Chapter 2

Understanding the Forest: Planning and Resources

The planning process for the Southwest Oregon State Forest involved many people, including the local communities, agency specialists, and scientists. This inclusive process was based on the belief that public awareness and involvement would lead to the best management plan. The next few pages describe the steps of the planning process for the Southwest Oregon District.

Forest management begins with an understanding of the parts of the forest, from Douglas-fir trees to salamanders. The resource descriptions in this chapter briefly describe what we know currently about the forest. They will be supplemented over time by continuing research, monitoring and on-the-ground experience.

This chapter's main headings are listed on the next page.

The main headings in this chapter are:

The previous long-range forest management plan for the Southwest Oregon District was adopted in 1987 (Oregon Department of Forestry 1987). This was primarily a timber management plans, with other resource values considered mainly as constraints on timber management and revenue production for the counties and local taxing districts. Environmental influences, while well considered, were not transparent to the public.

During the late 1980s, there was growing concern about the status of several wildlife species. The northern spotted owl was listed as a federal threatened species in 1990. In response, the Department of Forestry began to survey for the presence of owls in and near existing and planned timber harvest units. Many owl sites were located, and many sold timber sale contracts were affected. Following federal guidelines for take avoidance (since rescinded), the Department of Forestry established circles with a 1.5 mile radius around each owl site, and severely limited management activities within the circles. The result was a net reduction in the acres available for sustainable timber production and a corresponding reduction in the harvest objectives for each district with owl sites.

The marbled murrelet was also listed as a federal threatened species in 1992, affecting many state forest lands in western Oregon. Salmon conservation became a major issue in the 1990s, and many other wildlife species also appear to be in trouble, although less information is available about several of these.

Due to these new concerns, the Department of Forestry saw in the 1990s that there was a need to develop comprehensive, integrated forest management plans for state forests. The planning process for Southwest Oregon District is described in this section.

Planning Team, Resource Specialists, and Consultants

The core planning team consisted of both field and program staff of the Department of Forestry, as well as representatives of the Oregon Department of Fish and Wildlife. The core team was responsible for managing all aspects of the planning process. The core team included foresters, fish and wildlife biologists, and other specialists. Additional specialists were consulted in fields such as geotechnical engineering, geology, hydrology,

air quality, soils science, forest pathology, forest economics, special forest products, botany, and cultural resources.

Planning Elements

The planning process was guided by a set of guiding principles. The draft plan contains an integrated set of goals and strategies for managing the forest resources, and specific processes and procedures for implementation of the strategies in an adaptive management context.

Guiding Principles

The guiding principles are listed in Chapter 3. The principles were derived from the following sources:

- **State and federal laws and administrative rules —** Statutes and mandates governing state forest management include the direction to manage the lands "so as to secure the greatest permanent value of such lands to the state" (ORS 530.050). Other laws recognize the special interests of the counties, local governments, and Common School Fund, and address the importance of salmon and other native species.
- **Board and state agency policies —** These include policies of the Board of Forestry, State Land Board, and State Forester.
- **Other sources —** Other sources include recommendations from planning team members, resource specialists, and the public, consistent with good stewardship of the forests.

Resource Descriptions

Technical specialists developed initial assessments for each resource. After these assessments were evaluated and additional information gathered, final resource descriptions were written. This chapter provides summaries of the resource descriptions.

Development of Goals

The resource goals in Chapter 3 describe broadly what we would like to achieve through the management of each resource. The goals are intended to be qualitative, not quantitative in nature. They derive from the following sources:

- **State and federal laws and administrative rules**
- **Board and state agency policies**
- **Other sources —** These include recommendations from planning team members, resource specialists, and the public. These goals are not mandated in law or policy, but are believed to be consistent with good stewardship of the forests.

Development of Strategies

Strategies are found in Chapter 4. During concurrent development of the *Northwest Oregon State Forests Management Plan*, the Department of Forestry developed a set of

integrated strategies termed "structure-based management" (SBM). This set of strategies was reviewed in two separate peer review processes by scientists of diverse fields, and also received intensive public review and comment. The structure-based management approach has been adapted to the different forest conditions in southwest Oregon.

The goals for one resource may compete to some degree with the goals for one or more other resources. The strategies attempt to achieve a reasonable balance between the goals for the various resources. The highest priority was placed on meeting goals related to specific laws or administrative rules. The next priority was on goals based on current policy direction. The lowest priority was placed on meeting goals that are not mandated in law or policy, but which are consistent with good stewardship of the forest resources.

This forest plan does not present a range of alternative strategies. The integrated strategies are designed to achieve high levels of outputs for key resources, including forest products, revenues, and habitat for native fish and wildlife. This is a departure from more traditional approaches to forest planning, which tend to focus on trade-offs among competing resources. In connection with planning for the northwest Oregon state forests, the Department did contract with Dr. John Sessions of Oregon State University to examine habitat and economic outputs for a variety of forest management approaches. This information is summarized in the *Final Report for Decadal Analysis of Alternatives* (Oregon Department of Forestry 2000c).

Adaptive Forest Management

Monitoring and adaptive management are key elements of this forest plan. A properly constructed monitoring program combined with effective adaptive management will provide the necessary flexibility to modify the strategies as new information becomes available. In fact, the integrated strategies and their associated standards need to be viewed as a reasonable starting point. They will be changed over time as we learn more. Over the long term, the strategies could result in a variety of possible outcomes as adaptive management is achieved.

Public Involvement

Public involvement provides the planning team with a wider range of information and ideas, and is critical to gaining public understanding, acceptance, and support for planned actions. The planning team began public involvement at the same time they started forest planning in 1997. The public involvement process had three important objectives:

- Seek appropriate insight, opinion, and data on planned management actions.
- Foster understanding, acceptance, and support for the forest management planning process and the forest management plan.
- Promote opportunities to inform the public about forest systems, forest stewardship, and management of state forests.

The public involvement process included public meetings, written comment periods, press releases, and informal contacts with interest groups, county commissioners, and individuals. Public meetings were held in Glendale and Grants Pass on April 14 and 15, 1997, and November 3 and 4, 1997.

Plan Approval

The provisions of this plan are intended to satisfy the legal and policy framework for managing Board of Forestry and Common School Forest Lands. The Department of Forestry also has a contractual obligation with the Oregon State Land Board to prepare management plans for Common School Forest Lands. Accordingly, this plan requires the approval of both the Board of Forestry and the State Land Board.

Resource Descriptions

This section describes the forest resources in the Southwest Oregon state forest planning area. An overview gives the regional and landscape perspective, followed by descriptions of forest resources, in alphabetical order. Appendix D describes legal and policy mandates for specific resources.

Overview of Southwest Oregon State Forest

State Forest Ownerships

Oregon state forests consist of two different ownerships, Board of Forestry and Common School forest lands. The two types of land were acquired in different ways, and they are owned differently within state government. Board of Forestry forest lands are also known as County Forest Trust Lands, and are owned by the Board of Forestry. Common School forest lands are owned by the Oregon State Land Board. Legal and policy mandates for the two ownerships are described in Appendix D.

