

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

ENVIRONMENTAL ASSESSMENT NO. OR O90-EA-03-03  
Rusty Nel Timber Sale

## 1.0 INTRODUCTION

The Bureau of Land Management proposes to regeneration harvest (see glossary) approximately 100 acres of timber. The proposed harvest area is composed of 63-66 year-old stands dominated by Douglas-fir within the Matrix land use allocation. The proposed action (Alternative 1) includes cable logging and approximately 3 acres of new road construction.

The project area is located in T. 17 S., R. 7 W., Section 7, Willamette Meridian, within the Lake Creek Watershed and the Wildcat Creek Watershed of the Siuslaw Resource Area, Eugene District, in Lane County, Oregon. Watershed analysis was completed for the Lake Creek Watershed in June 1995 and the Wildcat Creek Watershed in March 1999 by the Eugene District BLM. Timber harvesting would occur on land in the General Forest Management Area (GFMA) portion of the Matrix land use allocation (LUA) as identified in the Eugene District Record of Decision and Resource Management Plan (RMP), June 1995.

### 1.1 Management Objectives and Goals for Land within the GFMA Portion of the Matrix Land Use Allocation

Matrix land is Federal land outside of reserves and special management areas that will be available for timber harvest at varying levels. The management objectives for the Matrix LUA, as directed in the RMP, are:

Produce a sustainable supply of timber and other forest commodities to provide jobs and contribute to community stability.

Provide connectivity (along with other allocations such as Riparian Reserves) between Late-Successional Reserves.

Provide habitat for a variety of organisms associated with both late-successional and younger forests.

Provide important ecological functions, such as dispersal of organisms, carryover of some species from one stand to the next, and maintenance of ecologically valuable structural components, such as down logs, snags, and large trees.

Provide early-successional habitat.

### 1.2 Conformance

This Environmental Assessment (EA) is tiered to and in conformance with 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), USDA Forest Service and USDI Bureau of Land Management, January 2001; the "Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl"

(ROD), April 1994; and the “Eugene District Record of Decision and Resource Management Plan” (RMP), June 1995, as amended by the “Record Of Decision for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines” (S&M ROD), USDA Forest Service and USDI Bureau of Land Management, January 2001.

### **1.3 Purpose of and Need for Action**

This section shall briefly specify the underlying purpose and need to which the BLM is responding in proposing the alternatives including the proposed action.

The purpose of the proposed action is to produce forest products while providing early successional habitat. Approximately 4 million board feet (MMBF) of timber would be offered for sale through a timber sale contract. The need for the action is established in the RMP which directs that timber shall be harvested from Matrix lands to provide a sustainable supply for community economic benefit.

## **2.0 ISSUES**

### **2.1 Issues Selected for Analysis**

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

The Proposed Action and alternatives incorporate the use of design features and selected Best Management Practices (BMPs) to insure the project proposal does not prevent or retard attainment of the nine ACS Objectives on a watershed or landscape scale.

Issue 2: *How will timber harvest and road construction affect habitat for threatened and endangered species?*

The project area is dispersal habitat for northern spotted owls. Dispersal habitat provides transient owls with roosting and/or foraging habitat while seeking their own territory. Timber harvest could affect the project area’s ability to function as dispersal habitat.

### 3.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

This section shall describe the potential actions.

Table 1: Alternative Descriptions

| <b>Activity</b>                  | <b>Proposed Action Alternative 1 Cable Yarding</b>  | <b>Alternative 2 No Road Construction</b>                 | <b>Alternative 3 No Action</b> | <b>Alternative 4 Helicopter &amp; Cable Logging</b>  |
|----------------------------------|---|---|--------------------------------|--|
| Matrix Silviculture              | Approximately 100 acres regeneration harvested to 8-10 TPA*   | Approximately 56 acres regeneration harvested to 8-10 TPA | No harvest                     | Same as Alternative 1  |
| Riparian Reserve Activity        | 150 feet of road construction in Riparian Reserve (Spur H); cable corridors across streams  | Cable corridors across streams                            | None                           | Cable corridors across streams   |
| Volume (MMBF)                    | 4.0   | 2.2   | 0                              | 4.0  |
| Road Construction                | 3,600 feet of new spurs rocked (Spurs E, F, H, I); 1000 feet dirt spur (G2) 2.75 acres total  | None  | None                           | 2,000 feet of new spurs rocked; approximately 2 acres of log landings constructed 1.89 acres total |
| Road Improvement                 | 5,600 feet of Road #17-8-13.1 widened and rocked; Road #17-8-13.1 partly realigned for Spur G2  | 5,600 feet of Road #17-8-13.1 widened and rocked          |                                | 6,700 feet of Road #17-8-13.1 widened and rocked   |
| Stormproofing or decommissioning | Rocked spurs stormproofed by removing cross drains, waterbarring and blocking<br><br>Dirt spur (G2) decommissioned with excavator, then blocked | None  | None                           | Rocked spurs stormproofed by removing cross drains, waterbarring and blocking                      |
| Yarding                          | Cable   | Cable   | None                           | Aerial & Cable   |
| Site Preparation                 | Hand slash, strip cover & swamper burn Unit 1; broadcast burn Unit 2  | Same as Alt. 1  | None                           | Same as Alt. 1   |

\* TPA - trees per acre

### **3.1 Alternative 1 - Regeneration Harvest of Matrix Upland (Proposed Action)**

Alternative 1 would regeneration harvest approximately 100 acres of timber in a 320 acre project area. Approximately 2.75 acres of road construction would be required (see EA Map).

#### **Silviculture**

Fuels treatment for Unit 1 would include a combination of hand slashing of brush concentrations using chainsaws, strip covering of heavy slash concentrations and swamper burning areas of moderate slash. The combination of hand slashing, strip covering and swamper burning offers a range of tools to achieve acceptable site preparation with the least risk to resource values and personnel at a reasonable cost.

Fuels treatment for Unit 2 would be broadcast burning.

Both units would be planted with Douglas-fir and minor species. Stock type and numbers of trees planted per acre would depend on the availability of trees at the time of planting.

#### **Retention**

Green trees would be retained at an average density of 8-10 TPA. Spacing of retention trees would vary, with approximately 25% of them well-dispersed individuals and the remainder clustered in large groups. Of the 8-10 TPA to be retained, 6-8 would be retained to provide legacy trees (see glossary). Retention trees would reflect the species and range of diameters across the stand.

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 downed woody debris. Of the 8-10 TPA, 1.7 green conifer TPA greater than 15 inches in diameter would be retained for snags.

In addition, Pacific yew, western redcedar, and hardwood trees would be retained where possible. Those felled for safety reasons would be left on site as downed woody debris. All plus trees (genetically select trees) would be retained. Legacy trees (28" DBH and greater with old growth characteristics and which appear to date from the previous stand) would be retained where possible. In a few places, legacy trees may be felled for safety reasons or to make operations feasible. The felled tree may be moved to facilitate operations, or, in very rare cases, the felled tree may be removed.

