

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
EUGENE DISTRICT OFFICE

ENVIRONMENTAL ASSESSMENT NO. OR090-00-27  
Dorena Lake Timber Sale

## **I. INTRODUCTION**

### **A. BACKGROUND AND HISTORY**

This action proposes timber harvest and other forest management activities within a project area located in Section 35, Township 20 South, Range 2 West, Willamette Meridian, Lane County, Oregon in the South Valley Resource Area of the Eugene District of the Bureau of Land Management (BLM).

The attached map has been refined to show the traverse of the boundary as it would actually appear on the ground. The map attached to the previous EA was an approximation.

Those passages within the EA which have been added or clarified since release of the previous EA appear in a different font.

### **B. PURPOSE OF AND NEED FOR THE ACTION**

The project area is within the Matrix Land Use Allocation and has management objectives for Connectivity and Riparian Reserves. The purpose of the Proposed Action within Connectivity is to provide forest products while reducing stand density to accelerate diameter growth. The need for the action is established in the Eugene District Record of Decision and Resource Management Plan, which directs that timber be harvested from Matrix lands to provide a sustainable supply of timber. No management activities would take place in the Riparian Reserves under the Proposed Action.

### **C. CONFORMANCE WITH LAND USE PLAN**

The Proposed Action and alternatives are in conformance with the Eugene District Record of Decision and Resource Management Plan, June 1995 (RMP). The RMP makes land use allocations and allows for density management in this land use allocation. The actions described in Part III of this environmental assessment would cause impacts. However, no impacts have been identified that exceed those described in the Eugene District Proposed Resource Management Plan/Environmental Impact Statement (PRMP/EIS) and RMP.

Plan maintenance documentation postponing surveys for seven Survey and Manage and Protection Buffer species was recently completed ("Plan Maintenance Documentation, USDI Bureau of Land Management, To Change the Implementation Schedule for Survey and Manage and Protection Buffer Species," approved March 13, 2000). This plan maintenance delays the survey requirements because these seven fungi species may require five or more years of surveys to have a high likelihood of locating sites occupied by the species, and therefore have feasibility problems for completion of pre-project surveys. In lieu of these multi-year surveys, "single season" survey protocols have been developed for

these seven species; such surveys have been conducted for this project. Thus, the Proposed Action and alternatives are in conformance with the direction provided in the Plan Maintenance Documentation. The implementation of the plan maintenance is provided for by BLM planning regulations (43 CFR 1610.5-4).

The effect of the plan maintenance action was analyzed in an environmental assessment (EA), "To Change the Implementation Schedule for Survey and Manage and Protection Buffer Species," issued October 7, 1998 ("Schedule Change EA"). The analysis contained in the Schedule Change EA is incorporated into this document by reference.

In addition, a Supplemental EIS is being prepared that proposes amendments to the Survey and Manage and Protection Buffer species standards and guidelines (For Amendment to the Survey and Manage, Protection Buffer, and Other Mitigating Measures Standards and Guidelines, USDA Forest Service and USDI Bureau of Land Management). If that FSEIS is completed prior to a decision on this project and provides information that would indicate other management is necessary for the Survey and Manage/Protection Buffer species known to exist within the project area, the Proposed Action would be modified or withdrawn.

Additional site-specific information is available in the Dorena Lake Timber Sale project analysis file. This file and the above referenced document are available for review at the Eugene District Office. The Schedule Change EA and Plan Maintenance Documentation are also available for review on the internet at <http://www.or.blm.gov/nwfp.htm>.

## II. ISSUES

### A. ISSUES SELECTED FOR ANALYSIS

Issue 1: *How will timber harvest and roading affect attainment of Aquatic Conservation Strategy (ACS) Objectives at the watershed scale?*

In order for a proposal to comply with the Northwest Forest Plan, it must be shown that the project, at a minimum, does not prevent or retard attainment of the nine ACS Objectives on a watershed or landscape scale. Activities described in the Proposed Action and alternative may have some effect on BLM's ability to meet these objectives.

Issue 2: *How will timber harvest and roading affect critical habitat for northern spotted owls?*

The project area lies within a larger area identified by the U.S. Fish and Wildlife Service as being critical habitat for northern spotted owls. Critical habitat consists of habitat capable of supporting nesting, roosting, and foraging for resident owls, and dispersal habitat for owls seeking unoccupied territories. Timber harvest could affect one or more of these habitat functions.

Issue 3: *What are the effects on certain Survey and Manage/Protection Buffer species as a result of timber harvest and road construction?*

Several Survey and Manage/Protection Buffer species are known to exist within the project area. These species include red tree voles, Oregon meadowfox, papillose tail-droppers, blue-gray tail-droppers, Otidea fungi, Sarcosoma fungi, and Helvella fungi. Timber harvest and road construction could affect these species.

### B. ISSUES NOT ANALYZED

"Single season" surveys were completed for the seven Survey and Manage or Protection Buffer species listed in the plan maintenance documentation for the Schedule Change EA. While these surveys may locate some individuals if localized conditions are right, conditions may not be right in other places in any given year. To have a high likelihood of finding these species, surveys may need to be done for several years over a variety of climatic conditions. Therefore, it is possible that there are undetected individuals of these species in the project area. The issue of how the Proposed Action and alternative would impact undetected individuals or populations of these species was not analyzed herein because impacts are not expected to exceed those anticipated in the Schedule Change EA.

### III. PROPOSED ACTION AND ALTERNATIVES

This Proposed Action considers timber harvest and other forest management activities on approximately 160 acres (see map).

#### A. PROPOSED ACTION - Density Management

This is a density management alternative designed to provide forest products while promoting stand vigor. Approximately 1.012 million board feet (MMBF) and 1,856 cunits (CCF, or 100 cubic feet) of timber would be offered for sale. Approximately 71 acres would be harvested, leaving approximately 89 acres unharvested. Of the unharvested acres, 14 are Matrix and 75 are Riparian Reserve.

##### Silviculture

All trees not specifically identified for retention would be cut. No site preparation would be needed. Fuels reduction would include covering and burning landing piles if needed for hazard reduction upon completion of harvest.

