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Douglas Creek

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

ENVIRONMENTAL ASSESSMENT NO. OR090-02-04
Douglas Creek Timber Sale

I. INTRODUCTION

The project area is located in Section 3, Township 20 South, Range 5 West, Willamette Meridian, Lane County, Oregon in the Siuslaw Watershed. The project area is in the Matrix Land Use Allocation and has management objectives for Connectivity and Riparian Reserves. This project was first described in 1998, in Environmental Assessment Number OR090-98-24. The original environmental assessment was released for a 30-day public review on March 24, 1999, and a Decision Record was signed on July 29, 1999. However, because of changes to the Survey and Manage policy, the decision was never implemented. This EA contains new and updated information to ensure compliance with new policy regarding Survey and Manage Species. A new decision will be necessary.

A. PURPOSE AND NEED FOR THE ACTION

The purpose of the action within Connectivity is to provide a sustainable supply of forest products while promoting late-successional forest structural characteristics on the west side of the stand and improving stand vigor to promote stand volume growth on the east side of the stand. Specific objectives are to increase diameter growth on the project area, and encourage canopy layering and shade tolerant conifers on the west side of the project. The need for the action is established in the "Eugene District Record of Decision and Resource Management Plan", June 1995 (RMP), 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 the development of late-successional forest structural characteristics. The need for the action is demonstrated by the uniform, heavy stocking of Douglas-fir, which is causing suppression mortality, reduced tree growth rates, and slowed development of canopy layering. 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 objectives. Specific objectives are to increase diameter growth on the project area, promote canopy layering and shade tolerant conifers on the west side of the project, and increase the amount of coarse woody debris and snags.

B. CONFORMANCE WITH LAND USE PLAN

The Proposed Action and alternatives are 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, April 1994 (NSO ROD), and the RMP 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.

Additional site-specific information is available in the Douglas Creek Timber Sale project analysis file. This file and the above referenced documents are available for review at the Eugene District Office.

II. PROPOSED ACTION AND ALTERNATIVES

The Proposed Action and Alternatives consider forest management activities including density management by commercial timber harvest; felling trees to create coarse woody debris; snag creation; and road construction, renovation and decommissioning in an approximate 360-acre project area. Table 1 compares harvest levels and design features between the Proposed Action and alternatives.

Table 1. Douglas Creek Alternative Comparison

Design Feature		Proposed Action	Alternative A	Alternative B	Alternative C (No Action)
Matrix Silviculture		Moderate Thin – 45 acres, 100 TPA retained Heavy Thin – 45 acres, 50 TPA retained	Moderate Thin – 45 acres, 100 TPA retained Heavy Thin – 45 acres, 50 TPA retained	Moderate Thin – 45 acres, 100 TPA retained Heavy Thin – 45 acres, 50 TPA retained	No thinning
Riparian Reserve Treatment		10 acres thinned to same density as adjacent uplands (5 ac. heavy thin; 5 ac mod thin)	Same as Proposed Action	No Riparian Reserve thinning	No Riparian Reserve thinning
Volume (MMBF)	Matrix	1.5	1.6	1.5	0
	Riparian Reserve	0.1	0.1	0	0
	Total	1.6	1.7	1.5	0
Road Construction and Decommissioning		5,900 feet new construction on BLM; 1,850 feet new construction on private land; 700 feet of road renovation on BLM; 7,750 feet of new road and 700 feet of renovated road would be decommissioned upon project completion	Same as Proposed Action, plus additional 2,200 feet of road renovation (spur F) and additional 500 feet of new construction on BLM (spur F1); 8,250 feet of new road and 2,900 feet of renovated road would be decommissioned upon project completion	Same as Proposed Action	No new roads; no decommissioning on existing roads
Yarding		Cable and tractor	Same as Proposed Action; additional acres would be cable yarded	Same as Proposed Action	N/A
Coarse Woody Debris		10 TPA >10"dbh in treated Riparian Reserves felled as CWD	Same as Proposed Action	None	None
Snag Creation		3-5 snags/ac on west side of project area (approx 50 acres)	Same as Proposed Action	3-5 snags/ac on west side of project area, not within Riparian Reserves (approx 32 acres)	None

A. PROPOSED ACTION - Density Management

This density management alternative with two thinning prescriptions proposes to thin from below the Connectivity lands and adjacent Riparian Reserves. The stand located east of Douglas Creek would be moderately thinned where the amount of ground vegetation present would not facilitate establishment of an understory of shade tolerant conifers. In the stand

located west of Douglas Creek, heavy thinning would be completed where areas of little ground vegetation are present. Approximately 1.6 million board feet (MMBF) (3000 hundred cubic feet (CCF)) of timber from an approximately 100-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. Retention would favor conifers other than Douglas-fir, while harvested trees would be primarily Douglas-fir. Riparian Reserves would be treated to within 100 feet of non-fishbearing streams (see map) by thinning to the same densities as the adjacent uplands.

