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Jasper Creek

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

**ENVIRONMENTAL ASSESSMENT NO. OR090-98-24**  
**Jasper Creek Timber Sale**

## **I. INTRODUCTION**

### **A. BACKGROUND**

This action proposes timber harvest and associated activities in a project area located in Section 35, Township 22 South, Range 3 West, Willamette Meridian, Lane County, Oregon in the South Valley Resource Area of the Eugene District, Bureau of Land Management. The project area is in the Matrix Land Use Allocation and has management objectives for Connectivity and Riparian Reserves.

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

The purpose of the action within Connectivity is to provide a sustainable flow of forest products, reduce stand density to promote diameter growth and stand volume growth, promote canopy retention and layering, improve growing conditions for shade tolerant conifers, and promote species diversity. The need for the action is established in the "Eugene District Record of Decision and Resource Management Plan" (RMP), June 1995, which directs that timber be harvested from Matrix lands in a sustained yield manner.

The purpose of the action within the Riparian Reserves is to hasten development of late-successional forest structural characteristics by reducing stand density to promote diameter growth, canopy retention and layering, improve growing conditions for shade tolerant conifers, and promote species diversity. The need for the action is established in the RMP, which directs that silvicultural practices be applied in Riparian Reserves to acquire desired vegetative and structural characteristics needed to attain Aquatic Conservation Strategy (ASC) objectives.

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

The Proposed Action and alternatives are in conformance with the RMP. The RMP makes land use allocations and allows for density management thinnings in the Connectivity land use allocation and silvicultural practices within Riparian Reserves.

On November 4, 1996, "Interim Guidance for Survey and Manage Component 2 Species: Red Tree Vole" was issued to implement component 2 of the Survey and Manage Standard and Guideline under the Northwest Forest Plan Record of Decision (BLM Instruction Memorandum No. OR-97-009). This memorandum contained both the management recommendations (interim guidance) and the survey protocol for the red tree vole. Instruction Memorandum No. OR-98-105 extended the interim guidance through FY99 or until superseded by revised direction. The Proposed Action and alternatives are in conformance with this guidance.

Plan maintenance documentation postponing surveys for 32 Component 2 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 3, 1999). 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, “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.

Additional site-specific information is available in the Jasper Creek Timber Sale project analysis file. This file and the above referenced documents are available for review at the Eugene District Office. The Schedule Change EA and the 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 would timber harvest and road construction affect Survey and Manage Species?**

Field surveys for certain Survey and Manage Component 2 species have located several species within proposed harvest units. Timber harvest activities, including road construction, could adversely affect the species and their habitat which may affect population viability within the watershed.

#### **Issue 2: How would timber harvest and road construction affect the Attainment of Aquatic Conservation Strategy 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, and that silvicultural practices in Riparian Reserves are needed to attain ACS Objectives. Activities described in the Proposed Action and alternatives may have some effect on BLM’s ability to meet these objectives.

#### **Issue 3: How would timber harvest and road construction affect northern spotted owl habitat?**

The project area is located within the home range of the Jasper Creek owl site. Harvesting timber may affect habitat for owls utilizing that site. The project area may also provide dispersal habitat for owls seeking unoccupied territory. Timber harvests may affect the quantity and quality of foraging and dispersal habitat within the project area.

### B. ISSUES NOT ANALYZED

#### **How would timber harvest and road construction activities affect Survey and Manage and Protection Buffer Species for Which Surveys are not Technically Feasible.**

No site specific surveys were completed for any of the 32 Component 2 or Protection Buffer species listed in the Schedule Change EA. Individuals of *Sarcosoma mexicana* were found, incidental to other surveys, and appropriate management actions to protect these sites would be implemented under all alternatives. However, it is possible that additional individuals may reside in the project area. The issue of how the Proposed Action and alternatives would impact potential locations of this species was not analyzed, because impacts would not be expected to exceed those anticipated in the Schedule Change EA. Any unprotected site would not necessarily be

extirpated as there would likely remain a source of spores and appropriate habitat for this species in the stand, both from harvested and reserved areas.

### III. PROPOSED ACTION AND ALTERNATIVES

The Proposed Action and Alternatives consider forest management activities including density management by commercial timber harvest.

#### A. PROPOSED ACTION - Density Management

This is a density management alternative with two thinning prescriptions designed to provide a sustainable flow of forest products, reduce stand density to promote diameter growth and stand volume growth, promote canopy retention and layering, improve growing conditions for shade tolerant conifers, and promote species diversity. Approximately 2.9 million board feet (MMBF) (5,400 hundred cubic feet (CCF)) of timber from an estimated 151 acre harvest area would be offered for sale.

##### Silviculture

All trees not specifically identified for retention would be cut. Areas to be harvested would be thinned from below, reserving the largest and most vigorous trees, except where some larger trees would be harvested as needed to achieve the stocking objectives and to clear road right-of-ways. Retention would favor conifers other than Douglas-fir, while harvested trees would be primarily Douglas-fir. Some Riparian Reserves would be treated by thinning to the same density as the adjacent uplands.

- In the Moderately thinned areas (approximately 141 acres), approximately 100 trees per acre (TPA) would be retained. Canopy closure would be approximately 60% after treatment
- In the Heavily thinned areas (approximately 10 acres), approximately 50 TPA would be retained. Canopy closure would be approximately 45% after treatment.
- Covering and burning of landing piles along Roads 22-3-35 and 22-3-3 would be done to reduce the roadside fire hazard. Pile burning would commence after the onset of autumn rains to insure moist soil conditions. Any landing piles generated along natural surfaced spurs would be left untreated for wildlife habitat.

##### Retention

C Coarse woody debris (CWD) of decay classes 3, 4 and 5 would be retained where possible.

- Hardwoods and snags which are not a safety hazard to woods workers would be retained. Those felled for safety reasons would be retained on site.
- If found, nest trees would be retained where possible.