##### Retention

Conifers in the matrix would be thinned from below, varying spacing as needed to reserve the largest, most vigorous trees. Large remnant seed trees and hardwoods would be reserved where possible. Approximately 90 trees per acre (TPA) would be reserved.

All existing snags that do not pose a safety hazard would be retained. Snags that do pose a safety hazard would be felled and retained as coarse woody debris.

Downed woody debris of decay classes 3, 4 and 5 would be retained where possible.

##### Reserves

The height of one site-potential tree has been determined to be 200 feet slope distance in the Row River Watershed. Riparian Reserves 200 feet wide on either side of non-fishbearing streams would be managed in accordance with the standards and guidelines in the Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl (NSO ROD) (Appendix C, pp. 31-38). No harvest would occur within the Riparian Reserves.

The "dry bald" in the southwest corner of the project area would be reserved and surrounded by a ring of retention trees 2 trees deep.

##### Survey and Manage/Protection Buffer Species

The cluster of three red tree vole nest trees in the southwest corner would be protected by a reserve of 10 acres or more. The red tree vole nest tree west of Road No. 21-2-2 would be protected by a reserve of 10 acres or more.

The known sites of *Sarcosoma*, *Otidea*, *Helvella*, and mollusks would be protected by a reserve of approximately 1/4 acre for each site, except where the reserve is contiguous with another reserve, such as a Riparian Reserve; and where two or more known sites may be located such that they may share a 1/4-acre reserve.

Because the distribution pattern of *Ulota megalospora* in the general area of the project area is not disjunct or highly localized, no protection of known sites is required. However, the ten trees on which these mosses were found would be protected by Riparian Reserves.

## **Roads and Yarding**

Approximately 4185 feet of road would be constructed (Spurs A-E). Roads would have a 14-foot subgrade and a natural surface with no ditch and outsloped, where possible. Newly constructed roads would be blocked and waterbarred between logging seasons. Completion of the project would take no more than 2 years. Upon completion of the project, newly constructed roads would be blocked and subsoiled (i.e. mechanically breaking up the compacted area of the road) with a winged subsoiler.

The area would be logged with both a cable yarding system and a ground-based yarding system while adhering to the relevant Best Management Practices (BMPs) listed in Appendix C of the RMP. All compacted skid roads would be subsoiled.

### **B. ALTERNATIVE A - No action**

All timber harvest activities would be deferred; no management activities described under the Proposed Action would occur, and no timber would be offered for sale at this time. Because the project area is within the Matrix land use allocation, it may be considered for future timber harvests even if this alternative is selected at this time.

### **C. ALTERNATIVES CONSIDERED BUT NOT ANALYZED**

- 1. Density Management with Riparian Treatment** was an action alternative similar to the Proposed Action with the addition of thinning the outer 100 feet of the Riparian Reserves, construction of Spur F, and the extension of Spur A. The densities and locations of Survey and Manage/Protection Buffer species and their reserves caused this alternative to be infeasible.
- 2. Density Management with Riparian Treatment/Crossing Rehabilitation** was an action alternative similar to the above alternative with the addition of rehabilitation of two stream crossings by the existing dirt road. The densities and locations of Survey and Manage/Protection Buffer species and their reserves caused this alternative to be infeasible.

## **IV. EXISTING CONDITIONS**

### **A. GENERAL SETTING**

The project area is in the Willamette Province and in the Row River Watershed. Watershed analysis has been completed (BLM Eugene District, Row River Watershed Analysis, June, 1995). Most forest stands in the Row River Watershed are currently in early or mid-seral stages, with approximately 11.8% of the federally managed forested land in the watershed in late-successional forest condition.

BLM sections to the north of the project area are in the General Forest Management Area land use allocation. BLM sections to the south, west and east are Connectivity. The nearest Late Successional Reserve is approximately 15 miles to the south in the Sharps Creek Watershed.

The plants and animals in this project area do not differ significantly from those discussed in the Eugene District Proposed Resource Management Plan/Environmental Impact Statement (RMP EIS) (Chapter 3). The following resources are also discussed in greater detail in the project file.

### **B. SPECIFIC RESOURCE DESCRIPTIONS**

#### **Vegetation**

The project area is composed of multiple stands which originated from natural seeding following logging operations in the late 1940s. Much of the area was precommercially thinned in 1972. The common stand condition is a well-stocked overstory of Douglas-fir with scattered western hemlock, western redcedar, incense cedar, grand fir and bigleaf maple. Ground vegetation consists of salal,

swordfern, Oregon-grape, vine maple, and other common natives. Conifer regeneration is generally sparse but more abundant to the west and northwest. Scattered remnant seed trees from the previous stand are located in the west portion; large snags are generally sparse throughout the stand but are more abundant in this area. Downed woody debris is well distributed in class 3 and 4 wood exceeding 20 inches diameter at generally low density with some heavier concentrations, particularly in riparian areas. Minor occurrence of root rot is widely scattered and is not a concern. Stand exam records from 1997 show an average stand age of 46 years, average diameter of 14 inches, and approximately 237 TPA.

### **Wildlife (including Special Status and Special Attention Species)**

The project area is located on the edge of the provincial home range of the Smith Creek East owl site and may function as foraging habitat for this site. The remnant old trees could provide cavities for spotted owl prey species. The brushy portions of the stand would be low-quality foraging habitat. The project area also provides dispersal habitat for non-resident spotted owls.

Section 35 is part of Critical Habitat Unit (CHU) OR-21. The CHU was established to provide a stepping stone of suitable spotted owl nesting habitat within the South Willamette/North Umpqua Area of Concern and to help maintain and improve the distribution of suitable nesting habitat in an area of highly fragmented forest.

### **Survey and Manage/Protection Buffer Species**

Red tree vole surveys were completed during the spring of 2000. Three red tree vole nest trees were located in the southwest corner of the project area, and one nest tree was located west of existing Road No. 21-2-2.

The project area is suitable habitat for three of the four Survey and Manage species present on the Eugene District; *Megomphix hemphilli*, *Prophysaon coeruleum*, and *Prophysaon dubium*. Protocol surveys for these three species were completed during the spring of 1999. Eighteen mollusk sites were located within the project area: 12 with *M. hemphilli*, 3 with *P. coeruleum*, 2 with *P. dubium*, and one with both *P. dubium* and *P. coeruleum*. One site is within the Riparian Reserves; seventeen are within Matrix.