- In the Moderately thinned area east of Douglas Creek (approximately 50 acres), approximately 100 trees per acre (TPA) would be retained. Approximately five of the 50 acres would lie within the Riparian Reserves.
- In the Heavily thinned area west of Douglas Creek (approximately 50 acres), approximately 50 TPA would be retained. Up to one-half of this area would be planted with shade-tolerant conifers (western red cedar) at a density of 100 TPA. Seedlings would be protected from animal browse with tubing. Approximately five of the 50 acres would lie within the Riparian Reserves.

No site preparation would be needed in the density management area. Any landing piles along natural-surfaced spurs would be left untreated for wildlife habitat.

Retention

- Coarse woody debris (CWD) of decay classes 3, 4 and 5 would be protected from damage from logging operations where possible by locating yarding corridors and skid trails away from CWD.
- Hardwoods and snags which are not a safety hazard to woods workers would be left standing. Those felled for safety reasons would be retained on site.

Reserves

- The height of one site-potential tree in the Siuslaw Watershed has been determined to be 200 feet slope distance. Riparian Reserves (widths of 200 feet on either side of non-fish bearing streams, 400 feet on either side of the stream of fishbearing streams) would be managed in accordance with the standards and guidelines in the Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl (NSO ROD) (Appendix C, pp. 31-38). Management treatments within the Riparian Reserves would include thinning, CWD creation, and snag creation. No harvest would occur within 100 feet of non-fishbearing streams in treated Riparian Reserves.
- Each wetland and spring would be reserved to its extent in accordance with the NSO ROD (Appendix C, pp. 31-38).
- One mollusk site located near a proposed landing at the end of Spur J would receive an approximately ¼-acre reserve adjoining a Riparian Reserve to the south. Eleven other mollusk sites would be incorporated into the Riparian Reserves.

Roads

- Approximately 1,850 feet of road would be constructed on privately-owned land, and 5,900 feet of road would be constructed on land managed by BLM. Approximately 700 feet of an existing BLM-managed road (Spur F) would be renovated. To minimize the introduction of scotch broom into the stand, renovation of Spur F would occur from the start of new

construction outward toward the rock-surfaced 20-5-3 road. New roads would be natural surfaced, built to minimum width standards (14 foot subgrade), with no ditches, reduced clearing limits, and outsloped where possible.

- All temporary new and renovated roads would be waterbarred and blocked between logging seasons.
- Upon completion of harvest operations, all newly constructed roads and the renovated portion of Spur F would be blocked and subsoiled (i.e., mechanically breaking up the compacted area of the road). All new landings would be subsoiled.
- No yarding or log hauling would be conducted on the 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 away from the untreated Reserve Areas would be required.
- 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%, except that no ground-based yarding would be allowed in the treated portions of the Riparian Reserves. Best Management Practices (BMP's) for cable and tractor yarding would be followed (ROD/RMP Appendix C). Ground-based yarding would be restricted to areas with slopes less than 35 percent outside of Riparian Reserves, and operations would be limited to periods of low soil moisture (dry season). Skid trails would be designated and limited in extent to less than 10% of the unit. Upon completion of operations, skid trails would be subsoiled. Falling and yarding operations would not be allowed between March 1 and July 7. This is the critical nesting period for the northern spotted owl.
- Yarding and falling would not be permitted in the untreated Reserve Areas.

Coarse Woody Debris Creation within the Treated Riparian Reserves

In the treated portions of the Riparian Reserves (the outer half), approximately 10 TPA with diameters 10 inches or greater would be felled and retained for CWD.

Snag Creation

Approximately 3-5 snags per acre across diameter classes would be created after the density management treatment in the westside Riparian Reserves and in the westside project area. The work would be accomplished via a contract separate from any timber sale contract.

B. ALTERNATIVE A - Density Management

This alternative is similar to the Proposed Action, except an extension of Spur F (Spur F1) would be renovated and constructed to access approximately 7 acres in the southeast portion of the project area (see Alternative A map). Approximately 1.7 MMBF (3200 CCF) of timber from an approximately 107-acre harvest area would be offered for sale.