Downed logs of decay classes 3, 4 and 5 would be retained where possible. Twelve logs per acre greater than 20" diameter and 20 feet long would be retained as coarse woody debris (CWD).

#### **Reserves**

The height of one site-potential tree has been determined to be 210 feet slope distance in the Lake Creek and Wildcat Creek Watersheds. Riparian Reserves 210 feet wide on either side of non-fishbearing streams and 420 feet wide on either side of fishbearing streams would be managed in accordance with the standards and guidelines in the NSO ROD (Appendix C, pp. 31-38).

Some skyline cable corridors may be needed through the Riparian Reserves to gain the necessary suspension of logs during yarding. Cable corridors would be kept approximately 150 feet apart at the end furthest from the yarder and would be limited to 12 feet in width. If needed, cable corridor trees within the non-treated Riparian Reserves would be felled and left parallel to the stream to the extent possible and retained on site to provide coarse woody debris.

Spur H would include approximately 150 feet of ridgetop road constructed within the outer 20 feet of the Riparian Reserve for Stream 8, a non-fishbearing stream.

A Marbled Murrelet Reserve would be managed according to Late Successional Reserve standards. Some of the clustered retention trees would be located near this nest tree. Five Megomphix hemphilli sites are within the proposed harvest area and would be protected by ¼ acre reserves. The remaining 22 Megomphix hemphilli sites are within Riparian Reserves.

A red tree vole nest tree would be reserved as directed by Management Recommendations within a ten-acre habitat area.

## **Noxious Weeds**

In order to slow the spread of noxious weeds, all yarding and road construction equipment, including excavators, would be cleaned prior to arrival on BLM land.

## **Roads & Yarding**

### **Roads**

BLM Road No. 17-8-13.1 would be improved to a 16-foot wide subgrade and would be rocked. Approximately 100 feet of Road No. 17-8-13.1 may need realignment to accommodate entrance of Spur G2. Waste generated from excavation for this realignment would be hauled approximately 1 mile west to a waste site within the proposed harvest area of Unit #1.

Approximately 4,600 feet (2.75 acres) of spur roads would be constructed during the dry season to allow further access to the project area (Spurs E-I). Approximately 4,900 cubic yards of waste generated from excavation for this construction would be hauled approximately 1 mile west to a waste site within the proposed harvest area of Unit #1.

Spurs E, F, H and I (approximately 3,500 feet total) would be designed to 14-foot wide subgrades and rocked. Approximately 400 feet of Spur H would be full-bench (see glossary) construction. Approximately 150 feet of Spur H would occur within the outer 20 feet of the Riparian Reserve for Stream 8. Upon completion of operations, the rocked spurs would be stormproofed by removing culverts, blocking, and waterbarring.

Spur G2 would be approximately 900 feet and would be designed to a 14-foot subgrade with a dirt surface. Approximately 250 feet would be a full bench construction throughout. Approximately 300 feet would be full bench construction of a 25% grade road. This portion of the road would require a "tractor assist" -- that is, loaded log trucks would need a cat or other piece of equipment to push or pull them up this portion of the road. Upon completion of operations, Spur G2 would be decommissioned in the following manner:

- a) The length of the road would be lifted and aerated, either with a track mounted excavator or a winged subsoiler.
- b) Side cast soils with a high potential for triggering landslides would be removed from fill slopes.
- c) Water bars or drainage dips would be installed along the road where necessary.
- d) Adequate drainage for an unmaintained road would be ensured.
- e) The road surface would be blocked using appropriate barricades.
- f) Slash, boulders, and logging debris would be placed along as much of the length of the road as possible, including small trees, if available.

### **Yarding**

Yarding would be done from Spurs E-I and existing road grades with cable equipment. All yarding would be to designated or approved landings and would adhere to the relevant BMPs as described in the RMP.

To mitigate impacts of audio disturbance to marbled murrelets, harvest activities within 0.25 mile of the occupied site would not commence until two hours after sunrise and would cease two hours prior to sunset. There would be no daily timing restrictions between September 15 and March 31 of any given year.

One-end suspension of logs would be required during yarding and intermediate supports would be required where necessary to attain the required suspension.

## **3.2 Alternative 2 - Regeneration Harvest of Matrix Upland - No New Road Construction**

Under this alternative, approximately 56 acres would be regeneration harvested as described in Alternative 1. Approximately 44 acres in the project area which could not be reached by cable logging from existing roads would not be harvested.

## **Reserves**

Riparian Reserve design features would be the same as Alternative 1 except that there would be no road construction within the Riparian Reserves.

## **Roads & Yarding**

### **Roads**

BLM Road No. 17-8-13.1 would be improved as described in Alternative 1 except that there would be no realignment. There would be no new road construction.

### **Yarding**

Yarding would be done only from existing road grades with cable equipment. All other yarding features would be as described in Alternative 1.

All other design features, including **Silviculture** and **Retention**, would be the same as Alternative 1.

## **3.3 Alternative 3 - No Action**

Under this alternative, no timber would be harvested from these stands and no roads would be constructed. The project area would be allowed to grow along its current growth trajectory. 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.

## **3.4 Alternative 4 – Helicopter and Cable Yarding**

Alternative 4 would regeneration harvest approximately 100 acres of timber. Approximately 2 acres of road construction and 2 acres of landing construction would be required.

### **Reserves**

Riparian Reserve design features would be the same as Alternative 1, except that there would be no road construction within Riparian Reserves.

### **Roads & Yarding**

#### **Roads**

BLM Road No. 17-8-13.1 would be improved as described in Alternative 2 to the east section line. Spur E (approximately 800 feet) would be constructed as described in Alternative 1 to Landing #1 (see L#1 on map). Approximately 300 feet of Spur H and all of Spur I (approximately 600 feet) would be constructed to Landing #2 (see L#2 on map). The knob where Landing #2 would be located could require excavation to achieve a flat area large enough for the activities that take place on a helicopter landing, including: a drop zone for logs; a decking area; a loading area; and an area for placing unmerchantable material that may be lifted out of the proposed harvest area. The waste generated by this excavation would be hauled to a waste site approximately 1 mile away.

#### **Yarding**

Two log landings would be constructed on BLM land (Landings #1 and #2). Each would be constructed to approximately 0.75 acre of landing area. The landings would be rocked. An existing waste area on State land to the west of the project area could be used as a service landing. Should the State not give permission to use this area, a third landing (approximately 0.75 acre) may need to be constructed on BLM land near Road No. 17-8-13.1, or on the ridge system associated with Spur E.

To minimize disturbance during the spotted owl and marbled murrelet nesting seasons, helicopter operations would be limited to August 6-February 28 of any given year.

Cable yarding operations would be allowed from Road No. 17-8-13.1 and Spurs E and I using the BMPs as described in Alternative 1.