Surveys for Survey and Manage/Protection Buffer fungus species were conducted during the fall of 1999 and spring of 2000. A total of five sites were found, including one of *Sarcosoma mexicana*, three of *Otidea onotica*, and one of *Helvella compressa*.

Ten populations of *Ulota megalospora*, a Protection Buffer moss, were found in the Riparian Reserves of Streams 1, 5 and 7.

### **Aquatic and Riparian Resources and Fisheries**

The elevations in the project area range from 1800 to 2560 feet. Approximately 40% of the project area is at elevations that are considered rain dominated. Areas that are rain dominated primarily experience precipitation in the form of rain in the winter months but could occasionally be under a transitory snow pack. Approximately 60% of the unit is in the peak rain-on-snow zone. This elevation band usually experiences winter precipitation in the form of rain but has the highest probability of transitory snow packs. The unit generally has moderate to moderately steep slopes. A fairly broad ridge crosses the southern third of the unit from east-northeast to west-southwest.

Nine streams (1-5, 7-9, and 12) were identified within or immediately adjacent to the proposed project area. There are three springs (6, 11, and 13), a seep (14), and a wetland (10) located within the project area. The major stream in the sale is Dinner Creek (Stream 2), located in the northern quarter of the project area. Features 1-7 and 12 drain north to northwest to Dinner Creek. Dinner Creek drains west about 1-1/2 miles to Rat Creek, which drains to Dorena Reservoir.

There are several compacted tractor skid roads from a previous logging entry within the project area. The flow from Stream 7 is diverted by an old road about 80 feet to the stream crossing over

Stream 2. The stream crossing over Stream 2 has 3 to 6 feet of fill over it. There is no apparent culvert in this location. Some fill failure has already occurred in this area from extreme flows from Streams 2 and 7. More fill failure is likely to happen in this location in the future.

The closest beneficial use is irrigation on Rat Creek (approximately 1 mile downstream of the project area). There are no fish-bearing streams within the project area.

### **Botany**

No threatened, endangered, or sensitive plant species were found in 1998 vascular plant surveys.

## **V. DIRECT AND INDIRECT EFFECTS**

### **A. UNAFFECTED RESOURCES**

The following resources are either not present or would not be affected by either of the alternatives: Areas of Critical Environmental Concern; prime or unique farm lands; invasive, non-native species; Native American religious concerns; solid or hazardous wastes; Wild and Scenic Rivers; Wilderness; minority populations; and low income populations.

### **B. PROPOSED ACTION**

#### **Issue 1: Aquatic Conservation Strategy (ACS) Objectives**

The Proposed Action includes no management within Riparian Reserves. The following is a site-specific analysis of the effect of the Proposed Action on attainment of the ACS objectives:

**Objective 1.** The Proposed Action would maintain the existing distribution, diversity, and complexity of watershed and landscape-scale features. No effects on the streams or their aquatic communities are expected. The thinned stands up-slope of riparian areas would retain adequate supplies of future large woody material.

**Objective 2.** The Proposed Action would maintain the existing spatial and temporal connectivity within and between watersheds. Drainage network connections would be protected with the Riparian Reserves around all streams and other hydrology features. With no new stream crossings of any hydrology feature, the existing physical and chemical routes would be maintained.

**Objective 3.** The Proposed Action would not adversely affect the physical integrity of the aquatic system. The Riparian Reserves would ensure that density management would not affect streambank integrity or tree/shrub root strength within the riparian areas. It is unlikely that management activities within the project area would cause alteration of peak water flows sufficient to affect channel morphology because of the high number of retention trees.

**Objective 4.** The Proposed Action would maintain existing water quality. The action is unlikely to have an impact on stream temperatures because of the wide (200 feet) reserves around all streams. Although some microclimatic changes would be expected in the thinned area, stream shading would not be reduced. In addition, the retention of 90 TPA in the upland areas would further minimize the change to existing shading conditions. A lack of new stream crossings would eliminate direct physical impacts to stream channels.

**Objective 5.** The Proposed Action would not prevent or retard restoration of the sediment regime under which this aquatic ecosystem evolved. The probability of sediments entering streams from the new spurs and landings would be low due to the distance the new spurs/landings would be from streams (at least 200 feet). Design features of outsloping the roads, building to minimum size, blocking and waterbarring between logging seasons, and blocking and subsoiling the new roads upon completion of the project (in 1-2 years) would further reduce the potential of erosion and sedimentation. Following the BMPs for yarding would also greatly minimize the potential for sedimentation. The Riparian Reserves around all streams would provide for filtering of any erosion potentially created from yarding or new roads.

During operations, the use of existing roads for timber haul could produce an increase in sedimentation because some of the existing roads are likely to route sediment/flow via ditch lines to cross drains and stream crossings. However, the amount of sediments and the impact would be expected to be low because some surface erosion occurs from nearly all roads, and haul would be during the dry season. Minimal disturbance of cut and fill slope vegetation of existing roads would be expected.

**Objective 6.** The Proposed Action could contribute to an increase in summer low flows and overall water yield because of reduction in evapotranspiration and interception due to the removal of some of the trees. The effect would be expected to be low because much of the canopy would be retained. The high level of canopy retention would help to minimize the potential for greater snow accumulation and snow melt that is associated with rain-on-snow events. New roads would not be expected to extend the length of drainage networks because of the design features. Compaction would be expected from the proposed yarding methods. Subsoiling of skid trails upon completion of yarding would be likely to mitigate to meet the RMP standard of 1% or less impact to growth (2% or less areal extent). Effects on the timing and magnitude of peak flows would be expected to be low.

**Objective 7.** The Proposed Action would maintain the existing timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands. Much of the vegetative cover of the project area would be retained. Riparian vegetation would remain undisturbed.

**Objective 8.** The Proposed Action would maintain the species composition and structural diversity in riparian areas and would maintain the amount and distributions of coarse woody debris sufficient to sustain the present physical complexity and stability of the riparian areas. No activity is proposed within the Riparian Reserves, so existing vegetation and downed wood would remain undisturbed.