Roads

- Approximately 2,200 feet of existing Spur F would be renovated and approximately 500 feet of Spur F1 would be constructed. Design features for Spur F1 would be the same as for other roads as described in the Proposed Action.
- To minimize the introduction of scotch broom into the southeast portion of the project area, Spur F1 would be constructed before renovating Spur F. Spur F1 would be constructed from

its terminus outward toward Spur F. Additionally, Spur F would be renovated from its terminus in the stand outward toward the rock-surfaced 20-5-3 road.

- Spur F1 would be waterbarred and blocked between logging seasons,
- Upon completion of harvest operations, Spurs F and F1 would be subsoiled and blocked.
- All other road features would be the same as the Proposed Action.

Yarding

- Yarding of the additional 7 acres would be by a cable system.

All other design features, including Silviculture, Retention, Reserves, Coarse Woody Debris Creation, and Snag Creation would be the same as the Proposed Action.

C. ALTERNATIVE B - Density Management, No Riparian Reserve Treatments

This is a density management alternative that includes only treatments associated with timber harvest. No management would occur within Riparian Reserves, including Coarse Woody Debris Creation, and Snag Creation. Approximately 1.5 MMBF (2800 CCF) of timber from an approximately 90-acre harvest area would be offered for sale.

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

D. ALTERNATIVE C (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.

E. ALTERNATIVES CONSIDERED BUT NOT ANALYZED

A “forest restoration alternative” was suggested by the Oregon Natural Resources Council in their comment letter to the original environmental assessment. This alternative was considered but not analyzed. This alternative would not meet the purpose of the action, which is to provide a sustainable supply of forest products while promoting late-successional characteristics on the west side of the stand and improving stand vigor to promote stand volume growth on the east side of the stand. Additionally, all action alternatives contain features that contribute to forest health, such as thinning prescriptions that promote development of late-successional forest characteristics in part of the project area.

An alternative that considered building no new roads and harvesting only those acres that could be accessed from existing roads was considered but not analyzed. Cable yarding systems could access less than 20 acres from existing roads, not a sufficient size in a density management thinning to make a viable project. Thus, harvesting only the timber that could be reached from existing roads using cable yarding would not achieve the purpose of and need for the action, and was not considered.

The use of helicopter yarding was also considered for this project area. We consider four questions when selecting a logging system for a given project area: (1) What systems can provide the required degree of environmental protection? (2) What systems can provide worker safety? (3) What systems can operate successfully on the terrain of the project area? (4) Given the first three questions, what system is the most cost-effective? Each of these will

be addressed below.

What system can provide the required degree of environmental protection? The selected logging method must provide the level of environmental protection prescribed in the applicable land use plan. The Eugene RMP EIS anticipated temporary road construction and the use of cable and ground-based yarding. Relevant Best Management Practices for cable and ground-based yarding would be applied in each action alternative and would provide a high level of environmental protection in the proposed project area (see Environmental Consequences section). Helicopter yarding may eliminate the need for road construction and decommissioning. However, helicopter operations create their own unique set of consequences. When we consider the need for constructing helicopter landings and staging areas, potential for hazardous material spills, and damage to the residual stand, we think that helicopter yarding would not substantially increase overall environmental protection in the project area.

What system can provide worker safety? We also consider safety of woods workers. Government standards for helicopter logging operations state that there should be no more than 50-60 percent of the crown density remaining after harvest for a safe helicopter operation (USDA 1986). For Douglas Creek, the residual crown density in the heavy thin area would approach the maximum allowed for a safe helicopter logging operation. The moderately thinned area would exceed acceptable crown density.

What systems can operate successfully on the terrain of the project area? Terrain plays a major factor in determining logging system feasibility. Helicopter logging is more suited for steep terrain, which allows helicopters to gain forward momentum to get lift above ground. In flatter terrain, vertical lift must be accomplished without the aid of forward momentum. Flatter terrain increases the risk of the operation, because hovering is inherently dangerous and requires more power to clear the residual stand. Terrain at the Douglas Creek project area is gentle to moderate, and we do not consider it suitable for safe and efficient helicopter operations.

What system is the most cost-effective? Helicopter logging is much more expensive than cable or ground-based yarding, even when including the cost of road decommissioning. In two recent density management thinnings in the Eugene District, helicopter logging was estimated to be 2-3 times that of cable yarding. We expect that the costs of helicopter logging at the proposed project area would also be at least 2-3 times that of cable or ground-based yarding systems.