##### Reserves

- The height of one site-potential tree in the Upper Coast Fork Willamette watershed has been determined to be 200 feet. Riparian Reserve widths of 200 feet on either side of non-fishbearing streams would be established 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). Management treatments within the Riparian Reserves would include thinning, road construction, and road decommissioning.
- Portions of the Riparian Reserves for Hydrologic Features 6, 7, 8 (east of Road 23-3-35), 9, 13, and 17 would be thinned to within 100 feet, and Hydrologic Features 4, 5, 14, 15, and 16 would be thinned to within 50 feet of the hydrologic feature to the same densities as the adjacent uplands.

- Seventy-three sites containing *Prophysaon* or *Megomphix* mollusk species located within proposed harvest boundaries would be protected consistent with the Eugene District Interim Management Guideline For Three Survey and Manage Mollusks (October 1998). These interim recommendations are included in the project analysis files and are incorporated herein by reference. Twenty-one sites in the proposed harvest area would receive buffers totaling 4.45 acres. Thirty-two sites would be protected by clumps of five retention trees, and twenty sites would be incorporated into the Reserve Area.
- Two *Sarcosoma mexicana* site would be protected by one-quarter acre reserves. One *Helvella compressa* site would be protected by a 100 foot radius reserve and incorporated into an adjacent mollusk buffer. Several *Ulota megalospora* sites would be protected within the untreated Riparian Reserve.

### Roads

- On privately-owned land, approximately 850 feet of road would be constructed, 1,000 feet of existing Road 22-3-36 would be improved, and 150 feet of existing Road 22-3-35.3 would be renovated. On BLM-managed land, approximately 7,500 feet of road would be constructed and 470 feet of existing Road 22-3-35.3 would be renovated. Road 22-3-3 would be improved by installing a cross-drain culvert for Stream 3 and replacing the existing culvert for Stream 4 with a larger culvert capable of draining a 100-year flood event. New roads would be natural surfaced, built to minimum width standards (14 foot subgrade), with no ditches, reduced clearing limits and outslopped where possible.
- Approximately 100 feet of Spur A, 200 feet of Spur B, 600 feet of Spur F, and 100 feet of Spur H would be constructed in the outer portion of the Riparian Reserves.
- All natural surfaced roads would be waterbarred and blocked at the end of each operating season.
- Upon completion of harvest operations, all newly constructed roads and landings would be subsoiled (i.e., mechanically breaking up the compacted area of the road) and blocked, and the renovated portions of Road 23-3-35.3 would be waterbarred and blocked.
- No log hauling would occur on natural surfaced spurs or roads during periods of wet weather.

### Yarding

- Falling and yarding would not be permitted during the sap flow period to avoid damage to the residual stand. Directional falling would be required to protect wetlands, springs, and adjacent reserve areas.
- No whole tree logging with limbs would be allowed. Limbs would be cut and left in the unit.
- Yarding would be by cable and tractor. The Purchaser would have the option of using ground-based equipment on slopes less than 35%. Best Management Practices (BMP's) for cable and tractor yarding would be followed, including use of intermediate supports and tail trees where necessary to obtain partial suspension, predesignating skid trails, and limiting tractor yarding to dry seasons (ROD/RMP Appendix C). Upon completion of logging, skid trails would be subsoiled and water-barred as needed.

## B. ALTERNATIVE A - Density Management

This alternative would be similar to the Proposed Action, except no treatment or road construction would occur in the Riparian Reserves. Approximately 2.4 million board feet (MMBF) (4,500 hundred cubic feet (CCF)) of timber from an estimated 128-acre harvest area would be offered for sale.

### **Silviculture**

- Riparian Reserves would not be treated. All other silviculture features related to density management outside the Riparian Reserves would be the same as the Proposed Action.

### **Roads**

- Spur D1 (approximately 1,000 feet) would be constructed instead of Spur A. Spur B and approximately 1,200 feet of Spur F would not be constructed. Spur H would be shortened by approximately 100 feet. Landings for Spurs E and H would be located out of the Riparian Reserves.
- All other road features would be the same as the Proposed Action.

All other design features related to density management outside the Riparian Reserves, including Retention, Reserves, and Yarding would be the same as the Proposed Action.

### **C. ALTERNATIVE B - No Action**

All timber harvest activities would be deferred, and no management activities described under any alternatives would occur 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.

## **IV. EXISTING CONDITIONS**

### **A. GENERAL SETTING**

The project area is in the Upper Coast Fork Willamette Watershed in the Jasper Creek drainage, formerly known as the Cottage Grove Lake/Big River Watershed. Watershed analysis has been completed (BLM Eugene District, Cottage Grove Lake/Big River Watershed Analysis, May 1997). The Cottage Grove Lake/Big River Watershed Analysis analyzed the condition of the Riparian Reserves in the watershed and established guidelines under which they should be treated. (Cottage Grove Lake/Big River Watershed Analysis, Chapter 4, pages 4-6.)

The watershed contains 15.2% late successional forest. The Connectivity lands comprising the 25-30% to be managed to provide late succession forest conditions are located in the west portion of Section 35.

The project area is located near the edge of a Late Successional Reserve (LSR), which lies to the east and southeast of the project area. The drainage has been heavily harvested during the past decade. Sections adjacent to the project area are private industrial forest land or public land managed by the BLM.

The plants and animals in the project area do not differ significantly from those discussed in the "Eugene District Resource Management Plan\Environmental Impact Statement," November 1994 (Chapter 3). The following resources are also discussed in greater detail in the project file.