All other design features, including **Silviculture**, **Retention**, and **Reserves**, would be the same as Alternative 1.

### 3.5 Alternative Considered but not Analyzed

A commercial thinning alternative was considered but not analyzed. The stand has already differentiated (self thinned -- see glossary) such that it would not respond well to a thinning treatment.

## 4.0 ENVIRONMENTAL CONDITIONS

This section describes the relevant resource components of the existing environment.

### 4.1 Lake Creek Watershed

The Lake Creek Watershed is located in Lane and Benton Counties, northwest of the city of Eugene, and contains the communities of Blachly, Horton, Triangle Lake and Greenleaf. The watershed lies at the northeastern headwaters of the Siuslaw River Basin. The Lake Creek Watershed contains approximately 68,771 acres. The current landscape in the Lake Creek Watershed is largely influenced by the checkerboard ownership pattern of BLM and private owners. Primary uses of the watershed have been timber logging and agriculture. BLM manages approximately 46% of the watershed. Forest industry companies manage 23%. The State of Oregon manages 12%. The remaining 19% of the watershed is in other private ownership. (Lake Creek Watershed Analysis, 1995).

Approximately 22 percent of the forested BLM administered lands within the Lake Creek Watershed are in the 0-30 year age classes. Approximately 59 percent are in the 40 to 70 year age classes, and approximately 19 percent are in the late successional or 80 year and older age classes (Based on Forest Operations Inventory (FOI) stand data 2002).

### 4.2 Wildcat Creek Watershed

The Wildcat Creek Watershed is located in Lane County, northwest of the city of Eugene, and contains the community of Walton. The watershed lies at the east-central headwaters of the Siuslaw River Basin. The Wildcat Creek Watershed contains approximately 34,902 acres. Primary uses of the watershed have been timber logging and agriculture. Ownership within the Wildcat Creek Watershed is primarily checkerboard with alternating BLM managed sections and privately owned sections. BLM manages approximately 40% of the watershed; forest industry companies manage approximately 41%; the State of Oregon manages approximately 14%; and the remaining 5% of the watershed is in other private ownership (Wildcat Creek Watershed Analysis, 1999).

Approximately 26 percent of the forested BLM administered lands within the Wildcat Creek Watershed are in the 0 to 30 year age classes. Approximately 63 percent are in the 40 to 70 year age classes, and approximately 11 percent are in the 80 year and older age classes (Based on Forest Operations Inventory (FOI) stand data 1998).

### 4.3 Stand Descriptions

The proposed harvest area is composed of 63- to 66-year-old stands dominated by dense Douglas-fir. Minor components include western hemlock, western redcedar, and hardwoods. The stands were established 1937-1940.

### 4.4 Botanical Resources

#### Special Status, and Survey & Manage Species

These 63-66 year-old stands contain some scattered legacy trees and areas with big-leaf maple. Understory species include salal, dwarf Oregon-grape, vine maple, evergreen huckleberry, sword fern, and rhododendron. Several orchids and herbaceous *Ericaceae* occur, including *Monotropa uniflora*, and *Hemitomes congestum*. These species are indicative of older forests. Early-successional species also occur in the area, including *Salix scouleriana* and *Baccharis pilularis*.

Surveys were conducted in the project area for federally listed Threatened or Endangered, BLM Special Status, and Survey and Manage plants and fungi. Surveys for vascular plants occurred in August 1998. Surveys for lichens, bryophytes and fungi occurred in October 1998 and March and April

1999. An additional 6 acres in an area not included in the first surveys were surveyed for lichens and bryophytes in January 2002.

No federally listed or Special Status species were located during surveys. Several former Survey and Manage species were located, including moss *Ulota megalospora* (15 sites), and two fungi: *Gymnopilus punctifolius* (1 site) and *Sarcosoma mexicana* (5 sites). These species have since been removed from the Survey and Manage list, either in the Record of Decision for Amendments to the Survey and Manage, Protection Buffer, and Other Mitigation Measures Standards and Guidelines (2001), or in the subsequent Annual Species Review (June 2002).

#### **Noxious Weeds and Non-Native Plant Species**

Weeds located during plant surveys include bull thistle, tansy ragwort, and common St. John's-wort. These noxious weeds are commonly scattered along roadsides in the Siuslaw Resource Area. All are perennial herbs, and bio-control measures are often used to control them.

### **4.5 Soils**

Predominant soils found in the project area include Bohannon and Digger. Bohannon soils are moderately deep, well-drained, gravelly or cobbly loam soils formed from arkosic sandstone and basic igneous rocks in areas receiving from 60-120 inches of precipitation. They occur on gently sloping to very steep mountainous upland at elevations of 500-3,000 feet. The surface layer is dark brown gravelly loam about 11 inches thick. The subsoil is dark brown and brown cobbly loam about 13 inches thick. Highly fractured, weathered sandstone is at a depth of 24 inches. Depth to weathered bedrock ranges from 20-40 inches.

Digger soils are moderately deep, well-drained, brown loamy skeletal soils formed from arkosic sandstone. They occur on steep sideslopes, narrow ridges and headwalls at elevations of 600-2,800 feet in areas having an annual precipitation of 50-80 inches. The surface layer is dark brown gravelly loam about 4 inches thick. The subsoil is dark yellowish brown and yellowish brown gravelly and very gravelly loam about 33 inches thick. Fractured weathered sandstone is at a depth of 37 inches. Depth to bedrock ranges from 20-40 inches.

Within the Riparian Reserve for Stream 4, a small area with the potential for slope instability was identified.

### **4.6 Fisheries, Aquatic, and Riparian Resources**

The project area is in the Lake Creek and Wildcat Creek Watersheds. The project area is in a rain-dominated zone, with elevations ranging from 600 to 1,300 feet.

Nelson Creek, located in the Lake Creek Watershed, is a fifth-order stream arising on the western slope of the Coast Range and flowing in a westerly direction before joining Lake Creek near the community of Greenleaf in T. 17 S., R. 7 W., Section 8. Nelson Creek contains spawning and rearing habitat for coho and Chinook salmon, steelhead, cutthroat trout and sculpin. Riparian communities are dominated by red alder and bigleaf maple. Unnamed tributaries (Streams 4, 5, 12, 13, 14, and 15) adjacent to the northern boundary of Unit 1 drain into Nelson Creek.

Knapp Creek, a tributary of Chickahominy Creek, is located in the Wildcat Creek Watershed. Knapp Creek provides habitat for coho salmon, cutthroat trout, steelhead and sculpin. Hardwoods, second growth conifers and salmonberry dominate the riparian area of Knapp Creek. Unnamed tributaries (Streams 6, 7, 8, 11, 16, 17, and 18) adjacent to the southern boundary of Unit 2 drain into the northwest (Stream 9) and northeast (Stream 10) forks of Knapp Creek.