The state forest lands in Southwest Oregon District are generally small parcels and widely scattered. The two largest parcels are a tract of about 3,500 acres in Windy Creek, and a tract of 1,900 acres in McCullough Creek, near Glendale.

Board of Forestry Lands (BOFL) – These lands were acquired by the Board of Forestry through direct purchase or transfer of ownership of the lands from counties in exchange for a portion of the future revenue produced by the lands. Much of the land base was tax-

delinquent land transferred by the counties to the state for management in the 1930s and 1940s. In 1944, the Windy Creek property and some other acreage, a total of about 3,600 acres, were deeded by the landowner directly to the Board of Forestry.

In the Southwest Oregon planning area, 9,372 acres are Board of Forestry lands. These lands consist of parcels that range in size from 40 acres to 3,400 acres, located in southern Douglas and northern Josephine Counties. This area is referred to as the "acquisition area" in Southwest Oregon's forest management plan and land exchange plans.

Background Information

The Governor appoints the seven members of the Board of Forestry, and the Oregon State Senate confirms the appointments. No more than three members may receive any significant portion of their income from the forest products industry, and at least one member must reside in each of the three major forest regions of the state. Members serve no more than two consecutive four-year terms. The Board supervises forest policy for all of Oregon's 27.8 million-acre forest, as well as state forest management.

Common School Forest Lands (CSFL) – Most Common School lands were acquired when Oregon became a state in 1859. At that time the federal government granted sections 16 and 36 of every township to the new state for the use of schools. Oregon's grant was originally 3.5 million acres of grazing and forestland. Eventually, much of the land was either sold for the benefit of schools, or lost through fraudulent land deals. More recently, the state acquired some lands due to foreclosures on unpaid loans that were used to purchase unimproved forestlands. Common School forest lands are owned by the Oregon State Land Board, which consists of the Governor, the Secretary of State, and the Treasurer, and are managed for the benefit of schools.

About 48% of the Southwest Oregon planning area, 8,702 acres, is made up of Common School forest lands, arranged as scattered tracts in four counties. These parcels range in size from 40 acres to 640 acres. Most Common School forest lands are located in Josephine County, followed by Jackson, Douglas, and Curry Counties. Table 2-1 below summarizes the land base acres within the Southwest Oregon planning area by county.

Table 2-1. Summary of Land Ownership

County	BOFL acres	CSFL acres	TOTAL acres
Curry	0	589	589
Douglas	6,864	1,229	8,093
Jackson	0	2,048	2,048
Josephine	2,508	4,835	7,342
Total acres	**9,372**	**8,702**	**18,073**

Compiled from OSCUR 1998 Inventory data

Land Base Designation and Land Management Classification

The 1998 Oregon Administrative Rules on State Forest Management Policy and Planning (Chapter 629 Division 35) require that all forest land shall be designated either as "silviculturally capable of growing forest tree species" or "not capable of such growth (non-silviculturally capable)." The purpose of this designation is limited to portraying the physical potential of the land to grow trees. The designation is merely descriptive, and does not propose any land use strategy.

The rules also require the State Forester to classify all forest lands within planning areas according to the types of management that will be applied, the appropriate range of management activities, and the forest resources addressed. Land management classification describes the management emphasis for parcels of state forest lands, as determined by forest management plans ~~and habitat conservation plans~~. The system identifies when a particular forest resource may need a more focused approach in its management or, in some cases, exclusive priority in management. State forest lands will be classified into one of three classifications: General Stewardship, Focused Stewardship, or Special Stewardship.

General Stewardship lands include all those where forest resources are managed using integrated management practices, and for which resource management goals are compatible over time and across the landscape. All resources addressed in forest management plans will be managed. Resources may not be treated equally on every acre, but across the landscape, management will meet the goals identified in the plans.

Focused Stewardship lands are also managed using integrated management practices, but for a specific resource or resources on these lands~~,~~; a forest management plan~~, HCP,~~ or legal requirement identifies the need for supplemental planning, modified management practices, or compliance with specific requirements. Management of specific forest resources may have minor impacts on the management of other resources, but will not preclude integrated management. Focused Stewardship lands will be further classified into one (or more) of the following subclasses: Agriculture, Grazing or Wildlife Forage; Aquatic and Riparian Habitat; Cultural Resources; Deeds; Domestic Water Use; Easements; Energy and Minerals; Plants; Recreation; Research/Monitoring; Transmission; Visual; and Wildlife Habitat. An example of Focused Stewardship might be an area with scenic values, where visual qualities must be protected during and after forest management activities. This consideration could affect harvesting systems, the size and location of harvest units, and road locations.

Special Stewardship lands are those where one or more forest resources require protection that precludes integrated management of all resources; where a legal or contractual constraint dominates resource management; or where lands are committed to a specific use and management activities must be compatible with that use. Special Stewardship lands are classified into the following subclasses: Administrative Sites;

Agriculture, Grazing or Wildlife Forage; Aquatic and Riparian Habitat; County or Local Comprehensive Plans; Cultural Resources; Deeds; Domestic Water Use; Easements; Energy and Minerals; Operationally Limited; Plants; Recreation; Research/Monitoring; Transmission; Visual; and Wildlife Habitat. An example of Special Stewardship might be the area surrounding a nest tree of a threatened or endangered species.

The goals and strategies of forest management plans ~~and habitat conservation plans~~ drive the management of key resources, rather than the land management classification system. The identification and mapping of streams, wetlands and associated aquatic and riparian habitat will be based upon criteria in forest management plans, using existing information or map-based estimates. Information will be updated through watershed assessments and site-specific monitoring conducted over time. Land management classifications are not prescriptions. Prescriptions are based upon a forest management plan, statutory or contractual requirements, and site-specific conditions.

Public involvement is an important component of the land management classification process. A minimum 90-day public comment period is required prior to the State Forester approving the initial land management classifications. A 30-day comment period is mandated before any major changes are made to the classifications, and there may be an optional 30-day comment period before minor changes are made.

Table 2-2 shows a preliminary classification of the state forest lands in this plan. Public comment will take place in 2000-2001. (Note: Total acres in this table are greater than actual ownership because of overlapping subclasses.)