**Objective 9.** The Proposed Action would maintain the existing habitat of native plant, invertebrate, and vertebrate riparian-dependent species. The untreated Riparian Reserves would continue to provide habitat for these species.

Based on the above analysis of the effect on attainment of the ACS objectives, the Proposed Action is consistent with the ACS and the objectives for the Riparian Reserves, and would not prevent or retard attainment of any of the ACS objectives.

## **Issue 2: Spotted Owl Critical Habitat Unit**

The action may affect and is likely to adversely affect spotted owls and may affect critical habitat. The Proposed Action would degrade approximately 71 acres of foraging/dispersal habitat by opening up the canopy and possibly disturbing the downed wood that provides habitat for the spotted owl prey base. Currently there are 750 acres of suitable habitat and 300 acres of dispersal/foraging habitat within the CHU. Within the project area approximately 75 acres of unthinned Riparian Reserve would continue to provide foraging/dispersal habitat. As the stand grows and the canopy closes (10-20 years), foraging habitat would improve. Accelerating the development of late-successional stand characteristics as a result of the Proposed Action would ultimately benefit this species and improve critical habitat.

The Proposed Action would degrade but not eliminate the functionality of dispersal habitat provided by the existing stand. The Proposed Action would maintain canopy closure above 40%, maintaining dispersal habitat. However, opening the canopy would degrade the existing dispersal habitat because owls dispersing through the stand would be more subject to predation by other raptors and have less protection from the elements for 10-20 years because the canopy would be opened. Dispersal habitat is an essential element of critical habitat.

## **Issue 3: Impacts to Known Sites of Survey and Manage/Protection Buffer Species**

The 10-acre reserves, together with the buffering effect of the residual stand in the surrounding harvested area and Riparian Reserves is expected to provide adequate protection to the known population of red tree voles. The 10-acre reserve would protect the trees from damage during

harvest activities and maintain the forest canopy surrounding the nest trees. In addition, disturbance from noise would be minimal because of the buffering effect of the trees in the 10-acre reserve.

Based on information in the management recommendations for the three mollusk species known to exist in the project area (BLM - Instruction Memorandum No. OR-2000 -15 (Expires 09/30/2001) "Survey and Manage Management Recommendations for Four Terrestrial Mollusks: *Cryptomastix devia*, *Megomphix hemphilli*, *Prophysaon coeruleum*, and *P. dubium*." November 23, 1999), the ¼-acre buffers around each known mollusk site would be expected to provide adequate protection to the sites by mechanical protection and maintaining shade. Standard timber sale contract terms do not allow falling of timber into the reserves. Therefore, no direct disturbance to the ¼-acre reserves is expected.

Similarly, the ¼-acre reserves around the *Sarcosoma*, *Helvella*, and *Otidea* known sites would provide adequate protection of the sites. For *Sarcosoma*, no management recommendations exist; however, the Northwest Forest Plan states that management of known sites should emphasize protecting the duff layer where the species is found. For *Otidea*, management recommendations call for protecting the microclimate of the site (BLM - Instruction Memorandum OR-98-003, "Management Recommendations for Survey and Manage Fungi, Version 2.0", and "Draft *Otidea onotica* Protection Buffer rationale for the Eugene District", May 1, 2000). For *Helvella*, management recommendations do not specify mandatory protections of known sites. However, Eugene District guidance provides for a 60-foot radius reserve to be placed at the discretion of the botanist. That option is chosen for this site. In all cases, the ¼-acre buffers are expected to maintain these habitat elements for the species.

### C. ALTERNATIVE A (No Action)

#### Issue 1: ACS Objectives

Alternative A includes no management within Riparian Reserves and would maintain existing trends. Alternative A is consistent with the ACS and the objectives for the Riparian Reserves, and would not prevent or retard attainment of any of the ACS objectives.

#### Issue 2: Spotted Owl Critical Habitat Unit

Acceleration of late-successional stand characteristics would ultimately benefit most species using these habitats. This acceleration would not be realized without stand treatment. However, this acceleration would be at the expense of creatures currently occupying the stand, including the Smith Creek East spotted owls. The "No Action" alternative would have no immediate effects on wildlife habitat. It would not displace wildlife species that are sensitive to or unable to recover from disturbance based on their life history needs. It would not degrade spotted owl dispersal habitat or foraging habitat.

#### Issue 3: Impacts to Known Sites of Survey and Manage/Protection Buffer Species

Alternative A would result in no change in conditions at the known sites of red tree voles, mollusks, and fungi. It is unknown to what extent the high stand density and eventual tree suppression would effect these species.

## VI. CUMULATIVE EFFECTS

This analysis incorporates by reference the analysis of cumulative effects in the Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (NSO FSEIS) (Chapter 3 & 4, pp. 4-10), the RMP EIS (Chapter 4), and the Schedule Change EA. Those documents analyze most cumulative effects of timber harvest and other related management activities. Neither of the alternatives analyzed here would have cumulative effects on soils or air quality beyond those effects analyzed in the

above documents. The following section supplements those analyses, providing site-specific information and analysis particular to the alternatives considered here.

It is likely that other stands on BLM-administered lands within the Row River Watershed would be harvested, either through regeneration or thinning, over the next several years. Upper Harms (T20S-R2W-S25) was analyzed for treatment in 1999. Perkins Creek (T21S-R2W-S27) and Smaller Ones (T21S-R1W-S35) were sold in 1998. Other sales that have occurred in the past five years include Row River (T21S-R1W-S33) and Hawling Cedar (T21S-R1W-S19 and T21S-R1W-29), completed in 1995; Pitcher Perfect Thinning (T21S-R2W-S25 and T21S-R2W-S27), completed in 1997; and King Hawley (T21S-R2W-S35), completed in 1998. Total treatment from 1992 through the year 2004 is anticipated to be 1,205 acres, or 11% of all BLM land in the watershed.

On private lands in the watershed, more intensive timber management actions, including clearcutting and broadcast burning, are occurring and are likely to continue. Also, it is possible that some forest stands on private land will be converted to non-forested land, for either agricultural or residential use. Private lands would continue to provide habitat for deer, elk, and neotropical birds, but would primarily alternate between early- and mid-seral stages.