Riparian communities along the unnamed tributaries consist mainly of hardwoods and some second growth conifers. The tributaries flow through steep narrow valleys constrained by hillslopes. These small streams generally stairstep over logs and boulders. The upper reaches are non-fishbearing due to high stream gradient and physical barriers. Prominent habitat types include cascades, riffles and pools. A presence/absence fish survey, utilizing netting and visual observation, was conducted along the streams adjacent to Units 1 and 2. Results are shown in Table #2.

Table 2: Fish Presence/Absence

| Stream          | Presence | Description   |
|-----------------|----------|---|
| 7               | Present  | Cutthroat trout present in Stream 7 from the confluence with the NW fork of Knapp Creek for a distance of approximately 360 feet upstream.                      |
| 9               | Present  | Cutthroat trout and sculpin present in the NW fork of Knapp Creek.  |
| 10              | Present  | Cutthroat trout present in the NE fork of Knapp Creek, from the confluence with the NW fork of Knapp Creek, for a distance of approximately 1200 feet upstream. |
| 11              | Present  | Cutthroat trout present in Stream 11, from the confluence with the NW fork of Knapp Creek, for a distance of approximately 120 feet upstream.                   |
| 4,5,12,13,14,15 | Absent   | Unit #1   |
| 6,8,16,17,18    | Absent   | Unit #2   |

## 4.7 Wildlife

### Threatened and Endangered Species

#### Northern Spotted Owl

The four corners of Section 7 are adjoined with other BLM-managed sections, while non-federal lands border Section 7 directly north, south, east and west. The result of a checkerboard ownership pattern and differing management strategies is a discontinuity of habitat types. Presently, the non-federal lands are providing scattered stands of dispersal habitat for the owl, although it is difficult to predict how long these stands will remain before they are harvested.

BLM-managed lands to the northeast and northwest are classified in the Connectivity LUA. The section to the southwest is classified as Late Successional Reserve, and the section to the southeast is Matrix.

The project area is composed of a mid-seral Douglas-fir stand that qualifies as dispersal habitat for the northern spotted owl. The stands, although lacking structure suitable for nesting, provide temporary habitat for transient owls searching for territories.

Several mature Douglas-fir trees within the Riparian Reserve of Stream 4 could support nesting owls, but annual surveys have not resulted in any owl detections in this area.

#### Marbled Murrelets

Two individual trees within the Riparian Reserve of Stream 4 possess structure suitable for murrelet nesting. These trees were inspected by a climber certified to identify murrelet nests. One such nest was discovered during this search and appeared to be about four years old and no longer in use. The presence of this nest is indicative of murrelet occupancy, and in accordance with the RMP, a Marbled Murrelet Reserve will be delineated and will include all suitable and recruitment habitat within 0.5 mile. Other than these two trees, no habitat suitable for the murrelet exists within the unit.

## **Survey and Manage Species**

### **Mollusks**

Survey and Manage mollusk species previously requiring surveys included Oregon Megomphix (*Megomphix hemphilli*), papillose tailedropper (*Prophysaon dubium*), and the blue-grey tailedropper (*Prophysaon coeruleum*). These species have been removed from the Survey and Manage list in Lane County, Oregon (USDA & USDI, 2001), and no longer require pre-project surveys. Mitigation measures are still required for Megomphix sites discovered prior to October, 1999. Twenty-seven such sites were located during pre-project surveys. Five of these sites are within the proposed harvest area for Alternatives 1 and 4.

### **Red Tree Vole**

Red tree vole surveys were conducted in 2001. One active nest was identified within the project area. A ten-acre habitat area has been identified and would be reserved as required by Management Recommendations for this species.

No other special status species were encountered within the project area during various wildlife surveys associated with the project.

### **Other Wildlife**

This Douglas-fir stand provides for a variety of species that utilize mid-seral habitat. For a list of species that may occur here, refer to Table 3-54 in the Eugene District's RMP (page 3-52).

## **4.8 Cultural Resources**

A cultural resource inventory of the project area has not been conducted. Past pre-project cultural resource surveys conducted in conjunction with surface-disturbing actions in the Coast Range physiographic province have not resulted in the discovery of significant cultural properties. Following the signing of the national Programmatic Agreement, the Oregon BLM and the Oregon Historic Preservation Office developed a protocol agreement recognizing the paucity of discoverable historic properties in the Coast Range. Under this protocol, pre-project cultural resource surveys will not be conducted in the Coast Range physiographic province. The Protocol Agreement does set forth procedures covering post-project cultural resource surveys which would be implemented.

## **4.9 Recreation and Visual Resources**

The Visual Resource Management Class for the project area is IV, which allows major modifications of the existing character of the landscape. The project area is in an area of dispersed recreation activities such as hunting and driving for pleasure and is not readily visible from moderately traveled roads such as Highway 36.

## **4.10 Fuels/Downed Woody Debris**

The pre-harvest fuel loading in the project area is approximately 3 tons per acre of fine fuels (0-3 inches in diameter), which is considered low. Ladder fuels are not common or heavy. Some decay class 2, 4 and 5 coarse woody debris exists and is heavy in some areas. Brush in the project area is heavy in some areas, with some large openings.

## **5.0 ENVIRONMENTAL CONSEQUENCES**

This section explains and summarizes the environmental consequences including direct, indirect, short-term, long-term, and cumulative effects of all the alternatives.

### **5.1 Unaffected Resources**

The following resources are either not present or would not be adversely affected by the proposed action or any of the alternatives: Areas of Critical Environmental Concern, prime or unique farm lands, wetlands, Native American religious concerns, solid or hazardous wastes, Wild and Scenic Rivers, Wilderness, and low income or minority populations.

## **Cultural Resources**

Cultural Resources are not expected to be affected by the proposed action or any of the alternatives.

## **Air Quality**

Burning activities would be consistent with Oregon Smoke Management Regulations. Burning under Alternatives 1, 2, or 4 would be of very short duration and would have no local short- or long-term impacts on air quality. All burning would meet the State Implementation Plan for smoke management and the National Ambient Air Quality Standards set forth in the Clean Air Act. This resource will not be addressed further in this analysis.

## **5.2 Issue 1 - How will timber harvest and road construction affect attainment of the Aquatic Conservation Strategy (ACS) Objectives?**

### **Alternative 1 – Regeneration Harvest of Matrix Upland (Proposed Action)**

Alternative 1 includes no treatment of the Riparian Reserves. The following is a site-specific analysis of the effect of Alternative 1 on attainment of the ACS objectives:

**Objective 1.** Alternative 1 would maintain the distribution, diversity, and complexity of watershed and landscape-scale features. No treatment of the Riparian Reserves is proposed.

**Objective 2.** Alternative 1 would maintain the existing spatial and temporal connectivity within and between watersheds. Drainage network connections would be protected with Riparian Reserves around all streams and other hydrologic features. The existing physical and chemical routes would be maintained because there would be no new stream crossings.