In summary, we determined that we can maintain a high degree of environmental protection while using cable and ground-based yarding, and that helicopter yarding brings its own set of environmental consequences. We conclude that its increased risk of accident, unsuitability for the terrain, and additional cost outweighs the slight soil and water benefits that may result from helicopter yarding in this project area.

III. ISSUES

A. ISSUES SELECTED FOR ANALYSIS

The following issues were identified during development of the action alternatives.

ISSUE 1: *How will management activities in Riparian Reserves affect attainment of ACS objectives?*

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 Aquatic Conservation Strategy Objectives. Activities described in the Proposed Action and alternatives may have some effect on BLM's ability to meet these objectives.

ISSUE 2: *What is the effect of road construction, timber harvest, and yarding on the spread of scotch broom?*

Roads can be vectors for invasive plants to enter an area. Each of the action alternatives contain road construction, timber harvest, and yarding that could contribute to the spread of scotch broom.

ISSUE 3: *How will management activities affect dispersal habitat for northern spotted owls?*

The project area lies within northern spotted owl Critical Habitat Unit OR-CHU-53. The project area is defined as dispersal habitat with low quality foraging and roosting potential. The management actions described in the action alternatives may have some effect on the quantity and quality of dispersal habitat in the project area.

B. ISSUES NOT ANALYZED

Impacts to Cultural Resources

In response to initial consultation regarding a number of potential timber harvests within their ancestral area, the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians raised a concern about "...the state of dwindling resources of a cultural nature left for native people to rely upon for their traditional ways of living." Follow-up conversations with their cultural coordinator revealed that they had no specific information regarding use areas within the proposed project area, nor did they have specific concerns regarding the Proposed Action. Therefore, this issue was not analyzed further.

IV. AFFECTED ENVIRONMENT

The project area is in the Douglas Creek drainage of the Siuslaw Watershed. The Siuslaw Watershed Analysis analyzed the condition of the Riparian Reserves in the watershed and established guidelines under which they should be treated. (Siuslaw Watershed Analysis, chapter 5, pages 1-2.)

Most forest stands in the Siuslaw Watershed are currently in early or mid-seral stages, with approximately 39% of the watershed in a "mature" (80-199 years) or "old forest" (200+ years) condition. The project area is within a large area of pole-young stands (30-79 years). The area in the eastern portion of Section 3 was clearcut between the early 1970s to 1990, except for a stand of "mature" forest in the southeast quarter. Most of Section 5 to the west is "old forest" and is classified as Late-Successional Reserve (LSR), which means it is to be managed to protect and enhance conditions of late-successional and old-growth forest ecosystems. The Travis Tyrrell Seed Orchard lies to the south and southwest of the project area in Sections 9 and 15 and is classified as "non-forest".

Sections adjacent to the project area are privately owned and are used for timber production.

The project area is within a Connectivity/Diversity Block of the Matrix land use allocation. In Connectivity, 25-30 percent of the Connectivity/Diversity block is to be managed for late successional forest characteristics. In Douglas Creek, this block is located in Section 3 within the project area Riparian Reserves and within the stand of "mature" forest in the southeast quarter of the section.

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.

Vegetation and Botany Resources

The project area consists of approximately 46-year old Douglas-fir which regenerated naturally following seed tree harvest in 1945. The stand is densely stocked with a uniform overstory of Douglas-fir and a minor component of western hemlock. Western red cedar and western hemlock regeneration vary from sparse to moderate levels. Little legacy of the original stand remains other than scattered areas of large CWD. Portions of the stand have a scattered overstory of remnant (old) seed trees. Black cottonwood and alder are found in the riparian zones. Few understory conifers are present. Vine maple clumps are scattered throughout. Understory shrubs include vine maple, salal, swordfern and Oregon grape.

Very few snags of any diameter or age class are present in the project area. CWD is generally sparse, although there are a few concentrations which are highly-decayed, large diameter, and of short length.

Areas of laminated root rot, *Phellinus weirii*, are widely scattered throughout the project area.

The eastern edge of the project area abuts a young plantation (planted in 1991) that contains large patches of scotch broom. Two areas adjacent to Douglas Creek also have small patches of scotch broom.

All botanical surveys have been completed. No threatened, endangered, or sensitive vascular plant species were detected.