## A. PROPOSED ACTION

There is incomplete knowledge about the distribution of red tree voles, the ability of individuals and populations to disperse, and their ability to tolerate disturbances such as timber harvest. The species has been found in low numbers in second-growth forests and in disturbed environments, such as adjacent to existing roads. Based on this experience it is possible that populations of this species would persist after partial timber harvest but they are unlikely to persist after clearcuts on adjacent private lands.

Within the Willamette Province portion of the South Valley Resource Area, five project areas were surveyed in 1998, resulting in the discovery of 98 *M. hemphilli*, 23 *P. coeruleum*, and 5 *P. dubium*. Four project areas were surveyed in 1999, resulting in the discovery of 110 *M. hemphilli*, 18 *P. coeruleum*, and 10 *P. dubium*. Total numbers at the nine project areas were 208 *M. hemphilli*, 41 *P. coeruleum*, and 15 *P. dubium*. *M. hemphilli* snails were found at seven of the project areas in moderate numbers. *P. coeruleum* were found at eight project areas in low numbers, and *P. dubium* were found at six project areas in low numbers. These species appear to be fairly well distributed across the resource area. In both the Coast Range and the Cascade foothills of the Eugene District, it has been observed that releasing bigleaf maples by reducing the number of conifers ultimately favors the associated mollusk fauna. Populations of these mollusks are known to have survived disturbances such as thinning and regeneration harvests.

The Proposed Action, together with other federal harvests, is not expected to pose a risk to local viability or distribution of the three mollusk species found in the Willamette Province portion of the South Valley Resource Area. Sites would be protected in Riparian Reserves and through management recommendations.

The Proposed Action, together with other harvest activities, would contribute to the degradation or elimination of habitat for species preferring heavy canopy cover. Species preferring these stands would be displaced and concentrated into smaller fragmented suitable habitat that may be already occupied. In the long term (more than 40 years), the Proposed Action and other thinnings could accelerate the development of mature and late-successional forest characteristics.

Little is known about the ecology and life cycle of *Sarcosoma mexicana*, a species of winter-fruiting fungus. At the writing of the Northwest Forest Plan, *S. mexicana* was thought to occur in deep conifer litter layers in older forests. However, from its occurrence in disturbed, compacted soils and second-growth forests, it can be deduced that *S. mexicana* can either survive or re-establish into the kind of environment caused by timber harvest, road construction, burning, and (in one known case) plowing. Based on this experience and the analysis presented in the Schedule Change EA, it is possible that populations of this species would continue to persist in this and other nearby stands after timber harvest. Additionally, it is possible that timber harvest without any protections for this

species, such as will occur on non-federal land, may not even result in the loss of populations, limiting the potential for cumulative effects on this species.

Little is known about the ecology and life cycle of *Otidea* species. They have been found regularly in second-growth forests. Based on this experience and the analysis presented in the Schedule Change EA, it is possible that populations of these species would continue to persist in this and other nearby stands after timber harvest.

*Helvella compressa* is a candidate for removal from the list of species of special concern because it is commonly found in disturbed, non-forested habitats across its range. (BLM - Instruction Memorandum OR-98-003, "Management Recommendations for Survey and Manage Fungi, Version 2.0", May 1, 2000). Based on this experience and the analysis presented in the Schedule Change EA, it is possible that populations of these species would continue to persist in this and other nearby stands after timber harvest.

The Proposed Action, together with other harvesting and road construction, could cause a minor increase in water flows and overall water yield during operations. There would be no cumulative effect on soils.

## **B. ALTERNATIVE A**

Alternative A would not add to the cumulative effects of other harvests in the area. Development of late-successional characteristics would continue slowly because the stand would not be released.

## **VII. MITIGATION MEASURES**

The Fish and Wildlife Service has authorized taking of northern spotted owls that is incidental to this Proposed Action. To minimize any take, the Service believes that it is necessary and appropriate to prevent disturbance to spotted owl pairs and their progeny during the nesting season. To implement this reasonable and prudent measure, the Service provided the following non-discretionary terms and conditions: prohibit timber harvest activities within 0.25 miles of an active nest site during the nesting season, from March 1 to June 30 (or later if deemed necessary by the BLM biologist); and report on the progress of the activities described in the Biological Opinion.

## **VIII. CONSULTATION AND COORDINATION**

### **A. LIST OF PREPARERS**

The proposed action and alternatives were developed and analyzed by the following interdisciplinary team of BLM specialists.

Jeff Apel	Engineering
Alison Center	Threatened and Endangered Wildlife Species
Rick Colvin	Landscape Planner
Alan Corbin	Timber Management
Richard Hardt	Ecology
Pete O'Toole	Silviculture
Mike Southard	Cultural Resources
Steve Steiner	Hydrology
Chuck Vostal	Fisheries
Molly Widmer	Botany
Barry Williams	Soils

### **B. CONSULTATION**

Pursuant to the Endangered Species Act, formal consultation has been completed with the Fish and Wildlife Service on this Proposed Action, along with other actions proposed in the Eugene District for Fiscal Year 2000. The Fish and Wildlife Service issued its Biological Opinion on February 14, 2000.

The State Historic Preservation Office (SHPO) has been notified of this proposal and has determined, in accordance with 36 CFR 800.5(b), that the proposed undertaking would have no effect on cultural resources.

The Confederated Tribes of the Siletz and the Confederated Tribes of the Grand Ronde were notified of this project during the scoping process, requesting information regarding tribal issues or concerns relative to the project. No response was received.

No candidate, proposed, or listed threatened and endangered fish species under the Endangered Species Act exist in the Row River Watershed above Dorena Dam. Consultation with the National Marine Fisheries Service is not necessary.

### **c. PUBLIC PARTICIPATION**

A public notice advertising the availability of this EA and preliminary FONSI appeared in the Eugene Register-Guard on June 28, 2000. Additionally, this environmental assessment was sent to the following list of groups, agencies and individuals.