**Objective 3.** Alternative 1 would maintain the physical integrity of the aquatic system. The Riparian Reserves would ensure that harvest would not affect streambank integrity or tree/shrub root strength within the riparian areas.

**Objective 4.** Alternative 1 would maintain existing water quality. The action is unlikely to have an impact on stream temperatures because of the Riparian Reserves. No direct physical impacts would occur because there would be no new stream crossings.

**Objective 5.** Alternative 1 would maintain 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 of these features from streams (at least 210 feet for most spurs, 190 feet for Spur H). Design features, such as out-sloping the roads, building to minimum size, blocking and waterbarring the new roads upon completion of the project (in 1-2 years), would further reduce the potential for erosion and sedimentation. Following the BMPs for yarding would 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. There would be no effect from building Spur H through the outer 20 feet of Stream 8's Riparian Reserve.

During operations, the use of existing rocky County 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 additional amount of sediment from the project would be expected to be low relative to natural background levels. Haul during wet weather would be on rock surface roads, and minimal disturbance of cut and fill slope vegetation of existing roads would be expected.

**Objective 6.** Alternative 1 could contribute to an increase in summer flows and overall water yield because of reduction in evapotranspiration and interception due to the removal of most of the trees. This increase would return to pre-harvest levels over time. The riparian area would remain in conifers; therefore, the flows would not be expected to fall below pre-harvest levels (R.D. Harr 1983). New roads would not be expected to extend the length of drainage networks because of road design features. Some compaction would be expected from the proposed yarding methods. Effects on the timing and magnitude of peak flows would be expected to be low. The project area is below the rain-on-snow zone, so increases in peak flows would only be expected in early fall and late spring while trees

are actively transpiring. Large winter flood flows would show little effect as the trees are dormant at this time and interception is a small part of the total precipitation (Harr et al.1975).

**Objective 7.** Alternative 1 would maintain the existing timing, variability, and duration of floodplain inundation and water table elevation. The vegetative cover of the Riparian Reserves would be retained.

**Objective 8.** Alternative 1 would maintain the species composition and structural diversity in riparian areas and would maintain the amount and distribution of coarse woody debris sufficient to sustain the present physical complexity and stability of the riparian areas.

**Objective 9.** Alternative 1 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, Alternative 1 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.

### **Alternative 2 - Regeneration Harvest - No New Road Construction**

Alternative 2 includes no treatment of Riparian Reserves. Effects on attainment of the ACS objectives would be similar to Alternative 1.

### **Alternative 3 - No Action**

No management actions would occur under Alternative 3. Effects on attainment of ACS objectives 1-5 and 7-9 would be similar to Alternatives 1 and 2. The following is a site-specific analysis of the effect of Alternative 3 on ACS Objective 6.

**Objective 6.** Alternative 3 would not contribute to an increase in summer flows and overall water yield. Because no trees would be removed, evapotranspiration and interception would not be reduced.

### **Alternative 4 – Helicopter and Cable Yarding**

Alternative 4 includes no treatment of Riparian Reserves. Impacts would be similar to Alternative 1.

Based on the above analyses of the effects on attainment of the ACS Objectives, Alternatives 1, 2, 3, and 4 are consistent with the ACS and the objectives for the Riparian Reserves, and would not prevent or retard attainment of any of the ACS Objectives.

## **5.3 Issue 2: How would timber harvest and road construction affect habitat for threatened and endangered species?**

### **Alternative 1 - Regeneration Harvest of Matrix Upland (Proposed Action)**

This alternative would result in the removal of approximately 100 acres of Douglas-fir that provides dispersal habitat for the northern spotted owl. Federal holdings in both watersheds in which the project area lies contain greater than 50% of this habitat type (Lake Creek, 52%, Wildcat Creek, 70%). Additionally, the quarter township centered around the project area is composed of 59% of this habitat type. Although exact figures are difficult to obtain, private and State lands provide additional dispersal habitat for the northern spotted owl. The proposed removal of 100 acres in this area would not result in a change of the overall percentages of dispersal habitat within this watershed.

The differing management standards associated with the LUAs and non-federal lands is expected to provide a variety of habitats, including dispersal. It is expected the local area would continue to provide adequate dispersal habitat for the spotted owl although the spatial arrangement of these habitats will change over time as harvests continue and other stands mature.

### **Alternative 2 - Regeneration Harvest - No New Road Construction**

Effects on spotted owl dispersal habitat would be similar to Alternative 1 except that approximately 56 acres would be removed rather than 100 acres.

### **Alternative 3 - No Action**

Under this alternative, the proposed harvest area would gradually develop characteristics associated with older stands. There would be no loss of dispersal habitat and, over time, the stand would mature into habitat suitable for species reliant upon later seral stages. Because the area is GFMA, it may be proposed for harvest at a later date.

### **Alternative 4 – Helicopter and Cable Yarding**

Effects on northern spotted owl dispersal habitat would not differ from Alternative 1. Because use of heavy helicopters would take place August 6- February 28 to accommodate the marbled murrelet, which is also outside of the northern spotted owl breeding season, there would be no impact from the disturbance created by helicopters.

## **5.4 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) and the Eugene District Final Proposed Resource Management Plan/Environmental Impact Statement, November 1994 (RMP EIS) (Chapter 4). Those documents analyze most cumulative effects of timber harvest and other related management activities. None of the alternatives analyzed here would have cumulative effects on water or wildlife 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 some stands on BLM-managed lands in the Lake Creek Watershed and Wildcat Creek Watershed will be treated with partial harvests or regeneration harvests given that the surrounding sections are GFMA and Connectivity. Badger One (a regeneration harvest located in T. 17 S., R. 7 W., Section 35, Wildcat Creek Watershed) was sold in December, 2002. Nelson Way (a thinning located in T. 17 S., R. 8 W., Section 13, Lake Creek Watershed) has been analyzed for sale in Fiscal Year 2003. Rock Fish (a thinning in T. 16 S., R. 7 W., Section 23, Long Tom and Lake Creek Watersheds) is currently being analyzed for sale in 2004.

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-forest land, for either agricultural or residential use. Private lands will primarily alternate between early- to mid-seral stages.

The majority of this watershed is below what is believed to be the Rain-On-Snow (ROS) zone, as is the project area itself. ROS is the one condition that is believed to have an effect on large peak flows. The effects on smaller flows are caused by a lack of evapotranspiration caused by the removal of trees. The proposed action includes leaving an uncut buffer on all streams and 8-10 trees per acre as retention trees. These remaining trees would use a portion of the soil moisture made available by the removal of the harvested trees. Much of the state lands in this area have been commercially thinned. The residual trees in these stands would use much of the soil moisture made available if the crop trees are removed. As the regeneration and brush species grow back, the additional soil moisture would eventually return to preharvest levels. The roads in this unit would not be hydrologically connected to streams, so there would be no increase in flows from the roads.