Table 2-2. Draft Land Management Classification System Southwest Oregon (November 1999)

Stewardship	Subclass	BOF	CSL	Total Acres
General		5,014	4,128	9,142
Focused	Aquatic and Riparian Habitat	3,264	2,931	6,195
	Transmission	16	0	16
	Visual	504	218	722
	Wildlife Habitat	0	496	496
Focused Total		3,784	3,645	7,429
Special	Aquatic and Riparian Habitat	709	599	1,308
	Operationally Limited	0	202	202
	Plants	0	644	644
	Transmission	109	0	109
	Visual	0	302	302
	Wildlife Habitat	88	0	88
Special Total		906	1,747	2,653

Grand Total	9,704	9,520	19,224

Forest Ecosystems of Southwestern Oregon

Climate and Landforms

Climate and landforms are the major factors that shape regional forest ecosystems. Southwest Oregon is an interesting and complex region, influenced by the Pacific Ocean and the coming together of three mountain ranges: the Siskiyou Mountains (the northernmost range of the Klamath Mountains group), the Coast Range, and the Cascades. The land was formed by vast geological events that resulted in depositions, folded and faulted mountains, rocks metamorphosed by great heat and pressure, and peaks and outcroppings from volcanic action. Rocks here are among the oldest in Oregon. The topography is rugged and eroded, and soils are extremely varied. The area has experienced a long history of disturbance, especially by fire.

The Southwest Oregon District is mountainous, with little land located on the valley floors. State forest lands in the region vary from 1,120 to 6,400 feet elevation, and are found from 18 to 89 miles from the coast, and from southern Douglas County to the California border. Most of the lands (more than 16,000 acres) are located at elevations ranging from 2,000 feet to 4,500 feet, and are in the Klamath Mountains, the west slopes of the Cascades, or the Coast Range. The lands are divided almost equally between the Rogue River basin (including the Illinois and Applegate Rivers sub-basins) and the Cow Creek sub-basin of the Umpqua River basin.

The underlying bedrock is metamorphic on most of the lands, and includes some of the oldest rock formations in Oregon. The soils are generally very stable, even on steeper slopes. The district has only small amounts of highly erosive soil types. Some of the poorer soils may develop a deep surface ravel if they are subjected to heavy disturbance.

The region has a Mediterranean climate that is typified by hot, dry summers and moderate rainfall occurring abundantly in the winter months, making it unique from the rest of western Oregon. Snow occurs mostly above the 3,000-foot elevation and is generally short-lived. Average annual precipitation varies from 25 inches per year (near Rogue River and Shady Cove) to 118 inches per year (near the Cave Junction). Nearly 80% of the precipitation occurs in the winter months. Temperatures range from 9 degrees to 116 degrees F.

Diverse Tree and Shrub Species of Southwest Oregon

Plant communities in southwest Oregon combine elements of northern California, the coast, and eastern Oregon regions, and include a number of species indigenous only to the Klamath Mountains (Franklin and Dyrness 1988). In the western Siskiyou Mountains, forests consist of a mixture of evergreen conifers dominated by Douglas-fir (*Pseudotsuga menziesii*) mixed with drought-resistant hardwoods such as Pacific madrone (*Arbutus menziesii*) and golden chinquapin (*Castanopsis chrysophylla*). Soils are diverse and include serpentine outcrops, which have a distinctive array of trees and plants.

Douglas-fir and madrone are usually the dominant tree species, but ponderosa pine (*Pinus ponderosa*) may be more dominant on some drier, southern exposure aspects. Most Douglas-fir dominated sites also contain significant conifer populations of ponderosa pine, sugar pine (*Pinus lambertiana*), incense cedar (*Libocedrus decurrens*), and grand fir (*Abies grandis*) as well as hardwood populations of madrone, chinquapin, tanoak (*Lithocarpus densiflorus*), and canyon live-oak (*Quercus chrysolepis*). Jeffrey pine (*Pinus jeffreyi*) is found primarily on serpentine sites. In upper elevations, on sites with lower productivity, knobcone pine (*Pinus attenuata*) pioneers after fire. This tree is totally dependent on fire to open the cones and release seed.

A variety of other trees may also be present on Southwest Oregon state-owned forest land under special circumstances: on moister serpentine sites, Port-Orford cedar (*Chamaecyparis lawsoniana*) may be found; at higher elevations, white fir (*Abies concolor*) and Shasta red fir (*Abies magnifica var. shastensis*); on north slopes in the more northern tracts of southwestern Oregon, western hemlock (*Tsuga heterophylla*); in a very small, high elevation area south of Grants Pass, Brewer's weeping spruce (*Picea Brewerana*); along stream courses and wet areas, red alder (*Alnus rubra*), black cottonwood (*Populus trichocarpa*), Oregon ash (*Fraxinus latifloia*), willows (*Salix sp.*) and Pacific yew (*Taxus brevifolia*) are common; white alder (*Alnus rhombifolia*) is found in isolated more moist areas; and on the most western parcel, Oregon myrtle (*Umbellularia californica*) may be found.

Brush fields of evergreen chaparral are abundant in the mixed-evergreen zone. Typical shrubs are manzanita (*Arctostaphylos spp.*), canyon live oak, ceanothus (*Ceanothus spp.*) and poison oak (*Rhus diversiloba*). Many of the hardwood trees in this zone may also exist as shrubs, depending on site. Shrubs tend to dominate after fire and on dryer sites with shallow soils.

Mid to high elevation areas with shallow and/or rocky soils occasionally contain rock gardens or natural, open meadows with few, if any trees. These areas are unique and may contain threatened, endangered or rare plants. They are usually protected through the Land Management Classification System (LMCS) or County Comprehensive Land Use Planning (LUP) designations or both.

Watersheds

A watershed is an area within which precipitation that falls as rain or snow drains to the same stream or river. There are different levels of watershed, from the watershed of a small stream to the watershed of the Willamette or Columbia Rivers. The Oregon Water Resources Department has defined 18 major drainage basins in Oregon. The Southwest Oregon state forests are in the Rogue and Umpqua drainage basins.

The Rogue and Umpqua drainage basins are significant watersheds which are directly influenced by state forest lands in Southwest Oregon. In the Rogue drainage basin: Althouse Creek tributary to East Fork Illinois, and Illinois Rivers; Coleman Creek, tributary to Bear Creek; Hog Creek; Quartz Creek tributary to Jump-off Joe Creek; the

Rogue River; Salmon Creek tributary to Grave Creek; Slick Rock Creek, tributary to Steve's Fork, Carberry Creek, and Applegate River; and Yale Creek, tributary to Little Applegate and Applegate Rivers. In the Umpqua drainage basin: Cow Creek tributary to South Umpqua River; McCullough Creek, Perkins Creek, and Windy Creek, tributaries to Cow Creek; Little Bull Run, tributary to Bull Run and Cow Creek; Bear Creek, tributary to Windy Creek; and Lawson Creek, tributary to Bear Creek.

For more information on watersheds, see particular resources, including fish and wildlife, water quality, water supply, and wetlands.

Regional Ownership Patterns

The Glendale block, along with some of the scattered tracts, consisting of about two dozen parcels and 12,000 acres, are part of a checkerboard array of BLM and private forest lands (mostly industrial). Conditions on adjacent ownerships range from late successional conifer forests on BLM lands to regeneration and young forest types on most privately owned lands.