A series of steep grassy meadows is located above the east banks of Douglas Creek in the north part of Section 3 (see map). Vegetation is somewhat diverse and mainly native with a few exotics. The meadows appear to be natural and could qualify as a "dry meadow" special habitat as described in the RMP. Other special habitats in the project area include beaver ponds, emergent wetlands and wide floodplains along portions of Douglas Creek. Because no activity would occur

within the Riparian Reserves under any alternative where the special habitats are located, they would remain unaffected.

Wildlife (including Special Status and Special Attention Species)

Marbled Murrelets. Section 3 is not suitable nesting habitat. No known nesting locations exist within the project area or within 0.25 miles. Suitable nesting habitat does exist within 0.25 mile, in the southeast quarter of Section 3, outside the project area. The project area was surveyed in 1997 and 1998; no murrelets were detected.

Northern Spotted Owls. Section 3 is identified as Critical Habitat for northern spotted owls (Critical Habitat OR-CHU-53). According to the Upper Siuslaw Watershed Analysis, CHU OR-53 within the Eugene District contains 31,180 acres of federal land, of which 10,734 acres (34%) are suitable (roosting, nesting, and foraging) habitat and 8,002 acres (26%) are dispersal habitat. The project area is defined as dispersal habitat with low quality roosting and foraging potential. Nesting potential is possible but unlikely. No known spotted owl sites exist within the 1.5 mile provincial radius. Surveys conducted from 1991-1995 detected a single status male owl once in Section 3. Surveys were conducted in 1998; no spotted owls were detected. Surveys will be conducted in harvest years as needed in order to comply with the terms and conditions of the Biological Opinion issued by the US Fish and Wildlife Service.

In 1997 and 1998, surveys were conducted as directed in current protocols for three Survey and Manage species mollusks: *Megomphix hemphilli* (Oregon megomphix), *Prophysaon coeruleum* (Blue-gray tail-dropper), and *Prophysaon dubium* (Papillose tail-dropper). Eleven sites were located: four Oregon megomphix only, six Blue-gray tail-dropper only, and one site containing both species. Since the time of the surveys, 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) changed the status of these species such that surveys in Lane County are no longer necessary. However, the Record of Decision also required that sites of Oregon megomphix discovered prior to September 30, 1999 be protected. Thus, four of the sites would be protected because they have been incorporated into untreated areas. The other site, located near the end of Spur J, would be reserved with a ¼-acre reserve area.

Red tree vole surveys were completed in 2000. Two active nests were located in the northwest corner of Section 3. This unit was dropped from the proposed harvest area. Three inactive nests were found in Unit B. No other active nests were located in the project area.

The small natural pond associated with Hydrology Feature 24 in the northwest corner may provide breeding habitat for red-legged frogs and other amphibian species, including *Rhyacotriton variegatus* salamanders. The project area may provide habitat for these species. No surveys have been conducted.

Up to five special status bat species potentially use the project area for all or part of their life cycle. However, the quality and amount of habitat in the project area is generally limited due to the absence of most types of roosting and hibernacula sites, including low quality and numbers of snags. No surveys have been conducted.

Soils

Soils in the project area are of the Bellpine, Dupee, and Atring series. Bellpine is a well drained, moderately deep, silty clay loam of high productivity. Dupee is a moderately well to somewhat poorly drained, deep, silty loam to silty clay. Atring is a moderately deep, well-drained, loamy-skeletal soil.

One area of Dupee soils is located on the west side of the northern Riparian Reserve for Douglas Creek and another on both sides of Douglas Creek in the southern Riparian Reserve. Atring soils

are located on the east side of the northern Riparian Reserve for Douglas Creek and extend along the lower reaches of Streams 14 and 17. Bellpine soils are located throughout the rest of the project area.

The westside of the project area is located on gentle to moderate topography. Slopes range from 0 to 40%. The eastside of the project area is located on gentle to moderately steep topography. 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 780 to 1,100 feet.

Timber Productivity Capability Class (TPCC) areas classified as fragile nonsuitable lands due to soil moisture deficiencies (FSNW) are located within the untreated Riparian Reserve for Douglas Creek in the northern portion of the project.

Aquatic and Riparian Resources and Fisheries

All of the streams within the project area drain to Douglas Creek, which drains directly to the Siuslaw River. There are 24 streams, and a number of springs, seep, and wetlands located within the project area or immediate vicinity. Two streams (11 and 15) and two wetlands (7 and 27) are located on private land adjacent to the project area. A wetland associated with Hydrology Feature 24 within the project area has a very small natural pond and a short section of scoured channel associated with it.

