

To: Ross Holloway, State Forest Program Director
Mike Bordelon, Northwest Oregon Area Director
Dan Shults, Southern Oregon Area Director

From: Roy Woo, Acting State Forester

CC: NWOA and SOA District Foresters

Date: 03/10/03

Re: District Implementation Plan and Forest Land Management Classification
Approval

The Board of Forestry adopted the *Northwest Oregon and Southwest Oregon State Forests Management Plans (FMPs)* in January 2001. Each plan included direction for the development of "implementation plans that describe the management approaches and activities each district in the planning area will pursue in order to carry out" the plans.

Districts developed draft Implementation Plans (IPs) and made them available for a 90-day public comment period from June 12 to September 14, 2001. Jim Brown reviewed the initial recommended IPs and the *Resolution Team Report for Implementation Plan Comments*. Jim Brown required the recommended implementation plans (dated May 2001) be modified before receiving final State Forester approval.

The final IPs I am approving incorporate the State Foresters recommended modifications outlined in the memo in July 2002, "Direction to Modify IPs1.doc", and the following modifications resulting from public comment and Board of Forestry discussion on March 5, 2003. The "Current Stand Structure" chart on page 14 of the Astoria District IP has been modified to reflect updated data. The West Oregon District and Western Lane District IPs have been modified to include the projected timeline for reaching the desired future condition. This is consistent with the FMPs requirement that states "The State Forester shall approve, modify, or deny the recommended implementation plans. If the State Forester modifies a recommended plan, the modifications will be incorporated into the original plan and appropriate revisions made to land management classifications."

My approval of this document individually approves the district implementation plans included in this document. As such, revisions to individual IPs will not require review and re-approval of other IPs included in this package.

Forest Land Management Classification (FLMC)

The districts' initial draft of the forest land management classification was completed and subject to public review in accordance with OAR 629-035-0050. The final FLMC district maps I am approving have incorporated public comment where appropriate and the previous State Forester's recommended modifications.

I am approving the final IPs for Astoria, Forest Grove, Tillamook, Clackamas-Marion (Cascades), West Oregon, Western Lane and Southwest Oregon Districts, and the final FLMC maps for those districts. I am directing the State Forests Program Director and the Area Directors for Northwest and Southern Oregon Area to carry out the projects and plans described in the later sections of the IP notebook.

Roy Woo, Acting State Forester

Date



Southwest Oregon District

Implementation Plan

March 2003

This implementation plan describes the management approaches and activities that Southwest Oregon District will pursue in order to carry out the *Southwest Oregon State Forest Management Plan* and the draft *Western Oregon State Forests Habitat Conservation Plan (HCP)*. Prior to completion and approval of a HCP and issuance of an Incidental Take Permit for covered species, ODF will continue to apply “take avoidance” strategies for listed species as the forest management plan is implemented, to assure compliance with state and federal Endangered Species Acts.

The *Southwest Oregon District Implementation Plan* (and earlier drafts) guide forest management for all forest resources on Southwest Oregon District from July 1, 2001 through June 30, 2011.

The main headings in this plan are listed below. A detailed table of contents begins on the next page.

District Overview _____	4
Management Activities _____	19
Landscape Design Overview _____	38
Management Basins _____	41
Expected Outputs and Habitat Achievements _____	48
Appendix A. Determining Levels of Harvest and Other Silvicultural Activities _____	51
Appendix B. References _____	60
Map Section _____	62

District Overview	4
Land Ownership	4
Land Management Classification System	4
History	6
Physical Elements	7
Geology and Soils	7
Topography	7
Water	7
Climate	7
Natural Disturbance	8
Biological Elements	8
Vegetation	8
Insects and Disease	9
Fish and Wildlife	11
Human Uses	12
Forest Management	12
Roads	12
Recreation	15
Scenic Resources	16
Management Activities	19
Current Condition Analysis	19
Stand Structures Interaction	19
Hardwoods	20
Regeneration	21
Closed Single Canopy	21
Understory	21
Layered	23
Older Forest Structure	23
Non-Silviculturally Capable	24
Management Activities in Each Stand Type	24
Regeneration Stands	24
Closed Single Canopy Stands	25
Understory Stands	26
Layered Stands	27
Older Forest Structure	28
Proposed Management Activities	28
Silvicultural Activities	28
Roads	29
Recreation	31
Aquatic Resources: Stream Enhancement Projects	32
Cultural Resources	32
Energy and Mineral Resources	33
Lands and Access	34
Scenic Resources	34
Special Forest Products	37

Landscape Design Overview	38
Management Basins	41
Management Basin Overview	41
Basin Descriptions	41
Umpqua	41
Rogue	44
Information Summary for All Management Basins	47
Expected Outputs and Habitat Achievements	48
Appendix A	51
Determining Levels of Harvest and Other Silvicultural Activities	51
Appendix B	60
References	60
Map Section	62

District Overview

Land Ownership

The Southwest Oregon District manages a total of 18,091 acres of state forest lands. These lands are scattered over four counties and extend north and south from Canyonville, Oregon to the California border and east and west from the foothills of the Cascades to a few miles from the Pacific Coast. The majority of the acres are in Douglas and Josephine counties. The acreage breakdown by county is shown in Table 8-1 below.

The 9,339 acres of Board of Forestry (BOF) lands within the district are located in southern Douglas and northern Josephine counties. These lands represent 52 percent of the acreage in the Southwest Oregon District. The majority of the Board of Forestry lands are consolidated north of Glendale in the Windy Creek and McCullough Creek drainages. The remaining 48 percent of the district, or 8,752 acres, are Common School Land (CSL) parcels located in all four counties.

State forest lands in the Southwest Oregon District comprise approximately 1 percent of the forested landscape in the district. The Bureau of Land Management (BLM) and the United States Forest Service (USFS) manages more than 50 percent of the forests in the district. The remainder of the district is comprised of privately owned industrial forest lands and to a lesser degree privately owned non-industrial forest lands.

Table 8-1. Southwest Oregon District Acres, by County and Ownership

County	Board of Forestry	Common School	Total Acres
Curry	0	604	604
Douglas	6,865	1,269	8,134
Jackson	0	2,049	2,049
Josephine	2,474	4,830	7,304
Total Acres	9,339	8,752	18,091

Land Management Classification System

The Southwest Oregon District's Land Management Classification System (LMCS) acreage breakdown is shown in Tables 8-2 and 8-3. Table 8-2 shows the classified acres in each of the three stewardship classes. Table 8-3 shows the acres in both the Focused Stewardship and Special Stewardship subclasses.

The LMCS includes some overlapping classifications, defined as areas where two or more classifications occur on the same parcel of land. Overlap may occur within classifications or between classifications. For example, the subclasses of Aquatic and Riparian Habitat, and

Visual, can occur at the same point on the landscape. Where overlaps occur between classifications, the resource requiring the highest level of protection will determine the management approach. Also, overlapping classifications cause the double counting of acres. As a result, if the acres shown in the tables below were totaled, the total would be greater than the actual number of acres in the district. Table 8-1 above shows the actual acres in the district.

Table 8-2. Southwest Oregon District Acres, by Stewardship Class and Fund

Classification	BOF	CSL	Total Acres
Special Stewardship	1,356	1,642	2,998
Focused Stewardship	13,202	11,994	25,196
General Stewardship	659	1,375	2,034

Table 8-3. Southwest Oregon District Acres, Focused and Special Stewardship Subclasses

	Focused	Special
Administrative Sites	0	2
Aquatic and Riparian Habitat	3,940	1,023
Cultural Resources	1	1
Deeds	0	0
Domestic Water Use	9	0
Easements	0	0
Energy and Minerals	0	11
Operationally Limited	N/A	1,205
Plants	1,293	0
Recreation	35	12
Research/Monitoring	21	0
Transmission	0	154
Visual	2,431	223
Wildlife Habitat	17,466	367

History

(Excerpts from the *Southwest Oregon State Forest Management Plan* pages 1-4 through 1-9)

The forest lands in the Southwest Oregon District have a long history including the presence of fire and human activity. Prior to the first human inhabitants, natural lightening caused fire return intervals ranged from ten to forty years. Upon the arrival of human inhabitants, Native Americans and European-American settlers frequently burned the valleys and hillsides to clear the ground for hunting and agriculture. Many of these land clearing fires spread into the mountains where natural lightning fires also burned. Both the vegetation and the wildlife became accustomed to the presence of frequent low intensity fire that often spared mature trees. Low intensity fires were interspersed with hotter, high intensity stand replacing fires, creating a mosaic of diverse stands across the landscape.

The use of fire continued up until the early twentieth century when fires became a threat to the developing region. Many of the Southwest Oregon District state forests originated about the time that fire protection increased. During this century, fire suppression and prevention has become so effective that it has transformed the forests. Fires are much less frequent and less widespread, forest fuels have built up and shade tolerant, fire prone plant species have proliferated. When fires do occur, they are much more likely to be very intense and stand replacing. The 1987 and 2002 fire seasons will long live in the memories of regional residents in which many acres of forest were consumed by fire.

Because of this fire history, there is less down woody debris on Southwest Oregon forests than in the Northwest Oregon forests, particularly in late decay classes. The fire history also shaped the diverse species distribution across the district. Stand replacing fires and the absence of reforestation resulted in the development of pure hardwood stands. Large, remnant, old trees which survived from past fires can be found scattered throughout the district.

The Southwest Oregon District landbase has various origins prior to being managed by the Oregon Department of Forestry. Some of the Common School Lands in the Southwest Oregon District are the original lands given at statehood to support the Common School Fund. These lands are located in the 16th and 36th sections of certain townships. A portion of the Southwest Oregon District was tax-delinquent land that the counties transferred to the state for management in the 1930s and 1940s. Other lands came into state management through purchase or donation from private land owners. In 1944, the Windy Creek property along with some other parcels, approximately 3,600 acres, were deeded by the landowner directly to the Board of Forestry. State forests near Glendale have a history of railroad and truck logging. Old skid roads in this area reveal tractor logging on very steep slopes. Evidence of mining also exists on state forest land.

Physical Elements

(Excerpts from the *Southwest Oregon State Forest Management Plan* pages 1-4 through 1-5)

Geology and Soils

The Southwest Oregon District is considered part of the Klamath Mountains physiographic province. The underlying geology is made up of exotic terranes that were once parts of ocean crust or islands. The land was formed from complex folds, intrusions, and islands of many different metamorphosed, sedimentary, and volcanic rocks of different ages. These rocks were welded to the mainland by granitic intrusives before being rotated as a block into their current position. The various parent rock produced a wide variety of soils which are a primary influence over the diverse plant communities in the region. The soils are mostly very stable, even on steeper slopes, and very little is highly erosive. Some of the poorer soils are subject to developing a deep surface ravel if they are subjected to heavy disturbance.

Topography

State forest land is mountainous, with little land in the valley floors. Elevation is the second primary influence over plant communities in the region due to the fact that precipitation increases and average temperature decreases with an increase in elevation. Most of the land is at elevations ranging from 2,000 to 4,000 feet in the Siskiyou Mountains, the west slopes of the Cascades, or the Coast Range. Less than 2,000 acres are at higher or lower elevations. Slopes range from 20 to 80 percent with the majority of the district at 40 to 60 percent.

Water

State forest lands are located almost equally in either the Cow Creek portion of the Umpqua River drainage or the Rogue River drainage, including the Illinois and Applegate River sub-drainages. Major streams include Cow Creek, Little Bull Run, Windy Creek, McCullough Creek, and Perkins Creek in the Umpqua drainage; and the Rogue River, Salmon Creek, Hog Creek, Woodcock Creek, Althouse Creek, Coleman Creek, Steve's Fork of Carberry Creek, and Yale Creek in the Rogue drainage.

Climate

Climate fluctuations over the last several thousand years allowed migrations of plants from both warmer (California and the Sierra Mountains) and cooler climates (Northern Oregon). There was little glaciation in this province, and it served as a refuge for migrant species during glacial periods. "Climate ranges from cool and moist in the coastal regions to hot and dry in the interior valleys, which are the driest locales west of the Cascade Range" (Franklin et al., 1969). Southwest Oregon can be described as having a Mediterranean climate, which is characterized by seasonal temperature extremes and a prolonged dry season. Summer brings high fire occurrence and intensity while the winter months contribute the majority of the precipitation. The greatest limiting factor to plant growth and survival is precipitation.

Natural Disturbance

The primary agents of natural disturbance in the Southwest Oregon District include drought, insects, disease, and fire. However, isolated natural events involving wind, floods, and landslides have also been recorded. As mentioned in the **History** portion of the **District Overview** section, and the **Climate** portion of the **Physical Elements** section, and will be expanded in the **Insects and Disease** portion of the **Biological Elements** section, a complex relationship exists in Southwest Oregon between climate, natural pathogens, and fire. Prior to the widespread suppression of wildfires, the region would experience frequent fire interval, low intensity fires which would periodically reduce both ladder and surface fuel accumulations. Presently, due to the highly successful fire suppression methods over the previous century, a transformation of the forest has occurred decreasing the fire return interval and increasing the fire intensity. This transformation has also affected the biological occupants of the forests in Southwest Oregon. As for wind, floods, and landslides, the net effect of these events is to contribute additional large woody debris to the landscape and potentially riparian areas depending on the location of the disturbance.

Biological Elements

Vegetation

“Floristically the region combines elements of the Californian north coast and Eastern Oregon floras, with a large number of species indigenous only to the Klamath Mountains region. The environmental and floristic diversity combines with a long history of pre historic and historic disturbances, primarily by fire, to produce an extremely varied array of communities. The major Southwest Oregon tree species can be arranged in relation to tolerance of moisture stress. [Vegetation zones are generally distinguished]... along the moisture and temperature gradients (which are broadly correlated with elevation) based on [tolerance of moisture stress] and the relative shade tolerance of the species. The ‘zonal’ outline [for Southwest Oregon District state forest land] is as follows: Interior Valley Zone [Pine-Oak-Douglas-fir], Mixed-Evergreen Zone [Douglas-fir-Madrone], Mixed-Conifer Zone [Douglas-fir-Pine-Incense Cedar-Fir], *Abies concolor* zone [White Fir], and the *Abies magnifica* zone [Shasta Red Fir].” (Franklin et al., 1969)

As indicated above, forests consist of a mixture of evergreen conifers dominated by Douglas-fir, mixed with drought-resistant hardwoods such as Pacific Madrone and Golden Chinquapin. Ponderosa Pine may be dominant on some drier, southern aspects. Most Douglas-fir-dominated sites also have significant conifer populations of Sugar pine, Incense Cedar, and Grand Fir, as well as hardwood populations of Tanoak and Canyon Live Oak. Red Alder, Black Cottonwood, Oregon Ash, Willows, and Pacific Yew are common along stream courses and wet areas.

A variety of other trees may also be present on state forest land under special circumstances. Jeffrey Pine is found primarily on sites with serpentine soils while Port Orford Cedar may be found on moister serpentine sites. At higher elevations, Knobcone Pine pioneers after fire and then transitions into a Douglas-fir and True Fir forest and at elevations above 6,000 feet healthy populations of Shasta Red Fir can be found. Western Hemlock is found on north

slopes in the northern portions of the district and Brewer's Weeping Spruce is located in a very small, high elevation area south of Grants Pass. White Alder is found in isolated moist areas and Oregon Myrtle may be found on the westernmost parcels. Brush fields of evergreen chaparral are abundant in the mixed-evergreen zone. Typical shrubs are Manzanita, Canyon Live Oak, Ceanothus, and Poison Oak.

The Southwest Oregon District has good, native on-site seed sources for the variety of species noted above. The district's small scale and the large variety of species make tree improvement and seed orchard programs impractical; therefore conservation of these genetic resources through conservation of the current species diversity is important.

"There are 100 plant species officially designated as noxious weeds in Oregon. By definition, they include plants that are injurious to public health, agriculture, recreation, wildlife or any public or private property. In addition, some have become so thoroughly established and are spreading so rapidly on public or private land that they have been declared to be a menace to public welfare. The Oregon Department of Agriculture has established a quarantine to cut down the number of noxious weeds in the state. Simply put, it is against the law to sell, offer to sell, purchase, or transport plants on Oregon's noxious weed list. The State Weed Board follows strict criteria for determining which weeds are noxious. They examine whether the plant species is causing or has the potential to cause severe production losses to agriculture or horticulture industries of the state. Or perhaps it is endangering native flora and fauna by its encroachment, or hampering the full use and enjoyment of recreation areas. Sometimes the noxious weed is poisonous or harmful to humans or other animals. There are several levels of control for plants listed as noxious weeds. The A-list of noxious weeds includes species not known to be established in Oregon or those currently restricted to small areas of the state. These weeds are subject to immediate action if detected early enough to contain or eradicate them. The B-list of noxious weeds may not require immediate action, although their rates of infestation are a concern. On the T-list are plant species targeted for the highest priority control action. They include scotch broom, gorse, and thistle in the Southwest Oregon District, among others throughout Oregon." (OSU Extension, 2003)

Insects and Disease

Insect and disease activity in Southwest Oregon rarely reaches epidemic levels due to the variety of plant species and communities and the frequent occurrence of fire. However, prolonged drought, increased fire intensity and size, and the reduction of post fire salvage may contribute to increases in insect activity. Progressive increases in mortality of Douglas-fir and Pine species have been noticed over the past several years due to bark beetle activity.

Insects currently causing mortality in Southwest Oregon, but not currently on state forest land, include the Fir Engraver in True Firs, the Douglas-fir bark beetle in Douglas-fir, the Pine bark beetle in Ponderosa Pine, and the Mountain Pine bark beetle in Sugar Pine. Bark beetles are attracted to weak or dying trees as a result of drought, fire, or damage. Larvae bark beetles cause mortality by eating the cambium and girdling the tree. The primary means of controlling bark beetle populations is to remove infested trees prior to the emergence of young adults in the spring.

Dwarf Mistletoe is a parasitic plant which grows in the branches of Douglas-fir and True Fir in the Coleman Creek area of the Southwest Oregon District. Previous partial cutting in this area removed the healthy trees and retained the diseased trees. Once exposed to full sunlight, Dwarf Mistletoe rapidly spread throughout the retained trees crowns and to young trees growing within 100 feet of the diseased host tree. This disease prevents the proper growth and development of both older and younger trees by causing “witches brooms.” These brooms rob the tree of essential nutrients and can render the tree susceptible to bark beetle outbreaks. The primary means of controlling Dwarf Mistletoe is to remove diseased trees and reforest with non-host species (i.e. Pines and Incense Cedar).

White Pine Blister Rust is an introduced pathogen which attacks five needled pines. Sugar Pine, Western White Pine and Whitebark Pine are the five needled pines in Southwest Oregon susceptible to this disease. White Pine Blister Rust generally attacks younger pines in the lower branches. The infection then spreads from the infected branch to the main stem and girdles the tree causing mortality. While there is no absolute treatment to prevent infection, two methods seem promising. First, White Pine Blister Rust resistant seedlings are available which promise an 80 percent or greater likelihood of survival. The second method is to prevent the transfer of the disease to the tree by removing (i.e. pruning) the lower limbs as soon as the tree is tall enough to grow and survive without them. Both methods are still experimental with unknown results but the alternative of managing future forests without these species is unacceptable.

“Port Orford Cedar Root Rot is currently known to exist in the Cave Junction area of the Southwest Oregon District and currently is untreatable. Port Orford Cedar is found mainly along streamsides, bogs, and other wet areas. Port Orford Cedar can be also be found on sideslopes and at higher elevations. Port Orford Cedar Root Rot does not appear to be spreading as rapidly in these drier areas. Port Orford Cedar Root Rot is a root colonizing organism that spreads via living spores in water and also via more durable long lasting spores, which reside in the soil. When soil which is infected with these spores is transported in mud on vehicle tires, boots, mountain bikes, logging trucks and equipment, and other off road vehicles to areas that are not infected, the disease can then establish itself and colonize any Port Orford Cedar roots which it comes into contact with. If the disease infects Port Orford Cedar along streams, rivers, or any open body of water, the disease spreads rapidly to other Port Orford Cedar downstream and within contact with that body of water. Therefore, the primary means of preventing infection of Port Orford Cedars is preventing the spread of the pathogen. Operational seasons are limited to the dry season and equipment is required to be cleaned before entering uninfected areas and when leaving infected areas. Signs have been posted on travel routes through Port Orford Cedar stands and on gates which are closed for Port Orford Cedar protection. Roads that access areas that are disease free are being closed year round with gates to lessen the risk of introduction of the disease. Roads with little or no infection of Port Orford Cedar next to the roadway are being cleared of Port Orford Cedar to prevent establishment of the disease in trees next to the roadway. It is hoped that this will prevent spread of the disease downslope and downstream from Port Orford Cedar stands directly adjacent to roads.” (USFS, 2003)

Currently, there are no reported cases of Sudden Oak Death in the Southwest Oregon District. No management constraints are anticipated in the district because of this disease.

Currently, Swiss Needle Cast has not been discovered within the Southwest Oregon District. No management constraints are anticipated in the district because of this disease.

Fish and Wildlife

The Southwest Oregon District is comprised of a variety of habitat types that support many species of mammals, birds, amphibians, reptiles, and fish. The integrated forest management strategies, as well as the aquatic and riparian strategies, detailed in Chapter 4 of the *Southwest Oregon State Forest Management Plan*, will contribute to diverse habitats that are likely to accommodate most native fish and wildlife species and contribute to the maintenance and restoration of biodiversity.

Of the many wildlife species potentially found on the Southwest Oregon District, four are listed as threatened or endangered under either (or both) federal and state Endangered Species Acts: the northern spotted owl, marbled murrelet, bald eagle, and peregrine falcon. The presence of three of these species (northern spotted owl, bald eagle, and the peregrine falcon) has been confirmed on the Southwest Oregon District.

The Southwest Oregon District has conducted a northern spotted owl survey program since 1990. Currently, there are 32 known spotted owl sites and 39 other spotted owl sites not currently being surveyed by the Oregon Department of Forestry. Of the 32 known sites, 29 are occupied by pairs and the remaining three sites are either resident singles or unknown status. According to current survey data, approximately 70 percent, or 12,708 acres of state forest land, is within 1.3 miles of an owl activity center, although only three spotted owl activity center core areas are located on state forest land.

Marbled murrelet surveys have been conducted on this district since 2000 on the portion of the district most likely to be occupied by murrelets due to proximity to the ocean and habitat composition. No murrelet detections have been made to date. All marbled murrelet surveys are conducted in accordance with the Pacific Seabird Group survey protocol, explained in the *Methods for Surveying for Marbled Murrelets in Forests: A Revised Protocol for Land Management and Research*. Pacific Seabird Group (Pacific Seabird Group, 2003).

Bald eagles have been observed on the district, and there are currently two known nest sites on state forest land along the Rogue River.

Peregrine falcons have been observed on the district and two nest sites are within one mile of state forest land.

State forest lands have a direct influence on approximately 11.4 miles of Type F streams. Native salmonid species that have been confirmed in the Southwest Oregon District include Chinook Salmon, Coho Salmon, Steelhead Trout, and Coastal Cutthroat Trout. The primary fish species present in the streams on state forest land are Steelhead and Cutthroat Trout, with a high probability of Coho Salmon occurring in Windy Creek. In the Rogue Basin, larger seasonal streams commonly have fish use for spawning and rearing if pools remain in the stream after spring flows cease.

Human Uses

Forest Management

Over the past 40 years, forest management has been directed primarily toward the commercial growing and harvesting of trees to provide forest products and revenues for the Common School Fund, counties, and local taxing districts. In the 1960s and 1970s, a combination of diameter limit harvests and marked partial cutting were the primary focus of state forest management. These harvests resulted in both well stocked even aged and poorly stocked uneven aged conifer forests. In the mid 1970s, the confidence increased in reforestation success and as a result, forest management focused on clearcutting. Clearcut harvests occurred in some of the under-productive stands and mature stands not logged in previous decades, resulting primarily in well-stocked mixed conifer plantations. From 1996 through 2000, commercial thinning operations averaged less than 300 acres per year. From 2001 to the present, the amount of commercial thinning over the entire district has gradually decreased to approximately 250 acres per year.

The Southwest Oregon District has always had a very small harvest level. Earlier forest plans (which included combined plans for both the Elliott State Forest and Southwest Oregon) called for a clearcut harvest of about 130 acres per year. The main objective was to achieve sustained yield for Southern Oregon Area forests. As a result, most stands over 90 years old were planned to be clearcut harvested within 30 years. This objective was about 50 percent accomplished by 1990 when the Oregon Department of Forestry implemented a northern spotted owl policy that postponed any clearcut harvest within 1.3 miles of owl activity centers. In December 1994 the Oregon Department of Forestry modified its policy to allow commercial forest operations in accordance with the 1990 United States Fish and Wildlife Service *The Procedures Leading to ESA Compliance for the Northern Spotted Owl* (USFWS 1990).

Cone collection is the primary means for maintaining an adequate seed bank for the variety of tree species found on the district. This collected seed is then propagated to reforest clearcut acres and interplant and underplant lower stocked areas. From the mid-1970s to the present, most planted stands in the district have had a moderate to high survival rate and have been pre-commercially thinned to reduce stand density. Pre-commercial thinning has also been used to reduce the effects of competing vegetation in young stands. Some pruning has taken place on the district but was discontinued due to the high cost.

Roads

The district's primary road network is an established system that has been in place for 30 to 40 years. It provides access for forest management activities, fire suppression, and public travel.

In general, the district road network can be divided into the following management categories as discussed in the *Forest Roads Manual* on pages 8-2 and 8-3:

Active Use — This category includes any road open for travel with a motorized vehicle with at least four wheels. It includes permanent roads and also temporary roads that are currently

in use or will be used in the near future. These roads are usually available for use at any time of the year. Use may be continuous or intermittent. Roads in this category require active maintenance and have a full maintenance obligation under the Oregon Forest Practices Act.