Some adjacent land is owned by private industrial forest landowners, including Rough and Ready, Sun Studs, Superior Lumber, C&D Lumber, and Roseburg Forest Resources. The private industry lands have a mix of medium-aged forest and younger plantations. The private landowners continue to use both regeneration harvest and commercial thinning. Industrial forest ownerships tend to be well stocked to conifer species and intensively managed. Many small privately owned lands are a result of early harvesting with little reforestation effort, which has resulted in mixed conifer/hardwood forest types.

More extensive blocks of federal lands, either BLM or national forests, surround another dozen parcels of state lands, totaling about 6,000 acres. Much of the federal land is in protected land use classification, but some partial cutting is currently being done on BLM lands. Much of the BLM ownership adjacent to state-owned lands is made up of matrix lands, which are included in harvest calculations. The national forest lands have more restrictions, but are often within federal allowable harvest areas.

Most of the scattered, more remote lands are good candidates for land exchanges, especially with the federal agencies. Although significant effort has been made to exchange scattered lands and consolidate state forest lands into larger blocks, only a few small exchanges have occurred. Much of the effort has been directed at exchanging lands with both BLM and the Forest Service, since land managed by these federal agencies surrounds the scattered state forest lands. In exchange, the state would acquire parcels of federal lands within the acquisition area identified in the Southwest Oregon Land Exchange Plan.

Specific Resources

Additional details on mandates and policies for specific resources may be found in Appendix D.

Agriculture and Grazing

Farming and grazing took place historically on some Southwest Oregon state forest lands, and some land under a power line right-of-way has been leased for Christmas tree growing. Generally, the terrain and soil types are not suitable for growing agricultural crops. Currently there is no authorized agricultural or grazing use on Southwest Oregon state forest lands, and none is anticipated.

Air Quality

Two activities on Southwest Oregon state forests can affect air quality: prescribed fire and wildfire. Slash disposal by burning is carried out on a small portion of state forest operations. Prescribed burning is used on state forest lands when it will result in a significant increase in reforestation success. Prescribed fire might be used where there is lack of sufficient planting spots due to slash, or where fire would inhibit competing vegetation. Good planning for a prescribed burn is a must in order that the complex issues (including air quality) are addressed. Past burning on state forest land has had minimal impacts on air quality in southwest Oregon.

There have only been three significant wildfires in the Southwest Oregon District from 1963 through 1999. All three fires occurred in 1987-1988. Collectively, the fires burned 1,000 acres of state-owned forest land. Air quality impacts from wildfire are unpredictable and not controllable except through fire prevention efforts.

National standards regulate both total suspended particles in smoke, and particulate matter small enough (10 microns and less in size) to be carried deep into the lungs where it can cause serious health problems. Because of improvements in air quality, Grants Pass was recently removed from the list of non-attainment areas for particulate matter. Particulate matter in the Grants Pass airshed is largely produced by wood stoves. Wildfires and prescribed burning also produce particulate matter.

A second set of standards, the Prevention of Significant Deterioration (PSD) standards, determine the maximum amount that pollutants may exceed 1977/1978 baseline levels. This program classifies areas into three classes, depending on air quality. Class I areas within the region include Crater Lake National Park and some federal lands classified as wilderness, and have the strictest regulations. Most land within the region is Class II. There are no Class III areas in the vicinity of state forest lands in southwestern Oregon.

Aquatic and Riparian Resources

As described above under "Watersheds" (page 2-12), the Southwest Oregon state forests are located within the Rogue and Umpqua drainage basins. State forest lands represent only a small percentage of any one basin.

Aquatic and riparian resources are intimately influenced by forest management activities. Forest management activities on state forest lands have been conducted to meet or exceed the requirements of the Forest Practices Act and its various revisions since 1971 (see Appendix D for a summary of Forest Practices Act changes). Therefore, activities on state forest lands have been increasingly sensitive to effects on aquatic and riparian resources and their importance to aquatic and terrestrial wildlife.

Riparian zones on most state forest lands are in fairly good condition as far as water quality, vegetative cover, and stream banks are concerned. Other elements, such as large woody debris, stream structure, snags, and large conifer trees within the aquatic and riparian zones may be in need of improvement. In part this is being accomplished through time, as existing trees become larger and areas of excessive hardwood stands are replaced with more conifer.

Cultural Resources

Cultural resources are objects, structures or sites used by people in the past, whether thousands of years ago or during recent history. They are fragile, irreplaceable and nonrenewable resources. Objects that remain undisturbed in their original locations provide the most significant record of past lifeways and cultures in Oregon, including past ecological conditions.

Most cultural sites found so far on Southwest Oregon state forests are related to early logging, farming, railroading, trapping, or mining. Sites that are obviously intact are protected when timber sales and other management activities are planned. Individual artifacts of logging or railroading origin are noted, but may not be protected.

Ditches, presumably to transport water for hydraulic mining, were found on property in T38S, R2W. A Native American camp site is known to exist on or near state-owned land near the Rogue River and within the federal and state Scenic Waterways in T34S, R8W. Amateur collectors heavily used this area for many years before BLM began managing the site under the Scenic Waterways Act. An old, split-rail cedar fence was known to exist on

land in Section 6, T34S, R1W, but mostly disappeared in the 1970s. There were known to be two small log cabins, apparently used for temporary shelter by trappers, miners or others on or near state-owned land in T32S, R3W and in T40S, R5W. Their current condition and status is unknown. There have also been reports of incidental pieces of equipment from logging operations in the early part of the twentieth century. The current location or status of these is unknown. No cultural resource surveys have been conducted on state-owned lands in this district. Surveys have been conducted on nearby federal lands.

Energy and Minerals

The geology of southwestern Oregon is complex and difficult to read. The mineral, oil, and gas potential of the state forest lands is largely unknown. Except for limited areas and certain commodities, the forests remain unexplored for mineral resources. Field studies would be needed throughout the planning area to do a meaningful assessment of these resources. Mineral resources that have been located, especially in the Siskiyou Mountains and Rogue River Valley, include gold, quicksilver (mercury), copper, chrome and nickel.

Several state laws regulate energy and mineral resources on state forests. The Division of State Lands (DSL) has jurisdiction for the leasing of oil, gas, and minerals on state-owned lands. Before a lease is issued, the law directs DSL to consult with the State Department of Geology and Mineral Industries (DOGAMI) and to get concurrence of the state agency responsible for the surface rights of the land involved. Leases are auctioned when more than forty acres are involved. On less than forty acres, leases are handled through negotiations. DSL also administers a prospecting permit system that could eventually lead to applications for leases.

The Department of Forestry does have the right to use gravel, sand, stone, and soil from state forest lands to repair or construct roads or other state facilities without going through DSL. Department of Forestry policies provide guidance on the sale of rock to other forest landowners or contractors for road surfacing, while recognizing the primary need to meet state forest management goals.

DOGAMI collects and publishes mineral resource information, produces geologic maps and archives, and distributes information from other state and federal natural resource agencies. DSL maintains records of mineral leases and mineral prospecting permits, as well as correspondence files that indicate areas of past exploration interest. The Department of Forestry and Department of Transportation have test data on the rock resources in various locations.

