** - One WFUD consists of 12 hours of recreation that is the result of fish or wildlife.

**WILDLIFE HABITAT DIVERSITY** - The distribution and abundance of different plant and animal communities and species within a specific area.

**WINTER RANGE** - A range, usually at lower elevation, used by big game during the winter months; usually smaller and better-defined than summer ranges

**WITHDRAWAL** - The withholding of an area of Federal land from settlement, sale, location, or entry, under some or all of the general land laws for the purpose of limiting activities under those laws in order to maintain other public values in the area.

**WORKING GROUP** - Comprises those parts of a forest that have generally the same growth potential and management opportunities.

## Y

**YARDING** - The moving of logs from the stump where cut to a central concentration area or landing.

## Z

**ZONE OF INFLUENCE** - The geographic area where most, but not all, of the direct social and economic effects of the Forest and Grassland's management occur

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