The following two categories of roads are closed to vehicle use and require maintenance under the Oregon Forest Practices Act.

Road Closure — There is restricted access to the road for part or all of the year. This may be as simple as placing a sign or other marker at the start of the road, as might be the case in a cooperative travel management area for wildlife protection. Or, it might involve placing a semi-permanent barricade at the start of the road. This barricade can be a gate, large boulders, stumps and logs, or a trench. This strategy does not significantly alter the nature of the road, and the obligation to maintain the road remains. Road maintenance needs and sediment loads are reduced due to the elimination of traffic-related wear.

Partial Vacation — Partial vacation involves barricading the road and installing minor drainage structures, which might include the construction of water bars or rolling dips. This strategy is best suited for roads that will be needed again after long periods (perhaps as much as 15 to 20 years) of inactivity. Ridge-top roads or other roads where drainage and sediment issues are negligible are good candidates. The nature of the road may be altered somewhat through the addition of waterbars and other drainage structures, but the obligation to maintain the road remains. Sediment loads are reduced due to the elimination of traffic-related wear, and road maintenance needs are greatly reduced.

The last category of roads is not available for vehicle use and does not require maintenance under the Oregon Forest Practices Act.

Full Vacation — Full vacation involves removing all stream crossing structures, installing maintenance-free drainage (outsloping, water bars, rolling dips, etc.), pulling back any sidecast material, seeding grass on disturbed soil, and barricading the road. The road is effectively “put to bed.” All access is prevented, and there is no maintenance obligation. Cross-drain culverts may be left in place but will not be considered as a functional drainage feature.

The last three categories are referred to as “Managed Access” categories. The roads in these categories are predominantly short spur roads and some collector spur roads. These roads are closed to reduce or minimize vandalism, dumping, operational conflicts, wildlife harassment (cooperative travel management areas), road wear, and water quality impacts. All Managed Access roads are open to public non-motorized travel (hiking, biking, horse riding) with the exception of areas in active operations.

Abandoned roads are additional road category often mentioned but not specifically addressed in the *Forest Roads Manual*. These roads are no longer used or maintained but have not been formally vacated to today’s Forest Practices standards. These roads are generally unavailable for use due to encroaching vegetation or road failures that prevent passage of vehicles and do not require maintenance under the Oregon Forest Practices Act.

The Active Use, Road Closure, and Partial Vacation Roads have been classified into three separate road use standards as defined on pages 3-6 and 3-7 in the *Forest Roads Manual*.

These standards provide guidance on how roads are constructed, improved, and maintained, and are defined below:

Low Use Standard — These are individual short spur roads designed primarily for pickups and log trucks. Low use roads generally provide access to a single harvest unit. Their use is short term and may be temporary.

Medium Use Standard — These are longer spur roads designed primarily for pickups and log trucks. Medium use roads may provide access to several harvest units. Their use is more permanent.

High Use Standard — These are longer roads designed for all types of traffic, including large equipment. High use roads are generally permanent and provide access to large areas. They are referred to as mainline roads.

Roads in the Southwest Oregon District provide essential access for forest management and fire protection. Approximately 102 miles of single-lane forest roads are located on state forest lands in the Southwest Oregon District. Table 8-4 below summarizes the current district road network by road use standard. Board of Forestry lands and Common School Lands are generally well roaded. Collector spurs and temporary spurs will be needed for future management on these lands. However, a few of the Board of Forestry and Common School Lands in scattered parcels are intermixed with private and federal forest lands and do not currently have adequate access or the access is in need of reconstruction. Given the range of adjacent landowner policies and procedures, developing and maintaining access into many of these scattered parcels is challenging.

Table 8-4. Southwest Oregon District Road System

Road Use Standards	Miles
Low Use	51
Medium Use	33
High Use	18
Total Miles	102

Information was gathered in 1999 about the current condition of roads on all state forest land in the district. The information will help conduct Level II transportation planning for Southwest Oregon District state forest lands as discussed on page 2-2 in the *Forest Roads Manual*. The information shows that 80 percent of the road miles are in an open or closed status, and the remaining 20 percent are considered to be partially vacated, fully vacated, or abandoned.

Approximately 52 percent of the road miles are located on ridge tops, 31 percent on midslopes, and 17 percent in valley bottoms.

Over 67 percent of the road miles are unsurfaced or have a natural rock surface. Approximately 33 percent of the road miles are surfaced with crushed or processed pit-run

rock. Most of the unsurfaced dirt roads are short spurs that have been or will be closed to vehicle traffic once they are no longer necessary for forest management.

On 70 percent of the road miles, the road surface is intact and shows no evidence of erosion. Approximately 18 percent of the road miles have berms that are preventing the water from draining off the road. 10 percent of the road miles show some signs of erosion, and about 2 percent of the road miles are showing some evidence of rutting. Cut-and-fill slopes are rated as good on nearly 90 percent of the road miles. Ravel is the major problem on the remainder of the cut slopes. There are 26 areas identified as segments of potentially unstable road fill. 75 percent of these identified areas have a low risk of material entering a stream if a failure occurred. Ditches are considered to be in good condition along 13 percent of the road miles. 66 percent of the road miles are without ditches. Outsloping is used to the extent possible to drain water where ditches are not present. Along approximately 17 percent of the road miles, the ditches are full of sediment.

There are 419 culverts installed across roads on state forest land. Nearly 90 percent of the culverts are in good physical condition. The remaining 10 percent show signs of rusting or some degree of collapsing. Even though the culverts are in good physical condition, 60 percent are partially or totally blocked by sediment, mechanical damage, or debris. There are 130 culverts installed in fish-bearing streams. 44 percent of the culverts will allow all fish to move upstream and downstream. 45 percent will allow adult salmonids to move upstream but not adult trout or juvenile salmonids. The remaining 11 percent block upstream movement of all fish.

Recreation

State forest lands in the Southwest Oregon District are estimated to experience only light recreational use. The guiding principle for recreation policy in the Southwest Oregon District for many years has been to provide dispersed recreational opportunities on state forest lands. Hunting is the main activity during the late summer and fall while fishing opportunities are limited due to small fish streams on the district. Other recreation opportunities include hiking, mountain biking, off-highway vehicle use, horseback riding, and sight seeing.

The Windy Creek and McCullough Creek areas receive greater recreational use because of their ease of access and proximity to the town of Glendale. Windy Creek has a day-use park which 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 Oregon Department of Forestry. Although the park area is currently in disrepair, the potential remains to develop this site into a revitalized day-use area.

There are approximately 1 mile of hiking trail on Kerby Peak and 0.5 mile of hiking trail on London Peak. The state forest portion of the London Peak trail also serves as the trailhead. The Oregon Department of Forestry has entered into a special use agreement assigning the BLM responsibility for maintaining the portions of the trailhead and hiking trails that are on state land.

Scenic Resources

There are a number of important or sensitive visual resource areas across the district. Portions of Southwest Oregon District lands are within view of three Scenic Highways (Interstate 5, the Redwood Highway, and Highway 62) as well as the Wild and Scenic Rogue River. The Land Management Classification System has placed all lands governed by state or federal rules for scenic values (i.e. Oregon Forest Practices Act, the Wild and Scenic Rivers Act, and the Oregon Scenic Waterways Act) into the Special Stewardship classification, Visual subclassification. Lands in this classification total approximately 223 acres. Adjacent lands not subject to state or federal rules, but which are subject to prolonged view from these highways or river are placed in the Focused Stewardship classification, Visual subclassification. Lands in this classification total approximately 2,041 acres.

Forest Stand Structure: Current Condition

The current stand condition is displayed in the figures on the next two pages, and in the second map in the **Map Section**. Figure 1 shows the current stand structure, acreage, and percentage, using the structure-based management definitions for structure types. The stand structure abbreviations are given in Table 8-5 below.

In order to determine the current condition of the stand structure array on the district, aerial photograph interpretation coupled with OSCUR inventory information and field verification were employed during the stand typing portion of the Stand Level Inventory project. It is possible to make errors on forest stand types using this process, due to the incomplete stand structure information (e.g., there is no information on understory species composition, nonmerchantable tree species, layering, etc.).

In order to correct any errors, all silvicultural prescriptions will be based on actual Stand Level Inventory field data, rather than on these initial screens. In addition, all stands over 70 years of age planned for a commercial operation in the initial 10-year implementation plan period have been prioritized for Stand Level Inventory field work in 2002 or 2003. The new Stand Level Inventory is currently in progress and will include the additional information necessary to accurately assess forest stand structure.

For now, the current inventory does include some information related to stand structure, including tree species composition, stand age, diameter class, stand density, and stand management history. These parameters were used in the current condition analysis and proved to be most useful.

Figure 2 shows the current age distribution of Southwest Oregon District forests, regardless of structure, by acreage and percentage. Stands over 100 years old are based on incorrect inventory information. Ages in this range were based solely on the largest, dominant trees in the stands. In most cases, those trees were remnant old growth trees, and the true age of the stands were not recorded. As the new stand level inventory is developed, this information will be updated. In addition, the 17% (3,047 acres) of 0 – 19 year old stands includes the 7% (1,188 acres) of non-silviculturally capable stands. Therefore the actual percentage of forested acres 0 – 19 years old is 10% (1,859 acres).

Table 8-5. Abbreviations for Forest Stand Structures

REG	Regeneration
CSC	Closed single canopy
UDS	Understory
LYR	Layered
OFS	Older forest structure
NSC/NF	Non-Silviculturally Capable/ Non Forest

Figure 8-1. Current Stand Structure, by Acres and Percent

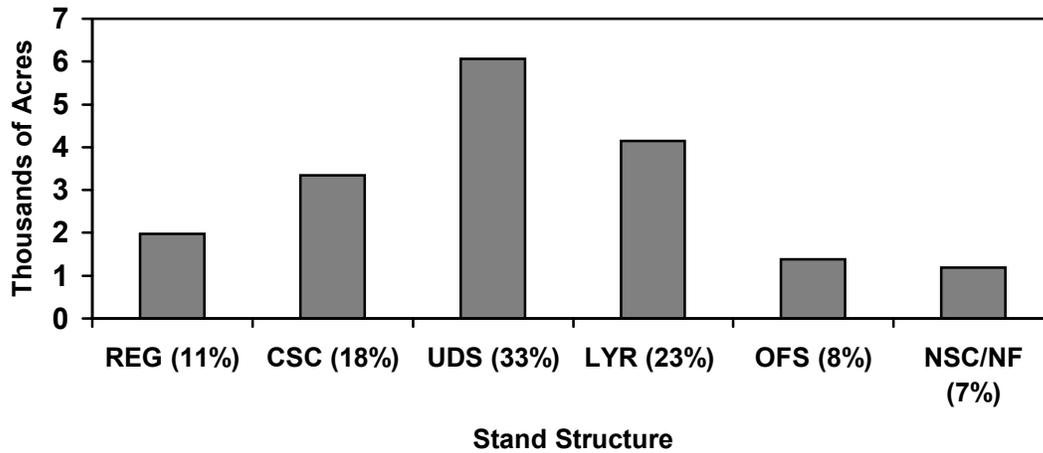
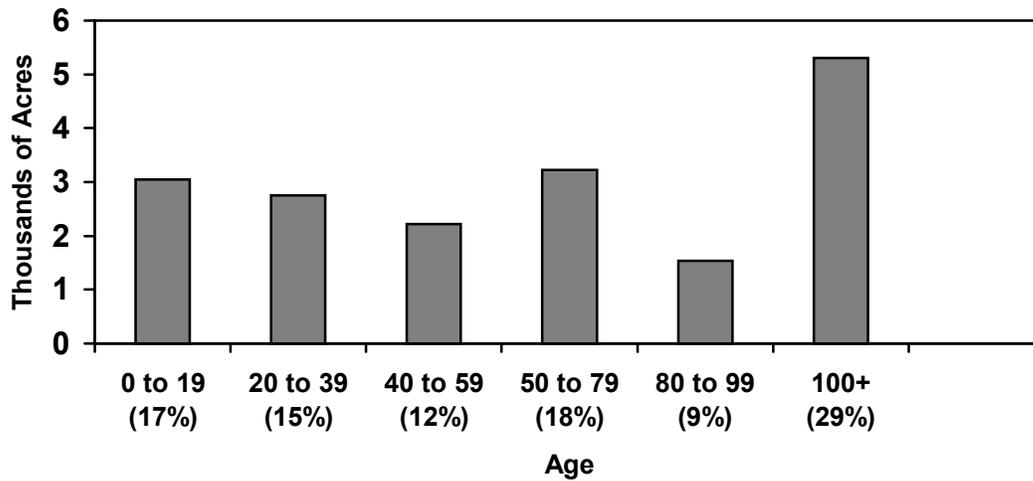


Figure 8-2. Stand Age Distribution, by Acres and Percent



Management Activities

Current Condition Analysis

Stand Structures Interaction

The Current Condition Analysis and the Landscape Design sections of this implementation plan describe the amount of each of the identified forest stand types. As described in the forest management plan, the stand types represent only five points along a continuum of forest development. Five “stand” types were developed as a means to plan for and assess the development of the forest toward a range of “forest” types over time. Because the five types are only points along a continuum they do not express five specific habitat types nor are they perceived as discrete habitats by wildlife species. This is discussed in detail in Appendix C of the *Northwest Oregon State Forests Management Plan*.

As you think about the current condition and desired future condition descriptions as they relate to wildlife habitat keep in mind the following concepts and refer to Appendix C in the *Northwest Oregon State Forests Management Plan* for more detail.

In an attempt to describe how wildlife may view the forest, they seem to “see” three fundamental patch types. Table 8-6 below compares these three patch types to the five stand types described in the forest management plan.

Table 8-6. Comparison between Landscape Patch Types and Stand Types

Landscape Patch	Stand Type
Young forest	Regeneration through closed single canopy sapling stands
Pole-sized forest	Closed single canopy pole-sized through layered stands
Mature forests	Closed single canopy, understory, layered, and older forest structure stands (trees larger than pole-sized)

Thus, as you examine the current and desired future conditions described by the stand types, it is important to think about combinations and aggregations of different stand types that function together to provide the benefits for each of the three broad patch types that wildlife use.

For example when thinking about the amount of mature forest habitat that will be provided by the anticipated future array of layered and older forest structure stands – also consider the role of understory and closed single canopy stands. The desired future condition was developed to provide a blueprint of a desirable array for the development of the percentage of layered and older forest structure stand types in the future if natural disturbances allow and management assumptions come to fruition. As described in the table above, these stand types will be complemented by adjacent understory and large diameter closed single canopy

stands to provide habitat patches that represent mature forests to wildlife species. The result being significantly more acres of mature forest habitat available for wildlife than any single stand type represents.

The entire array of all stand types has not been depicted because it is virtually impossible to predict how each stand on the landscape will develop over the next several decades. By focusing on generally, where we anticipate the development of layered and older forest structure stands, it provides the local manager with the blueprint for the management prescriptions necessary to move the landscape in the desired direction. Future adjustments will undoubtedly have to be made as natural disturbances, insects and disease, or other factors result in some stands not developing in accordance with management plans.

Hardwoods

Although hardwood stands are not a stand structure type, as defined on page 4-10 through 4-16 in the *Southwest Oregon State Forest Management Plan*, they do play an important role in the mix of stand structures across the landscape. In Southwest Oregon, common hardwood tree species include: Pacific Madrone, Golden Chinquapin, Tanoak, Canyon Live Oak and Oregon White Oak; California Black Oak occurs on drier, better drained sites; and Red Alder, Oregon Ash, and Bigleaf Maple occur along streams and in wetland areas. Hardwoods on the Southwest Oregon District are found as nearly pure stands (up to 100 acres); as a major component in conifer stands; as small patches within conifer stands; as the dominant species in riparian areas; or as a second canopy in some conifer stands. Although hardwood trees occur in a wide variety of stand types, densities, and compositions, a hardwood stand is defined (for the purposes of this plan) as a stand where hardwood species comprise more than 70 percent of the tree canopy. 70 percent is a set measure that identifies when the hardwoods are the dominant tree species, and thus will likely control the focus of stand management practices.

Approximately 578 acres or 3% of state forest lands meet the preceding definition of hardwood stands, of which 58 percent have been classified as CSC, 32 percent UDS, and 10 percent LYR. The role of hardwoods is explained in the discussion of each of the stand structure types below.

The importance of hardwood stands on the landscape has only recently been recognized. Hardwoods contribute to diversity in the forest structure in many ways. The stands and small patches of hardwoods as well as individual hardwood trees provide vegetative diversity in the conifer-dominated landscape. Hardwoods also play an important role in the development of layered stands by providing vertical diversity in conifer-dominated stands.

The management of hardwoods is still evolving. The district will maintain a component (approximately 10% or less) of hardwood dominated stands in both pure and mixed stands through a variety of silvicultural techniques. Some of these techniques will be variations of current practices, while others will be newer non-traditional silvicultural practices. Density management practices can encourage or discourage hardwoods in forest stands. Partial cutting and underplanting are being used as silvicultural techniques to enhance the structure mixed conifer and hardwood stands contribute on the landscape. In some cases stands may be dominated by non-commercial hardwood types as a result of past fire history and no

subsequent forest management. These stands may be targeted for rehabilitation, if it is determined that the site can sustain a more productive forest composition.

Regeneration

The regeneration (REG) structure covers 1,981 acres or 11 percent of the district. The desired future condition target for REG is 5 percent. This structure is currently characterized primarily by young, even-aged Douglas-fir plantations resulting from clearcut harvests occurring over the last 20 years. As management strategies and techniques have evolved over the last 20 years, this structure type has evolved to include the retention of live trees, snags and downed wood. In addition, these young stands support a diversity of other conifer and hardwood species including Ponderosa Pine, Sugar Pine, Incense Cedar, True Firs, Pacific Madrone, Chunkapin, and Tanoak which were planted or naturally regenerated. Current planting prescriptions are focusing on a greater diversity of tree species adapted to each site. Most REG stands have been or will be precommercially thinned. A few of these stands have also been pruned. Depending on silvicultural treatments, REG stands have the potential to move through all stand structures toward OFS. This structure type is widely used by big game animals for foraging habitat.

Closed Single Canopy

The closed single canopy (CSC) structure accounts for 3,342 acres or 18 percent of the district. The desired future condition target for CSC is 35 percent. This structure is characterized by the closed crowns of the overstory trees which prevent light from reaching the majority of the forest floor. This low light level precludes the natural regeneration of both brush and shade tolerant tree species in the understory, thus leaving the forest floor sparsely vegetated. Overstocking and the interspecies competition for light, water, and nutrients often leaves the stand susceptible to insects, disease, wind, or fire. Of all the structure types, this type is least used by wildlife species, especially those requiring more complex habitats.

In Southwest Oregon District, this stand type is broadly characterized by two main age classes, the 20 to 39 year old age class, which is the result of well-stocked plantations, and the 40 to 59 year old age class comprised of naturally regenerated stands. CSC stand structure is often composed of many species, both hardwood and conifer. These stands are generally more open than a typical Northwest Oregon CSC stand and water is the limiting factor for stand stocking levels.

A minor component of the district CSC percentage is in hardwood stands, usually found in areas where a stand replacing disturbance (i.e. fire) was not followed up with reforestation activities. These hardwood stands do not lend themselves to specialized management and are most often managed as a sub-component of the surrounding conifer stands.

Understory

The understory (UDS) stand structure covers the largest percentage of the district, 6,057 acres or 34 percent of the district. The desired future condition target for UDS is 15 percent.

This structure occurs where tree mortality, previous density management (precommercial thinning, partial cutting), poor stocking, low growth sites, or a combination of these factors have prevented the overstory canopy from fully closing permitting light to reach the forest floor. As a result, an understory of herbs, shrubs, and small conifer trees may develop. The least developed stands in this category have an understory of shrubs and herbs more diversified than just one or two shade-tolerant species. When sufficient light enters the stand, through continued stand management or natural processes, the continued development of diverse shrub and herb layers will occur. Vertical layering may begin developing in these stands, but is not yet extensive enough to advance to the next stand structure.

On good sites in this structure type, large, healthy conifer or hardwood trees with large crowns characterize the overstory. Some of these stands began in a low stocked condition, with the overstory canopies eventually closing enough to shade out some of the brush and allow young trees to regenerate.

Poor site class also contributes to the occurrence of this structure across the forest landscape. Site class is usually lowest on rocky, south-facing slopes where both water and nutrients are limited for supporting forest tree species. Therefore, in an environment with few overstory trees, the forest floor has many openings available for understory vegetation.

Previous partial cutting also contributes to the presence of this structure. In stands managed through partial cutting, tree density may have been reduced enough to allow for understory vegetation development. The residual trees have increased growth in girth and crown size and are generally more healthy and vigorous.

A minor component of the district UDS percentage is in hardwood stands, usually found in areas where a natural disturbance (i.e. fire) was not followed up with reforestation activities and portions of the conifer overstory survived the disturbance. Openings created by the disturbance were naturally regenerated with young conifer, hardwood, brush, or a combination, resulting in a complex mixture of plant species and associations. These hardwood stands do not lend themselves to specialized management and are most often managed as a sub-component of the surrounding conifer stands.

Depending upon the intensity and timing of disturbances or density management activities, stands may shift back and forth between CSC and UDS types over time, or may move toward more complex stand structures. Due to the various ways that UDS stands have developed and the differing vegetation compositions of the understory, a variety of stand management options must be pursued in order to address stand-specific conditions.

In the Southwest Oregon District, the understory reinitiation process is a significant stand development process, especially on the drier sites. Most of the older stands have cycled through this process several times in their life history in successive natural events (i.e. fires), to develop complex forest structures. These stands contain more diverse herb and shrub layers than CSC stands. Stand compositions include both single-species and multi-species overstories with associated dominant, codominant, intermediate, and suppressed trees. In most cases, this structure provides better wildlife habitat, provides more recreation opportunities, is more scenic, provides better tree growth, and stimulates forest health better than the CSC stand structure.

Layered

The layered stand structure (LYR) currently covers 23 percent or 4,140 acres and is the second most prevalent stand structure on the district. The desired future condition target for LYR is 20 percent. The LYR stand type is the result of continued growth and development of the understory of a UDS stand and is therefore more complex in vertical canopy arrangement. In addition, the vertical layering offers a diverse array of habitat niches for more complex shrub and herb plant communities as well as wildlife species. LYR stands occur throughout the district where complex arrangements of tree species of various shade and moisture tolerances have grown and developed relatively undisturbed for 20 to 30 years. Evidence of previous disturbances contributing to the development of LYR stands include both fire and logging. A few of the district's layered stands are composed of mixed hardwood species with scattered conifer in the overstory.

Older Forest Structure

Older forest structure (OFS) currently covers 8 percent or 1,383 acres of the district. The desired future condition target is 25 percent. The OFS stand type is the incorporation of natural decadence resulting from the continued growth, development, and limited degeneration of a LYR stand and is therefore more complex in structural composition. The addition of a variety of snags and downed wood offers a diverse array of habitat niches for more complex shrub and herb plant communities as well as wildlife, bryophyte, and saprophyte species. On page 4-16 of the *Southwest Oregon State Forest Management Plan*, older forest structure has been defined as including all of the following four characteristics including the variety of trees typically found in a LYR stand:

- At least 8 or more live trees per acre that are at least 28 inches in diameter at breast height (DBH). On soil types with 50-year site indexes below 80 for Douglas-fir, this characteristic will be defined as 8 or more trees per acre with DBH of at least 24 inches.
- Two or more tree canopy layers. Some more shade-tolerant species, such as grand fir and western hemlock, may be present in the lower layers, but the intent will be to manage mostly for less shade-tolerant species, such as Douglas-fir, sugar pine, ponderosa pine, and incense cedar.
- At least 6 snags per acre, of which 2 must be at least 24 inches DBH, and the remaining 4 must be at least 12 inches DBH. Snags should be represented by all decay classes.
- 250 to 350 cubic feet per acre of sound (decay class 1 or 2) down conifer logs, or 1,200 to 1,800 cubic feet per acre of down logs in all decay classes 1 to 5, including at least 2 logs per acre greater than 24 inches in diameter (at the largest end).

OFS stands on the district include Douglas-fir and mixed conifer types with mixed conifer and hardwood understories. There are also OFS stands scattered throughout the poorer sites. Most of these forest types look very different from Douglas-fir dominated OFS stands. These OFS stands range from mixed hardwoods with scattered remnant conifers to open Ponderosa Pine stands with Incense Cedar in the understory. Some stands in the southern portions of the district on serpentine soil sites were classified OFS due to the relatively long

period of time without significant disturbance. Most of these stands are over 100 years old and include plant communities unique to the region. Although the OFS stands in the district have had little human disturbance, they have had a long fire history. Continued exclusion of fire in these stands may limit their potential to develop further.

Non-Silviculturally Capable

Although non-silviculturally capable (NSC) lands do not form a single structure type, these lands do provide unique and significant habitat contributions to the district landscape. Comprising 1,188 acres or 7 percent of the district, these lands are characterized by geologic and hydrologic conditions unsuitable for the commercial growth and harvest of forest tree species. Geologic conditions include rock cliffs, talus slopes, rock slopes and outcroppings, and other substrate conditions incapable of supporting forest tree species (i.e. serpentine soils). Hydrologic conditions include floodplains, marshes, beaver ponds, and other aquatic conditions that prevent the growth of trees. These lands provide for plant and animal communities not associated with the other forest structures. These lands are not considered part of the commercial forest land base and will not be managed for the growth and harvest of forest tree species.

Management Activities in Each Stand Type

This section describes the various management activities and the effects of management for each structure type.