Fish and Wildlife

The following briefly summarizes the known current condition of the fish and wildlife resource.

Northern Spotted Owl

Survey work for northern spotted owls began on state lands in 1991. In 1994, state survey teams began working cooperatively with BLM surveyors to more efficiently cover planned operational areas as well as existing owl sites. Spotted owl detections have increased over the last several years, due to better or more extensive surveys, or to an increase in the number of birds present. There are currently threewo active pair sites on state land. One pair site located in 1997 is inactive, as the birds separated without any noted nesting activity, and left the area before the end of the nesting season. Both birds were detected later at different sites (off state land), with new mates and actively nesting. The two active pairs on state land have been present for about 10 years and have produced young in most years.

In recent the years leading up to the 2001 plan approval, up to 34 owl activity centers have beenwere reported on federal and private lands adjacent to state forest lands; today, the number is approximately 60 owl activity centers. Approximately 95 percent of Southwest Oregon state forest land is within 1.3 miles of an owl activity center on adjacent lands.

Marbled Murrelet

The forest lands in this plan are in Marbled Murrelet Recovery Zone 4 (USDI Fish and Wildlife Service 1997). Typically the inland range of the marbled murrelet is considered to be within 50 miles of the ocean. In southwest Oregon, the inland range of the marbled murrelet is less than 50 miles from the ocean, and is restricted to the hemlock/tanoak vegetation zone (plus a 10 km buffer around that zone). Approximately 5,500 acres of Southwest Oregon District lands are currently considered to be within the inland range of the marbled murrelet in Oregon (50 miles from the Pacific Ocean). Of the nine parcels within 50 miles from the ocean, most are open forest types on low site serpentine soils, and do not form closed canopies. A few parcels have large trees and some limbs of sufficient size, but the sites are dry and the limbs have little moss.

The BLM and USFS have conducted many surveys within the mixed conifer/mixed evergreen zone within 50 miles of the southern Oregon coast, with no detections of murrelets (Webb 2000). These agencies contend that the current inland range for the murrelet in Southern Oregon coincides with the eastern boundary of the western hemlock zone, which varies from approximately 10 to 35 miles inland (Franklin and Dyrness 1988). Original USFS and BLM data are being supplemented with additional surveys, and the USFWS will be evaluating this issue in the near future (Folliard 2000). If the USFWS concurs with the assessment of the BLM and USFS, it would likely lead to the inland range of the murrelet being changed in Recovery Zone 4. However, if the boundary is adjusted, the USFS and BLM plan to continue murrelet surveys for management activities up to 6 miles further inland than the adjusted boundary, as a precautionary measure.

Approximately 625 acres of state forest lands are within the southwest Oregon murrelet survey zone. Surveys for murrelets have been conducted in suitable habitat since 2002, however no murrelets have been detected.

Bald Eagle

There are about ~~twenty~~ thirty-five known bald eagle territories~~sites~~ in southwestern Oregon. There is one bald eagle nest on state forest lands near the Rogue River. This nest is one of two used by a pair of bald eagles. The other nest is located about ¼ mile away on BLM land. Two additional bald eagle territories are within one mile of state forest lands.

Peregrine Falcon

Peregrine falcons are not known to nest on Southwest Oregon state lands. There is a known falcon nest site within 0.5 miles of and across the Rogue River from state land near the mouth of Grave Creek. Two other parcels, Kerby Peak and Slick Rock Creek, have rocky outcrops and cliffs that have potential as nest sites. The more likely of these sites, Kerby Peak, has been monitored periodically by BLM and ODFW biologists, but no activity has been observed.

Northern Goshawk

Goshawks are not known to nest on state forest lands in Southwest Oregon, although systematic surveys have not been conducted. Goshawks do nest on federal lands adjacent to state forest land.

Fish

All native salmonid species except chum salmon are present in Southwest Oregon. State-owned lands have a direct influence on eight Type F streams (Cow Creek, Little Bull Run, Windy Creek, McCullough Creek, and Perkins Creek in the Umpqua Basin; Salmon Creek and Coleman Creek in the Rogue Basin; and Yale Creek in the Applegate Basin). The species present in these streams are primarily steelhead and cutthroat trout, with coho likely to be found in Windy Creek. In Southwest Oregon, especially in the Rogue Basin, larger seasonal streams commonly have fish use for spawning and occasionally for rearing, if pools remain in the stream after summer flows cease. Otherwise juvenile fish move downstream to perennial waters during the summer months.

Fisher

Fishers are not known to inhabit any state lands in Southwest Oregon. However, no systematic surveys have been done for this species on these lands. The fisher's range would indicate that it could be found on most state lands within Southwest Oregon. It is likely that the lack of older forest and more complex forest types on these lands limit prey

base, as well as other habitat requirements such as large tree cavities, large down logs, and mistletoe brooms.

Bats

The Townsend's Big-Eared Bat is a species of concern that may be present on Southwest Oregon sate forests. Likely habitat for hibernacula, summer roosting, and maternity/ nursery sites (caves and cave-like structures) are not known to occur on state lands. There are a few man-made mine adits near state land, but their suitability for possible bat use is unknown. Bat boxes were constructed and placed under bridges in two locations on state lands in 1997, but have not been occupied to date.

Amphibians

There are several amphibian species of concern that have ranges within lands under Southwest Oregon District management. No systematic surveys have been done for these species. The foothill yellow-legged and the tailed frog, prefer streams that are perennial and cold. The red-legged frogs prefer ponds or slow moving streams.

The Del Norte and Siskiyou salamanders prefer rock talus slopes within a forested canopy. Small streams comprise the habitat for the southern seep salamander. The clouded salamander prefers loose bark and downed wood. The western toad requires woody debris and slow moving streams.

Western Pond Turtle

Western pond turtles occur over much of Southwest Oregon and are likely on many state lands. They have been observed on a beaver pond in the upper reaches of Windy Creek (washed out during flood events of 1996 and 1997). They are likely to be found on state lands in other beaver pond areas downstream, and in beaver ponds in the Little Bull Run Creek. Western pond turtles are present on state lands associated with the Rogue River.

Forest Health and Biodiversity

Fire, windstorms, people, insects, and diseases constantly disrupt forests, injuring and killing trees and other living things. These disturbances are natural and necessary processes of the forest ecosystem. However, when disturbance causes effects that are more severe and widespread than people consider normal or acceptable, the forest is often described as unhealthy (Campbell and Liegel 1996).

Forest health can be evaluated by measuring key ecosystem processes. It is essential to recognize that ecological conditions are always changing due to normal system variability, such as responses to natural events and human use. Evaluations must determine what level of change indicates a significant forest health trend, within the

context of normal and historical variability. Listed below are forest health issues that may occur in Southwest forests.