Ann Mathews, Eugene, OR  
Carol Logan, Kalapooya Sacred Circle Alliance, Springfield, OR  
Charles and Reida Kimmel, Eugene, OR  
Confederated Tribes of the Siletz, Siletz, OR  
Confederated Tribes of the Grand Ronde, Grand Ronde, OR  
Craig Tupper, Eugene, OR  
David Simone, Eugene, OR  
George Sexton, American Lands Alliance, Eugene, OR  
Governor's Forest Planning Team, Salem, OR  
Harold Schroeder, Eugene, OR  
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John Bianco, Creswell, OR  
John Poynter, Lorane, OR  
Kris and John Ward, Eugene, OR  
Lane County Land Management, Eugene, OR  
Neal Miller, Eugene, OR  
Oregon Dept. of Forestry, Springfield, OR  
Oregon Dept. of Fish and Wildlife, Springfield, OR  
Oregon Dept. of Environmental Quality, Portland, OR  
Oregon Natural Resources Council, Eugene, OR  
Pam Hewitt, Marcola, OR  
Peter Saraceno, Eugene, OR  
Robert Davison, Wildlife Management Institute, Bend, OR  
Roseburg Forest Products, Roseburg, OR  
Sierra Club - Many Rivers Group, Eugene, OR  
Sondra Zemansky, Junction City, OR  
Swanson-Superior Forest Products, Inc., Noti, OR  
The Pacific Rivers Council, Eugene, OR  
Alice Doyle, Cottage Grove, OR

A 30-day public comment period for this EA closed on July 28, 2000. Two comments were received. One was an e-mail from Michael Bormuth of Myrtle Creek, Oregon, in which he expressed his approval of the proposed action and use of resources in the Matrix land use allocation, and a desire to have a more economic alternative. The other comment letter was from Doug Heiken, Oregon Natural Resources Council, Eugene, Oregon. The paragraphs below summarize ONRC's comments and the responses to the comments.

1. "The EA states that 71 acres of spotted owl critical habitat would be impacted..."

You cite passages that we could not find within the Dorena Lake Timber Sale EA. Perhaps you have confused this proposed project with another.

The Dorena Lake Timber Sale would degrade, but not remove, 71 acres of dispersal habitat. The determination of whether a project would cause "adverse modification" of critical habitat is made by the U. S. Fish and Wildlife Service after the BLM and the Forest Service submit a combined Biological Assessment describing all proposed projects for one year within the Willamette Province. For the Dorena Lake Timber Sale, the Fish and Wildlife Service determined that critical habitat would not be adversely modified (USDI, Fish and Wildlife Service, "Formal and informal programmatic consultation on FY2000 routine habitat modification projects within the Willamette Province [1-7-00-F-155]", February 14, 2000).

We did fully analyze the effects of the Dorena Lake Timber Sale on critical habitat. We sent this analysis to the Fish and Wildlife Service during consultation on our FY2000 habitat modification projects. Our analysis is reproduced here for your convenience.

"The Dorena Lake timber sale is within a critical habitat unit (CHU OR-21) for the northern spotted owl. The U. S. Fish and Wildlife Service established critical habitat in 1992. The CHU was established for two reasons 1) to provide a stepping stone of suitable nesting habitat within the South Willamette/North Umpqua Area of Concern, and 2) to help maintain and improve the distribution of suitable nesting habitat in an area of highly fragmented forest habitat within checkerboard ownership (personal communication, U. S. Fish and Wildlife Service). It also was expected to provide dispersal habitat which is considered to be a component of critical habitat. CHU OR-21 is approximately 2000 acres in size of which 750 acres are suitable spotted owl habitat, 300 acres are dispersal/foraging habitat, and 950 acres are young stands.

"The ROD for the Northwest Forest Plan states that the combination of reserves and the standards and guidelines should allow critical habitat to perform the biological function for which it was designated. Site-specific considerations of critical habitat will be evaluated through watershed analysis (NFP, p. A-3). The Row River watershed analysis (1995) shows that 73% of the late-successional forest in the watershed is in CHU OR-21 and points out the importance of this cluster of older forest throughout the document. For the younger stands within critical habitat in the watershed, the document states that the improvement of future dispersal and foraging conditions are goals.

"The action may affect and is likely to adversely affect spotted owls and may affect critical habitat. The project area could be used for foraging by the Smith Creek East owls. The proposed

action would degrade foraging habitat by opening up the canopy and possibly disturbing the downed wood. Some research has found that spotted owls avoid foraging in thinned stands for at least 10 years (Janice Reid, personal communication). By not treating the riparian reserves, portions of the stand would remain available for foraging. As the stand grows and the canopy closes (approximately 10-20 years), foraging habitat would improve. Accelerating the development of late-successional stand characteristics as a result of the proposed actions would most likely ultimately benefit this species and improve critical habitat.

"Habitat through which spotted owls could disperse (combining suitable habitat with dispersal habitat) is just adequate within the critical habitat unit at 52%. The prescription would maintain canopy closure above 40% maintaining dispersal habitat, however, it would be degraded because the canopy would be opened. The untreated riparian reserves would sustain dispersal habitat in its present condition. The canopy is expected to close in 10-20 years.

"Critical Habitat Unit OR-21 is approximately 2000 acres in size covering portions of five sections in federal ownership and comprises 750 acres of suitable spotted owl habitat, 300 acres of dispersal/foraging habitat, and 950 acres of young stands. The proposed action would degrade 25% (71 acres) of the dispersal habitat within the CHU. In the long-term (40 plus years) the Proposed Action could accelerate the development of mature and late-successional forest characteristics in CHU OR-21." (Dorena Lake Timber Sale files, Wildlife Input).

2. *"Current direction for protecting and providing snags does not meet the needs of the many species ..."*

We are familiar with the PNW Research Station publication that you reference. That publication summarizes research findings (but presents no new research) related to forests of the interior Columbia River Basin. The broad statements presented in that publication about the importance of snags and logs have some general applicability beyond the interior Columbia River Basin and are reflected in the FSEIS for the Northwest Forest Plan (pp. 3&4-29 - 3&4-33) and the EIS for the Eugene District RMP (pp. 3-37 - 3-39; 4-57 - 4-50). Based on the analysis in those EISs, the Eugene District RMP contains a variety of standards related to retention of snags and coarse woody debris in timber harvests (pp. 38-39; 85-87). You present no new information related to the RMP analysis of snag requirements. In the absence of new information, amendment of the RMP standards for snag retention is not necessary at this time.