Regeneration Stands

Management practices for young stands will be applied to REG stands in order to obtain the greatest value of this structure (rapid tree growth, big game forage, wildlife habitat, etc.). These stands have the potential to move through all of the stand structures toward OFS, depending on current and future landscape designs. All current and future clearcut harvests are designed to incorporate live green trees, snags, and down wood. These structural components in the young plantation will assure proper function of REG stands throughout their growth and development.

Reforestation

Reforestation promptly follows all clearcut harvests and patch cuts down to one-quarter acre depending on the stand objective. Spacing, species, and stock types depend on the site-specific conditions and availability. Site preparation (clearing of planting spots), vegetation management (control of brush and grass), and tree protection (big game repellent) activities will be undertaken in conjunction with stand establishment and maintenance. Site-specific prescriptions may include herbicide treatments, manual release, slash burning, underburning, or mechanical site preparation.

Precommercial Thinning

Precommercial thinning (PCT) is an important density management practice that thins out closely spaced trees, including small and defective young trees or competing vegetation, in

order to provide more water, light, and nutrients for the healthy residual trees. In addition, PCT keeps the canopy from closing, thus preserving the growth of herbaceous vegetation required by big game, while maintaining vigorous tree growth.

Pruning

Pruning may be used in more specialized situations. Pruning removes the lower limbs on the residual trees. It increases the wood quality of the pruned trees and retains big game forage for a longer period of time. Stands with Sugar Pine are pruned to prevent infection from White Pine Blister Rust.

Fertilization

Broadcast fertilization of pre-commercially and commercially thinned stands may be beneficial in portions of the district, where the site would show the greatest benefit in growth increase with the application of fertilizer. As time and resources are available, a rate of return analysis will be conducted for this stand management opportunity.

Closed Single Canopy Stands

Partial Cut

Past management experience has found that most CSC stands respond very well to partial cutting. Not only do the residual trees grow faster, but also complex structures and diverse habitats develop more rapidly with the creation of snags, down wood, and a shade-tolerant conifer understory. The effects of partial cutting improve forest health through increased stand vigor, and lower susceptibility to damage from insects, disease, fire, and windthrow. This management option also produces timber, revenue, and enhancements to other resources like scenic and wildlife resources. Therefore, the primary management option for current CSC stands will be partial cutting.

Younger CSC stands will move towards the UDS structure after a first entry partial cut (30 to 40 percent maximum stand density index), and then grow back to CSC without further management. However, a low stand density prescription, below 30 percent stand density index, would move the stand into a UDS structure for a longer period of time and permit more growth and development of the understory prior to canopy closure. Fertilization may benefit these stands by increasing growth of the overstory trees and encouraging development of the understory. Snag creation within the younger CSC stands is not planned. It is anticipated that approximately two snags per acre will develop as a result of the logging operations, windthrow, and natural mortality in the stands. Existing cull logs and large down woody debris will be left on site. It is anticipated that the target for down woody debris will not be reached until later commercial entries.

Older CSC that have been left too dense for too long will be partial cut to encourage growth in the understory. Stands in this category generally have smaller crowns, are less vigorous, and may take a longer time to respond to the additional light and nutrients available after the partial cut than younger CSC stands. In this case however, partial cutting will be used to promote growth and development of the understory layers rather than accelerated overstory development. Partial cutting can move these naturally regenerated stands in the older age classes directly into UDS or LYR. Most of these CSC stands have a variety of species, age

classes, and sizes to work with, making it easier to transition to uneven-aged management. Snag retention and creation as well as providing for down woody debris may be used to further develop the understory and midstory structures.

In partial cutting CSC stands, opportunities to increase stand complexity (i.e. minor tree species retention, diameter limit harvests, small gap creation, etc.), reduce fuel loading (i.e. underburning, slash piling), and initiate understory development (i.e. underplanting) will be explored based on the desired future condition of the stand and site specific conditions.

Clearcut

It is desirable to maintain a variety of age classes and stand structures throughout the forest including the desired future condition of 5 percent in the REG structure. Clearcut harvesting 40 to 50 acres per year would maintain the district at 5 percent in the REG structure. However, with the exception of CSC stands severely impacted by insects, disease, wildfire, or other stand replacing event which will be salvage harvested to maintain forest health while retaining the appropriate numbers of snags, downed wood, and residual trees; no clearcut harvests are planned for the initial 10-year implementation plan period in CSC stands. Current “no take” strategies for the northern spotted owl employed by the Oregon Department of Forestry in conjunction with the current land ownership pattern make CSC stands unavailable for clearcut harvest. If the Oregon Department of Forestry acquires a HCP and an Incidental Take Permit, this silvicultural option in this stand structure will be reassessed to achieve the desired future condition stand structure array.

Understory Stands

Partial Cut

Due to the various ways that UDS stands have developed and the differing vegetation compositions of the understory, a variety of partial cutting options will be pursued to address the stand-specific conditions associated with stands in this structure type. Competition for moisture and nutrients has a significant impact on the development of additional vegetative layers in the understory in Southwest Oregon. Therefore, it is likely that UDS stands will not develop toward a LYR structure without partial cutting. Partial cutting in this stand structure is intended to maintain the health and vigor of the overstory and encourage the continued development of the understory. Overstory densities will need to be reduced to a maximum stand density index of 25 to 35 percent to further complex stand structure development. Snag retention and creation as well as the retention and creation of down woody debris will be utilized to contribute to structural targets.

In partial cutting UDS stands, opportunities to further increase stand complexity (i.e. minor tree species retention, diameter limit harvests, small gap creation, etc.), reduce fuel loading (i.e. underburning, slash piling), and initiate additional understory development (i.e. underplanting) will be explored based on the desired future condition of the stand and site specific conditions.

Clearcut

It is desirable to maintain a variety of age classes and stand structures throughout the forest including the desired future condition of 5 percent in the REG structure. Clearcut harvesting

40 to 50 acres per year would maintain the district at 5 percent in the REG structure. However, with the exception of UDS stands severely impacted by insects, disease, wildfire, or other stand replacing event which will be salvage harvested to maintain forest health while retaining the appropriate numbers of snags, downed wood, and residual trees; no clearcut harvests are planned for the initial 10-year implementation plan period in UDS stands. Current “no take” strategies for the northern spotted owl employed by the Oregon Department of Forestry in conjunction with the current land ownership pattern make UDS stands unavailable for clearcut harvest. If the Oregon Department of Forestry acquires a HCP and an Incidental Take Permit, this silvicultural option in this stand structure will be reassessed to achieve the desired future condition stand structure array.

Layered Stands

Partial Cut

The primary means to address the current surplus of stands in the LYR stand structure type above the desired future condition stand structure array and the current shortage of stands in the OFS stand structure type is through partial cutting. Partial cutting in this stand structure will maintain the health and vigor of the overstory and encourage the continued development of stand complexity toward OFS. Overstory species’ compositions and densities will need to be individually assessed for further complex stand structure development. The majority of the stands currently identified in this structure type are deficient in desired snag and downed wood levels. Therefore, snag retention and creation as well as the retention and creation of down woody debris will be utilized to contribute to structural targets.

In partial cutting LYR stands, opportunities to further increase stand complexity (i.e. minor tree species retention, diameter limit harvests, small gap creation, etc.), reduce fuel loading (i.e. underburning, slash piling), and initiate additional understory development (i.e. underplanting) will be explored based the stand and site specific conditions.

Clearcut

It is desirable to maintain a variety of age classes and stand structures throughout the forest including the desired future condition of 5 percent in the REG structure. Clearcut harvesting 40 to 50 acres per year would maintain the district at 5 percent in the REG structure. However, with the exception of LYR stands severely impacted by insects, disease, wildfire, or other stand replacing event which will be salvage harvested to maintain forest health while retaining the appropriate numbers of snags, downed wood, and residual trees; no clearcut harvests are planned for the initial 10-year implementation plan period in LYR stands. Current “no take” strategies for the northern spotted owl employed by the Oregon Department of Forestry in conjunction with the current land ownership pattern make LYR stands unavailable for clearcut harvest. If the Oregon Department of Forestry acquires a HCP and an Incidental Take Permit, this silvicultural option in this stand structure will be reassessed to achieve the desired future condition stand structure array.

Older Forest Structure

Partial Cut

In the future, partial cutting may be necessary in OFS for stand structure maintenance. Where OFS stands have been identified on the district, techniques could be used such as individual tree or group selection, snag creation, down woody debris recruitment, and underplanting, to maintain the OFS condition. However, partial cutting in existing OFS is not planned during the first 10-year implementation plan period.

In maintaining OFS stands, opportunities to reduce fuel loading (i.e. underburning, slash piling), and initiate additional understory development (i.e. underplanting) may be explored based the stand and site specific conditions.

Clearcut

With the exception of OFS stands severely impacted by insects, disease, wildfire, or other stand replacing event which may be salvage harvested to maintain forest health while retaining the appropriate numbers of snags, downed wood, and residual trees, no clearcut harvests are planned for the initial 10-year implementation plan period in OFS stands.

Proposed Management Activities

Table 8-7 below summarizes proposed management activities for Fiscal Years 2002 to 2011. The activities below are not all inclusive and may change based on district priorities and budget levels. Additional information on the rationale and method applied to determine the proposed silvicultural activities can be found in **Appendix A**.

Silvicultural Activities

Conifer and hardwood partial cutting will take place in CSC, UDS, and LYR stands. No clearcutting is currently planned. However, if stands on the district began showing signs of poor health as a result of insects, disease, drought, fire, or other stand replacing event; conifer and/or hardwood clearcutting may occur.

Table 8-7. Annual Silvicultural Activities for Fiscal Years 2002 to 2011

Activity	Estimated Annual Acreages
Partial cut	180 – 270 acres ¹
Clearcut	0 acres ²
Rehabilitation	0 – 50 acres
Reforestation	
- Initial Planting	0 – 50 acres
- Interplanting	0 – 25 acres
- Underplanting	100 – 200 acres
Precommercial Thinning	0 – 500 acres ³

Fertilization	0 – 250 acres ³
Pruning	0 – 50 acres ³

1. Dead or diseased patch cuts less than five acres will count toward the annual partial cut objective.
2. Dead or diseased patch cuts greater than five acres will count toward the annual clearcut objective.
3. The acres shown represent a range dependent on annual workloads and budget levels. In years of low fiscal budget levels, these estimates could fall to zero.

Specific actions are identified and scheduled in the annual operations plan. As outlined in the *Southwest Oregon State Forest Management Plan* on pages 4-70 and 4-71, geotechnical specialists will provide the initial slope stability hazard and risk assessment for commercial forest operations in the annual operations plan. This assessment will allow for proper consideration of alternatives in order to achieve the best decision for the resource and to avoid, minimize, or mitigate identified risks.

Roads

Section 2 of the *Forest Roads Manual* provides for three levels of transportation planning. Level 1 consists of the establishing the long term goals and strategies, as found on pages 2-22:23, 3-9, and 4-91:92 in the *Southwest Oregon State Forest Management Plan*.

Level II transportation planning for forest roads consists of the implementation plan and transportation plans. In these plans, the current condition of the road system is described (see the **Roads** portion of the **Human Uses** section) and a vision of the desired future condition of the road system is developed. The Level II plans will identify general needs to move from the current condition to the desired future condition as well as any significant road improvement activities and major road construction projects. Transportation plans will provide more detail than the implementation plan since their primary focus is roads. Aquatic and Riparian Strategy 7b in the *Southwest Oregon State Forest Management Plan* contains the following direction on this issue on page 4-73: “Initial district implementation plans will not contain all of the transportation planning elements described in *the Forest Roads Manual*. Following completion of watershed assessments, and as district implementation plans are subsequently revised and updated, the complete transportation planning process will be applied.”

Transportation plans will be developed to identify the current status and condition of the district road systems and develop action priorities to achieve during the current timeframe of the implementation plan. The specific actions are identified and scheduled in the annual operations plan. As outlined in the *Southwest Oregon State Forest Management Plan* on pages 4-70 and 4-71, geotechnical specialists will provide the initial slope stability hazard and risk assessment for road construction operations in the annual operations plan. This assessment will allow for proper consideration of alternatives in order to achieve the best decision for the resource and to avoid, minimize, or mitigate identified risks.

The desired future condition of the road system is one that provides for the transportation needs of the district while not adversely impacting water quality or other resources. Components of this road system include the following:

- **Location** — New roads will be located on ridge tops or near ridge tops where slopes are relatively gentle. When roads are considered on steep slopes or high risk sites, geotechnical analyses will be done to determine the likelihood of road-related slope failures, and to assess the necessary engineering design to avoid increasing the likelihood of slope failures. Roads will be designed to the minimum width necessary to accommodate the planned management activity.
- **Surfacing** — Mainline or high use roads will be surfaced with crushed rock to a depth sufficient to allow all-weather use, efficient surface grading/maintenance, and to minimize potential sedimentation. Medium use spur roads generally will be surfaced with crushed rock and/or pit run rock sufficient to allow use consistent with planned management activities and minimize potential sedimentation. However, some medium-use or low-use spur roads will not be surfaced; such as when these roads access small areas, are used only during dry conditions, are maintained to minimize erosion, and are waterbarred and closed to vehicular traffic at the conclusion of use. A district rock pit development and management plan will be essential in determining the rock availability to accomplish the surfacing needs of the transportation system.
- **Drainage** — Drainage structures will be adequate to provide proper drainage and minimize delivery of sediment to streams. All stream-crossing culverts will be designed to pass the flow associated with at least a 50-year storm event. All stream crossing culverts in Type F streams will be designed to allow passage of fish according to current guidance.
- **Old road excess sidecast** — Roads will be assessed to identify sites that present a significant risk of sidecast failure and risk of resource damage. These sites will be reconstructed to minimize the risk.
- **Abandoned roads** — Non-system roads will be assessed to identify any potential for failures that could cause damage to resources. Identified sites will be rehabilitated and vacated where feasible to minimize the risk.
- **Road maintenance** — Maintenance needs are evaluated by the unit on an ongoing basis, during active road use. Maintenance needs and/or road improvement plans are developed during the sale planning process. Purchasers of timber sales are responsible for maintenance on roads providing access to timber sales.
- **Road closures** — Roads will be assessed to identify segments that could be closed to restrict access, mitigate potential resource damage, or reduce maintenance costs. Closed roads will be barricaded or vacated as appropriate. Most restricted access is intended to keep non-surfaced roads from being used during the winter months. An added benefit for closing roads is to reduce hunter and/or poacher pressure on deer and elk populations, when recommended by Oregon Department of Fish and Wildlife (ODFW) biologists.
- **Inventory** — Inventory will be updated on an annual basis to reflect any road improvements or changes to the road system. Information will be used to identify and prioritize road maintenance needs and road improvement opportunities. The

forest road inventory identifies roads of concern in order to prioritize repair activity. Major elements of the inventory include stream crossing structures, sidecast fill on steep slopes, and road surface drainage systems.

Potential road activities are summarized in Table 8-8.

Table 8-8. Road Activities for the Southwest Oregon District from Fiscal Year 2002 through Fiscal Year 2011, by Road Classification and Miles

	Low Use	Medium Use	High Use
Current Miles of Road	50 – 55 miles	30 – 35 miles	15 – 20 miles
New Road Construction	20 – 30 miles	0 – 10 miles	0 – 10 miles
Road Improvement	30 – 40 miles	10 – 20 miles	0 – 10 miles
Road Closure and Vacation	30 – 40 miles	0 – 10 miles	0 miles
Estimate Miles of Road in 2011	40 – 45 miles	30 – 35 miles	15 – 30 miles

As mentioned in the **Roads** portion of the **Human Uses** section, the current condition of the Southwest Oregon District roads indicates that the existing road system on the majority of Board of Forestry lands and Common School Lands is in adequate to good condition. Minor improvements can and will be made to location, surfacing, drainage, and stream crossings as management activities occur in the vicinity of the improvement location to move these roads toward the desired future condition. New construction will be designed to minimize the number of forest road miles across the landscape as well as minimize the impacts to other forest resources in accordance with the strategies listed on pages 4-91 through 4-93 in the *Southwest Oregon State Forest Management Plan*. Low use and medium use roads will be evaluated for closure or vacation based on surfacing, drainage, and management necessity once management activities are complete. The anticipated net result of the implementation plan at the end of the initial 10-year period will be a 10 mile reduction of low use roads. Finally, in an effort to facilitate public use on the district, active use roads on state forest land will be signed indicating state ownership and the designated road name or number by the end of the initial 10-year period.

Recreation

It is an established fact that recreation has an economic value to the local communities and the region in which these activities take place. As a result of this economic value and in accordance OAR 629-035-0020 and page 4-96 of the *Southwest Oregon State Forest Management Plan*, the Southwest Oregon District intends to support the pursuit and development of recreational opportunities on state forest land as time and resources are available. However, a recreational resource inventory and assessment for the district will need to be completed prior to pursuing and developing new recreational opportunities. This assessment will assist the district determine the current level of recreational use, the locations of current use, and the best means to provide additional recreation opportunities

and improvements. Once complete, the district will further develop the recreational opportunities on state forest lands based on the availability of time and resources, emphasizing dispersed recreation. Recreation management projects and programs will consider adjacent ownerships, the potential for cooperative agreements, and the diversification of funding (i.e. grants).

In the meantime, without a recreational resource inventory and assessment, the district will maintain the currently known recreational resources identified the **Recreation** portion of the **Human Uses** section. Recreational use of the forests will be managed to minimize adverse impacts to other resources and adjacent ownerships, and to minimize conflicts among user groups. All commercial forest operations involving or utilizing active use roads are required to provide adequate signage to inform recreational users of the operation and the potential for access delay or road closures.

Public Safety and Law Enforcement

The estimated low public use and the lack of a recreational resource inventory and assessment direct the district to rely on Oregon Department of Forestry and Douglas Forest Protective Association employee presence, BLM and USFS law enforcement presence, and local law enforcement presence to provide for law enforcement in the forest. The primary methods employed by the district to provide for public safety on state forest lands are road closures and road signing.

Aquatic Resources: Stream Enhancement Projects

Stream habitat enhancement projects will be considered on a site-specific basis as a part of the annual operation development process. Specific projects on identified streams will be finalized in a cooperative effort between district personnel and Oregon Department of Fish and Wildlife (ODFW) biologists. ODFW will provide input on the actual design and location of enhancement work. The Department of Forestry will verify feasibility, provide necessary materials, appraise the cost of work, and prepare and co-administer the stream enhancement contracts.

Anticipated projects include placement of logs in streams to create pools, replacement of stream crossing structures (i.e. culverts) that block fish passage, relocation or redesign of improperly located roads, stabilization of sediment sources (i.e. cut banks), road closure and or road vacation.

Cultural Resources

- Cultural resource inventories will be developed and completed within the 10-year implementation planning period.
- Inventoried cultural resource sites will be evaluated to determine the appropriate protection class (Class I, II, or III).
- Potential operation areas will be checked against the cultural resource site inventory for the district to see if any sites are in or adjacent to the operation area.

- Sites that are within or adjacent to a proposed operation that has the potential to impact the site, and which have not been assessed for class designation, will be evaluated to determine the appropriate cultural resource class.
- Class I sites will be protected according to the legal standards in the applicable laws.
- Protection of Class II or III sites will be based on field inspection of the site and consultation with the appropriate Department of Forestry or other specialist.

Energy and Mineral Resources

The district will locate, assess, and plan for aggregate rock sources where adequate sources for future management are not currently identified. The district will assess existing sources to determine the amount and quality of rock present and any development constraints. Finally, the district will create quarry development and maintenance or reclamation plans based on the assessment data, estimated long-term needs, and resource protection issues.

Lands and Access

The district will carry out the following activities.

- Continue to pursue land exchange opportunities when:
 - (1) The transaction furthers the purposes of ORS 530.010, the acquisition of lands chiefly valuable for the production of forest crops, watershed protection and development, erosion control, grazing, recreation or forest administration purposes; and
 - (2) The exchange furthers the objectives of achieving greatest permanent value as defined in OAR 629-035-0020 as expressed in the approved forest management plan; and
 - (3) The transaction results in the consolidation of state forest lands, or makes management of state-owned forest lands more economically feasible.
- Follow current Board of Forestry policies for land acquisitions and exchanges and the Administrative Rule for State Forest Land Acquisitions and Exchanges (Chapter 629, Division 33).
- Complete a land exchange and acquisition plan, as required (OAR 629-033-0015).
- Maintain the inventory of property corners and lines.
- The establishment and maintenance of property corners and lines will be prioritized and scheduled through the annual operations plan.

Scenic Resources

The district will carry out the following activities.

- Identify and map visually sensitive areas using the criteria detailed on pages 4-97 through 4-99 in the *Southwest Oregon State Forests Management Plan* and the Land Management Classification guidelines.
- Prior to completion of moderate and low sensitivity area mapping, areas not initially identified as high sensitivity will be evaluated at the time of a proposed operation (with the potential for an adverse visual impact) to determine if the area is moderate or low sensitivity.
- Proposed operations in high and moderate sensitivity areas will be evaluated to determine appropriate landscape and/or stand-level prescriptions necessary to mitigate the visual impacts consistent with the management objectives in the strategies.
- The resource analysis section of the annual operations plan will include an evaluation of the potential visual impacts and a description of the landscape and/or stand-level prescription that will be applied.

Plants

The district will protect plant species in accordance with state and federal Endangered Species Acts. In addition to endangered and threatened plants, the district will also make provisions for candidate and special plants. The District Plant List (Table 8-9) includes endangered, threatened, candidate, and special concern plants that are, or have the potential to be found, on the district. This list is the regionalized version mentioned in the *Southwest Oregon State Forest Management Plan* on page 2-21.

This will be accomplished by the following:

- During the planning of forest operations, the district will determine whether the proposed operation areas contain a plant on the District Plant List. This determination will be made by reviewing the Oregon Natural Heritage Program database for rare plant locations. In addition, the district will use its local knowledge on rare plant locations and habitat requirements.
- When the district has determined that a plant from its list may occur within an operation area, it will consult with the Oregon Department of Agriculture (ODA) to determine the appropriate level of protection. If ODA deems a field survey is necessary due to the presence of listed plants and/or habitats, the survey results will be submitted to ODA. Survey methods and survey results will comply with OAR 603-73-090 5(C).
- The district will contribute all information about rare plant locations to ONHP so that the database is kept updated.

Table 8-9. Southwest Oregon District Endangered, Threatened or Candidate Plant Species

Genus	Species	Subspecies	Common name	Status	Record exists ¹	Potential to be present
Threatened and Endangered Plants						
<i>Calochortus</i>	<i>howellii</i>		Howell's mariposa lily	ST	✓	
<i>Hastingsia</i>	<i>bracteosa</i>	<i>atropurpurea</i>	Purple flowered rush-lily	ST	✓	
<i>Lomatium</i>	<i>cookii</i>		Agate desert lomatium	SE		✓
<i>Microseris</i>	<i>howellii</i>		Howell's microseris	ST	✓	
Candidate Plants						
<i>Camassia</i>	<i>howellii</i>		Howell's camassia	SC	✓	
<i>Cypripedium</i>	<i>fasciculatum</i>		Clustered lady's-slipper	SC	✓	
<i>Draba</i>	<i>howellii</i>		Howell's whitlow-grass	SC		✓
<i>Epilobium</i>	<i>oreganum</i>		Oregon willow-herb	SC		✓
<i>Gentiana</i>	<i>setigera</i>		Elegant gentian	SC	✓	
<i>Limnanthes</i>	<i>gracilis</i>	<i>gracilis</i>	Slender meadow-foam	SC	✓	
<i>Sedum</i>	<i>moranii</i>		Rogue River stonecrop	SC	✓	
<i>Sedum</i>	<i>oblanceolatum</i>		Applegate stonecrop	SC	✓	
<i>Senecio</i>	<i>hesperius</i>		Western senecio	SC	✓	
<i>Sophora</i>	<i>leachiana</i>		Western necklace	SC	✓	
<i>Streptanthus</i>	<i>howellii</i>		Howell's streptanthus	SC	✓	
<i>Triteleia</i>	<i>hendersonii</i>	<i>leachiae</i>	Leach's brodiaea	SC	✓	
<i>Viola</i>	<i>primulifolia</i>	<i>occidentalis</i>	Western bog violet	SC	✓	

¹Plants have been observed on or in close proximity to state forestlands.

Status:

SE – State Endangered

ST – State Threatened

SC – State Candidate

In addition, the district will contribute to statewide efforts to reduce the quantity and range of invasive, non-native plant species through the application of integrated pest management principles. This includes cooperation with other agencies and landowners, vegetation management to control such species, and the use of native plant species in re-seeding projects to reduce incidences of invasive, non-native plants on state forest land. As mentioned in the **Vegetation** portion of **Biological Elements** section, the T-list includes plant species targeted for the highest priority control action. They include scotch broom, gorse, and thistle in the Southwest Oregon District. Sightings of new invasions of noxious weeds will be reported to the Oregon Invasive Species hotline (1-866-invader) to determine the appropriate action.

Special Forest Products

The district will carry out the following activities as outlined in the *Southwest Oregon State Forest Management Plan* on pages 4-102 through 4-104.

- Provide permits to harvest special forest products on a request basis, consistent with product availability, protection requirements, and other resource management strategies.
- Periodically review and update district policies, procedures, and product price listings.
- Share special forest product information between districts and communicate permit information with adjacent landowners.
- Assess the need and capability for a special forest product planning program that could:
(a) identify major products that would be emphasized on the district, (b) delineate logical sale units and personal use areas, and (c) develop a harvest schedule based on the productivity of special forest products for both commercial harvesting and personal use.