Fire History

Historically, fire return intervals ranged from ten to forty years in this region. Native Americans burned forested areas regularly to maintain big game habitat for hunting and for other purposes. Early European-American settlers continued the burning to develop homestead farms and ranches. In the early twentieth century, fire protection efforts increased, and most existing forests in the Southwest Oregon District date from that time. Because of the fire history, few if any stands are as old as 200 years. The district's oldest known forest stands are 130 to 160 years old.

As a result of the fire history, the district's forests have only limited amounts of large down woody debris, and very few older, decayed, down logs. Given the high fire danger that is typical for these forests during the summer, and the increasing risk of accidental fire starts from an increasing population, large amounts of wood on these forest floors may create a significant fire hazard.

Insects and Disease

- **Bark beetles —** In southwestern Oregon, bark beetles such as Western pine beetle, Mountain pine beetle, Turpentine beetle, Douglas-fir bark beetle and the pine engraver beetle are always present in the forest. Most trees that are killed are ponderosa pine and sugar pine. The Douglas-fir bark beetle usually infests windthrown or diseased Douglas-fir trees. When a major windstorm or fire event occurs, the large supply of high quality Douglas-fir breeding logs allows beetle populations to increase tremendously. Unless the large (more than twelve inches in diameter) windthrown Douglas-firs are salvaged rapidly, a bark beetle outbreak can occur when the emerging brood attacks nearby standing green trees. Pine engraver beetles will attack dead or dying trees but can also move to healthy standing trees if populations are high enough.
- **Black Stain Root Disease** Black stain root disease, caused by the fungus *Leptographium wageneri*, was largely unrecognized in the Pacific Northwest before 1969. Since then the disease has been detected in many areas. It occasionally causes severe damage to Douglas-fir. Black stain is transmitted over long distances by spore-carrying bark beetles and weevils. The disease typically appears in small patches. These disease patches are encountered most frequently in areas with severe soil disturbance, in dense stands that have been precommercially thinned, along roads, and in stands with a history of tractor logging (Hansen 1978, Goheen and Hansen 1978). The high frequency of black stain root disease centers in disturbed areas probably reflects insect preference for stressed or injured host trees. Thinning in midsummer, avoiding site and tree damage, and favoring species other than Douglas-fir, can reduce impacts of this disease.

- **White pine blister rust —** White pine blister rust is caused by the fungus *Cronartium ribicola*, which was introduced from Europe into British Columbia in 1910. This disease also affects sugar pine. Special measures such as hazard rating, pruning, and planting resistant seedlings are necessary to ensure the continued presence of sugar pine in the forest.
- **Stem decay —** In old growth stands, decay organisms cause tree death or breakage, creating gaps in the canopy and providing rotten wood and hollow logs for wildlife. In areas with extensive young stands, the main concern may be the lack of decay and defect, and its probable effect on wildlife and ecosystem processes.
- **Dwarf mistletoe —** Different species of dwarf mistletoe may infect the Douglas-fir, western hemlock, sugar pine and ponderosa pine in this area. Height and diameter growth reductions can be large. Tree form is often affected. Bark beetles may attack trees weakened by mistletoe infections.
- **Port Orford cedar root disease —** This disease is caused by a root colonizing fungus *Phytophthora lateralis.* The fungus is spread by spores in water. Trees affected by this disease will die.
- **Noxious weeds —** Noxious weeds are an emerging problem on forest lands. Invading non-native plants compete with native vegetation, and can significantly alter ecosystems. Spotted knapweed, star thistle and gorse are present in some western Oregon forests (Campbell et al. 1997).
- **Animal damage —** Animals that can damage forest trees include black bears, mountain beavers, deer, elk, porcupines, gophers, and river beavers. With many of these animals, damage can be locally severe.

Drought, Freezes, Windthrow, and Other Non-Biological Factors

Severe windstorms, droughts, fires, and freezes can kill many trees. At least several of these events should be expected over the life of a stand. Isolated fragments of conifer stands, which may be set aside for threatened and endangered species, will be particularly susceptible to windthrow. Windfall is minimized when sound trees, free of root disease, are left along cutting lines.

Periodic cold snaps may caused extensive browning of many conifers, but the long-term effects have been generally minor. Low temperatures can also cause top-kill of conifers. Damage from abiotic stresses tend to be greatest when tree genotypes or species are planted which are poorly suited to their local environment.

Plants

The Oregon Natural Heritage Program has provided a list of threatened, endangered, candidate, and rare plant species which have potential to exist on state forest lands. However, this list includes a 50-mile buffer around the lands, and many species listed are

likely to occur only within the buffer area, e.g., those that occur within 100 feet of the ocean beach. The list of likely occupants of district lands is expected to be much shorter. Since Southwest Oregon includes such a diversity of micro-climatic, geologic, and vegetative types, it would be desirable for some regionalization of the list within the plan area.

Recreation and Scenic Resources

State forest lands in the district have light recreational use, mostly hunting during the late summer and fall. There is little fishing on state forest lands since the streams are generally small. The Windy Creek and McCullough Creek blocks receive greater recreational use than the other Southwest Oregon state lands because of the ease of access and proximity to a population center (Glendale). Windy Creek has had a day use park for about 30 years, jointly developed and maintained by Douglas County Parks and the department. This area is located about one-half mile from the end of the paved, county-maintained Windy Creek Road, and was jointly developed and maintained by Douglas County Parks and the district. In recent years the county has operated the park under a special use permit with the Department of Forestry. The county has indicated their intent to discontinue the permit and has let it expire. Much of the use of the park area in the last several years has come from youth parties and there is often associated vandalism, littering and other undesirable activities.

There is a small arboretum combined with a fitness trail located at the Grants Pass unit office. This trail system is currently under development, and has the potential to offer forest interpretation and outdoor education benefits to the local schools and community.

Unregulated shooting and target practice is also closely associated with littering and some vandalism. In 1997 meetings were held with Glendale area residents about development of a shooting range and archery target trails on state forest land. It was hoped that a public organization would develop to lead, monitor and maintain any facilities developed from this effort in cooperation with the department, but that hasn't occurred yet.

Scenic Resources

State forest lands in Southwest Oregon are within view of two Scenic Highways (Interstate 5 and the Redwood Highway) as well as the Wild and Scenic Rogue River. The draft land management classification process has placed the parcels that are affected by the Scenic Rules of the FPA or the Federal or State Scenic Waterways Act or Rules into Special Stewardship Classification. Lands that are outside the areas covered by these rules or acts, but which are subject to prolonged view from the highways or the river are classified Focused Stewardship.

Roads and Access

Access to state forest lands is provided by state highways, county roads, private and state forest roads, and recreational trails. State forest roads are a resource and represent long-term capital investments. They must be maintained in usable condition with minimum impacts on other resources such as water quality, soils, and wildlife.

Recreation trails exist in two locations, London Peak and Kerby Peak. Both trails were constructed or reconstructed and are maintained by BLM under Special Use Permits issued from the Department of Forestry.