Alternative 1 would have the greatest impact on the permanent roading of the watershed. Alternative 4 would contribute to the roading of the watershed to a lesser extent. Alternatives 2 and 3 would not contribute to an increase in permanent roads in the watershed.

Table 3: Rooding by Alternative

|               | New Road Construction | New Road Length | Road Improvement |
|---------------|-----------------------|-----------------|------------------|
| Alternative 1 | 2.75 acres            | 4,600 feet      | 5,600 feet       |
| Alternative 2 | 0 acres               | 0 feet          | 0 feet           |
| Alternative 3 | 0 acres               | 0 feet          | 0 feet           |
| Alternative 4 | 1.89 acres            | 1,920 feet      | 6,700 feet       |

The timber harvest proposed under Alternatives 1, 2 and 4, along with other private or federal harvest in the watersheds, could cumulatively reduce local closed canopy habitat for late-successional or old growth remnant-associated Survey and Manage plant species. Habitat fragmentation could prevent recolonization of isolated populations in the watersheds, possibly leading to local extinction. The 100-acre harvest proposed under Alternative 1 or 4 would contribute to this reduction and fragmentation more than the 56-acre harvest proposed under Alternative 2. The additional 44 acres retained under Alternative 2 would reach late-successional age earlier than if harvested, thereby providing additional habitat to mitigate the effects of future timber harvest in the watersheds. Riparian Reserves, Late-Successional Reserves, and specifically-designated reserves for other resources should mitigate the effects generated by any of the action alternatives and contribute to the viability of Survey and Manage plant species throughout the watershed. Alternative 3 (no action) would not contribute to any cumulative reduction of interior forest (closed canopy) habitat and would allow the project area to continue to provide this forest habitat.

## 6.0 CONSULTATION AND COORDINATION

### 6.1 Project Development

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

| Name                                    | Title                           | Discipline                              |
|---|---------------------------------|---|
| Karin Baitis<br>Barry Williams          | Soil Scientist                  | Soils                                   |
| Mark Stephen                            | Forest Ecologist                | Ecology                                 |
| Brett Jones                             | Engineer                        | Roads/Transportation                    |
| Dave Reed                               | Fuels Specialist                | Fuels/Air Quality                       |
| Michael Southard                        | Archaeologist                   | Cultural Resources                      |
| Phil Redlinger                          | Silviculturist / Timber Planner | Silviculture                            |
| Alan Corbin                             | Timber Manager                  | Timber                                  |
| Dan Crannell                            | T & E and Wildlife Biologist    | Wildlife Habitat                        |
| Leo Poole<br>Rob Preece                 | Fisheries Biologist             | Fisheries                               |
| Cheshire Mayrsohn<br>Douglas Goldenberg | Botanist                        | Botanical Resources                     |
| Sandra Miles                            | Recreation Planner              | Visual Resources and Recreation         |
| Gary Hoppe                              | Landscape Planner               | Planning and Environmental Coordination |
| Graham Armstrong                        | Forest Hydrologist              | Hydrology                               |

## 6.2 Consultation

### **U.S Fish and Wildlife Service**

This proposed action has been addressed in the FY 2003-04 Habitat Modification Biological Opinion which was issued on September 30, 2002. All required mitigation measures included in this Opinion would be followed to ensure compliance with the Endangered Species Act.

Because of the removal of dispersal habitat in an area that would continue to provide an adequate amount of this habitat after harvest, this project "May Affect, but is Not Likely to Adversely Affect" the northern spotted owl.

No habitat for the marbled murrelet exists within the proposed harvest area, but activity within 0.25 mile of the occupied stand "May Affect and is Likely to Adversely Affect" the marbled murrelet due to disturbance to the occupied stand. Project design features would minimize disturbance effects to the Marbled Murrelet.

There would be no effect to the bald eagle.

### **Confederated Tribes of the Grande Ronde and the Confederated Tribes of Siletz**

The Eugene District of the Bureau of Land Management consulted with the Confederated Tribes of Siletz, and the Confederated Tribe of Grande Ronde. No response was received.

## 7.0 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.

USDA, Forest Service and USDI, Bureau of Land Management. April 1994. Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl.

USDA, Forest Service and USDI Bureau of Land Management. January 2001. Record of Decision for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines.

USDA, Forest Service and USDI Bureau of Land Management. September 2000. Management Recommendations for the Oregon Red Tree Vole, *Arborimus longicaudus*, Version 2.0.

USDI, Bureau of Land Management. November 1994. Eugene District Proposed Resource Management Plan/Environmental Impact Statement. Eugene District Office, Eugene, Oregon.

USDI, Bureau of Land Management. June 1995. Eugene District Record of Decision and Resource Management Plan. Eugene District Office, Eugene, Oregon.

USDI, Bureau of Land Management and Oregon State Historic Preservation Office. 1998. Protocol Agreement.

USDI, Bureau of Land Management. June 1995. Lake Creek Watershed Analysis. Eugene District Office.

USDI, Bureau of Land Management. March 1999. Wildcat Creek Watershed Analysis. Eugene District Office.

Harr R.D., Potential For Augmenting Water Yield Through Forest Practices In Western Washington and Western Oregon, Water Resources Bulletin Vol. 19, NO. 3, June 1983.

Harr R.D., Changes in Storm Hydrographs After Road Building and Clear-Cutting in the Oregon Coast Range, Water Resources Research Vol. 11, NO. 3 June 1975.

## 8.0 Glossary

**Regeneration Harvest:** This silvicultural system is applied in the Matrix land use allocation. During regeneration harvest, most of the stand is cut; however, in the General Forest Management Area, an average of 6-8 trees per acre are reserved from cutting and left as clumps, strips, or scattered individual trees. In Connectivity, an average of 12-18 trees per acre are reserved.