Landscape Design Overview

Southwest Oregon District state forest lands are primarily adjacent to federally managed lands. BLM manages alternate square-mile sections in the interior of the district while USFS manages consolidated national forests on the western, eastern, and southern periphery of the district. In the Glendale area, state forest lands are located between two federal late successional reserves (LSR), but neither LSR is contiguous with state forest land. In several other areas, state forest land is either adjacent to or surrounded by federal LSRs. "LSRs are identified with an objective to protect and enhance conditions of late successional and old growth forest ecosystems, which serve as habitat for late successional and old growth forest related species including the northern spotted owl. Limited stand management is permitted." (BLM et al., 1994) In the Southwest Oregon District, federally managed lands have a better opportunity to provide older, more complex stand structures in large contiguous blocks to provide for interior habitat dependent species like the northern spotted owl. In addition, state forest lands, due to their small size and scattered nature, will be unable to provide large patches of interior forest habitat, even with significant blocking up through land exchanges.

However, the majority of state forest land shares common borders with federal lands managed as "matrix" land. "Stands in the matrix can be managed for timber and other commodity production, and to perform an important role in maintaining biodiversity. Silvicultural treatments of forest stands in the matrix can provide for the retention of old growth ecosystem components such as large green trees, snags and down logs, and depending on the forest type, can provide for a diversity of species." (BLM et al., 1994) Additionally, state forest lands are adjacent to industrial and non-industrial private forest land. These lands are most likely managed on shorter rotations primarily for the production of timber products.

In addition, as described in the **Fish and Wildlife** portion of the **Biological Elements** section, many northern spotted owl sites are associated with state forest lands. Owl populations have been generally stable to slightly declining since BLM began surveys in the early 1980s. Of the many northern spotted owls associated with state forest land, only three activity center core areas (approximately 100 acres each) are actually on state forest land. Northern spotted owls have successfully used these three sites for nesting and breeding for the last decade. The BLM has also established 100 acre activity center core areas on their land adjacent to these sites. The objectives of the activity center core areas on state forest lands will be: (1) to provide the best available habitat adjacent to the BLM activity center core areas, utilizing topographic features as boundaries; and (2) to provide connectivity between the activity centers on both ownerships. Commercial forest operations will not occur within activity center core areas. Active management will be applied within the northern spotted owl home ranges outside of the activity center core areas where more than 40 percent of the home range is considered suitable habitat.

Therefore, having taken into consideration the following variables: land ownership pattern, LSR and matrix designation, state forest land configuration and distribution, and the population distribution of northern spotted owls in the Southwest Oregon District; the

primary objective of Southwest Oregon District state forest lands will be to provide non-contiguous “stepping stone” habitats between larger blocks of habitat on federally managed lands. “Stepping stone” habitats are relatively small patches of complex forest structure, approximating a minimum of 240 acres where possible, spread across the extent of the state forest ownership and collectively represent the greatest opportunity for state forest to contribute habitat to complex forest dependent species in the Southwest Oregon District. A “stepping stone” configuration has the potential to provide more interior habitat than a corridor because it permits habitat contributions by adjacent forest ownerships as well as adjacent “stepping stones”. Locations for “stepping stones” include areas of current complex forest structure, areas where potential for future complex structure development exists, existing northern spotted owl activity center core areas, the headwaters of large streams, areas of slope stability concerns, and other silviculturally constrained state forest lands as identified in the LMCS. “Stepping stone” habitats have been designated on both Board of Forestry and Common School Lands.

A desired future condition map can be found in the attached **Map Section**. The district intends to achieve the desired future condition stand structure array by managing areas designated for the development of OFS and LYR stand structures as well as ensuring a variety of forest patch sizes and shapes that provide “stepping stone” habitats between federally managed forests. The overall design also includes habitats necessary for those species needing more open conditions. As can be seen on the district’s desired future condition map, complex structures have been designed somewhat evenly across state forest ownership. The landscape design was spatially arranged so as to include “stepping stone” habitats on the majority of the state forest ownership in the Southwest Oregon District.

In addition to “stepping stone” location, two main strategies were used to select stands for the development of complex forest structures.

The first strategy was to place OFS and LYR on sites where structural components of mature forests can be rapidly achieved (30 to 40 years from present), where access is good, and the risk to other resources is low. This strategy can be accomplished by partial cutting stands on high site ground where the trees will respond readily with increased growth. Approximately 67 percent of the desired future OFS and LYR will be achieved by this strategy. The areas identified for this strategy are located in Curry, Douglas, northern Jackson, and northern Josephine Counties.

The second strategy will achieve the remaining 33 percent of the desired future OFS and LYR stands on sites where resource protection can be maximized or where other resource values have a higher management priority. These areas have steep slopes, low site, and poor access. In many cases, conventional road building and timber harvest operations may not be feasible; thus the development of complex forest structures may take longer to achieve if they are not already present (60 to 80 years from present). Most of these stands are currently UDS or LYR with a significant percentage of OFS. Where possible, UDS and LYR stands will be partial cut to accelerate development towards more complex structures. As mentioned before, this may require less conventional means such as helicopter logging, when market conditions make this economically feasible. The areas identified for this strategy are located in southern Jackson and southern Josephine Counties.

In addition, all current OFS stands were assigned a desired future condition of OFS. The majority of LYR and all stands over 150 years of age were assigned a desired future condition of LYR or OFS. Finally, some younger stands may be included in the desired future development of OFS and LYR because the location of these stands and the potential stand contributions would best benefit the landscape design goals.

For the next 30 to 40 years, areas not designated to be OFS or LYR will provide the pool from which the remaining stand structures will be created. These stand structures will be arranged across the landscape, based on habitat, resources, and logistical and operational needs and constraints. The CSC stand structure will not be purposely designed in the landscape design. It will be identified and mapped as stands move into that stand structure.

The development of the desired future condition is a broad scale, long term endeavor. To achieve the desired future condition, a wide variety of silvicultural prescriptions will be applied to many stands of diverse origins. In the long term, Southwest Oregon District state forests will develop into forests quite different from the current Douglas-fir dominated second growth stands. Species diversity will be maintained or increased for both conifer and hardwood species. Across much of the ownership, canopies will be layered with multiple conifer and hardwood species of various ages and sizes. Large snags and downed wood will be common throughout the district. Vigorous mixed conifer stands will be found in the northern portions of the district while healthy, fire-resistant, uneven-aged stands, including open pine stands, will be common in the southern portion of the district.

Management Basins

Management Basin Overview

The Southwest Oregon District state forest lands are widely scattered and can at best be divided into two management basins. These two basins were delineated using major stream drainage and ownership patterns. The two primary river drainages in which state forest lands are located are the Umpqua River drainage and the Rogue River drainage. Portions of state forest land draining into both river drainages were allocated to the management basin in which the majority of the acres occurs. Approximately 100 acres of state forest land is located in the Klamath River drainage, but these acres were included in the Rogue River management basin for simplicity. Table 8-10 lists the acreages and percentages of the district in each management basin.

Table 8-10. Southwest Oregon District Management Basins (listed from North to South).

Management Basin	Acres	District Percent
Umpqua	8,136	45%
Rogue	9,955	55%

Basin Descriptions

The proposed management activities described below are for the planning period from July 1, 2001 to June 30, 2011. Activities already under contract or in the Fiscal Year 2001 annual operations plan may take place during the planning period, but will not be counted toward the planning period objectives. Activities planned in the final years of the planning period will most likely be completed after June 30, 2011, but will be counted as planning period objectives. Amounts of precommercial thinning, pruning, and fertilization depend on fiscal budget levels. Management basins are described from north to south.

Umpqua

This management basin is the smaller of the two on the district with approximately 8,136 acres and is located in Douglas, northern Josephine, and northern Jackson Counties. About 5,008 acres occur in two contiguous blocks. The other 3,128 acres occur in 16 parcels of various sizes.

The eastern portion of this basin is in close proximity to the Umpqua National Forest. The majority of the basin is intermixed with lands managed by the BLM, industrial, and non-industrial private landowners.

Forests in this management basin are primarily in the mixed conifer zone and consist of a mixture of evergreen conifers dominated by Douglas-fir, mixed with drought-resistant hardwoods such as Pacific Madrone and Golden Chinquapin. Most Douglas-fir-dominated sites also have significant conifer populations of Sugar pine, Incense Cedar, and Grand Fir, as well as hardwood populations of Tanoak and Canyon Live Oak. Red Alder, Black Cottonwood, Oregon Ash, Willows, and Pacific Yew are common along stream courses and wet areas.

Northern spotted owls are located throughout the basin. Three northern spotted owl activity center core areas located on state forest land are in this basin. Marbled murrelets are not known to be located on state forest lands in this basin.

The major streams in this basin are Cow Creek, Little Bull Run, Windy Creek, McCullough Creek, and Perkins Creek. The Oregon Department of Forestry manages lands adjacent to approximately 8.9 miles of fish streams, the majority of which are along Windy Creek. There are four domestic water sources located on state forest lands in this basin.

On state forest lands, portions of Windy Creek have been determined to be important for salmon. With direction from ODFW, the district plans to conduct some stream enhancement projects. Anticipated projects include placement of logs in streams to create pools, replacement of stream crossing structures (i.e. culverts) that block fish passage, relocation or redesign of improperly located roads, stabilization of sediment sources (i.e. cut banks), road closure and/or road vacation.

Recreation in this basin is mostly dispersed hunting, camping, and off highway vehicle use. Windy Creek Park is located in this basin. The Pacific Power and Light power line corridor is a naturally surfaced powerline access road used by off highway vehicle enthusiasts. Portions of state forest land are visible from Interstate 5.

Table 8-11 summarizes the current stand condition, the estimated post implementation plan stand condition, and the desired future condition for the Umpqua management basin.

Table 8-11. Umpqua Basin: Current Condition, Post Implementation Plan Condition, and Desired Future Condition, by Stand Structure and Percentage

	REG	CSC²	UDS³	LYR⁴	OFS	NSC
Current Condition	11	19	50	19	1	<1
Post Implementation Plan Condition ¹	1	25	54	19	1	<1
Desired Future Condition	5	28	18	30	19	<1

1. These are estimates that may differ from the actual conditions significantly.
2. After partial cutting CSC stands, it takes about 5 –to 7 years for an understory to develop.
3. After partial cutting and/or underplanting, it may take 20 to 30 years for layering to develop.
4. The time it takes to develop LYR stands into OFS is highly variable and depends on many factors, including (but not limited to): snag and down wood recruitment; development of trees greater than 28 inches in diameter.

Key Resource Considerations

- Northern Spotted Owls.
- Coho salmon and steelhead trout in Windy Creek.
- Recreation in the Windy Creek area.

Desired Future Condition and Landscape Design

Two important factors for the basin’s desired future condition are the current abundance of the UDS structure and the shortage of the OFS structure. The primary method to develop more complex structures in this basin will come through partial cutting CSC and UDS stands. In the future, this basin will have more LYR stands and fewer OFS stands when compared to the district average.

Proposed Management Activities

Harvest — Approximately 500 to 750 acres of partial cutting will take place in this basin during the implementation plan period. The majority of the partial cutting will be first entries into naturally regenerated CSC and UDS stands with one partial cut occurring in a naturally regenerated LYR stands.

Precommercial thinning — This basin is expected to need 0 to 200 acres of precommercial thinning, based on current stocking and stand ages. This practice keeps stands growing at their maximum rate and allows the selection of a desirable species mix.

Pruning — Young stands with Sugar Pine are candidates for pruning to prevent infection with White Pine Blister Rust.

Road construction — Between 7 and 10 miles of road will be constructed. Construction will consist of low use roads or landings along existing roads.

Road improvement — Between 15 and 25 miles of existing roads will be improved. The improvement work is needed to maintain or upgrade the standard of the roads.

Road closure and vacation — Between 10 and 15 miles of existing roads will be closed or partially vacated.

Recreation — Windy Creek Park will need some facility maintenance and general clean-up. The Pacific Power and Light power line corridor will need some access management and erosion mitigation.

Rogue

This is the largest management basin on the district, containing 9,955 acres located in Curry, Jackson, and Josephine Counties. All 9,955 acres occur in 37 scattered parcels of various sizes.

The western portion of this basin is in close proximity to the Siskiyou National Forest and the southern portion is in close proximity to the Rogue River National Forest. The majority of the basin is intermixed with lands managed by the BLM, industrial, and non-industrial private landowners.

Fire has had a significant presence in this management basin. Fires in 2001 and 2002 affecting state forest land included the Quartz Fire, the Timbered Rock Fire, and the 500,000 acre Biscuit Fire. The Quartz Fire of 2001 burned 37 acres of high elevation state forest land killing older White Fir and Shasta Red Fir trees in a mixed conifer stand while the Timbered Rock Fire burned 220 acres of young Douglas-fir and Ponderosa Pine killing the majority of the stand. While no state forest land was burned in the Biscuit Fire, several thousand acres were threatened.

Forests are primarily in the mixed evergreen zone but representatives of each of the vegetative zones in Southwest Oregon are found on state forest ownership in this management basin. Forests primarily consist of a mixture of evergreen conifers dominated by Douglas-fir, mixed with drought-resistant hardwoods such as Pacific Madrone and Golden Chinquapin. Most Douglas-fir-dominated sites also have significant conifer populations of Sugar pine, Incense Cedar, and Grand Fir, as well as hardwood populations of Tanoak and Canyon Live Oak. Ponderosa Pine may be dominant on some drier, southern aspects. Floristically, this basin is extremely diverse with known locations of threatened and endangered plants and has the highest percentage of non-silviculturally capable lands.

Insects and disease are also prevalent in this basin including bark beetles, dwarf mistletoe, White Pine Blister Rust, and Port Orford Cedar Root Rot.

Northern spotted owls are located throughout the basin with state forest land often occurring in several home ranges simultaneously. There are currently no northern spotted owl activity centers on state forest land. Marbled murrelets are not known to be located on state forest lands in this basin, however, the western most portion of state forest ownership in this management basin is being surveyed for marbled murrelet presence. Bald Eagles and Peregrine Falcons are also present in this management basin along the Rogue River.

The major streams in this basin are the Rogue River, Salmon Creek, Hog Creek, Woodcock Creek, Althouse Creek, Coleman Creek, Steve’s Fork of Carberry Creek, and Yale Creek. The Oregon Department of Forestry manages lands adjacent to approximately 2.5 miles of fish streams, the majority of which are along Yale Creek. There are five domestic water sources located on state forest lands in this management basin.

Recreation in this management basin is mostly dispersed hunting, camping, hiking, mountain biking, off-highway vehicle use, horseback riding, and sight seeing. There are approximately 1 mile of hiking trail on Kerby Peak and 0.5 mile of hiking trail on London Peak. The state forest portion of the London Peak trail also serves as the trailhead. Portions of state forest land are located within the Rogue River Wild and Scenic Corridor. Other areas are visible from the Redwood Highway.

Table 8-12 summarizes the current stand condition, the estimated post implementation plan stand condition, and the desired future condition for the Rogue management basin.

Table 8-12. Rogue Basin: Current Condition, Post Implementation Plan Condition, and Desired Future Condition, by Stand Structure and Percentage

	REG	CSC²	UDS³	LYR⁴	OFS	NSC
Current Condition	11	18	20	26	13	12
Post Implementation Plan Condition ¹	2	23	24	26	13	12
Desired Future Condition	5	27	14	13	30	12

1. These are estimates that may differ from the actual conditions significantly.
2. After partial cutting CSC stands, it takes about 5 –to 7 years for an understory to develop.
3. After partial cutting and/or underplanting, it may take 20 to 30 years for layering to develop.
4. The time it takes to develop LYR stands into OFS is highly variable and depends on many factors, including (but not limited to): snag and down wood recruitment; development of trees greater than 28 inches in diameter.

Key Resource Considerations

- Fire ecology and management.
- Northern Spotted Owls.
- Threatened and Endangered Plants
- Insect and Disease management.
- Recreation trails and trailhead.
- Rogue River Wild and Scenic Corridor.

Desired Future Condition and Landscape Design

Two important factors for the basin’s desired future condition are the current abundance of the UDS, LYR, and NSC structures and the relative shortage of the OFS structure. The

primary method to develop more OFS in this basin will come through partial cutting in UDS and LYR stands. This basin will have more OFS stands and fewer LYR stands when compared to the district average.

Proposed Management Activities

Harvest — Approximately 1,300 to 1,950 acres of partial cutting will take place in this basin during the implementation plan period. Approximately one half of the partial cutting will be first entries into naturally regenerated CSC and UDS stands while the other half will be first entry partial cuts in naturally regenerated LYR stands. One stand will be partial cut to remove severely Dwarf Mistletoe infected Douglas-fir and interplant with Incense Cedar and Ponderosa Pine.

Precommercial thinning — This basin is expected to need 500 to 700 acres of precommercial thinning, based on current stocking and stand ages. This practice keeps stands growing at their maximum rate and allows the selection of a desirable species mix.

Pruning — Young stands with Sugar Pine are candidates for pruning to prevent infection with White Pine Blister Rust.

Road construction — Between 15 and 20 miles of road will be constructed. Construction will consist of low and medium use roads or landings along existing roads.

Road improvement — Between 15 and 25 miles of existing roads will be improved. The improvement work is needed to maintain or upgrade the standard of the roads.

Road closure and vacation — Between 20 and 30 miles of existing or constructed roads will be closed or partially vacated.

Recreation — The London Peak trailhead and a portion of the trail will be relocated to prevent future use conflicts. Increased signage at the trailhead is planned in cooperation with the BLM.

Information Summary for All Management Basins

Table 8-13 shows the current and desired future condition for stand structures for each management basin and for the Southwest Oregon District as a whole.

Table 8-13. Summary: Current Condition (CC) and Desired Future Condition* (DFC), by Stand Structure and Percentage

Management Basin	Acres	NSC/ Non-Forest**		REG		CSC		UDS		LYR		OFS	
		CC	DFC	CC	DFC	CC	DFC	CC	DFC	CC	DFC	CC	DFC
Umpqua	8,136	<1%	<1%	11%	5%	19%	28%	50%	18%	19%	30%	1%	19%
Rogue	9,955	12%	12%	11%	5%	18%	27%	20%	14%	26%	13%	13%	30%
District Total	18,091	7%	7%	11%	5%	18%	28%	33%	15%	23%	20%	8%	25%

* The Desired Future Condition will be achieved in an estimated 40 to 50 years.

** NSC/Non-Forest (Non-Silviculturally Capable and Non-Forest lands). Non-Silviculturally Capable lands are not capable of growing forest tree species (defined in OAR 629-035-0040). Non-Forest lands are those areas, greater than 5 acres, that are maintained in a permanently no forest condition (example include district offices, work camps and large power line right-of-ways).

The district wide total for each stand structure type falls within the accepted stand structure array documented on page 4-46 in the *Southwest Oregon State Forest Management Plan* and as shown in Table 8-14.

Table 8-14. Stand Structure Array: Percent of the Landscape

Regeneration (REG)	5-20%
Closed Single Canopy (CSC)	35-55%
Understory (UDS)	5-15%
Layered (LYR)	10-20%
Older Forest Structure (OFS)	10-30%

This implementation plan will move stands toward the desired future condition while maintaining options for future landscape design considerations. The desired future condition will provide a range of stand structures that will meet habitat requirements for a full assortment of native plant and animal species. It is estimated that the desired future condition can be achieved in 40 to 50 years for all management basins.

Expected Outputs and Habitat Achievements

The vision outlined on pages 3-4 and 3-5 of the *Southwest Oregon State Forest Management Plan* is to create a forest with many different stand types across the landscape, and to encourage the recruitment of structural diversity components within stands, such as snags and down woody debris. In this vision for the forest, snags and down logs are located in all stand types, but occur in significantly different amounts in individual stands, emulating natural disturbance events. While the forest maintains a general balance of structures, each individual stand is continuously changing throughout time. This shifting mosaic of forest structures maintains healthy and vigorous stands, contributes to the diversity of plant communities and wildlife habitats, and enhances overall biodiversity throughout the forest.

Table 8-15 summarizes the current stand condition, the estimated post implementation plan stand condition, and the desired future condition for the Southwest Oregon District.

Table 8-15. Anticipated Stand Structure Development by 2011

	NSC	REG	CSC ²	UDS ³	LYR ⁴	OFS
Current Condition	7	11	18	33	23	8
After Implementation Plan Period ¹	7	2	24	37	23	8
Desired Future Condition	7	5	28	15	20	25

1. These are estimates that may differ from the actual conditions significantly.

2. After partial cutting CSC stands, it takes about 5 –to 7 years for an understory to develop.

3. After partial cutting and/or underplanting, it may take 20 to 30 years for layering to develop.

4. The time it takes to develop LYR stands into OFS is highly variable and depends on many factors, including (but not limited to): snag and down wood recruitment; development of trees greater than 28 inches in diameter.

Partial cutting will be the primary silvicultural activity to move stands toward the next level of structural complexity. More complex structures will not be achieved immediately after a partial cut. Historical evidence suggests that it may take the full 20 to 30 year period after the management prescription for a more complex structure to be achieved. Partial cutting in both younger and older stands will progress CSC and UDS stand structures towards the more complex LYR stand structure. Some younger stands will receive multiple partial cut entries on 20-year intervals to develop the components of a LYR stand. Some LYR stands may require an additional partial cut entry to hasten the development of OFS characteristics (larger diameter trees, higher snag densities, and greater down wood levels, etc.).

The harvest levels proposed in this implementation plan will contribute toward the desired future structure targets as outlined in Table 8-15. The greatest risk for missing these structure targets would come from clearcutting too many stands. The long-term desired future condition for the REG structure is 5 percent across the district. However, this first 10-year implementation plan proposes an average of 0 acres of clearcut per year, which will

yield 2 percent of the district in REG structure at the end of the 10-year period. This conservative approach will allow the accumulation of additional information about both current and desired future conditions and structure-based management in this interim period without a HCP. If the Oregon Department of Forestry acquires a HCP and an Incidental Take Permit, this silvicultural option in this stand structure will be reassessed to achieve the desired future condition stand structure array. In future 10-year planning periods, stands in the following conditions will be assessed for conversion into the REG structure:

- Stands in poor forest health condition (e.g., diseased stands greater than 5 acres).
- Stands surplus to the stand structure targets.
- Stands that are not reasonable silvicultural candidates for development into LYR or OFS. Typically these stands are sparsely stocked with a brush understory, or overstocked with a low likelihood of responding positively to partial cutting.
- Stands in a location on the landscape that cannot effectively be managed or are not designated for LYR or OFS development.

The annual operations plan will include a projection of how the planned silvicultural activities in a given fiscal year will contribute toward meeting desired future condition goals.

Tables 8-16 and 8-17 show the annual partial cut and clearcut objective for the implementation planning period. Prior to the *Southwest Oregon District Implementation Plan (February 2003)*, implementation plan harvest objectives assumed the acquisition of a HCP and an Incidental Take Permit. These harvest objectives are indicated in Table 8-16. The *Southwest Oregon District Implementation Plan (February 2003)* does not make this assumption and the harvest objectives have been reduced accordingly as shown in Table 8-17. Additional information about the harvest objectives and their calculation can be found in **Appendix A**. Table 8-18 shows the estimate annual habitat achievements for partial cuts and clearcuts based on the harvest objectives shown in Table 8-17.

Table 8-16. Annual Partial Cut and Clearcut Harvest Objectives, by Volume and Acres before FY 2004

Partial Cut		Clearcut		Total
Acres	MMBF	Acres	MMBF	MMBF
368 – 624	2.94 – 4.78	22 – 66	0.66 – 1.53	3.60 – 6.31

Table 8-17. Annual Partial Cut and Clearcut Harvest Objectives, by Volume and Acres after FY 2004

Partial Cut		Clearcut		Total
Acres	MMBF	Acres	MMBF	MMBF
180 – 270	1.44 – 2.16	0	0	1.44 – 2.16

Table 8-18. Estimated Annual Habitat Achievements for Partial Cuts and Clearcuts for Fiscal Years 2002 to 2011

Harvest Type	Structure Development (acres)	Snag Retention ¹ (snags)	Down Wood Recruitment ² (thousand cubic feet)	Green Tree Retention ³ (trees)
Clearcut	0	Not Applicable	Not Applicable	Not Applicable
Partial Cut	180 – 270	270 – 405	18 – 27	Not Applicable

1. Snag retention levels – younger partial cuts may not include snag creation; older partial cuts will have a target of 1 or 2 snags per acre, and clearcuts 2 snags per acre.
2. Down wood recruitment levels – average of 100 cubic feet per acre in partial cuts, and average of 300 cubic feet per acre in clearcuts.
3. Green tree retention level – average of 5 trees per acre

Table 8-19 shows the current and planned timber sale as of January 1, 2003. Three partial cuts and one clearcut remain under contract in the Southwest Oregon District.

Table 8-19. Summary of Current and Planned Timber Sales as of January 1, 2003.

Harvest Type	Clearcut Acres	Partial Cut Acres
FY 2000*	38	498
FY 2001*	25	0
FY 2002	0	0
FY 2003	0	330

* The annual operations plans for Fiscal Years 2000 and 2001 were approved prior to the adoption of the Northwest and Southwest Oregon State Forest Management Plans by the Oregon Board of Forestry. These two operation plans also occur prior to the time frame of this implementation plan, although the contracts extend into the implementation period.

Appendix A

Determining Levels of Harvest and Other Silvicultural Activities

This document shows the results and outlines the steps and processes used to determine the activity levels in the *Southwest Oregon District Implementation Plan (February 2003)*. Levels for harvest and other silvicultural activities were determined utilizing the Department of Forestry's *Implementation Plans 2001: Determining Levels of Harvest and Other Silvicultural Activities for Northwest State Forests and Procedure for Review and Refinement of the Draft IP Harvest Calculations* (ODF, 2001a). These harvest levels are consistent with the Board of Forestry Intent Statements on determining harvest levels numbers 4 and 9:

4. Timber harvests will be conducted across a range of forest conditions and forest age classes, consistent with achieving desired future condition as described in the FMPs.
9. Prior to completion and approval of a HCP and issuance of an Incidental Take Permit for covered species, ODF will continue to apply "take avoidance" strategies for listed species as the FMPs are implemented, to assure compliance with state and federal ESAs.