Approximately 90 miles of single lane forest roads are located on state-owned forest lands in the Southwest Oregon District. Lands in the Glendale block, which comprise about one-third of the state-owned forest land in the district, are well roaded. Collector spurs and temporary spurs will be needed for future management in this block.

The remainder of the state-owned land is in scattered parcels and is intermixed with private and federal forest lands. There are approximately 15 parcels that do not have reasonable access for management activities. About 6 of these may not need access due to no or limited planned activity. Three or four parcels have access that is in need of reconstruction due to washouts from recent flood events. One or two of these may be addressed by federal agencies.

One deeded county road easement, which is no longer used by the public or maintained by the county, in Section 3, T33S, R6W, is being examined by the county for vacation back to the original landowners (including BOF). This would enhance the ability of the landowners to control, use and maintain this road.

Most roads are built or improved as projects on timber sales. Main access roads are surfaced with rock to provide for all-weather use and to minimize impacts from rainfall and runoff. Secondary spur roads may either be surfaced with rock to reduce erosion potential, or blocked after a timber sale or other forest management activity is completed to minimize disturbance to elk, deer, other wildlife or for other management reasons. The roads are still subject to road maintenance requirements unless they are legally closed or "put to bed" by removing culverts and providing necessary long-term drainage.

Roads that go through federally and privately owned forest land access a significant portion of state forest land. Legal easements or permits are necessary in order to use these roads to haul logs from timber sales. Other non-commercial forest management activities are usually exempted from a permit requirement. Easements may be temporary or permanent, and may allow public use or only the department's employees and contractors.

A survey of all roads on state land has recently been completed. This information is being used to correct inadequate drainage and fish passage situations as well as to identify and correct unstable sites resulting from old road construction. This information will also be

used to develop access needs and to determine road closures and which roads should be abandoned and rehabilitated.

Social and Economic Resources

Intensive forest management activities provide sustainable timber to the marketplace and revenues to schools, counties and local taxing districts, as well as jobs related to various harvesting and processing activities. Special forest products, fish, wildlife, recreation, and scenic values promote regional economic viability.

Harvests from Southwest Oregon District forests represent only a small share of the region's timber harvests, which are dominated by harvests from federal and private forest lands. Similarly, state forests contribute other resources, such as recreation, but overall other ownerships are more significant.

Historically, Southwest Oregon management plans were developed around the timber harvest and revenue production for county taxing districts and the Common School Fund. The flow of timber volume and revenues has fluctuated but has been generally positive since active management began in 1963. There was a major dip in the early 1980's followed by an almost complete halt in 1990 due to concerns about northern spotted owl habitat.

During the past 38 years, the timber harvest has focused on cutting older timber stands. The objective was the harvest of stands over 90 years old within 30 years. This objective was about 50 percent accomplished by 1990. In that year, the Department of Forestry implemented a spotted owl policy that postponed any regeneration harvest within 1.3 miles of owl activity centers. Southwest Oregon District did not sell any regular timber sales from 1990 through 1994. The Department of Forestry modified its spotted owl policy in December 1994, allowing timber harvest in compliance with the 1990 USFWS guidelines for harvest.

Since 1995, commercial thinning of young forest stands has provided limited timber volume and revenues. It is anticipated that operations under this plan ~~and the proposed *Western Oregon State Forests Habitat Conservation Plan* (HCP)~~ will increase timber volume and revenues from state forest lands while concurrently increasing the amount and diversity of habitats available to sustain owls and other species of wildlife, fish and plants.

Soils

All forest resources are dependent upon soil. Besides supporting the growth of plants, soils store and deliver water to streams and lakes. The characteristics of a given soil are influenced by parent materials (rock), time, climate, living organisms, and topography. Forest site productivity depends upon soil depth, porosity, biology, and the availability of plant nutrients. BLM (1975) and the Soil Conservation Service (1979) have mapped most

soils in the planning area. Soils are grouped into associations defined as distinctive patterns of soils, topography and drainage that make up a unique natural landscape.

Upland soils in the western half of the Klamath province are moderately deep reddish-brown silt loam or silty clay loam underlain by silty clay (Franklin and Dyrness 1988). These soils are interspersed with scattered areas of peridotite or serpentine which are shallow and stony, and underproductive for tree growth. There are a variety of valley soils, mostly dark-colored, well-drained silt loam underlain by a silty clay loam subsoil. Poorly drained streamside soils also occur.

In the eastern part of the province, principal upland soils are dry for a long period of the year, and are generally reddish-brown soils with bedrock within 1 meter of the surface (Franklin and Dyrness 1988). The texture tends to be loam underlain by clay loam subsoils. Shallow, gravelly soils of low fertility occur but are less widespread. Soils on flood plains and alluvial fans in the eastern half of the Klamath Mountains province are principally well-drained prairie soils.

Site quality on state forest lands in the planning area varies from 60 to 130 based on 50 year site index. The average for the planning area is believed to be about 95. Areas with Site Indexes lower than 60 are classed as incapable of forest production. Forest stands range from being relatively windfirm to being highly susceptible to windthrow, depending on steepness of slope and soil depth. On dry sites or steep and precipitous slopes, reforestation may be difficult. Harvesting and silvicultural systems must be thoughtfully designed and implemented to ensure the long-term productivity of these sites. Organic material and duff are particularly important to the stability and productivity of forest soils. Controlling wildfires and carefully managing prescribed fires as well as carefully planning harvest systems are critical for preserving these organic materials.

Background Information

Site class is a measure of an area's relative capacity for producing timber or other vegetation. It is measured through the site index. The site index is expressed as the height of the tallest trees in a stand at an index age (King 1966). In this document, the age of 50 years is used. The 5 site classes are defined below.

Site class I – 135 feet and up
Site class II – 115-134 feet
Site class III – 95-114 feet
Site class IV – 75-94 feet
Site class V – below 75 feet

Erosion

Landslides are the dominant erosional processes in the steep terrain of the Klamath Mountains. Debris slides are the most common type of slide, and can originate in headwalls or elsewhere on over-steep mountain slopes. A significant portion of these

forest lands has an inherent, relatively high risk of slope movement. The most significant slides related to forest management occur because of road maintenance problems and legacy roads. Legacy conditions result from historical logging practices, especially old (sometimes abandoned) hauling and skid roads that were built before the current rules were adopted, and before there was a good understanding of the causes of slope failure.

Landslide monitoring occurs through the Forest Practices Landslide Reporting process. This information can be effectively used to identify problems and investigate causes. This program does not monitor background levels of slope movement that occur in the absence of management activities.

A study conducted by the Department of Forestry on landslides from the 1996 storm events have found that landslides have a higher occurrence in the 9 or 10 years following clear-cut harvesting as compared to mature forest stands. Stands of 10 to 100 years in age have a lower occurrence than mature forests. This same study showed that slides from recent road construction was relatively low, and those slides that did occur from roads were smaller.