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

#### **Vegetation**

This is a well stocked stand of approximately 45 year old Douglas-fir which regenerated naturally following harvest in the mid 1950's. The stand has a fully stocked over-story of Douglas-fir with a well distributed western hemlock component comprising from 10 to 20 per cent of the stand. The few hardwoods are generally riparian associated red alder. Western hemlock regeneration is found at moderate levels throughout much of the stand. Common understory vegetation consists of rhododendron, salal, sword fern, and Oregon grape at generally low density. Much of the area was adequately stocked with conifers by 1960, but some areas required subsequent planting due

to a reforestation failure. These planted areas currently exhibit lower stocking levels, canopy gaps and canopy closure of approximately 60%. Most of the initial well stocked area was pre-commercial thinned in 1970 to 300 TPA, and has a generally high canopy closure of 85% and greater, with minimal ground vegetation. Down woody debris is abundant throughout in pieces 20-60" diameter of various lengths. There are low numbers of snags.

### Wildlife

The project area is located within the home range of the Jasper Creek owl site. A pair was last confirmed in 1996; a single female was located in 1997. Section 35 likely functions as foraging habitat for the Jasper Creek owl site and dispersal habitat for owls seeking unoccupied territory, but is not designated as spotted owl critical habitat.

The project area is suitable habitat and within the expected range of three Survey and Manage mollusk species: *Megomphix hemphilli* (Oregon megomphix), *Prophysaon coeruleum* (Blue gray tail-dropper), and *Prophysaon dubium* (Papillose tail-dropper). Survey and Manage protocol surveys were conducted as directed in current draft protocols, and 73 sites were located: 56 Oregon megomphix, 6 Blue gray tail-dropper, and 11 sites containing both Oregon megomphix and Blue gray tail-dropper.

### Botany

All botanical surveys have been completed. No threatened, endangered, or sensitive plant vascular species were detected. Surveys for *Ulota megalospora*, a Protection Buffer species of moss, were conducted during October, 1998, according to survey protocols established by the Eugene District Botany Work Group. Protocols were developed using information from Appendix J2 of the FSEIS and local expertise. Several trees hosting *Ulota* were found within Riparian Reserves in the project area.

Two *Sarcosoma mexicana* populations and one *Helvella compressa* population were found incidental to general botanical surveys and Survey and Manage mollusk surveys. *Helvella compressa* is a Survey and Manage Component 1 and 3 species; under the Survey and Manage Standard and Guideline, surveys for this species prior to ground disturbing activities are not required. *Sarcosoma mexicana* is a Survey and Manage Component 3 species and a Protection Buffer Species. Northwest Forest Plan Standards and Guidelines for Protection Buffer species require surveys prior to ground-disturbing activities. However, consistent with the Plan Maintenance Documentation referenced earlier, site specific surveys for *Sarcosoma mexicana* were not conducted in the proposed harvest unit.

A dry rocky bald located north of Martin Creek is a special habitat and is located within the untreated Riparian Reserve for Martin Creek. Other special habitats, such as wetlands and alder groves, are associated with hydrologic features.

### Soils

The Peavine series comprises the predominant soils in the project area. Peavine is a moderately deep, red, clayey soil. The majority of the project area is located on gentle to moderately steep topography. Slopes range from 15 to 50%.

Steeper topography is located along Martin Creek (Hydrology Feature 8, the lower reach of Hydrology Feature 14 and portions of Hydrology Feature 11). Slopes range from 0 to 60%, with most of the area between 30 and 60%. The elevation for the proposed harvest area ranges from approximately 1,850 to 2,450 feet.

Timber Productivity Capability Class (TPCC) areas, classified as fragile non-suitable lands due to soil moisture deficiencies, are located within the untreated Riparian Reserve between Martin Creek (Hydrology Feature 8) and Hydrology Feature 6.

## Aquatic and Riparian Resources and Fisheries

Six perennial streams (1, 5, 8, 11, 14, and 23); 16 intermittent streams (3, 4, 6, 9, 10, 13, lower 15, 17, 18, 20-22, 24, and 29-31); 6 springs (7, upper 15, 16, 19, 26, and 28); 1 seep (27); and 2 wetlands (12 and 25), are located within or immediately adjacent to the project area. Streams 2, 3, 4, 29, 30 and 31 drain northwest to west to Stream 1 (Jasper Creek), which drains west to southwest to Big River. Streams or springs/seeps 6-11, 13-24, 26 and 28 drain to Stream 8 (Martin Creek), which drains west to southwest to Big River. Stream 3 lacks a culvert at Road 23-3-3, routing flow approximately 200 feet to 250 feet down the ditch-line to Stream 4, which lacks a culvert at Road 22-3-36.

Three major streams are located within or immediately adjacent to the project area: mainstem Martin Creek, a large tributary or fork of Martin Creek, and a headwater tributary of Jasper Creek. All streams were surveyed for the presence of fish and suitable habitat. No fish were found in any of the streams in or near the project area due to high-gradient stream channels and numerous moderate/high falls downstream.

## V. DIRECT AND INDIRECT EFFECTS

The Proposed Action and alternatives would have environmental effects. However, none of the alternatives would have effects beyond those described in the RMP EIS and the NSO FSEIS. Impacts foreseen based upon site specific analysis of the alternatives, are described below.

### A. UNAFFECTED RESOURCES

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

### B. PROPOSED ACTION - DENSITY MANAGEMENT

#### ISSUE 1: How would timber harvest and road construction affect Survey and Manage Species?

Mollusks - The mollusk reserves and retained trees around the *Prophysaon* and *Megomphix* sites would provide shade and mechanical protection from yarding for those individuals residing in those sites. Overall habitat conditions would be degraded until the forest grows back and provides sufficient down woody debris, moisture regimes, canopy closure, and temperature. Suitable habitat would remain in unharvested areas, including the riparian reserves and protected known site locations, allowing for survival of many resident individuals. Populations of these mollusks are known to have survived timber harvests, especially when key habitat features remain. The previous harvest of the project area left a high level of down wood on site, allowing these mollusk populations to persist.