Results

Table 8-20 summarizes the estimated annual harvest and other silvicultural activities to be accomplished by the Southwest Oregon District from July 1, 2001 through June 30, 2011. The steps and processes beginning on the next page were used to estimate the activity levels in this table.

Table 8-20. Annual Objectives/Estimates

Silvicultural Activity	Annual Objective Acres / Year
Conifer Partial Cut Harvest ¹	180-270
Conifer Clearcut Harvest ²	0
Hardwood Partial Cut Harvest	N/A
Hardwood Clearcut Harvest	N/A
Rehabilitation	0-50
Reforestation	
Initial Planting	0-50
Interplanting	0-25
Underplanting	100-200
Precommercial Thinning ³	0-500
Fertilization ³	0-250
Pruning ³	0-50

1. Dead and diseased patch cuts less than five acres in size will count toward the annual conifer partial cut objective.
2. Dead and diseased patch cuts greater than five acres in size will count toward the annual conifer clearcut objective.
3. The acres shown represent a range dependent on annual workloads and budget levels. In years of low fiscal budget levels, these estimates could fall to zero.

Step 1. Allocate the district acreage into categories.

Table 8-21 summarizes the Southwest Oregon District acres capable of supporting a commercial harvest operation and the acres not available for commercial harvest.

Table 8-21. Determination of Stands Capable of Supporting a Commercial Operation

Category	Acres
Total District Acres	18,091
Roads and Streams ¹	1,390
Non-Commercial ²	3,149
Commercial Conifer	12,974
Commercial Hardwoods	578

1. **Roads and Streams** – Acres in roads were determined by multiplying the total road length of all roads on the district (102 miles) by the average acres/mile for road right-of-ways (3.636 acres/mile). Acres in streams represent special stewardship stream buffers and were calculated from GIS.
2. **Non-Commercial** – Acreage that would not support a commercial operation in the foreseeable future due to non-silviculturally capable designation, special stewardship other than aquatic-riparian (i.e., northern spotted owl clusters, northern spotted owl core areas outside of clusters, marbled murrelet management areas, etc.), very low site or bad terrain, or because the site is grass, brush, or a noncommercial hardwood vegetation type.

Acreage in Roads and Streams

The acreage taken up by roads was generated by buffering the district’s current GIS road data-set by a width of 15 feet on each side of the centerline or 30 feet total road width. An acreage estimate was calculated totaling 367 acres in roads.

Second, the Special Stewardship Riparian Management Area (RMA) acreage was determined by applying the Special Stewardship RMA buffer widths shown in Table 8-22 to both sides of the updated Southwest Oregon District Medford and Roseburg BLM Stream databases. These Special Stewardship RMA buffer widths were determined by summing the average Aquatic Zone width with the Inner Zone width. Both of these zone widths are based on stream size. The Aquatic Zone includes the stream channel and the channel migration zone. The Inner Zone may include the Stream Bank Zone and the Inner RMA Zone as prescribed by stream size the *Southwest Oregon State Forest Management Plan*. The widths of each of these zones and the resulting Special Stewardship RMA widths are listed in the table below.

Table 8-22. Estimate of Special Stewardship RMA Widths

Stream Attributes	Aquatic Zone (feet)	Inner Zone (feet)	Total Special Stewardship RMA (feet)
Small, No Fish, Seasonal	0'	0'	0'
Small, No Fish, Perennial	5'	25'	30'
Small, Fish-Bearing	5'	100'	105'
Medium (all)	10'	100'	110'
Large (all)	20'	100'	120'

The updated Medford and Roseburg BLM Stream databases represent the best current linear and spatial hydrography estimate for the Southwest Oregon District. These lands, in addition to other significant aquatic areas, were designated as Special Stewardship – Aquatic and Riparian Habitat in the draft Land Management Classification System. In total, these lands approximate 1,023 acres.

The road acreage was then added to this acreage of Special Stewardship RMAs prior to subtraction from the district gross acreage. A total of 1,390 acres was subtracted from the district gross acreage, as shown in Table 8-21 above.

Acreage That Would Not Support a Commercial Operation

As outlined in the procedure document, this allocation includes:

- Areas that were classified as Non-Silviculturally Capable during the Land Base Designation Process;
- Areas classified as Special Stewardship for the Land Management Classification System (excluding those previously identified as Aquatic and Riparian); and
- Brush or rock, as identified in the SLI inventory system.

These areas were combined in GIS, areas of overlap or road intersections were removed, and the acreage was calculated. A total of 3,149 was subtracted from the district gross acreage as shown in Table 8-21 above.

Acreage in Conifer Stands That Would Support a Commercial Operation

This allocation includes all conifer stands excluding all lands previously allocated above. Conifer stands were determined during the stand typing process associated with the Stand Level Inventory project. There are 12,974 acres in conifer stands that would support a commercial operation as shown in Table 8-21 above.

Acreage in Hardwood Stands That Would Support a Commercial Operation

This allocation includes all hardwood stands excluding all lands previously allocated above. Hardwood stands were determined during the stand typing process associated with the Stand Level Inventory project. There are 578 acres in hardwood stands that would support a commercial operation as shown in Table 8-21 above.

Step 2. Determine annual conifer harvest objectives.

Annual Conifer Partial Cut Objective

Partial cut acres were determined by estimating the percentage of current conifer stand acres that are silvicultural candidates for partial cutting. This included all stands that could be managed for UDS, LYR, and OFS. In addition, candidates included commercial conifer stands from 0 to 25 years old that were classified as REG and CSC stands. The interval was based on a range from 15 to 25 years for partial cut entries. Reductions are defined in Step 4.

The 12,974 acres of conifer stands available for partial cut were divided by the 20-year interval to yield 649 acres of conifer partial cut per year. This amount was adjusted for the reductions in Table 8-23 below, resulting in 227 acres of conifer partial cut per year. The acres/year range was determined by adding and subtracting 20 percent to the partial cut target of 227 acres per year.

Estimated Conifer Partial Harvest: 180 to 270 acres/year

Annual Conifer Clearcut Harvest Objective

- It is desirable to maintain a variety of age classes and stand structures throughout the forest including the desired future condition of 5 percent in the REG structure. Clearcut harvesting 40 to 50 acres per year would maintain the district at 5 percent in the REG structure. However, with the exception of stands severely impacted by insects, disease, wildfire, or other stand replacing event which will be salvage harvested to maintain forest health while retaining the appropriate numbers of snags, downed wood, and residual trees; no clearcut harvests are planned for the initial 10-year implementation plan period in current stands. Current “no take” strategies for the northern spotted owl employed by the Oregon Department of Forestry in conjunction with the current land ownership pattern make current stands unavailable for clearcut harvest. If the Oregon Department of Forestry acquires a HCP and an Incidental Take Permit, this silvicultural option in this stand structure will be reassessed to achieve the desired future condition stand structure array.

Estimated Conifer Clearcut Acres: 0 acres/year

Step 3. Determine the annual hardwood harvest objectives.

Annual Hardwood Partial Cut and Clearcut Objectives

These objectives are not applicable to the Southwest Oregon District. The 578 acres of hardwood stands capable of supporting a commercial operation will be managed through partial cut harvest concurrently with the larger adjacent conifer stands, and therefore they do not have an associated annual objective.

Step 4. Adjust harvest objectives for availability factors.

The gross annual harvest opportunities and estimates represent opportunities. The opportunities may not be achievable and may need to be adjusted due to availability factors. Step 4 documents the reductions made to the gross annual harvest opportunities to account for potential availability factors based limitations due to ecological or biological immaturity of stands, or restrictions for threatened and endangered species. For example, those stands that will not be of sufficient age and size for commercial harvest during the 10-year planning period are considered unavailable. Harvest restrictions in northern spotted owl home ranges limit available acres for various harvest opportunities. These reductions are summarized in Table 8-23.

Step 5. Adjust harvest objectives for operability factors.

Operability reductions to the gross annual harvest opportunities include limitations caused by terrain, ownership boundaries, harvest type/method, or operational constraints. These areas represent site-specific areas not included in Special Stewardship - Operationally Limited including some high risk sites, areas of active soil movement, and areas of fragile soils. These reductions are summarized in Table 8-23.

Step 6. Adjust harvest objectives for logistical factors.

Logistical reductions to the gross annual harvest opportunities include limitations due to the operational holding capacity of the district, log accountability issues due to sale adjacency, workload, social considerations, and environmental constraints. The operational holding capacity refers to the number of management activities or operations that can reasonably coexist due to limitations imposed by roads systems or conflicts with other resource management goals. It is estimated that at current staffing levels the proposed management objectives will be achieved. These reductions are summarized in Table 8-23.

Table 8-23. Summary of Availability, Operability, and Logistical Reduction Factors in Acres and Percent (%).

Harvest Objective	Gross Annual Objectives	Availability Reduction	Operability Reduction	Logistical Reduction	Net Annual Objectives
Conifer Clearcut	649	325 (50%)	32 (5%)	65 (10%)	227
Hardwood Clearcut	N/A	-	-	-	N/A
Conifer Partial Cutting	0	-	-	-	0
Hardwood Partial Cutting	N/A	-	-	-	N/A

Step 7. Estimate the annual rehabilitation acreage.

Rehabilitation acreage includes those areas that would require an investment to control existing brushy vegetation and prepare the site for planting. There are small areas scattered throughout the forest that need some form of rehabilitation.

Estimated Rehabilitation Acres: 0 to 50 acres/year

Step 8. Estimate the annual reforestation acreage.

All clearcut harvest acres and all rehabilitation acres will be planted.

Estimated Initial Planting: 0 to 50 acres/year

Interplanting is utilized where initial plantings have failed or underachieved. It is estimated that 50 percent of all clearcut harvests and rehabilitations will have some form of interplanting.

Estimated Interplanting: 0 to 25 acres/year

In addition, some partial harvests that will be placed on the pathway to OFS or LYR structure types will be underplanted to initiate the development of an understory. An estimate of this acreage is about 55 percent of the partial cut objective.

Estimated Underplanting: 100 to 200 acres/year

Step 9. Determine the annual PCT estimate.

Precommercial thinning (PCT) increases the value of the stand biologically, silviculturally, and economically more than the costs to perform the operation. Biologically, PCT is necessary to maintain vigorously growing stands and high levels of forage for big game animals. Silviculturally, PCT has the additional benefit of providing for the selection of residual trees by size and species, thereby producing a healthy and diverse stand. Finally, PCT is cost-effective due to the economic benefits derived from maintaining a rapid growth rate at both the stand and individual tree level.

PCT is contracted labor. Although levels may fluctuate due to stand needs, budget levels, and contract crew availability, PCT levels should not fall to zero.

Annual PCT Estimate: 0 to 500 acres/year

Step 10. Determine the annual fertilization and pruning estimates.

Fertilization

Nitrogen fertilization has been shown to be most effective on sites ranging from low site II to site IV. Fertilization response is stronger in thinned than in unthinned stands. Douglas-fir and true fir both respond to fertilization. The time between thinnings would probably be shortened by fertilization. Conifer stands that have been thinned and are between ages 15 to 70 are likely candidates for fertilization.

Fertilizing each tree at the time of planting is relatively inexpensive and easy to accomplish. Whether this provides any increased benefits to tree growth is still being analyzed in Southwest Oregon, and will be evaluated in annual operations plan.

Annual Fertilization Estimate: 0 to 250 acres/year

Pruning

The low site indices and higher rotation age in Southwest Oregon are not conducive to an investment in pruning. The greatest benefit of pruning may be to reduce blister rust infection in Sugar Pine stands. Pruning would be utilized on higher site conifer stands on a limited basis as funding is available. Pruning may also be used on small acreages for visual stand enhancement projects.

Annual Pruning Estimate: 0 to 50 acres/year

Step 11. Adjust estimates for logistical, operability, and availability factors.

The estimates for Step 5 through Step 10 do not need to be further adjusted for logistical, operational, or availability factors. The reductions were included either in the initial harvest reductions or in the annual estimates for each silvicultural opportunity. Reductions were based largely on budget levels and to accomplish the work. Inmate crews are not available in Southwest Oregon, and labor-intensive projects must either be contracted out or completed with current staff. In the event of a significant, natural, catastrophic event (i.e., fire, windthrow, disease, or insect outbreak), new silvicultural objectives, and reforestation and rehabilitation plans may have to be developed.

Appendix B

References

- Bureau of Land Management and United States Forest Service.** 1994. Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of The Northern Spotted Owl: Attachment A to the Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl.
- Franklin, J. F., and C. T. Dyrness.** 1969. Natural Vegetation of Oregon and Washington. USDA Forest Service, Pacific Northwest Research Station, Portland, OR. General Technical Report PNW-80.
- Governor's Natural Resources Office.** 1999. Oregon Plan for Salmon and Watersheds. Office of the Governor, Salem, OR.
- Hayes, J. P., et al.** 1998. Effects of Commercial Thinning on Stand Structure and Wildlife Populations: A Progress Report, 1994-1997. Coastal Oregon Productivity Enhancement Program. College of Forestry, Oregon State University, Corvallis, OR.
- Hayes, J. P., and D. Larson.** 2000. Small Mammal Response to Thinning. The Cooperative Forest Ecosystem Research Program: Annual Report 2000.
- Hayes, J. P., and J. Weikel.** 2000. Bird Response to Thinning. The Cooperative Forest Ecosystem Research Program: Annual Report 2000.
- Oregon Department of Forestry.** 1996. Marbled Murrelet Management Plan for State Forest Lands. Revised May 30, 1996. State Forests Program, Salem, OR.
- Oregon Department of Forestry.** 1999. Draft Recreation Design Standards and Management Guidelines. State Forests Program, Salem, OR.
- Oregon Department of Forestry.** June 1999. Western Oregon State Forests Habitat Conservation Plan. Unpublished draft plan. State Forests Program, Salem, OR.
- Oregon Department of Forestry.** July 2000. Forest Roads Manual. State Forests Program, Salem, OR.
- Oregon Department of Forestry.** January 2001. Northwest Oregon State Forests Management Plan. State Forests Program, Salem, OR.
- Oregon Department of Forestry.** January 2001. Southwest Oregon State Forest Management Plan. State Forests Program, Salem, OR.
- Oregon Department of Forestry.** October 2000. Northern Spotted Owl Management Measures. Unpublished memo. State Forests Program, Salem, OR.

Oregon Department of Forestry. 2000a. Oregon Forest Practice Rules and Statutes. Salem, OR.

Oregon Department of Forestry. 2001a. Implementation Plans 2001: Determining Levels of Harvest and Other Silvicultural Activities for Northwest State Forests and Procedure for Review and Refinement of the Draft IP Harvest Calculations, March 6, 2001. State Forests Program, Salem, OR.

Oregon Department of Forestry. 2001b. Interim State Forests Salmon Protection Policy. May 2001. State Forests Program, Salem, OR.

Pacific Seabird Group. 2003. Methods for Surveying for Marbled Murrelets in Forests: A Revised Protocol for Land Management and Research. Pacific Seabird Group, Marbled Murrelet Technical Committee. Oregon State University, Corvallis, OR.

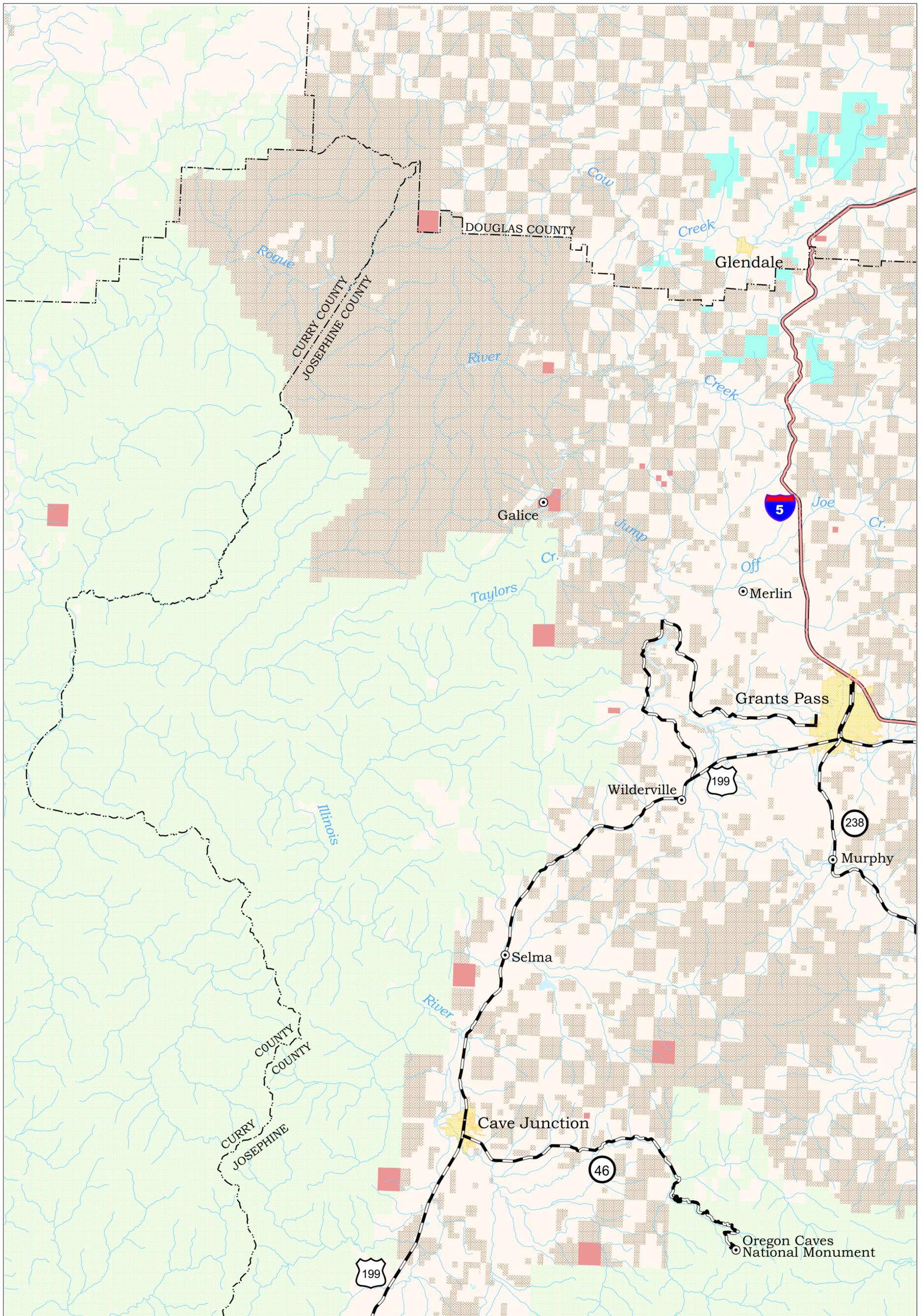
USFWS (USDI Fish and Wildlife Service). 1990. The Procedures Leading to ESA Compliance for the Northern Spotted Owl. Portland, OR.

Map Section

- 1. Southwest Oregon District Overview**
 - West Half
 - East Half

- 2. Southwest Oregon District: Current Condition Stand Structure**
 - West Half
 - East Half

- 3. Southwest Oregon District: Desired Future Condition Stand Structure**
 - West Half
 - East Half



Southwest Oregon District

West Half

Oregon Department of Forestry Ownership

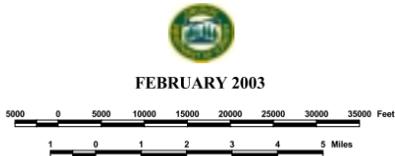
Identification and mapping of specific classifications are based on the strategies and standards in the approved Northwest Forest Management Plan (January, 2001) and selected strategies from the draft Western Oregon State Forest Habitat Conservation Plan.

Boundary lines on this map are approximate. Exact locations of boundary lines will be determined on the site and will depend on the upon conditions that exist on the site.

The identification and mapping of the aquatic sub-classes shown here were based on the best available information of stream types, including map-based estimates for some streams.

This information will be updated over time with information from site-specific assessments or inspections.

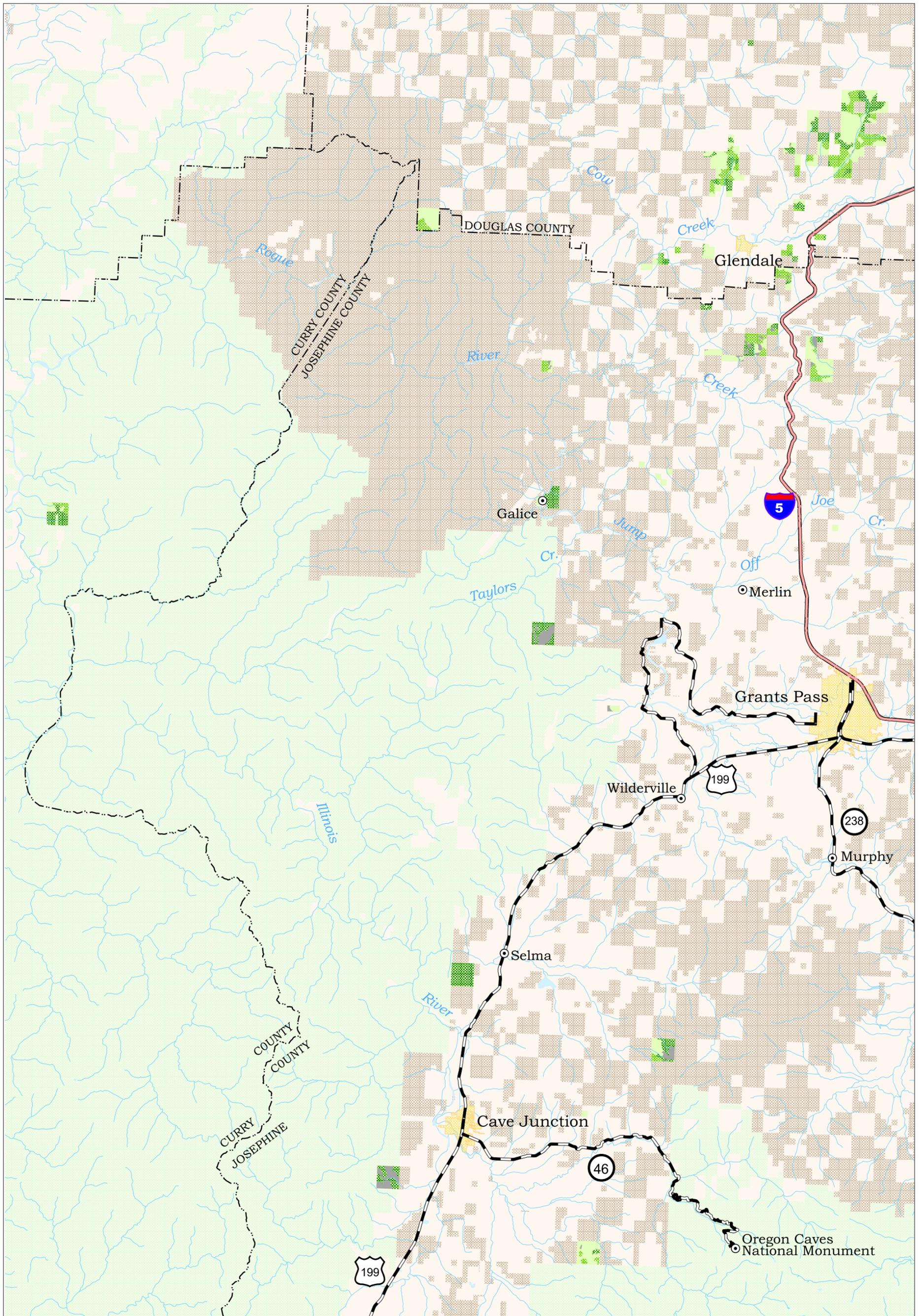
- State Board of Forestry Lands
- Common School Lands
- United States Forest Service Lands
- Bureau of Land Management Lands
- Cities



FEBRUARY 2003



- Highway
- Interstate 5



Southwest Oregon District West Half

Oregon Department of Forestry Desired Future Condition Stand Structure

The desired future condition is based on the landscape design strategies in the approved Northwest Forest Management Plan (January, 2001). The specific strategies and factors used to develop the landscape design and desired future condition are described in the district implementation plan.

Boundary lines on this map are approximate. Exact locations of boundary lines will be determined on the site and will depend on the upon conditions that exist on the site.

This information will be updated over time with information from site-specific assessments or inspections.