Douglas Creek is a 7th field watershed located in the Upper Siuslaw River basin. It is in the Oregon Coast (OC) coho salmon (*O. kisutch*) and steelhead trout (*O. mykiss*) Evolutionary Significant Unit (ESU). It is also prime habitat for other anadromous and non-anadromous species. During project survey in the mainstem of Douglas Creek, low numbers of coho salmon (*O. kisutch*), moderate numbers sculpin (*Cottidae* sp.), and a small population of lamprey (*Lampetra* sp.) were detected. Coho were also observed in the lower portions of Streams 5, 14, and 17. A moderate size population of cutthroat trout (*O. clarki*) was observed in the lower portion of Stream 17 and in the entire length of Stream 14. Numerous crayfish and unidentified salamanders were also observed throughout all reaches. Other streams in the project area are non-fish bearing due to low flow, lack of habitat, or steep topography.

Visual Resources

Because the project area is classified as Visual Resource Management Class IV, which allows major modifications of existing character of landscapes, no specific timber management constraints apply (RMP p.75).

Cultural Resources

A cultural resource survey of the project area was conducted in 1979 by crews from the University of Oregon's Department of Anthropology. No cultural resources were found during the surveys.

Air Resources

Air resources that would be affected by the alternatives are discussed in the RMP EIS (Chapter 3, pp. 14-20).

V. ENVIRONMENTAL CONSEQUENCES

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 FEIS. Impacts based upon site specific analysis of the alternatives are shown below. Table 2 summarizes the environmental effects of each alternative. Additional analysis is provided in the narrative sections.

Table 2. Douglas Creek—Comparison of Effects

Effects On:	Proposed Action	Alternative A	Alternative B	Alternative C (No Action)
ACS Objectives	Would contribute to attainment of Objectives 1, 3, 8, and 9. Would not prevent or retard Objectives 2, 4, 5, 6, 7.	Same as Proposed Action	Would not retard attainment of Objectives 2, 4, 5, 6, and 7. Would not contribute to attainment of Objectives 1, 3, 8, and 9.	Same as Alternative B
Spread of Scotch Broom	Existing trend in spread of scotch broom would continue; canopy closure maintained at levels prohibitive to scotch broom spread; known infested areas not disturbed.	Increase risk of scotch broom infestation in SE part of project area due to disturbance of existing infestations	Same as Proposed Action	Existing trend in the spread of scotch broom would continue
Northern Spotted Owl Dispersal Habitat	Canopy cover maintained above 40%; dispersal habitat degraded, but not removed, for up to 10 years. Accelerated improvement of habitat conditions expected	Same as Proposed Action	Same as Proposed Action, except in Riparian Reserves. In Riparian Reserves, existing dispersal habitat would not be affected; but no acceleration of improvement of habitat conditions	No short term degradation of dispersal habitat. No accelerated improvement of habitat

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. DIRECT AND INDIRECT EFFECTS OF THE PROPOSED ACTION

ISSUE 1: Effects on Attainment of ACS Objectives

The Proposed Action includes management within Riparian Reserves that would contribute to attainment of Aquatic Conservation Strategy (ACS) objectives. Site-specific conditions in this project area are consistent with the general discussion in the Siuslaw Watershed analysis, which identified management opportunities for density management treatments in Riparian Reserves. The following is a site-specific analysis of the effect of the Proposed Action on attainment of the ACS objectives:

Objective 1: The Proposed Action would maintain and contribute to the restoration of the distribution, diversity, and complexity of watershed and landscape-scale features. Thinning the outer 100 feet of selected Riparian Reserves (see map) would hasten the development of

late-successional structural characteristics in the residual stand, such as larger diameter trees and canopy layering, by lessening competition. Falling and leaving trees within the thinned portion of the Riparian Reserves would increase the amount of downed woody debris.

Objective 2: The management activities in the Riparian Reserves would maintain spatial and temporal connectivity within the watershed because of the influence of the residual stand, the unthinned buffers in the Riparian Reserves, and the temporary nature of the road construction. New road construction would not alter the existing drainage network because there would be no stream crossings, and roads would be at least 200 feet from streams. New roads would be outslotted and not hydrologically connected to streams by ditchlines.