Our experience in implementing intermediate harvests in stands of this age has been that few, if any, snags need to be felled for safety reasons in most project areas. In this project, we did locate the

proposed road so as to minimize any potential safety concern with snags. We expect that we would need to fell few, if any, snags in this project.

It would not be possible to predict how many, if any, snags would need to be felled for safety reasons. The need to fell snags would depend on site-specific and operation-specific conditions. Given the scattered distribution of existing snags in the project area, buffering all existing snags sufficiently to obviate any potential safety concern would compromise our ability to accomplish the purpose of the action. Furthermore, buffering would be unlikely to avoid safety concerns near existing roads and landings.

As noted in the EA, any snags that might need to be felled for safety reasons would be retained as coarse woody debris.

3. *"The EA says that the cluster of red tree vole nests would be given a ten acre buffer ..."*

Direction from the BLM Oregon State Office states that each red tree vole nest should be protected by a 10 acre reserve (IM-2000-055). The reserve should provide a buffer of at least one site tree length from the nest, but the reserve does not need to be centered on the nest site. The single red tree vole nest in the Riparian Reserve in the northeastern portion of the project area would have a reserve of approximately 13 acres. Three red tree vole nests in the southwestern portion of the project area are clustered within 100 meters [325 feet] of each other; two are active and one is inactive. The cluster of three nests would have a core reserve of 10.1 acres that would connect to the north (west of the dry bald) to an old growth stand (which would be excluded from the proposed harvest unit) and a Riparian Reserve complex of approximately 50 acres. The proposed harvest unit would be at least one site tree length away from the nearest nest (200 feet or 61.5 meters) in order to protect the microclimate at the nest and avoid increasing predation. These three nests were found on the edge of the unit adjacent to a 100 year old stand; the core would include the younger stand in which the nests were found and the 100 year old stand in which the source population probably resides. The three-nest red tree vole site reserve would include habitat that researchers deem "ideal" for red tree voles.

4. *"No new roads ..."*

As explained in the EA, approximately 4185 feet of temporary roads would be constructed under the Proposed Action (EA, p. 4). No permanent roads would be constructed. The EA analyzed the effects of the new road construction, considering the effects on soil compaction, water routing, and sedimentation. The analysis concludes that the design features of the new roads and their temporary nature would minimize any adverse effects, and, as a result, the new roads would not prevent or retard attainment of any Aquatic Conservation Strategy objectives (EA, pp. 6-7). Additional information on the proposed road construction and effects on soils and water are available in the project files.

You appear to believe that the Proposed Action calls for road construction and logging in Riparian Reserves. However, the EA states that no roads would be constructed in Riparian Reserves, and no harvest would occur in the Riparian Reserves (EA, p. 3, map).

5. "The EA says that protocol surveys for fungi were completed in the fall and spring ..."

Surveys of the Dorena Lake Timber Sale for Protection Buffer and Survey and Manage fungi (which involve multiple passes during specific times of the year for various kinds of fungi) were conducted to protocol specifications. Qualified botanical contractors conducted multiple surveys in late 1999. In addition, the South Valley Resource Area botanist conducted multiple visits to the Dorena Lake Timber Sale in September, October, and November of 1998, and other BLM personnel with fungi expertise made miscellaneous visits resulting in "known sites" of survey and manage fungi being established during these "incidental" visits.

There are survey and manage species of fungi which are considered "fall fruiting" and others which are considered "winter/spring fruiting" in the official *Survey Protocols for Seven Protection Buffer Fungi*, published by the US Departments of Agriculture and Interior. The BLM conducts surveys for both of the "fall fruiting" and "winter/spring fruiting" groups of fungi. The two groups have different but overlapping time periods during which surveys can be conducted to protocol standards. Both groups were adequately covered by the surveys conducted at Dorena Lake. The "spring" surveys were actually done mainly in winter, when more fungi in this group actually fruit, but we also made further fungal collections/documentations later that spring.

6. "The EA says that mollusks and other survey and manage and protection buffer species will be given only a 1/4 acre buffer ..."

This project would follow Strategy 1 for managing mollusk sites as described in the MANAGEMENT RECOMMENDATIONS FOR TERRESTRIAL MOLLUSK SPECIES, Version 2.0, 11/23/99. The Management Recommendations state that for *Megomphix* sites:

"Observations in the Eugene District of the Bureau of Land Management indicate that an adequate Habitat Area for an individual site can be as small as 0.1 hectare (0.25 acres), if most of the original shading is conserved. This refers to a simple majority of summer tree foliage intercepting sunlight that would otherwise reach the ground at the site. If the forest canopy outside of the Habitat Area is to be substantially opened, then a larger Habitat Area may be needed to conserve favorable moisture and temperature conditions at the site."

The direction for the *Prophysaon* species states that the size of the Habitat Area should be sufficient to maintain favorable environmental conditions at the site location but does not suggest a minimum size. Each mollusk site in the Dorena Lake Timber Sale would reside within a Habitat Area of at least 1/4 acre in size, and some would be connected

to the Riparian Reserves. In all cases, the majority of the original shading would be conserved, and the sites would be protected from mechanical damage during logging. Because the proposed action for the Dorena Lake Timber Sale is a thinning, and over 50% of the canopy would remain, we determined that a 1/4-acre reserve would be sufficient to moderate fluctuations of temperature and humidity and to protect the majority of the summer shading, the key habitat feature present (generally a bigleaf maple tree, large downed wood, or both), and the forest floor litter and duff.

7. *"The 'dry bald' is a 'special habitat' that should be buffered by more than a ring of two trees ..."*

The "dry bald" is a "special habitat" in that dry-site shrubs, vines, and herbs dominate a rocky opening where conifers have not established. It was botanically surveyed twice, and no sensitive or rare species of plants were discovered. The interdisciplinary team decided that the area functions as habitat for species of wildlife and plants not found elsewhere in the project area. The RMP directs that we manage these areas for the values that make them unique from the surrounding habitat types (RMP, p. 40).