Oregon Department of Forestry

-  Cities
-  Highway
-  Interstate 5
-  United States Forest Service Lands
-  Bureau of Land Management Lands

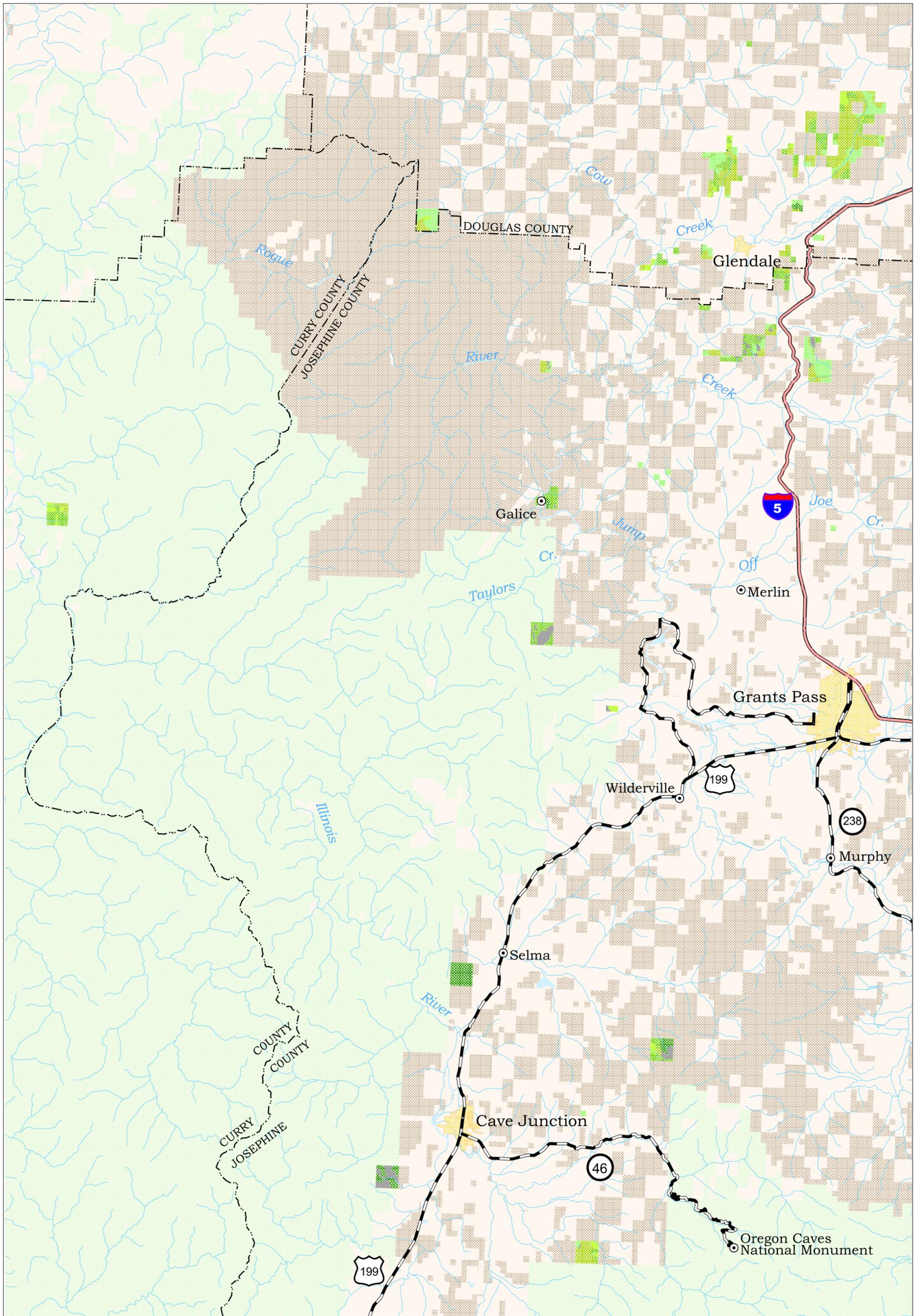


FEBRUARY 2003



- Desired Future Condition**
-  Non Silviculturally Capable
 -  Other Structures
 -  Layered
 -  Older Forest Structure





Southwest Oregon District West Half

Oregon Department of Forestry
Current Condition Stand Structure

Identification specific stand structures is based on the strategies and standards in the approved Northwest Forest Management Plan (January, 2001). Methods used to identify the stand structures are described in the district implementation plan.

Boundary lines on this map are approximate. Exact locations of boundary lines will be determined on the site and will depend on the upon conditions that exist on the site.

This information will be updated over time with information from site-specific assessments or inspections.

Oregon Department of Forestry

- Highway
- Interstate 5
- United States Forest Service Lands
- Bureau of Land Management Lands
- Cities



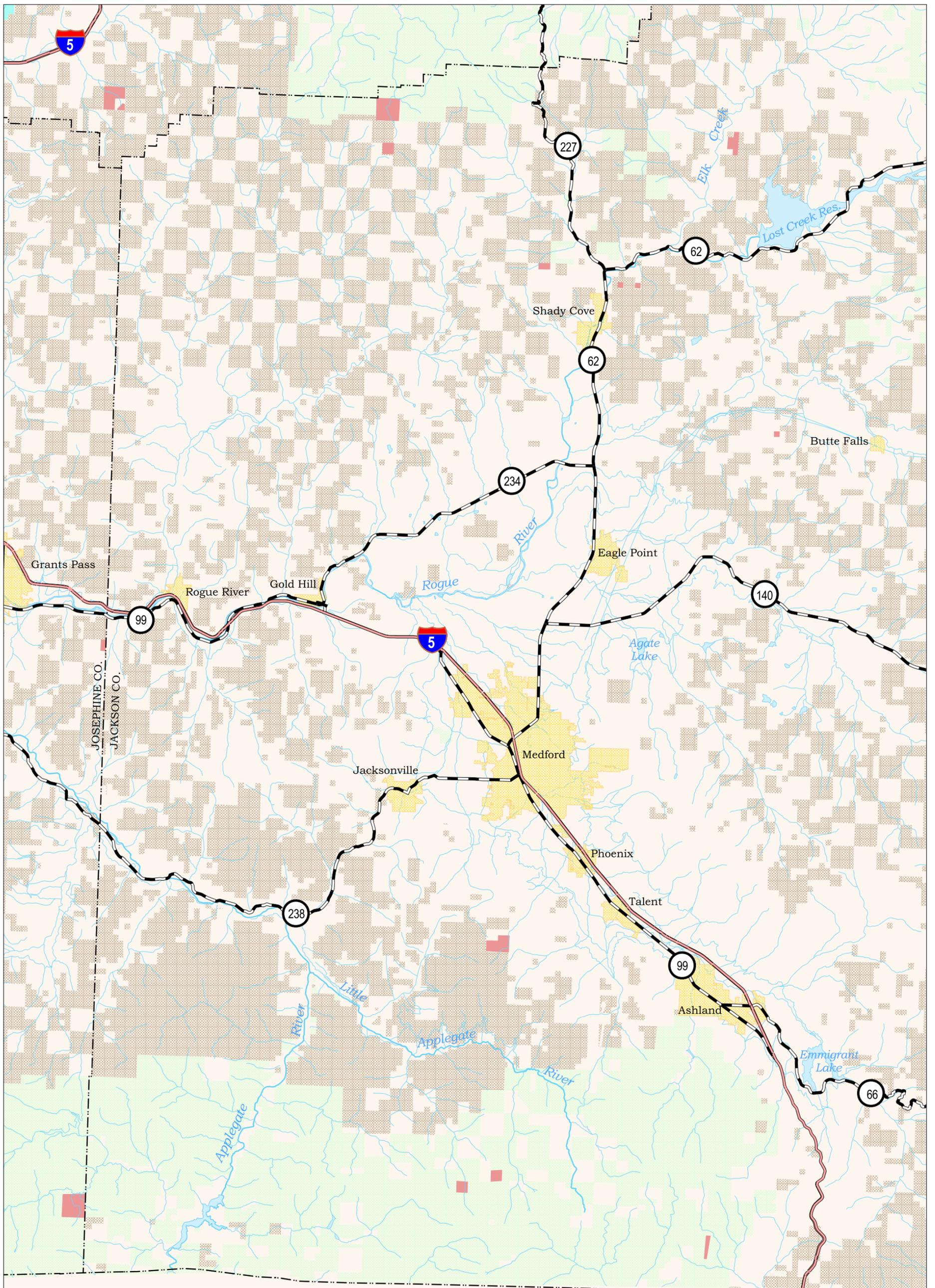
FEBRUARY 2003



Current Condition

- Non Silviculturally Capable
- Regeneration
- Closed Single Canopy
- Understory
- Layered
- Older Forest Structure



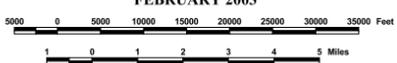


Southwest Oregon District East Half

Oregon Department of Forestry
Ownership



FEBRUARY 2003



Identification and mapping of specific classifications are based on the strategies and standards in the approved Northwest Forest Management Plan (January, 2001) and selected strategies from the draft Western Oregon State Forest Habitat Conservation Plan.

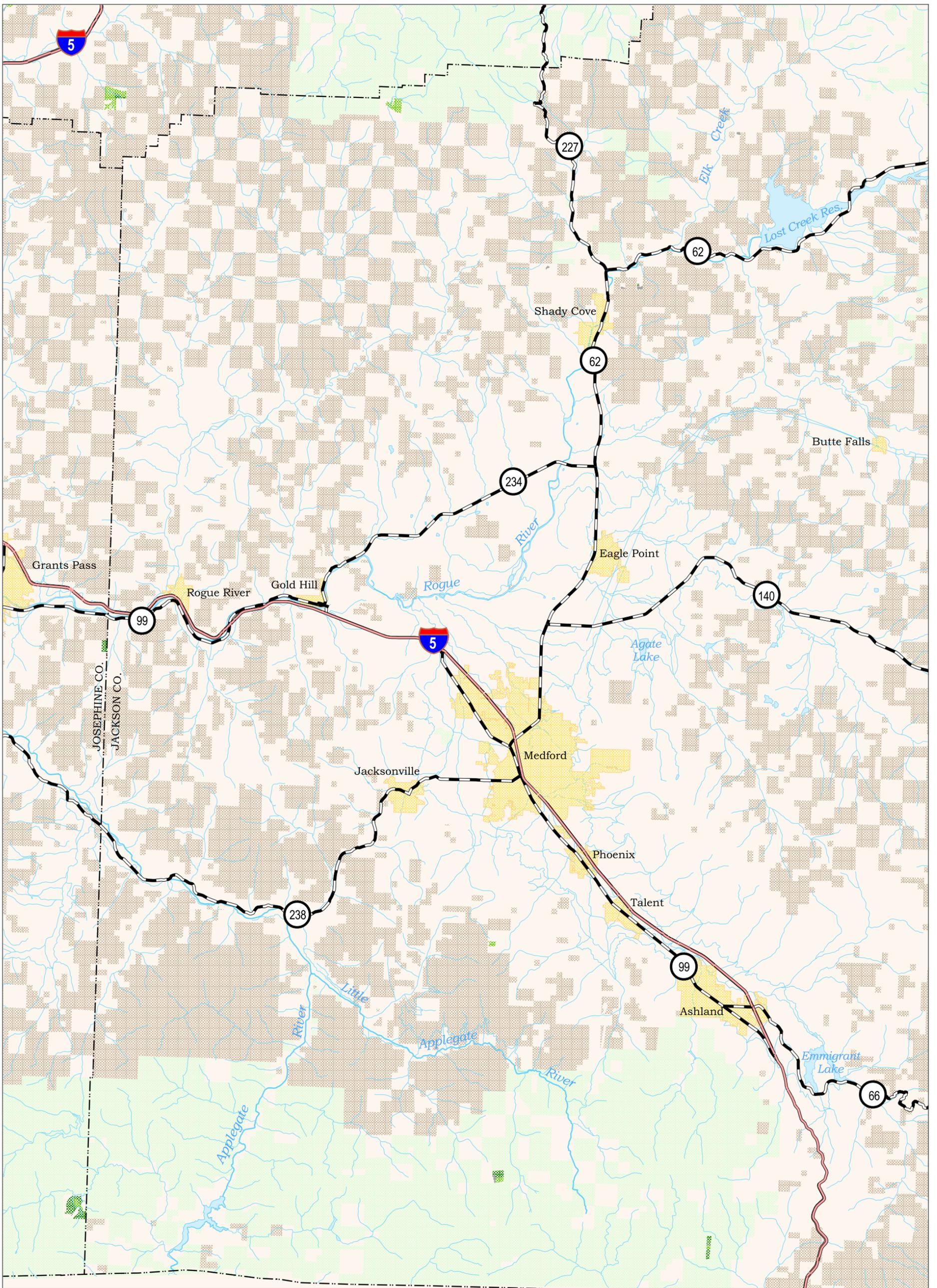
Boundary lines on this map are approximate. Exact locations of boundary lines will be determined on the site and will depend on the upon conditions that exist on the site.

The identification and mapping of the aquatic sub-classes shown here were based on the best available information of stream types, including map-based estimates for some streams.

This information will be updated over time with information from site-specific assessments or inspections.

- State Board of Forestry Lands
- Common School Lands
- United States Forest Service Lands
- Bureau of Land Management Lands
- Cities

- Highways
- I-5



Southwest Oregon District East Half

Oregon Department of Forestry
Desired Future Condition Stand Structure

Desired Future Condition

-  Non-Silviculturally Capable
-  Other Structures
-  Layered
-  Older Forest Structure

The desired future condition is based on the landscape design strategies in the approved Northwest Forest Management Plan (January, 2001). The specific strategies and factors used to develop the landscape design and desired future condition are described in the district implementation plan.

Boundary lines on this map are approximate. Exact locations of boundary lines will be determined on the site and will depend on the upon conditions that exist on the site.

This information will be updated over time with information from site-specific assessments or inspections.

Oregon Department of Forestry

 Cities

 Highways

 I-5

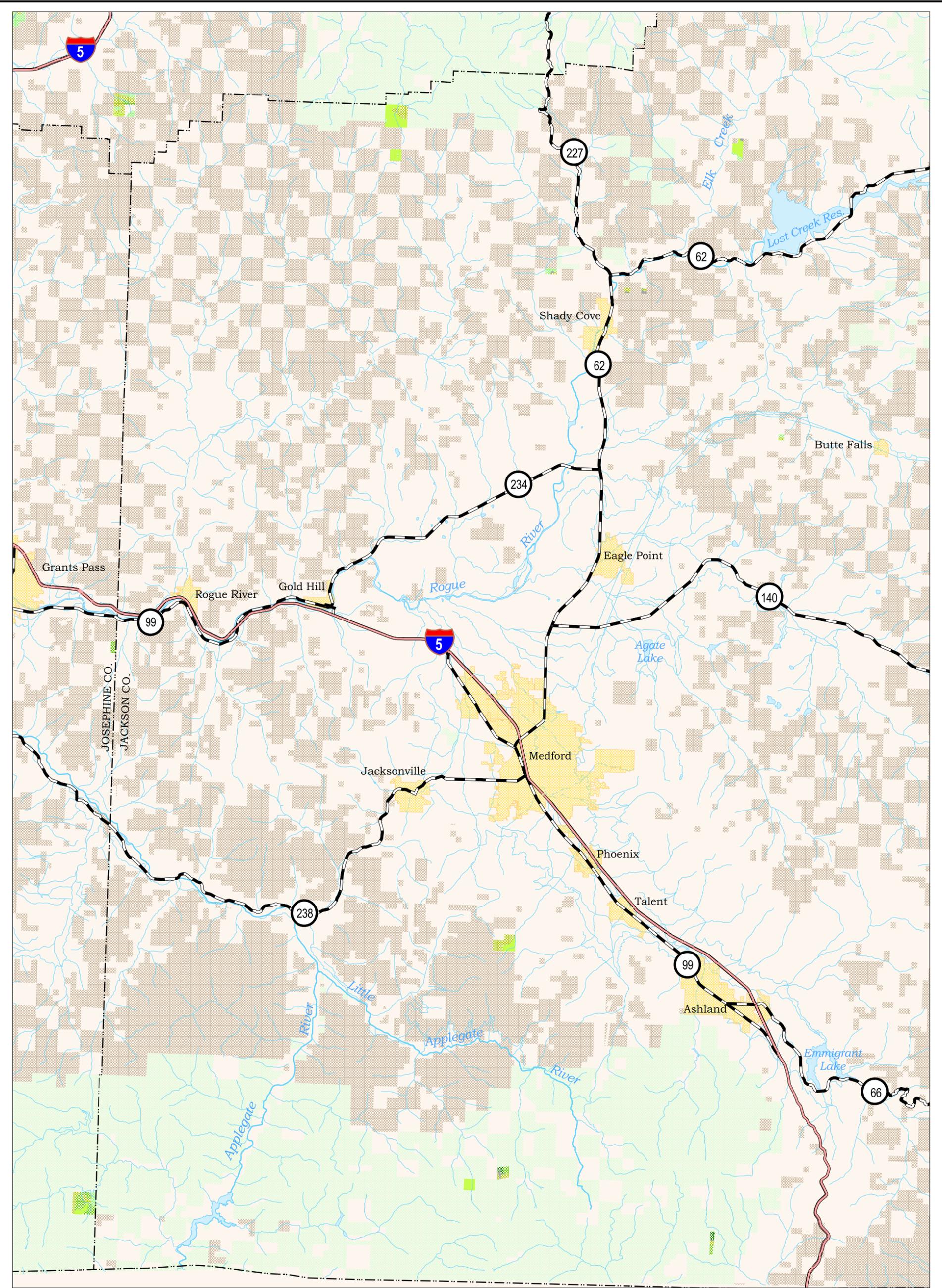
 United States Forest Service Lands

 Bureau of Land Management Lands



FEBRUARY 2003



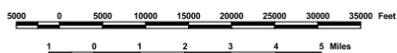


Southwest Oregon District East Half

Oregon Department of Forestry
Current Condition Stand Structure



FEBRUARY 2003



Identification specific stand structures is based on the strategies and standards in the approved Northwest Forest Management Plan (January, 2001). Methods used to identify the stand structures are described in the district implementation plan.

Boundary lines on this map are approximate. Exact locations of boundary lines will be determined on the site and will depend on the upon conditions that exist on the site.

This information will be updated over time with information from site-specific assessments or inspections.

Oregon Department of Forestry

- Highways
- I-5
- United States Forest Service Lands
- Bureau of Land Management Lands
- Cities

- Current Condition**
- Non Silviculturally Capable
 - Regeneration
 - Closed Single Canopy
 - Understory
 - Layered
 - Older Forest Structure





State Forests General File 3-1-2-200

SUBJECT: Extending State Forests Implementation Plans for West Oregon, North Cascades, Western Lane, and Southwest Oregon districts.

TO: Nancy Hirsch, State Forests Division Chief

FROM: Doug Decker, State Forester 

DATE: February 15, 2011

The Board of Forestry adopted the Northwest and Southwest Oregon State Forests Management Plans (FMPs) in January 2001. Acting State Forester Roy Woo approved implementation plans for the seven districts on March 6, 2003. These original IPs were intended to describe activities, projects, and efforts for the ten year period from July 1, 2001 through June 30, 2011.

The Board of Forestry adopted a revised Northwest and Southwest State Forests Management Plan in April 2010. Implementation plan revisions are underway in Forest Grove and Astoria districts, with reviews and approval expected by June 30, 2011. Work to support the implementation plan revisions for Tillamook¹, West Oregon, North Cascades, Western Lane, and Southwest Oregon districts has begun. The work underway includes harvest modeling and potential Species of Concern (SOC) strategy development. The revisions, reviews, and approval for these plans is expected sometime in FY 12.

Implementation plans for West Oregon, North Cascades, Western Lane, and Southwest Oregon districts approved in 2003, including all minor modifications previously approved by the District Forester, will remain in effect until revisions to the plans are completed and approved by the State Forester.

Cc:

Mike Cafferata, Deputy Chief, State Forests Division
Mike Bordelon, Northwest Oregon Area Director
Dave Lorenz, Acting Southern Oregon Area Director, District Forester Western Lane District
Mike Totey, District Forester, West Oregon District
Steve Wilson, Acting District Forester, North Cascades District
Dan Thorpe, District Forester, Southwest Oregon District
Rob Nall, Operations Coordinator, State Forests
Rosemary Mannix, Resource Specialist Unit Manager

¹ Tillamook district revised its IP in 2009 to accommodate a 40% landscape design and that plan is valid through 2019 – though the Tillamook plan will also be revised in FY11 /12 to accommodate FMP changes in April 2010.

Memorandum

To: Mike Cafferata, Deputy Chief, State Forests Program
Dan Shults, Area Director
Nancy Hirsh, Assistant State Forester
Marvin Brown, State Forester

From: Dan Thorpe, District Forester

CC: Chris Rudd, Unit Forester

Date: March 5th, 2009

RE: Minor Modification of the Southwest Oregon Implementation Plan

The Southwest Oregon District Implementation Plan under the Southwest Oregon State Forests Management Plan was approved in March 2003. The approved plan provides for minor modifications as approved document that do not meet the definition of major modifications included in the approved IP document. (Major modifications are those as defined in OAR 629-053-0060; or those that result in changed to the annual harvest level ranges of more than 25% based on the combined acreage of regeneration and partial cut harvests.)

The SWO Management Plan calls for between 20-50% complex stands across the landscape. Currently 48% or 8,674 acres of the district is classified as stands in complex structures.

The following minor modification to the Southwest Oregon Implementation Plan is related to the 2010 annual operations plan:

Change 58 acres of stand 5113 from DFC complex to DFC general to accommodate the Raspberry Mountain No. 3 timber sale. Following the adjustment, 8,616 acres or 47.6% of the forest will be classified as DFC complex within the range of the forest management plan.

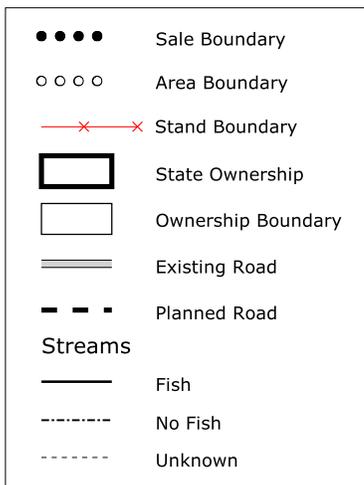
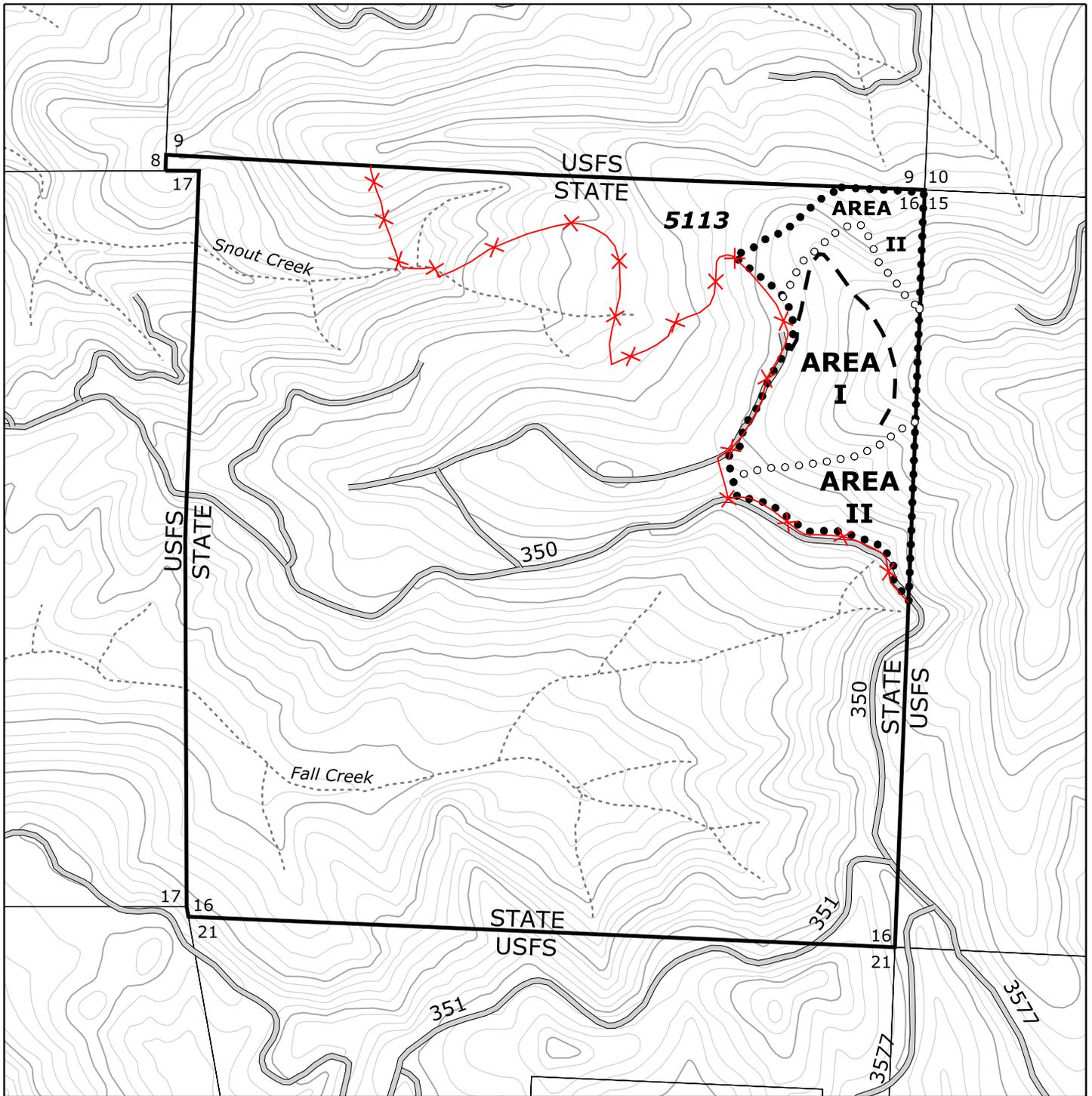
Approved:



Dan Thorpe, District Forester



Date



Raspberry Mtn #3



S.W.O. District
 Minor Modification - DFC

ACRES (est. gross)	
AREA I	: 32 acres
AREA II	: 26 acres
TOTAL	: 58 acres

T. 35 S., R. 11 W., Sec. 16; W.M.
 Curry County, Oregon



Contour Interval : 40 feet

JUNE 3, 2009

MEMORANDUM

To: Nancy Hirsch, State Forest Program Director
Dan Shults, Area Director
Marvin Brown, State Forester

From: Dan Thorpe, District Forester

CC: Chris Rudd, Management Unit Forester
Rob Nall, Operations Coordinator

Date: April 27, 2007

Re: Minor Modification to the Southwest Oregon District Implementation Plan
(March 2003)

The Southwest Oregon District Implementation Plan (IP) under the Southwest Oregon Forests Management Plan (FMP) was approved in March 2003. The plan provides for minor modifications as approved by the District Forester. Minor modifications are any modifications to the approved document that do not meet the definition of major modifications included in the approved IP document. The modification herein is less than 25% of the harvest level acreage and therefore qualifies as a minor modification.