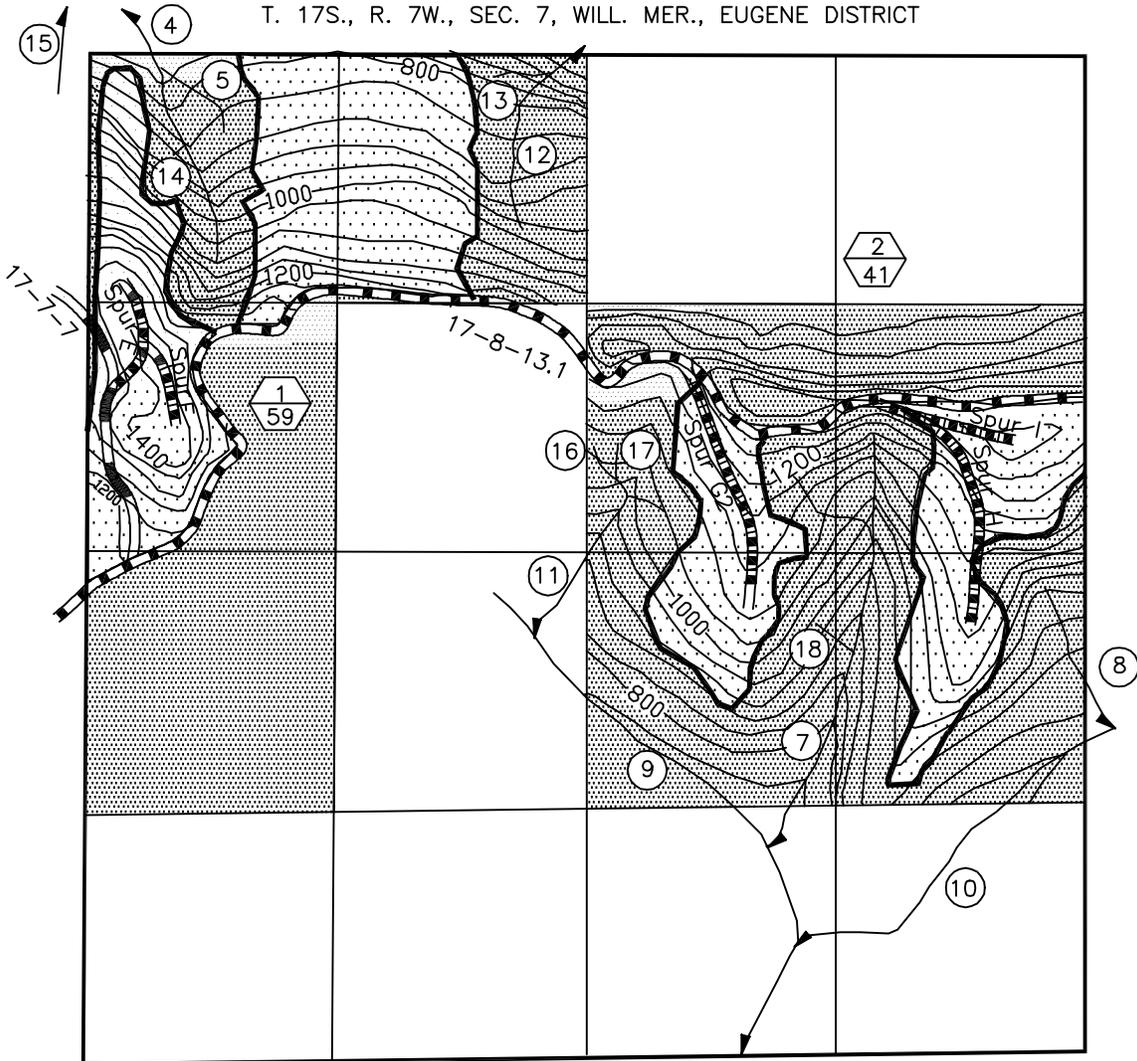
**Differentiated:** A stand of timber that has undergone biological competition, wherein some trees have thrived and some trees have died, has differentiated. A differentiated stand would not respond to further thinning by increasing its rate of growth.

**Legacy tree:** A tree that appears to date from the previous stand, is at least 28 inches dbh, and possesses characteristics such as large branches.

**Full-bench road construction:** In full-bench construction, the entire road surface is excavated into the hill. The excavated material is pushed or hauled to an area needing fill or to a disposal area.

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT

PROPOSED ACTION  
 RUSTY NEL ALTERNATIVE 1  
 T. 17S., R. 7W., SEC. 7, WILL. MER., EUGENE DISTRICT



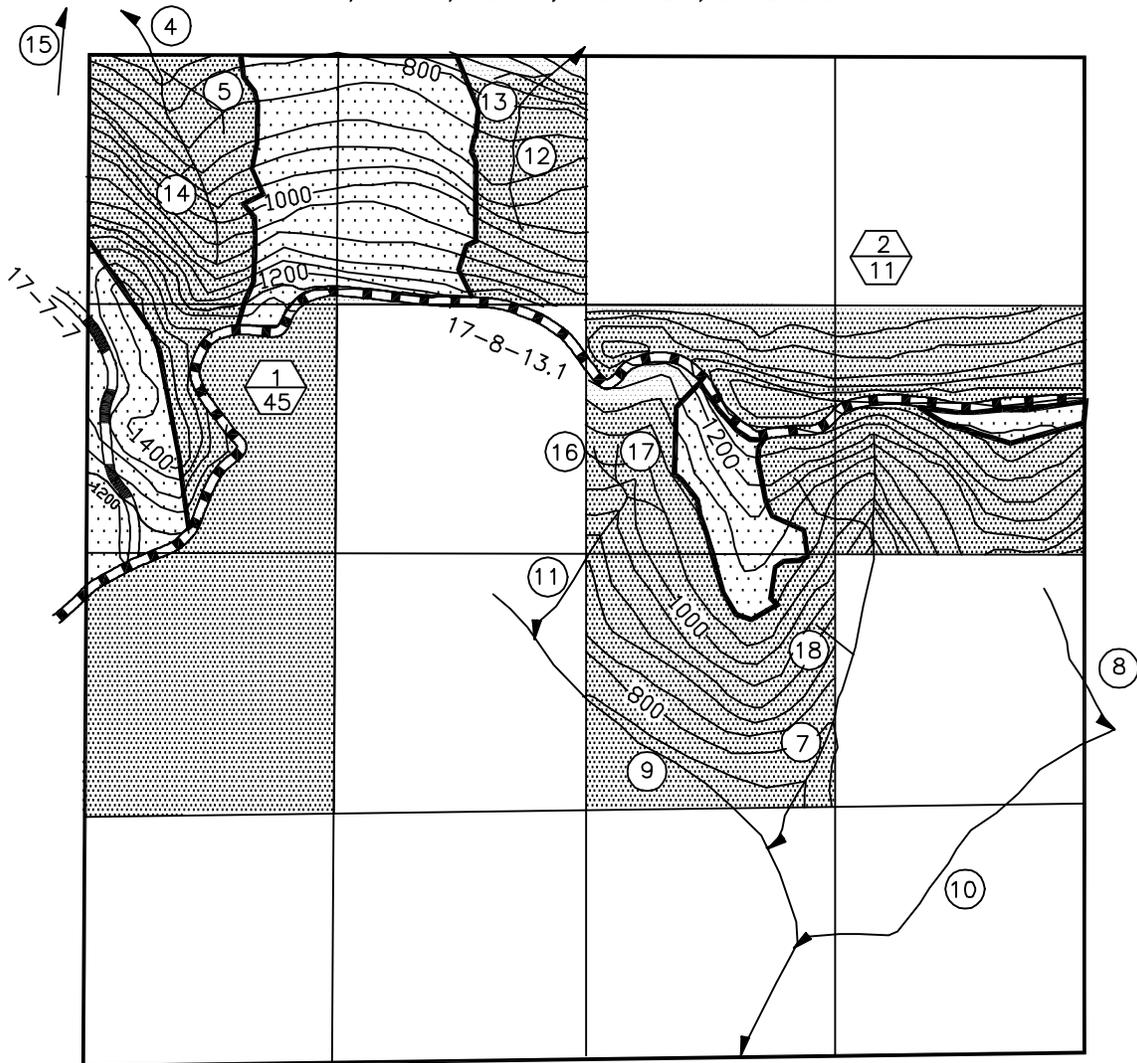
SCALE

LEGEND

- |   |                                    |   |                        |
|---|------------------------------------|---|------------------------|
|  | REGENERATION HARVEST AREA          |  | ROAD TO BE CONSTRUCTED |
|  | RESERVE AREA                       |  | ROAD TO BE IMPROVED    |
|  | UNIT NUMBER<br>ACREAGE WITHIN AREA |  | ROCK SURFACED ROAD     |
|   |                                    |  | STREAM                 |
|   |                                    |  | STREAM NUMBER          |