*Sarcosoma mexicana* - Known sites would be protected with one-quarter acre reserves. These reserves would be consistent with district interim management guidelines. These guidelines were developed utilizing information from Appendix J2 of the FSEIS and local expertise. The protected areas would be a no-entry, no-yard area, in which protection of the duff layer would be the main objective. These reserves would adequately protect the duff layer of the known sites.

*Helvella compressa* - The 100 foot radius reserve should adequately protect the known site of *Helvella compressa*. This reserve would be consistent with district interim management guidelines.

Other undetected sites of these species, should they occur in the project area, would likely be impacted by increased light, drying, and ground disturbance, but it appears that these species are

tolerant of such disturbance. The reserves for the known sites and other untreated portions of the project area would be adequate to maintain the species' range of habitats within the project area.

*Ulota megalospora* – Impacts to *Ulota* would be minimal. Recent field work has shown the species to be common to ubiquitous in this region, and recent data indicate that the species has the ability to survive thinnings and other stand disturbances which allow light and drying winds to increase. Management guidance developed by the Eugene District Botany Work Group states that where the species is found in an already protected reserve within a project area, protection is adequate and further survey or mitigation for the species in the project would not be necessary. Such a situation exists at Jasper Creek, where *Ulota* was found inside the Riparian Reserve for Martin Creek.

## **ISSUE 2: How would timber harvest and road construction affect the Attainment of Aquatic Conservation Strategy Objectives at the watershed scale?**

The Proposed Action includes management in the Riparian Reserves that promotes attainment of ACS objectives. Site-specific conditions in the project area are consistent with the general discussion in the Cottage Grove Lake/Big River Watershed Analysis, which identified management opportunities for projects in Riparian Reserves. That analysis specifically addressed density management treatments in stands where thinning would promote faster development of trees with fuller crowns (Cottage Grove Lake/Big River Watershed analysis, Chapter 4, pages 4-5). The following is a site-specific analysis of the effect of the Proposed Action on attainment of ACS objectives.

1. The Proposed Action would maintain and promote restoration of the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations, and communities are uniquely adapted. Riparian Reserves managed at high density for timber volume production, such as those found at Jasper Creek, would approach and remain at a level of tree-to-tree competition for growing space, such that tree growth and structural development would be suppressed and delayed, both at the individual tree and stand level. Density management within the Riparian Reserves proposed for treatment would promote development of structural characteristics at the stand level, such as a wide spectrum of tree diameters (including large diameter trees, snags and down wood), large tree crowns with large branches, canopy depth with multiple canopy layers, and vegetative complexity at the forest floor, and would, over time, contribute to the restoration of diversity and complexity of the Riparian Reserve within the project area and thus the watershed as a whole. No immediate effects would be expected to the streams and their aquatic communities.
2. The Proposed Action would maintain the existing spatial and temporal connectivity within and between watersheds. Drainage network connections would be protected by the untreated portion of the Riparian Reserves and by the residual trees in the treated portion of 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.
3. The Proposed Action would not prevent or retard restoration of the physical integrity of the aquatic system. Hastening the development of larger trees would contribute toward restoration of the physical integrity of the aquatic system by providing potential large woody debris sooner than if untreated. The untreated portion of the Riparian Reserves on all hydrology features would fully protect streambank integrity and tree/shrub root strength within the riparian areas. Improvements in stream channel and bank stability would be expected from replacing undersized culverts and installing culverts where they are currently lacking.
4. The Proposed Action would maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems. The action is unlikely to have an impact on stream

temperatures because of the untreated reserves around all hydrology features. In addition, the retention of 100 trees per acre in the majority of the project area would maintain adequate shading to prevent temperature impacts.

5. The Proposed Action would not prevent or retard restoration of the sediment regime under which this aquatic ecosystem evolved. Risk of sedimentation under this alternative is expected to be low because of the untreated area around all streams. Directional falling and yarding away from all streams and wetlands would be required. No new stream crossings are proposed. Any erosion that occurred from new roads or yarding corridors within the Riparian Reserves would be unlikely to reach stream channels, because design features include: no yarding across hydrology features, outsloping, temporary use, water-barring and blocking new roads between logging seasons, locating new roads away from stream channels and wetlands on gentle to moderate slopes, and subsoiling and blocking new roads upon project completion. The use of existing roads as a result of this action is expected to cause a low amount of erosion and sedimentation. Most of the log haul route would be over paved roads which have a very low erosion potential. Log haul would only occur during the dry season over a period of three seasons.
6. The Proposed Action would maintain existing in-stream flows. The timing, magnitude, duration, and spatial distribution of peak, high, and low flows would be protected. The Proposed Action may 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. Impacts to the timing and magnitude of flows would be expected to be low. Changes in water yield due to forest management activities such as the Proposed Action are usually too small to be measured. Measurable increases have occurred in some stream studies where more than 20% of the forest cover has been removed. Changes in water yield are generally detectable only in the immediate proximity of the harvested land. The removal of forest cover usually results in an increase in summer low flows by reducing evapotranspiration and interception. Changes to water yield and summer low flow are usually temporary impacts that gradually diminish over time as forest regrowth occurs. Most of the factors associated with changes to peak flows would be minimally affected as a result of this action. New roads would be temporary use. Subsoiling road surfaces upon project completion would help restore infiltration rates and mitigate road and skid trail compaction. Outsloping temporary roads would prevent the extension of the stream channel network. Little interruption of sub-surface flow would be expected, because deep road cuts would not be needed, as new construction would be located on gentle to moderate slopes. The project area is at elevations that are within the transient snow zone. The retention of 100 trees per acre on the majority of the project area would maintain a high percentage of forest canopy. The large openings usually associated with rain on snow events would not be created as a result of this action.
7. The Proposed Action would maintain and not prevent or retard restoration of the 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 zone vegetation would remain undisturbed.
8. The Proposed Action would maintain species composition and and restore structural diversity in riparian areas. Thinning the Riparian Reserves would increase growing space for residual trees and promote diameter growth and crown complexity, thus, over time, supplying larger diameter coarse woody debris sufficient to sustain and restore physical complexity and stability. No effects would be expected to species composition in riparian areas.
9. The Proposed Action would maintain habitat to support well-distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species. The untreated portion of the Riparian Reserves would provide adequate habitat for these species. No effects would be expected to the present populations of invertebrate and vertebrate riparian dependant

species.