Thinning the stand near to the edge of the rocky bald (itself an open, sunny environment) is consistent with the values of this special habitat and will accelerate the development of late-successional stand characteristics in the surrounding stand (EA, p. 7). Thinning the buffer around the special habitat, and the resulting light and temperature changes, would maintain the already open nature of this rocky bald. Thinning within the 100-200' buffer around this special habitat is consistent with the RMP direction, which directs the use of management practices to obtain desired vegetation conditions in special habitats (RMP, p.40). The interdisciplinary team felt that the bald and its immediate edge should be protected from direct disturbance. Therefore, a ring of two trees around the bald would be left untreated, no yarding would be allowed in the reserved area, and the trees in the harvested area would be directionally felled away from the bald to further reduce the possibility of any direct disturbance of the special habitat.

## **IX. REFERENCES**

USDA, Forest Service and USDI Bureau of Land Management. February 1994. Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl. Portland, Oregon.

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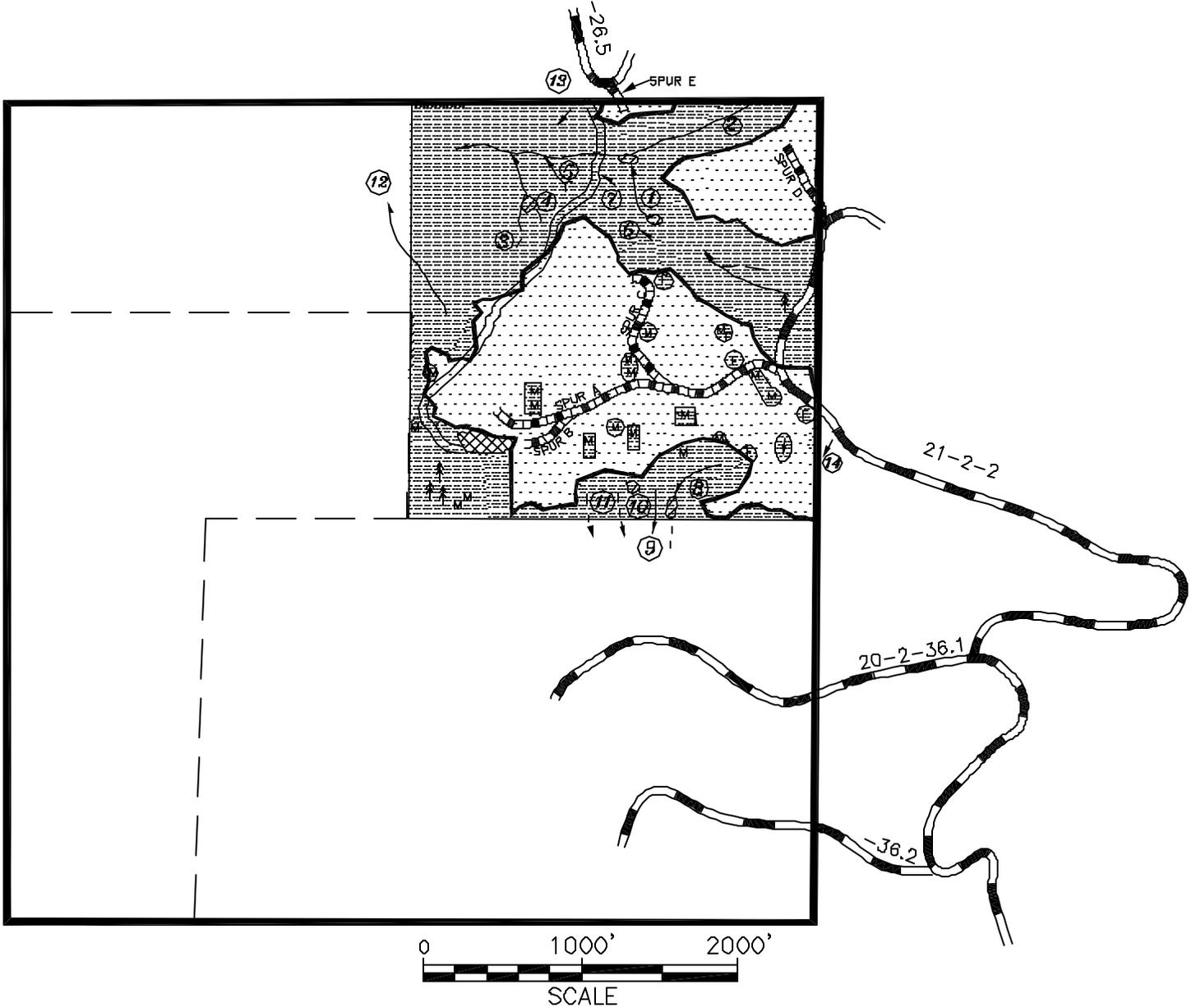
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USDI Bureau of Land Management. November 1999. Instruction Memorandum No. OR-2000-15 Survey and Manage Management Recommendations for Four Terrestrial Mollusks: *Cryptomastix devia*, *Megomphix hemphilli*, *Prophysaon coeruleum*, and *P. dubium*. Portland, Oregon.

USDA Forest Service and USDI Bureau of Land Management. October 1997. Instruction Memorandum No. OR-98-003, Survey and Manage Management Recommendations - Fungi, Version 2.0. Portland, Oregon.

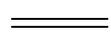
USDI Bureau of Land Management. May 2000. Draft *Otidea onotica* Protection Buffer rationale for the Eugene District. Eugene, Oregon: Eugene District Office.

BUREAU OF LAND MANAGEMENT  
 SV ID TEAM PLANNING MAP  
 DORENA LAKE - T205, R2W, SECTION 35  
 PROPOSED ACTION



LEGEND

-  WETLAND
-  PROPOSED HARVEST AREA
-  RESERVE AREA
-  DRY BALD (SPECIAL HABITAT)

-  ROAD TO BE CONSTRUCTED
-  ROCK SURFACED ROAD
-  DIRT ROAD
-  STREAM
-  RED TREE VOLE NEST TREE
-  MOLLUSK SITE
-  FUNGI SITE

**ENVIRONMENTAL ASSESSMENT NO. OR090-00-27**

Dorena Lake  
Timber Sale Tract No. E-01-327

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August 2000

United States  
Department of the Interior  
Bureau of Land Management  
Eugene District Office  
South Valley Resource Area