Objective 3: The Proposed Action would maintain and contribute to the restoration of the physical integrity of the aquatic system because the residual stands in areas thinned would maintain root strength; the untreated portions of Riparian Reserves would ensure that thinning would not affect streambank integrity; management activities throughout the project area would not cause alteration in water flows that could affect channel morphology; and the unthinned buffers would filter potential sediments before they reach the streams. Streambank integrity would be maintained because no yarding would occur across stream channels. Trees felled and left on site would create an immediate supply of coarse woody debris, and thinning in Riparian Reserves would speed the development of a future supply of larger woody debris. Snag creation on the west side of the project area would also provide a future supply of coarse woody debris.

Objective 4: The Proposed Action would maintain water quality necessary to support healthy riparian, aquatic, and wetland ecosystems. The Proposed Action would not alter stream temperature because the untreated portions of Riparian Reserves adjacent to the streams would maintain existing shading of streams. The potential of a hazardous material spill from operating machinery reaching stream channels is low.

Objective 5: The Proposed Action would maintain the sediment regime under which this aquatic ecosystem evolved. The untreated portions of Riparian Reserves would adequately filter any sediment from the uplands before it reaches the stream because of the generally gentle topography, the low risk of hillslope erosion, and the low risk of substantial sediment inputs from upland areas. The direct disturbance of road reconstruction and decommissioning could result in production of a minor amount of sediment only during the immediate periods of reconstruction and decommissioning, which would have negligible effects on the aquatic ecosystem. No new road construction would occur within the Riparian Reserves, the stream network would not be extended by the temporary roads, and existing roads would be only temporarily renovated. There is a slight possibility of a small sediment increase due to increased use of roads during active hauling.

Objective 6: The Proposed Action would maintain existing in-stream flows because none of the project area is considered to be within the transient snow zone, and a fairly high percentage of the area would remain uncut. The exact extent of the effect on flow from tree removal is not certain; most research on hydrologic response to timber harvesting has been conducted in clearcuts, and the effect of density management treatments on stream flows has not yet been extensively studied. Large openings in the canopy would be avoided with the retention of 50 TPA on the west side of Douglas Creek and 100 TPA on the east side. Evapotranspiration and interception would decrease within the proposed harvest area due to the removal of some of the overstory. Changes to the timing and magnitude of peak flows are expected to be negligible. The most likely changes to peak flows from this action would be during smaller storms in autumn or early winter when less precipitation is needed to recharge soil moisture. Large peak flows associated with flooding or channel alteration are likely to be negligibly affected by this action.

Most of the other factors associated with changes to peak flows would not be a concern with the Proposed Action. Compaction and reduction of infiltration rates from road construction would be substantially mitigated by subsoiling roads upon completion of the project. The stream network would not be extended by the temporary roads. Approximately 700 feet of existing road (Spur F) would be subsoiled under this alternative. This would reduce compaction in the watershed by a small amount. Yarding methods would incorporate the applicable Best Management Practices listed in Appendix C of the Eugene District RMP, including (1) restricting tractor operations to periods of low soil moisture, (2) limiting ground based yarding to slopes less than 35 percent, and (3) requiring one-end suspension for cable yarding. These practices, along with subsoiling tractor skid trails, would minimize the amount of compaction that would affect infiltration rates and soil moisture storage capacity.

Objective 7: The Proposed Action would maintain existing patterns of floodplain inundation and water table elevation because it would have little effect on existing flow patterns and stream channel conditions.

Objective 8: The Proposed Action would contribute to the restoration of the species composition and structural diversity of plant communities and habitat to support well-distributed populations of some riparian-dependent species. By speeding the development of late-successional forest characteristics within the Riparian Reserves, adding an immediate supply of down wood, and creating snags, structural diversity within the project area would be enhanced. Thinning the Riparian Reserves would allow for increased understory and shrub layer development, and underplanting on the west side of the project area would increase conifer species composition and diversity.

Objective 9: The Proposed Action would maintain and contribute to the restoration of habitat to support well-distributed populations of some riparian-dependent species by providing an immediate supply of woody debris, creating snags, and speeding development of future large woody debris in the thinned portions of the Riparian Reserves. The Proposed Action would cause a reduction in canopy closure for several decades in the thinned areas, which could result in some micro-climatic alteration or other adverse effects for species that prefer complete canopy closure or that do not tolerate disturbance. Any such effect would be minor because of the effect of the residual trees, the extensive untreated reserve areas, and because of the current poor habitat condition of the stands for most species associated with late-successional forests.