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

**ISSUE 3: How would timber harvest and road construction affect northern spotted owl habitat?**

The Proposed Action may affect and is likely to adversely affect the northern spotted owl. The amount of suitable habitat within the Jasper Creek site home range is presently below the incidental take threshold. This action would degrade foraging habitat for the Jasper Creek owl site by opening the forest canopy, possibly falling snags that pose a safety hazard, and possibly disturbing existing down wood, all which could affect owl prey species. As the stand grows and the forest canopy closes, foraging habitat would improve. Accelerating the development of late-successional stand characteristics as a result of the density management thinning would ultimately benefit this species. Dispersal habitat would be retained, but would be degraded because the canopy would be opened.

**C. ALTERNATIVE A - DENSITY MANAGEMENT**

**ISSUE 1: How would timber harvest and road construction affect Survey and Manage Species?**

Impacts to Survey and Manage and Protection Buffer Species would be similar to those described in the Proposed Action, except no harvest would occur in Riparian Reserves, so the acreage of undisturbed refugia would be greater.

**ISSUE 2: How would timber harvest and road construction affect the Attainment of Aquatic Conservation Strategy Objectives at the watershed scale?**

Alternative A would have effects on attainment of ACS objectives 2, 4, 5, 6, 7 and 9 similar to the Proposed Action. The following is a site-specific analysis of the effect of Alternative A on attainment of other ACS objectives.

1. Alternative A would maintain the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations, and communities are uniquely adapted, by protecting the streams and wetlands. No immediate effects are expected to the streams and their aquatic communities.
3. Alternative A would not adversely affect the physical integrity of the aquatic system. The Riparian Reserves on all hydrology features would fully protect streambank integrity and tree/shrub root strength within the riparian areas. Improvements in stream channel and bank stability would be expected from replacing undersized culverts and installing culverts where they are currently lacking.
8. The Proposed Action would maintain species composition and not prevent or retard restoration of the structural diversity in riparian areas, thereby sustaining the present physical complexity and stability of the riparian areas. No effects would be expected on species composition in riparian areas.

Based on the above analysis of the effect on attainment of the ACS objectives, 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 3: How would timber harvest and road construction affect northern spotted owl habitat?**

Alternative A would have effects similar to the Proposed Action. The action may affect and

is likely to adversely affect the northern spotted owl. However, less of the stand would be disturbed, leaving more foraging and dispersal habitat unmodified.

#### **D. ALTERNATIVE B - NO ACTION**

##### **ISSUE 1: How would timber harvest and road construction Survey and Manage Species?**

Alternative B would have no impact to Survey and Manage species as no timber harvest or road building activity would occur.

##### **ISSUE 2: How would timber harvest and road construction affect the Attainment of Aquatic Conservation Strategy Objectives at the watershed scale?**

Alternative B would maintain the current conditions of the Riparian Reserves and would not prevent or retard attainment of any of the ACS objectives.

##### **ISSUE 3: How would timber harvest and road construction affect northern spotted owl habitat?**

Alternative B would have no immediate effect to northern spotted owls. Spotted owl foraging habitat would remain intact, benefitting the Jasper Creek owl site. Dispersal habitat would not be degraded.

## **VI. CUMULATIVE EFFECTS**

This analysis incorporates by reference the analysis of cumulative effects in the USDA Forest Service and USDI Bureau of Land Management 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, February 1994, (Chapter 3 & 4) and in the Eugene District Proposed RMP/EIS November, 1994 (Chapter 4). These documents analyze most cumulative effects of timber harvest and other related management activities. None of the alternatives in this proposed action would have cumulative effects on resources beyond those effects analyzed in the above documents. The following section supplements those analyzes, providing site specific information and analysis particular to the alternatives considered here.

The Upper Coast Fork Willamette Watershed (formerly Cottage Grove Lake/Big River Watershed(CGL/BR)) is the southernmost fifth field watershed within the Willamette River Basin and the Willamette physiographic province, is located in Lane and Douglas Counties, and includes the communities of Cottage Grove and London Springs. The watershed includes the headwaters of the Big River and Little River drainages which flow together to form the Coast Fork Willamette River south of Cottage Grove. Cottage Grove Dam on the Coast Fork, operated by the U.S. Army Corps of Engineers (COE), is near the center of this watershed. The Umpqua River Basin lies immediately to the south and west, and the Siuslaw River Basin lies to the northwest. This watershed covers 97,420 acres; of this, slightly less than 24,400 are public land managed by BLM (CGL/BR Watershed Analysis, p. 1-1).

Most of the Upper Coast Fork Willamette Watershed is in forest industry ownership, with an equal amount being BLM-administered land and other private ownership. Land use in the watershed is primarily forest management in the higher elevation lands, rural residential and agriculture along the Interstate 5 corridor and along the Coast Fork Willamette River, and urban use concentrated in and around the Cottage Grove city limits.

It is likely that stands on BLM-administered lands in the Upper Coast Fork Willamette Watershed will be treated with regeneration harvests and thinning harvests given the land use allocations and the stand conditions. The BLM has sold one timber sale in the watershed that is in close proximity to the proposed project area, "Black Butte Density Management," in FY 96. For Fiscal Years 2000-2003, approximately 1,300 acres within the watershed will be analyzed for timber harvest. Because the

Jasper Creek project area is located within the Matrix LUA, it would be considered for additional future timber harvest.