The district analysis of the Harvest and Habitat Model Project and conditions on the district indicated that an adjustment to the mixture of regeneration and partial cut harvests would be needed to most efficiently and effectively meet Forest Management Plan goals and objectives. The modified IP harvest level shown in the table below better reflects the results of the district analysis.

The following minor modifications to the Southwest Oregon Implementation Plan are approved, effective April 27th, 2007. Modify table 8-7 to reflect the new harvest levels.

<u>Activity</u>	<u>Original IP Harvest Level</u>	<u>Modified IP Harvest Level</u>
Partial Cut	180-270 acres	150-270 acres
Clearcut	0 acres	0-50 acres

The department is continuing its Implementation Plan Revision Process following the guidance provided by the State Forester. The district's participation in this process will contribute to better decisions about the Forest Management Plan and future harvest levels.



Dan Thorpe, District Forester

5/2/07

Date



Oregon

John A. Kitzhaber, MD, Governor

Department of Forestry

State Forester's Office
2600 State Street
Salem, OR 97310-1336
503-945-7200
FAX 503-945-7212
www.oregon.gov/ODF



"STEWARDSHIP IN FORESTRY"

To: Liz Dent, State Forest Division Chief
From: Doug Decker, State Forester
Date: June 25, 2014

Subject: Implementation of the Revised Forest Land Management Classification Rule on State Forests

This memo addresses approval of the implementation of the revised Forest Land Management Classification System (FLMCS) rule, including the new High Value Conservation Areas and Special Use classifications, on State Forest lands managed by the following districts: Astoria, Coos, Forest Grove, North Cascade, Southwest Oregon, Tillamook, West Oregon, and Western Lane.

On June 5, 2013, the Oregon Board of Forestry adopted a revision to the FLMCS rule (OAR 629-035-0055) that added the classifications of High Value Conservation Area and Special Use while removing the Special Stewardship Classification. The purpose of this rule revision was to increase the visibility of the important conservation strategies that were already occurring on State Forests.

It was clear that implementation of this rule revision would result in a major change to the FLMCS maps/data and would be required to be available for public comment for 30-days (OAR 629-035-0060). Upon approval of the rule revision, the districts were directed to begin the task of updating the FLMCS data with the goal of having draft maps available for a public comment process that would occur concurrently with the normal 45-day public comment period for the Annual Operations Plans.

The public comment period occurred between March 17 and May 2, 2014 and included three open houses that focused on the implementation of the revised FLMCS rules, especially the location and purpose of High Value Conservation Areas. The open house were held early in the public comment period at the Forest Grove, Astoria, and Tillamook district offices. In response to the public comment period, the Division received:

- Eight letters/emails
- Approximately 1,700 form letter type emails
- Fifteen comments generated through an on-line survey

Almost all of the comments were generally supportive of the implementation of the FLMCS. Many of the comments included a request that the Department improve the durability of the High Value Conservation Areas; this issue is currently being addressed through the Alternative Forest Management Plan Project.

Several individuals indicated that old growth should be classified as High Value Conservation Areas. After reviewing the management strategies for old growth in the Northwest Oregon, Southwest Oregon, and Elliott State Forest Management Plans, I have found that old growth stands (as defined in those plans) qualifies for classification as High Value Conservation Areas under the Unique, Threatened, or Endangered Plants subclass. I have directed the districts to include existing old growth stands as High Value Conservation Areas in their final FLMCS designations.

After reviewing the draft FLMC maps/data, the public input, the recommendations from the District Foresters and Area Directors, and consistent with OAR 629-035-0060 (2), I am approving the revised FLMCS for Astoria, Coos, Forest Grove, North Cascade, Southwest Oregon, Tillamook, West Oregon, and Western Lane Districts.



Doug Decker
State Forester

6.25.14

Date

APPENDIX B

Forest Land Management Classification System (FLMCS) Major Change Notification

The FLMCS is a method of describing the management emphasis of parcels of state forest land. The management emphasis identifies the extent to which a parcel of land can be managed for a variety of forest resources. It also identifies when a particular forest resource may need a more focused approach in its management, or possibly an exclusive priority in its management. The framework of the FLMCS places all state forest land within one of four land management classifications. The classifications are: (1) General Stewardship, (2) Focused Stewardship, (3) Special Use, and (4) High Value Conservation Area. Subclasses are assigned for the specific forest resources that require a Focused Stewardship, Special Use or High Value Conservation Area Classification. A major modification of the FLMCS is defined as one that cumulatively exceeds 500 acres within one year. When changes in excess of 500 acres are proposed, a 45 day public comment period is held to allow review and suggestions. The Southwest Oregon District is holding a public comment period on changes in the FLMCS in conjunction with the FY 2015 AOP comment period. At the close of the public comment period, the Department will consider the public comments and make final decisions on the proposed changes. The District Forester will forward the draft final changes along with any public comments to the NWO Area Director and the State Forester for review and final approval.

In 2013, the Board of Forestry modified the FLMCS to add a new classification called High Value Conservation and rename Special Stewardship to Special Use. As a result of this significant change to the FLMCS, the District took this opportunity to do a thorough re-evaluation of all the classifications within the district. Northern Spotted Owl cores became HVCA's, State listed plant species, and the stream bank zone and inner zone of riparian management areas (RMA) are now proposed to be classified as High Value Conservation areas.

The following tables from the Southwest Oregon District Implementation Plan 2003 have been modified to reflect these changes:

Table B-1. SWO District Acres, by Stewardship Class and Fund*

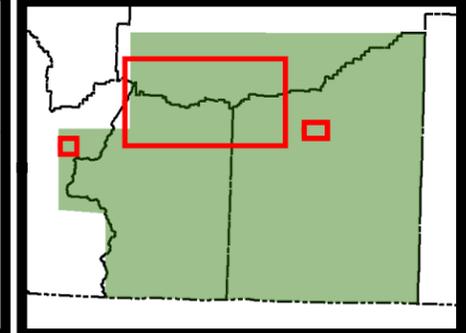
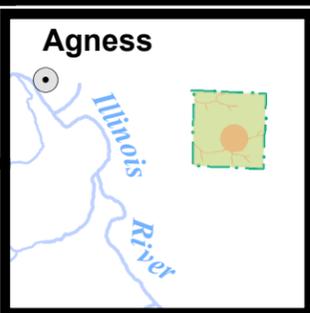
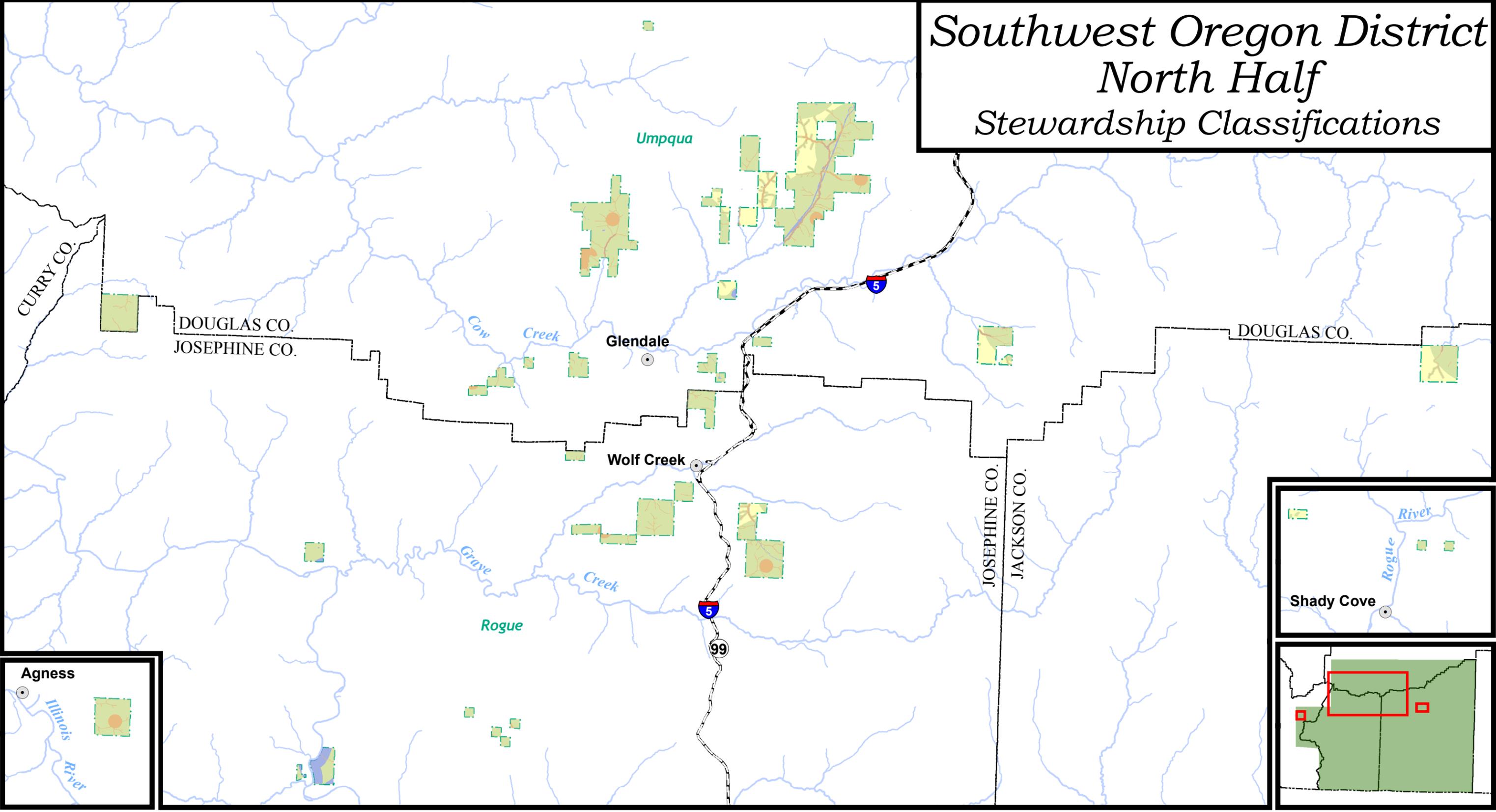
Classification	BOF	CSL	Total Acres
Focused Stewardship	10,516	7,253	17,769
Special Use	188	215	403
High Value Conservation Area	897	338	1,234
General Stewardship	1,082	1,249	2,330

Table B-2. Forest Land Management Classifications for SWO District – Focused and Special Subclasses (Acres)

	Focused Stewardship	Special Use	High Value Conservation Area
Administrative Sites	0	1	0
Agriculture, Grazing	0	0	0
Aquatic & Riparian	2,741	0	693
Cultural Resource	0	0	0
Domestic Water Use	4	0	0
Energy & Minerals	0	11	0
Operationally Limited	0	16	0
Plants	1,025	0	72
Recreation	20	12	0
Research/Monitoring	21	0	0
Transmission	0	150	0
Visual	1,823	212	0
Wildlife Habitat	12,135	0	470

*Acres in Table 2 and Table 3 include overlapping classifications.

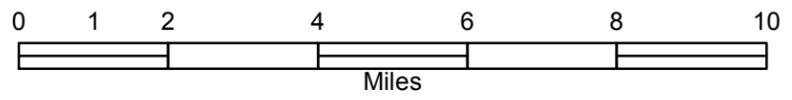
Southwest Oregon District North Half Stewardship Classifications



Stewardship Classifications

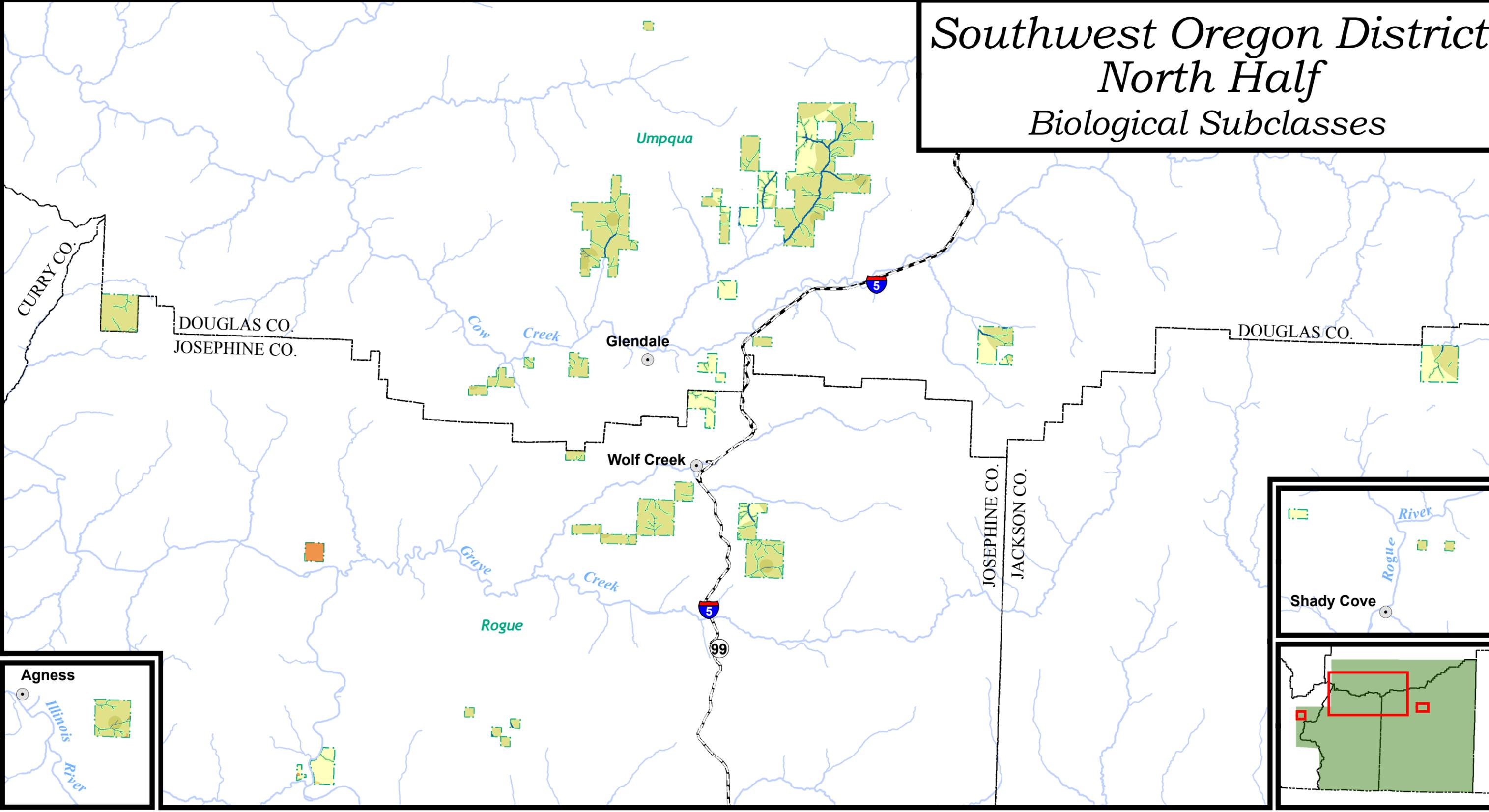
- High Value Conservation Area
- Special Use
- Focused
- Other

- Towns
- Roads
- Streams, Large
- Streams, Medium
- Management Basins



This product is for informational purposes, and may not be suitable for legal, engineering or surveying purposes. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user.

Southwest Oregon District North Half Biological Subclasses



High Value Conservation Areas

- Unique, Threatened or Endangered Plants
- Aquatic and Riparian Habitat
- Wildlife Habitat

Focused

- Unique, Threatened or Endangered Plants
- Aquatic and Riparian Habitat
- Wildlife Habitat

Towns

- Towns

Roads

- Roads

Streams

- Streams, Large
- Streams, Medium

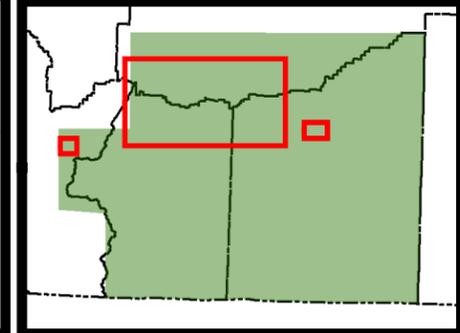
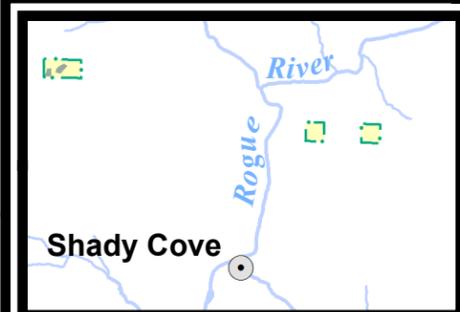
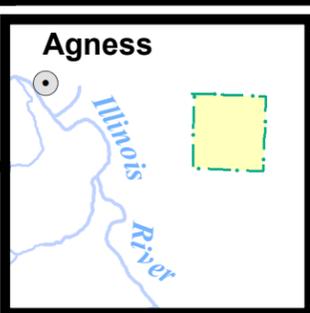
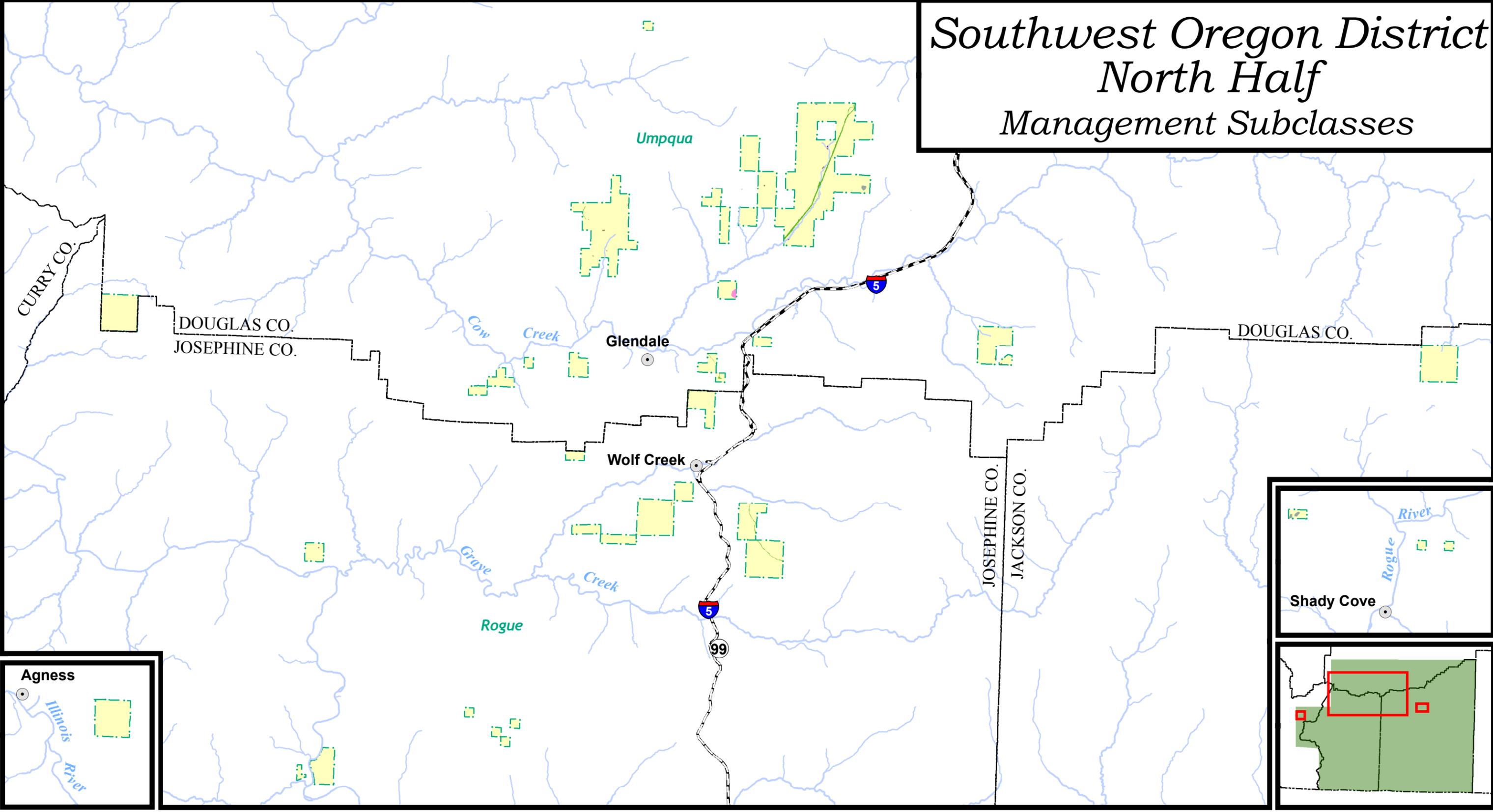
Management Basins

- Management Basins



This product is for informational purposes, and may not be suitable for legal, engineering or surveying purposes. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user.

Southwest Oregon District North Half Management Subclasses



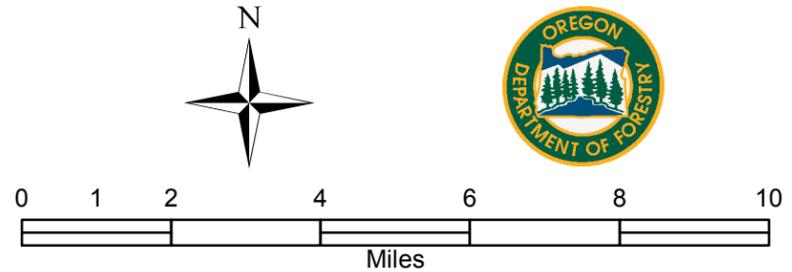
- Special Use**
- Administrative Sites
 - Easements
 - Energy and Minerals
 - Transmission
 - Operationally Limited

- Focused**
- Research/Monitoring

- Towns**
- Towns

- Roads**
- Roads
- Streams**
- Streams, Large
 - Streams, Medium

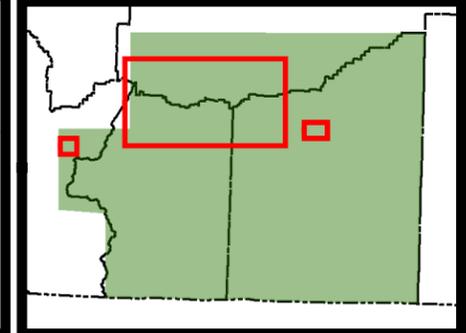
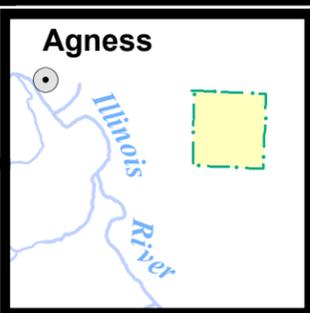
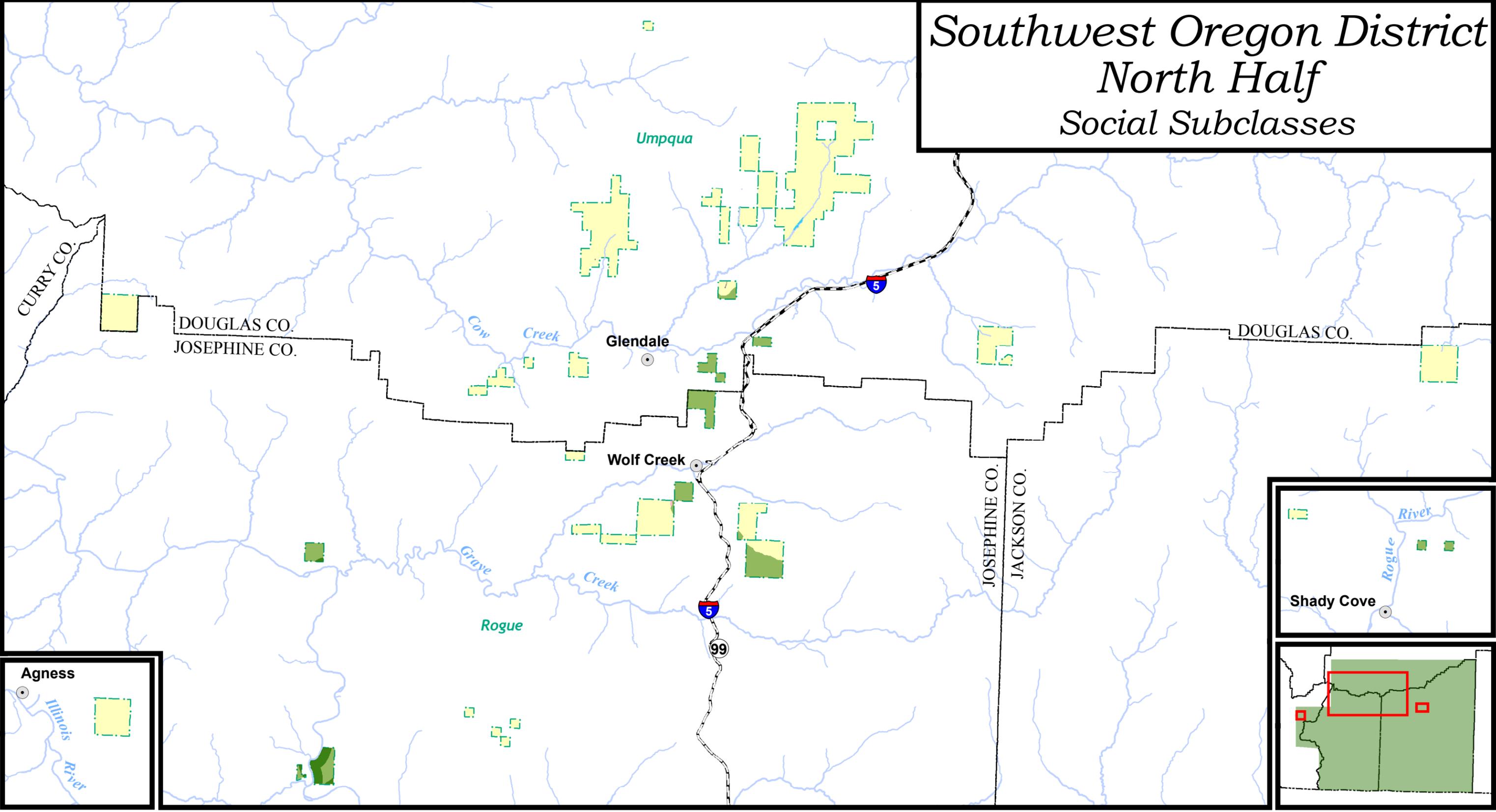
- Management Basins**
- Management Basins



This product is for informational purposes, and may not be suitable for legal, engineering or surveying purposes. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user.