General observation of Southwest Oregon state lands would indicate that slide occurrence is much lower than would be expected for this region. This might be due to more careful control of road construction and harvesting activities on state lands and/or the relatively low amount of "high risk sites" that is present on these lands. Over the last 25 years there have been very few landslides associated with state lands, and most were small. Two larger debris flows that were associated with state land occurred in the 1996 storm events, originated from other ownership, and came onto state ownership.

A survey of all roads on state land has recently been completed, and will be used to identify and correct unstable sites resulting from old road construction. (See information in the "Roads and Access" subsection above.)

Special Forest Products

The special forest products program in the Southwest Oregon District is very small. Most permits that have been issued are for firewood and beargrass, but occasional permits have been issued for pit-run rock, cedar boughs, various brush and fern species, mushrooms, and burls.

Firewood cutting falls into two categories: commercial and personal use. Generally, standing hardwood (madrone and chinquapin) and decks of high quality hardwood logs are made available to commercial operators. They are generally better able to handle the scope and difficulty of the project. This is also a more cost-effective way to market this material. Personal use cutters usually do not have the equipment needed to extract material which is not close to road access, and are not able to move large amounts of material in the time frame available. Personal use permits are normally issued on an "as available" and "first come" basis for landing piles which are close to access and do not fit the needs of the

commercial wood cutter. Additionally, since personal use wood cutters do not have the equipment to be a "fire safe" operation, these permits are not available during high fire danger periods (fire season). This creates a timing problem when many landing piles are not on all weather roads and often get too wet to allow access after the fire danger passes.

Timber

Harvesting and associated management activities have been occurring on Southwest Oregon state forest lands since 1960. Many of the Board of Forestry stands that were received by the state were either poorly or moderately stocked to conifer, and had abundant stocking of hardwood species (due to previous cutting and minimal reforestation). Most young stands (less than 40 years old) today are either adequately or over-stocked with conifer, and have minor components of hardwood species.

Common School forest lands in 1960 were unharvested and had limited or no access. These lands were often remote and/or of low site quality. Currently, approximately 44% of the Common School lands are in well-stocked young stands, and much of it has developed access.

Table 2-3. Timber Volume and Value from Board of Forestry Lands and Common School Forest Lands FY 1988-1998

BOFL MBF	BOFL Value	CSFL MBF	CSFL Value
2,861	$490,794	15,356	$2,891,336

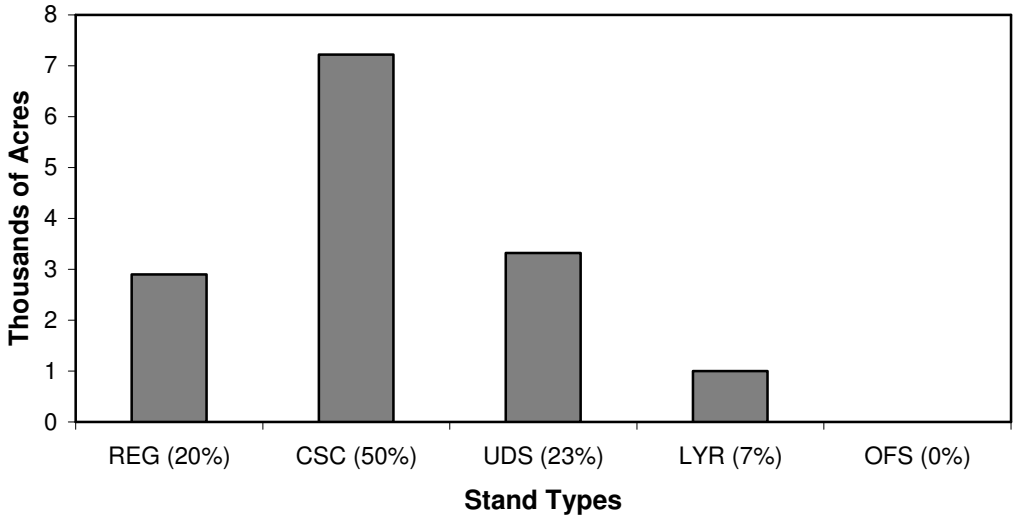
Forest Stand Types: Current Condition

The current stand condition for Southwest Oregon District is displayed below, showing the current age distribution (Table 2-4), and stand structure, acreage, and percentage (Figure 2-1), using the structure-based management definitions for structure types. Table 2-5 gives the standing volume summary.

Table 2-4. Average Stand Age Distribution

Age Ranges	0-35	36-75	76-125	126+
Acres	2,619	4,822	2,929	3,534

Figure 2-1. Current Stand Structure, by Acres and Percent



Common School lands contain more regeneration stand types, older-age stands, lower site productivity, and species diversity than do Board of Forestry lands.

Table 2-5. Size Class and MMBF Summary of Southwest Oregon Stands

Size Class	Acres*	MMBF 6”-12” dbh	MMBF 12”-16” dbh	MMBF 16”+ dbh	Net MMBF
0”-.5” reprod	23	0	0	0	0
.5” – 5” saplings	1,352	.56	0	0	.56
5”-8” premerch poles	2,660	2.87	0	0	2.77
8”-16” thinning size	7,079	85.59	13.78	0	99.37
16”-23” medium sawtimber	5,047	47.67	60.47	33.03	141.16
23”-75” large sawtimber	1,350	6.10	10.93	47.31	64.33
Totals	17,511	142.79	85.18	80.34	308.19

*Silviculturally capable lands
Data from 1998 Inventory (Forest Biometrics FPS 5.3b)

Water Quality

Water quality in the Southwest Oregon planning area is managed for industrial water supply, irrigation, livestock watering, anadromous fish passage, salmonid fish rearing and spawning, resident fish and aquatic life, wildlife and hunting, fishing, boating, water-contact recreation, and aesthetic quality.

The following rivers and streams that flow through or downstream from state forest lands are currently designated as water quality limited under the federal Clean Water Act (see Appendix D for more information on this Act): Windy Creek, Cow Creek, Coyote Creek, Salt Creek, Quartz Creek, Hog Creek, Elk Creek, Rogue River, and Coleman Creek. It is likely that high summer water temperatures are the limiting quality on all these streams. This may be an historical condition for streams in Southwestern Oregon and unrelated to current forest management practices.

Water temperatures are an important limiting factor for fish species. A rolling seven-day mean maximum temperature of 64° F is the standard limit for streams that do not have bull trout populations.

Water Supply

Many streams associated with Southwest Oregon state lands have permitted downstream water users. Most of these are considerable distance downstream from state land. There are less than a half dozen permitted water users that take water from or near state lands. All of these users are documented and an inventory will be maintained so that state forest operations can be tailored to protect the permitted water user. Efforts to get unpermitted uses either in compliance or removed from state forest land should continue as they are discovered.

Wetlands

There are no known “significant wetlands” (8+ acres) on Southwest Oregon state lands as defined in the Forest Practices Act. Smaller wetlands are not now inventoried.