Private forest lands within the watershed will most likely continue to be subject to intensive forest management, including clear cutting and burning. Also, it is possible that some forest stands on private land will be converted to nonforest land.

#### **A. PROPOSED ACTION - Density Management**

In the short term (approximately 10-40 years), the Proposed Action, together with current harvesting and other disturbances, would contribute to the degradation or elimination of habitat for species preferring heavy canopy cover stands (i.e. spotted owls). Mobile species which prefer heavy canopy cover would be displaced and concentrated into smaller, fragmented suitable habitat that may already be occupied. Competition for limited resources, such as food and nesting sites, would increase and could cause population declines. Species that prefer more open canopy, mid-seral stands, would benefit. In the long term (greater than 40 years), the Proposed Action and other thinning in the watershed would promote an increase in mature and late-successional habitats.

The cumulative effect of tree harvest is the set-back of the natural successional patterns in the lower canopy and herbaceous layer. There is also a tendency for non-native and more aggressive native species to monopolize habitats once occupied by more complex communities of co-adapted natives. The exclusion of late-successional native species may be long term or permanent; habitat for and presence of some sensitive species continue to be reduced cumulatively across the landscape in this way.

Within the Willamette Province portion of the South Valley Resource Area, five project areas were surveyed in 1998 for Survey and Manage mollusks resulting in the discovery of 98 *Megomphix hemphilli*, 23 *Prophysaon coeruleum*, and 5 *Prophysaon dubium*. *Megomphix hemphilli* snails were found at three of the project areas. All three project areas contained large pieces of down wood and the snails occurred in moderate numbers. *Prophysaon coeruleum* were found at all five project areas in low numbers; this species appears to be fairly well distributed across the Resource Area. *Prophysaon dubium* were found at two project areas in low numbers; they appear to be rarer throughout the Resource Area. In both the Coast Range and Cascade foothills of the Eugene District, BLM resource specialists have observed that releasing bigleaf maple from conifer competition 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 would not be expected to pose a risk to local viability or distribution of these three mollusk species, because sites will be protected in riparian reserves and through management recommendations. Private harvests most likely will cause population declines due to the low amount of down wood left after harvest and the size of riparian buffers.

Cumulative impacts on known sites of Survey and Manage and Protection Buffer botanical species would also be minimal. The known populations would be given long term protection because of the reserves established around each site. There is a slight risk that by conducting harvest in areas where surveys have not been completed for the 32 Component 2 and Protection Buffer species for which surveys have been delayed, some loss of individuals could occur. However, there is substantial similar habitat provided by Riparian Reserves and other reserves in the watershed. It is unlikely that exposing some percentage of potential habitat to management actions, as described in the action alternatives, would compromise the viability of the 32 species potentially occurring in the project area. The Schedule Change EA concluded that not surveying for these species would not substantially increase the risk to these species (Schedule Change EA, pg 24).

It appears that *Helvella compressa* is tolerant of disturbance such as would occur with the

Proposed Action, and, therefore, no cumulative effect on the species' viability in the watershed or on larger spatial scales would be expected.

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. Due to 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. Therefore, it is unlikely that exposing some percentage of potential habitat to management actions, as described under the Proposed Action, would compromise the viability of the species on a watershed or larger scale.

The viability of *Ulota megalospora*, a common moss would not be compromised in the watershed or on larger scales by the Proposed Action or Alternatives, though there could well be a temporary set-back in actual numbers in the stand. The stand is surrounded by similar habitat capable of supporting other populations of the species through time.

The Proposed Action and Alternative A, together with other harvesting and road-construction, could cause a minor increase in water flows and overall water yield. Because of the density of trees retained on the landscape and the protection of riparian reserves, a cumulative effect of increased water flow and yield is unlikely. In addition, the Proposed Action's direct or indirect effects on water resources would be not only minor, but also short-lived, limiting the potential for cumulative effects with other actions.

Sedimentation effects as a result of road construction associated with the Proposed Action would be anticipated to be very minor to non-existent and would likely be of short duration. In addition, cumulative effects on downstream flows would be very minor to nonexistent.

Construction of temporary roads would not result in cumulative effects on road densities after three years, because the roads would be subsoiled and blocked after harvest operations.

The proposed thinning within the Riparian Reserves would accelerate the growth of trees for future wildlife habitat and future large in-stream structure for aquatic habitat, while adequately maintaining species and structural diversity; riparian and aquatic function; and water quality. This acceleration would contribute to the process of riparian recovery within this watershed.

The majority of private timber harvest in this area has been clearcuts; consequently, dispersal habitat for spotted owls in the area is low. The combination of past federal timber harvests, planned timber harvest, and this project, has and will cause degraded dispersal habitat for 10 - 20 years. Over the decade, within the South Willamette/ North Umpqua Area of Concern, harvests are being offset by the growth of young forest stands into dispersal habitat. Between 1996-2004, the Area of Concern would gain a 9% increase in dispersal habitat if no harvests take place. If planned harvests do occur, the Area of Concern would gain an 8% increase in dispersal habitat.

## **B. Alternative A - Density Management**

Alternative A would have cumulative effects on vegetation, wildlife, soil and water resources similar to the Proposed Action, but of slightly lower magnitude, due to fewer acres treated. Alternative A would result in slower attainment of late-successional forest structural characteristics within Riparian Reserves.