MW 3/14/2014

Southwest Oregon District North Half Social Subclasses



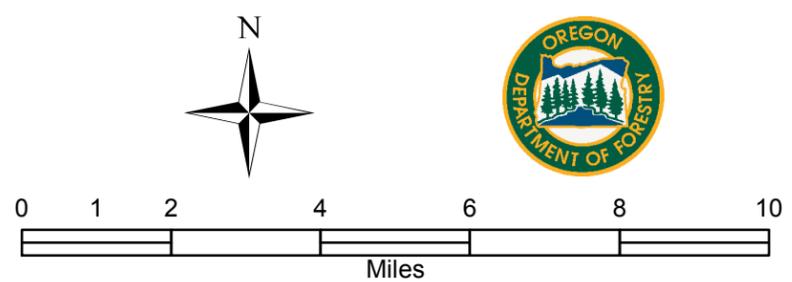
- Special Use**
- Recreation
 - Domestic Water Use
 - Visual

- Focused**
- Domestic Water Use
 - Visual
 - Recreation

- Towns**
- Towns

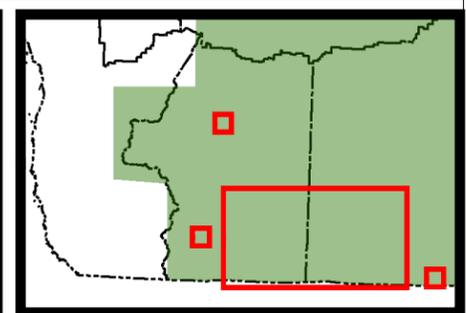
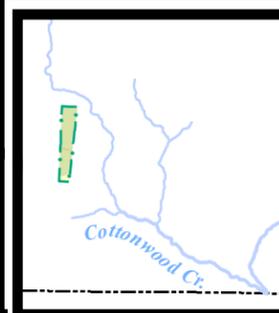
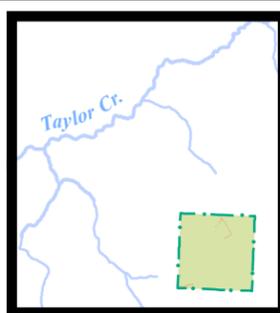
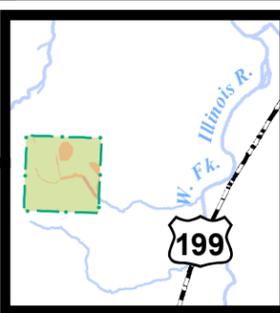
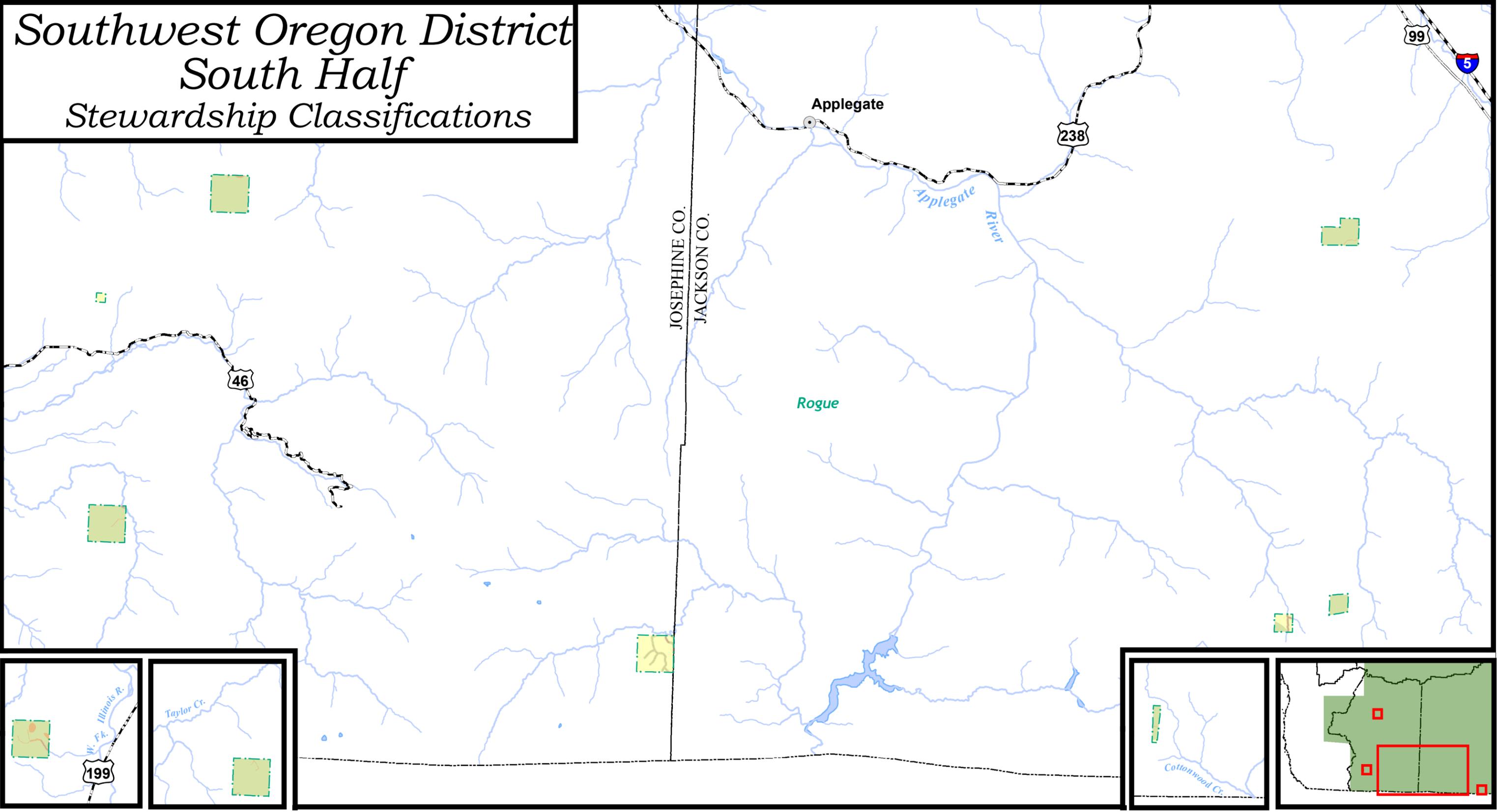
- Roads**
- Roads
- Streams**
- Streams, Large
 - Streams, Medium

- Management Basins**
- Management Basins



This product is for informational purposes, and may not be suitable for legal, engineering or surveying purposes. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user.

Southwest Oregon District South Half Stewardship Classifications



Stewardship Classifications

- High Value Conservation Area
- Special Use
- Focused
- Other

Towns

Roads

Streams, Large

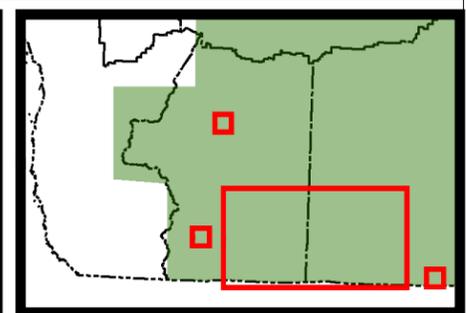
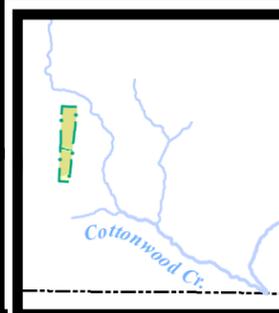
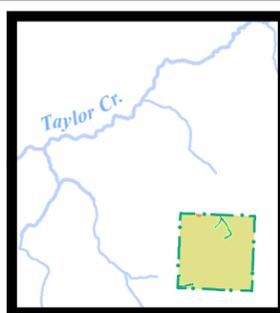
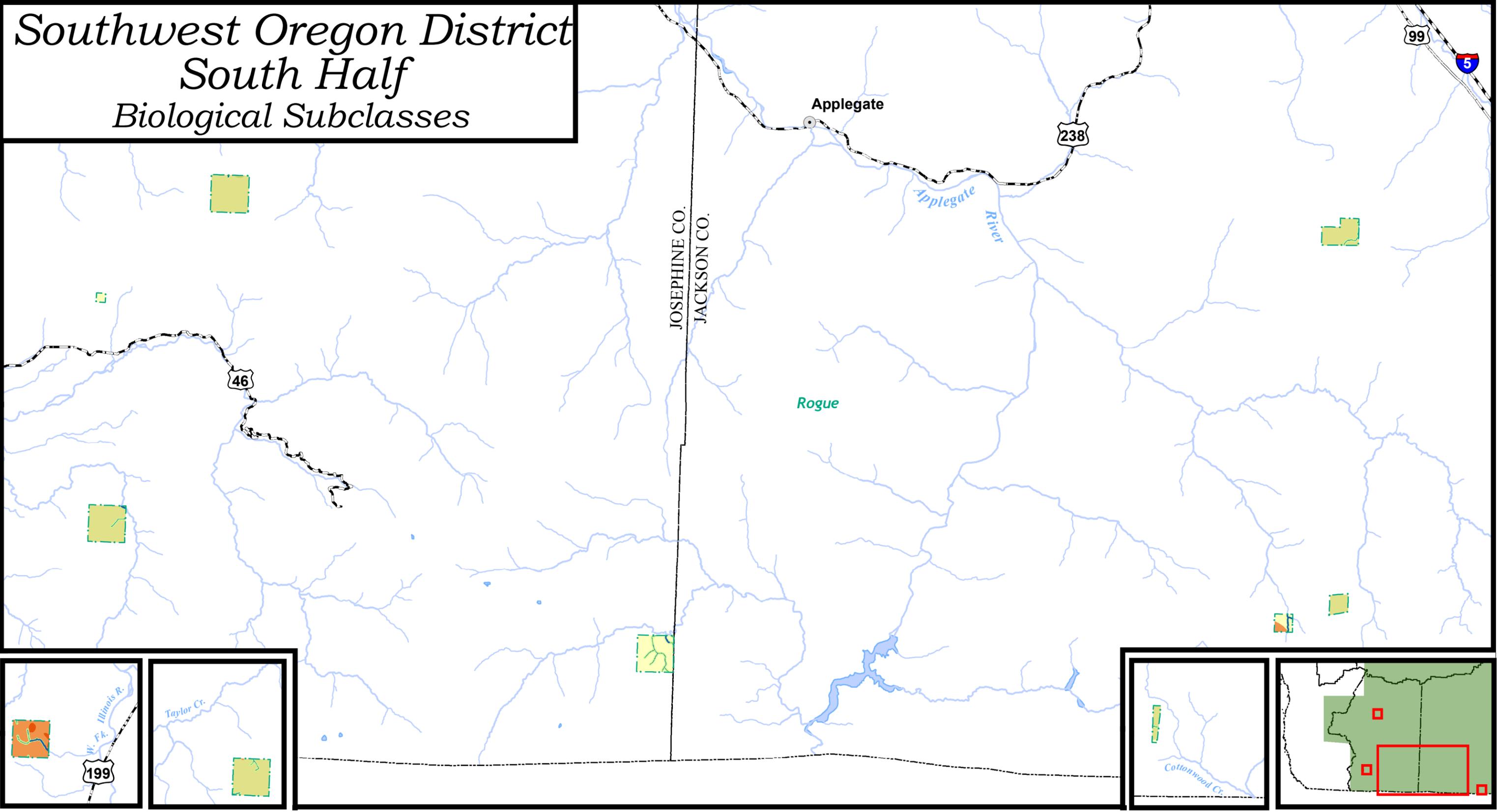
Streams, Medium

Management Basins



This product is for informational purposes, and may not be suitable for legal, engineering or surveying purposes. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user.

Southwest Oregon District South Half Biological Subclasses



High Value Conservation Areas

- Unique, Threatened or Endangered Plants
- Aquatic and Riparian Habitat
- Wildlife Habitat

Focused

- Unique, Threatened or Endangered Plants
- Aquatic and Riparian Habitat
- Wildlife Habitat

Towns

Roads

Streams, Large

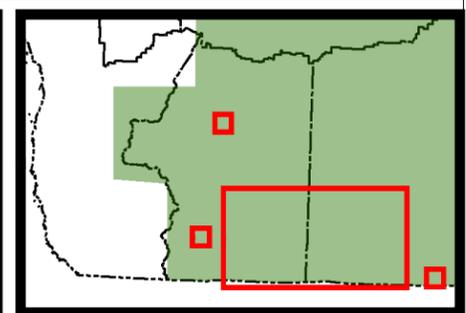
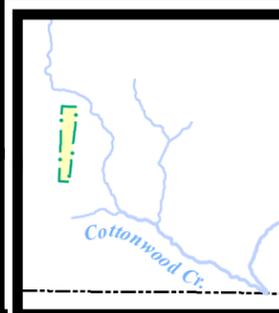
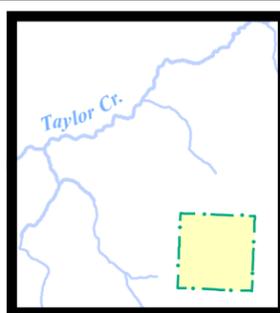
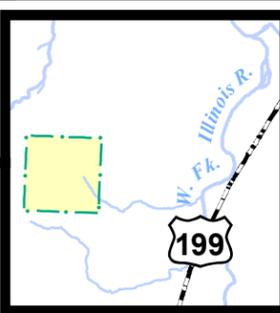
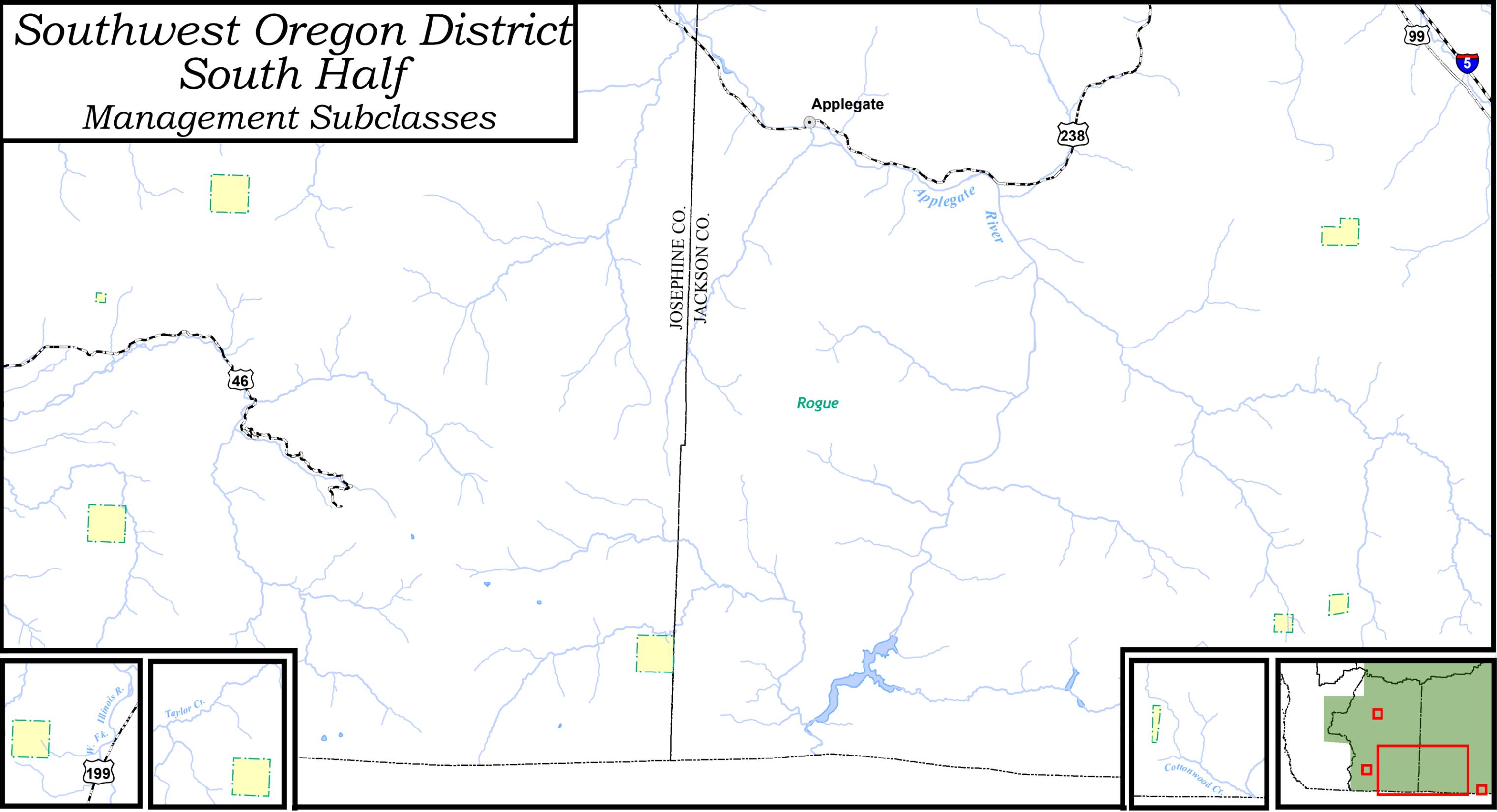
Streams, Medium

Management Basins



This product is for informational purposes, and may not be suitable for legal, engineering or surveying purposes. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user.

Southwest Oregon District South Half Management Subclasses

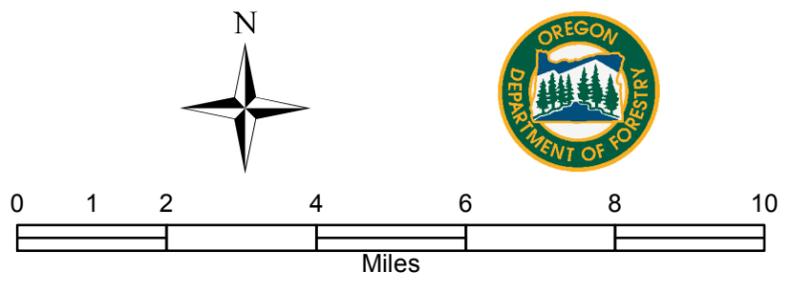


- Special Use**
- Administrative Sites
 - Easements
 - Energy and Minerals
 - Transmission
 - Operationally Limited

- Focused**
- Research/Monitoring

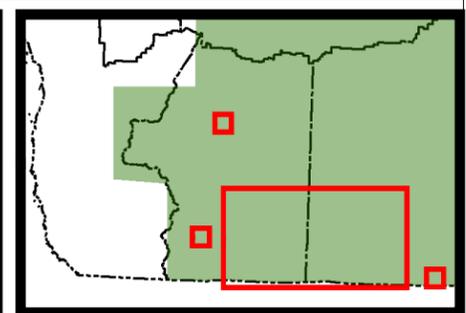
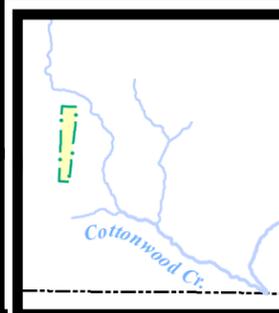
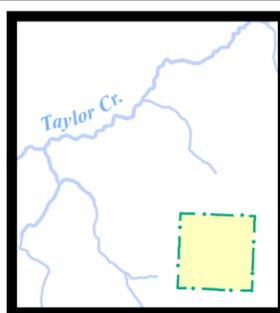
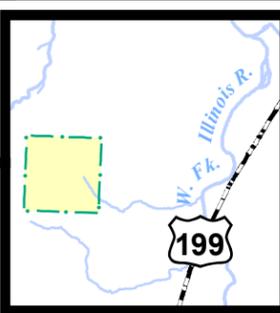
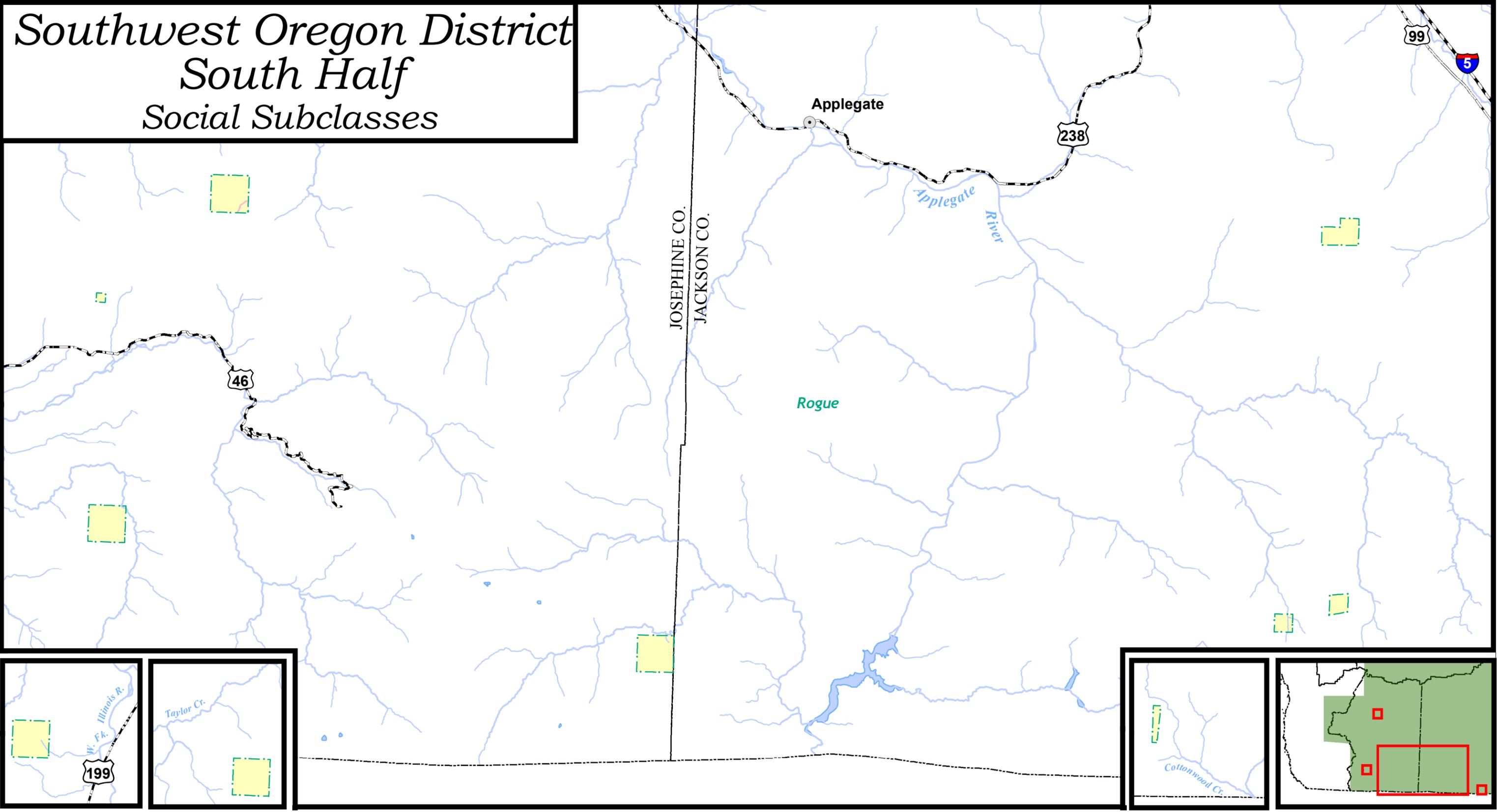
- Towns
- Roads
- Streams, Large
- Streams, Medium

- Management Basins



This product is for informational purposes, and may not be suitable for legal, engineering or surveying purposes. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user.

Southwest Oregon District South Half Social Subclasses



- Special Use**
- Recreation
 - Domestic Water Use
 - Visual

- Focused**
- Domestic Water Use
 - Visual
 - Recreation

- Towns
- Roads
- Streams, Large
- Streams, Medium

Management Basins



This product is for informational purposes, and may not be suitable for legal, engineering or surveying purposes. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user.