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT  
 RUSTY NEL ALTERNATIVE 2

T. 17S., R. 7W., SEC. 7, WILL. MER., EUGENE DISTRICT



SCALE

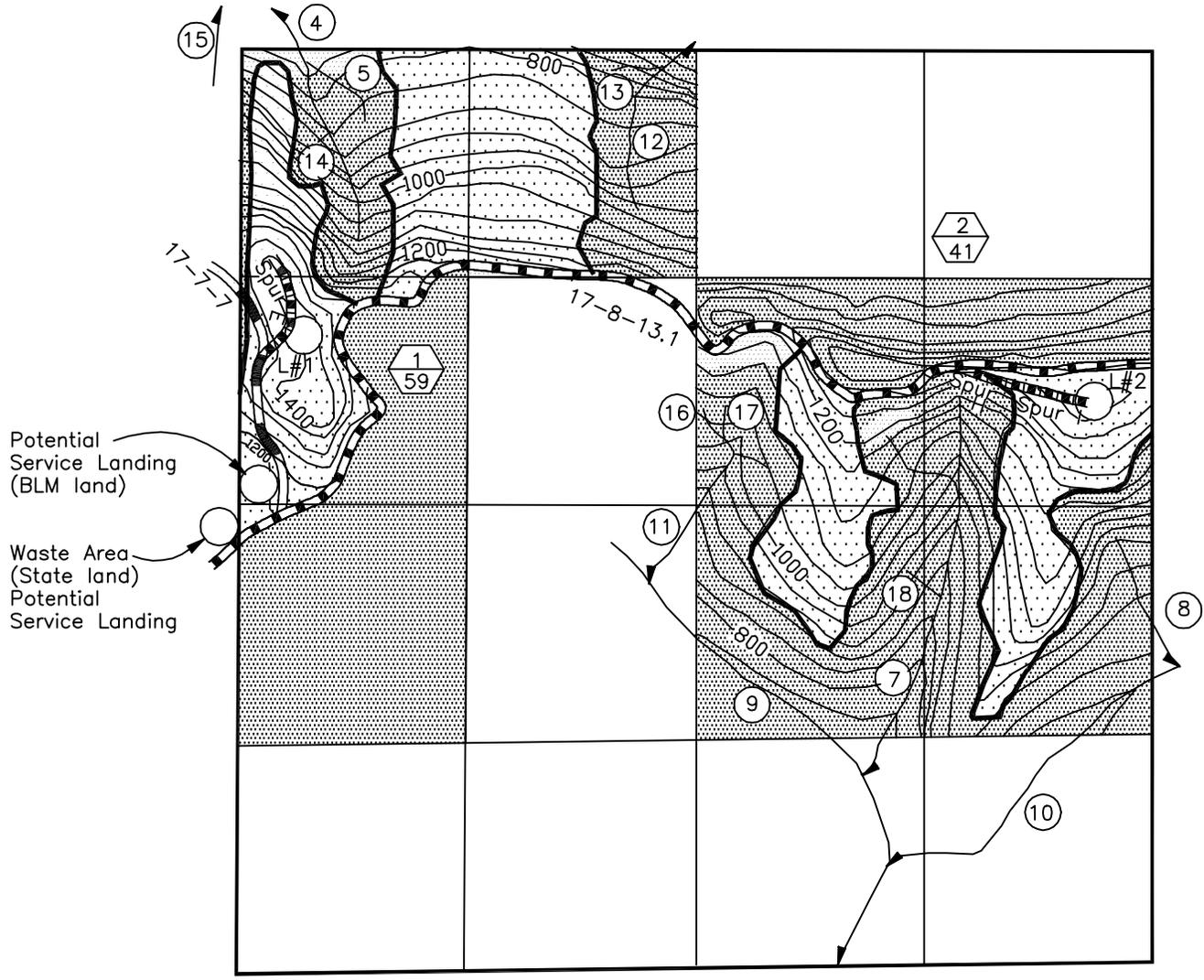
LEGEND

-  REGENERATION HARVEST AREA
-  RESERVE AREA
-  UNIT NUMBER  
ACREAGE WITHIN AREA

-  ROAD TO BE IMPROVED
-  ROCK SURFACED ROAD
-  STREAM
-  STREAM NUMBER

DATE: 5/21/03

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT  
 RUSTY NEL ALTERNATIVE 4  
 T. 17S., R. 7W., SEC. 7, WILL. MER., EUGENE DISTRICT



SCALE  
 LEGEND

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li> REGENERATION HARVEST AREA</li> <li> RESERVE AREA</li> <li> UNIT NUMBER<br/>ACREAGE WITHIN AREA</li> </ul> | <ul style="list-style-type: none"> <li> ROAD TO BE CONSTRUCTED</li> <li> ROAD TO BE IMPROVED</li> <li> ROCK SURFACED ROAD</li> <li> STREAM</li> <li> STREAM NUMBER</li> </ul> |
|---|---|

UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
EUGENE DISTRICT OFFICE  
Preliminary Finding of No Significant Impact  
for  
Rusty Nel Timber Sale  
OR O90-EA-03-03

Determination:

On the basis of the information contained in the Environmental Assessment, and all other information available to me, it is my determination that implementation of the proposed action or alternatives will not have significant environmental impacts beyond those already addressed in the Record of Decision (ROD) for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (April 1994), and the Eugene District Record of Decision and Resource Management Plan (June 1995) as amended by the Record of Decision for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines, USDA Forest Service and USDI Bureau of Land Management January 2001; with which this EA is in conformance, and does not, in and of itself, constitute a major federal action having a significant effect on the human environment. Therefore, an environmental impact statement or a supplement to the existing environmental impact statement is not necessary and will not be prepared.

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Steven Calish  
Field Manager, Siuslaw Resource Area

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Date

Environmental Assessment

for

Rusty Nel Timber Sale  
ORO90-EA-03-03

June 2003

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