## **C. Alternative B - No Action**

Alternative B would have no cumulative effects on soils or water. This alternative would have no immediate cumulative affect on wildlife species. Alternative B would result in slower attainment of late-successional forest structural characteristics

## VII. 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	Wildlife and Threatened and Endangered species
Rick Colvin	Landscape Planner
Al Corbin	Timber Management
Phil Dills	Fire
Richard Hardt	Ecology
Pete O'Toole	Silviculture
Kim Reviea	Timber
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 initiated with the Fish and Wildlife Service on this proposed action, along with other actions proposed in the Eugene District for Fiscal Year 2000. Any measures recommended by the USFWS to minimize impacts to Threatened or Endangered species would be incorporated into the Proposed Action.

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.

### C. PUBLIC PARTICIPATION

This environmental assessment will be 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  
Governor's Forest Planning Team, Salem, OR  
Harold Schroeder, Eugene, OR  
Jan Wroncy, Eugene, OR  
John Bianco, Creswell, OR  
John Poynter, Lorane, 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  
Pacific Rivers Council, Eugene, OR  
Pam Hewitt, Marcola, OR  
Peter Saraceno, Eugene, OR  
Roseburg Forest Products, Roseburg, OR  
Sierra Club - Many Rivers Group, Eugene, OR  
Swanson-Superior Forest Products, Inc., Noti, OR  
Western Environmental Law Center, Eugene, OR

Attachments  
Map

## VIII. 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.

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.

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

USDI Bureau of Land Management. June 1994. Eugene District Record of Decision and Resource Management Plan. Eugene, Oregon: Eugene District Office.

USDI Bureau of Land Management. May 1997. Cottage Grove Lake/Big River Watershed Analysis. Eugene, Oregon: Eugene District Office.

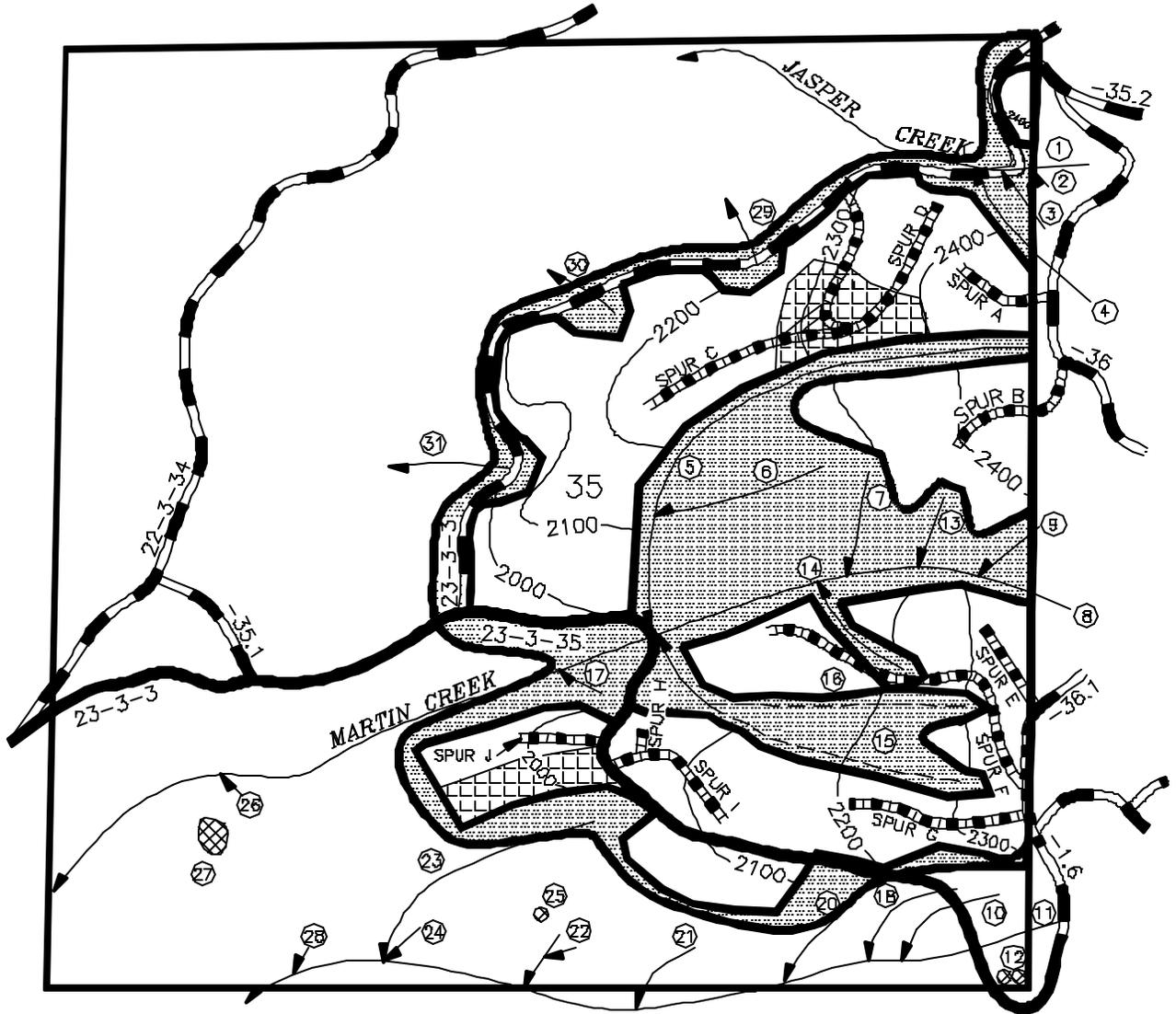
USDI, Bureau of Land Management. October 1998. Eugene District Interim Management Guideline For Three Survey and Manage Mollusks. Eugene District

USDA Forest Service and USDI Bureau of Land Management. October 1998. Environmental Assessment To Change the Implementation Schedule for Survey and Manage and Protection Buffer Species. Portland, Oregon.

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT

JASPER CREEK EA MAP  
 PROPOSED ACTION

T. 22S., R. 3W., SEC. 35, WILL. MER. EUGENE DISTRICT



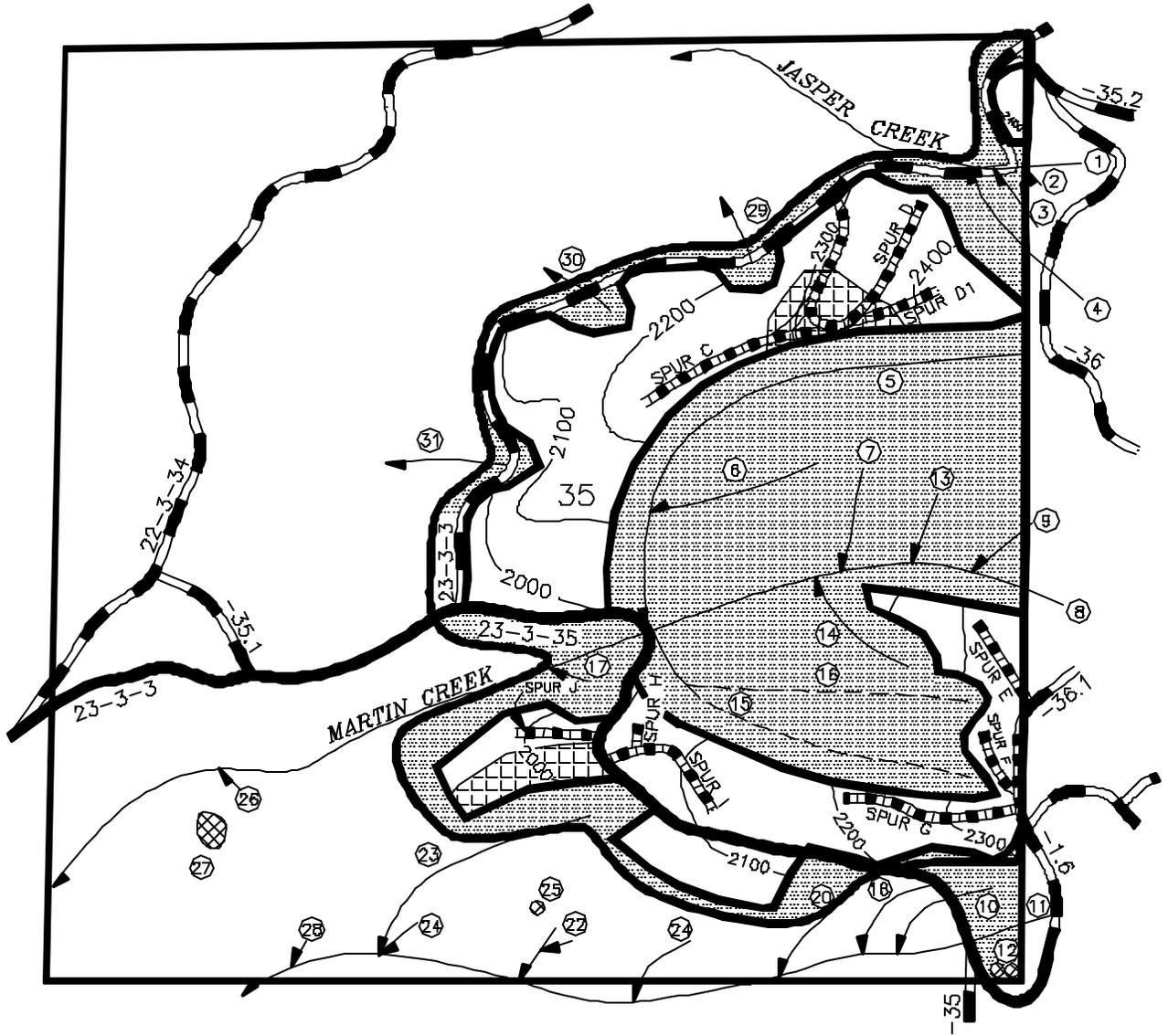
LEGEND

SCALE: 1" = 1,000 FT.

- |   |                    |   |                            |
|---|--------------------|---|----------------------------|
|  | MODERATE THIN AREA |  | BOUNDARY - PROPOSED ACTION |
|  | RESERVE AREA       |  | ROCK SURFACED ROAD         |
|  | HEAVY THIN AREA    |  | ROAD TO BE CONSTRUCTED     |
|  | WETLANDS           |  | ROAD TO BE RENOVATED       |
|   |                    |  | PAVED ROAD                 |
|   |                    |  | STREAM                     |
|   |                    |  | SEEPS                      |

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT  
 JASPER CREEK EA MAP  
 ALTERNATIVE A

T. 22S., R. 3W., SEC. 35, WILL. MER. EUGENE DISTRICT



LEGEND

SCALE: 1" = 1,000 FT.

- |   |                    |   |                          |
|---|--------------------|---|--------------------------|
|  | MODERATE THIN AREA |  | BOUNDARY - ALTERNATIVE A |
|  | RESERVE AREA       |  | ROCK SURFACED ROAD       |
|  | HEAVY THIN AREA    |  | ROAD TO BE CONSTRUCTED   |
|  | WETLANDS           |  | ROAD TO BE RENOVATED     |
|   |                    |  | PAVED ROAD               |
|   |                    |  | STREAM                   |
|   |                    |  | SEEPS                    |

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

Finding of No Significant Impact  
for  
Jasper Creek Timber Sale

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 not already addressed in the *Final Eugene District Timber Management EIS* (May 1983), and 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), 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.

\_\_\_\_\_ Date: \_\_\_\_\_

Area Manager, South Valley Resource Area

**ENVIRONMENTAL ASSESSMENT NO. OR090-98-24**

Jasper Creek  
Timber Sale Tract No. E-00-302

Peter O'Toole  
July 1999

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