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

ISSUE 2: Effects of Road Construction and Yarding on the Spread of Scotch Broom

Density management would raise light penetration levels, which could increase the likelihood of scotch broom entering the treated stand on the east side of Douglas Creek. However, scotch broom needs a minimum of 40% sunlight to produce flowers (Bossard et al.1996). The silvicultural prescription proposed for this part of the project area would maintain 100 TPA, which would limit the amount of direct sunlight reaching the forest floor to less than 40%. This would inhibit the spread of scotch broom within the area. The areas known to contain larger infestations of scotch broom would not be disturbed under the Proposed Action by roads or yarding activities.

ISSUE 3: Effects on Dispersal Habitat for Northern Spotted Owls

The action may affect but is not likely to adversely affect spotted owls. In the moderately

thinned area, canopy closure would be approximately 60% after treatment, and in the heavily thinned area, canopy closure would be greater than 40% after treatment. Dispersal habitat for spotted owls is low to the east of the project area, but adequate to the north, south and west. The prescription would maintain canopy closure above 40%, maintaining dispersal habitat; however, it would be degraded for approximately 10 years because the canopy would be opened. Approximately 1% of the dispersal habitat in the CHU would be affected.

In the heavily thinned area, stand development towards late-successional forest structural characteristics would be promoted by increasing growing space for reserve trees and by increasing the amount of light penetrating the canopy. Increased growing space would promote diameter growth and crown retention (i.e., increase in crown size) of the overstory. Increased light penetration would promote establishment and growth of shade tolerant seedlings which would increase canopy layering. Accelerating the development of late-successional stand characteristics on the west side of Douglas Creek as a result of the Proposed Action would ultimately improve critical habitat, both foraging and dispersal.

Unharvested areas may continue to function as dispersal and low quality roosting and foraging habitat for spotted owls.

C. DIRECT AND INDIRECT EFFECTS OF ALTERNATIVE A

ISSUE 1: Effects on Attainment of ACS Objectives

Alternative A includes management similar to the Proposed Action except that an additional seven acres would be harvested in the southern portion of the Project Area. To access this area, approximately 2,200 feet of Spur F would be renovated, and 500 feet of new road would be constructed (Spur F1). Alternative A would include subsoiling 2,200 feet of Spur F, resulting in slightly more reduction in compaction than the Proposed Action. No other appreciable differences in effects to attainment of ACS objectives are anticipated between Alternative A and the Proposed Action, because of the minimal amount of additional acreage, and because of road design features common to both alternatives. Alternative A is consistent with the ACS and the objectives for Riparian Reserves, and would not prevent or retard attainment of ACS objectives.

ISSUE 2: Effects of Road Construction and Yarding on the Spread of Scotch Broom

The risk of scotch broom infesting the proposed harvest area in the southeast part of the project area would be greater under Alternative A than the Proposed Action because ground disturbing operations would occur within heavily infested areas. However, the introduction of scotch broom would be minimized because both Spurs F and F1 would be renovated or constructed outward away from uninfested areas. Road building equipment would be driven in with the blade up to the end of the spurs. Construction/renovation would commence at the terminus of the spurs and work outward. The effect of this sequencing of construction would minimize the introduction of scotch broom seed into the project area.

ISSUE 3: Effects on Dispersal Habitat for Northern Spotted Owls

Due to the minimal additional harvest acreage and road renovation and construction, effects on dispersal habitat would be similar to the Proposed Action.

D. DIRECT AND INDIRECT EFFECTS OF ALTERNATIVE B

ISSUE 1: Effects on Attainment of ACS Objectives

Alternative B includes density management thinning as described under the Proposed Action, but no management within Riparian Reserves. Alternative B would have effects similar to those described under the Proposed Action for Objectives 2, 4, 5, and 7. This alternative would not retard attainment of Objectives 2, 4, 5, or 7. The following is a site-specific analysis of the effects of Alternative D on attainment of the remaining ACS objectives:

Objective 1: Alternative B would not hasten the development of late-successional structural characteristics in the Riparian Reserves, such as larger diameter trees and canopy layering, by lessening competition, as the Proposed Action would. There would be no creation of downed woody debris or snags.

Objective 3: Alternative B would not contribute to the restoration of the physical integrity of the aquatic system. No down woody debris or snags would be created and there would be no thinning in the Riparian Reserves to hasten development of a future supply of down wood.

Objective 6: This alternative would result in similar or lower increases in peak flows, summer low flows, and overall water yield than the Proposed Action or Alternative A because fewer acres would be thinned.

Objective 8: Alternative B would not speed the development of late-successional forest characteristics within the Riparian Reserves, and would not have the immediate supply of large woody debris or snags. Thus, Alternative B would not contribute to the restoration of the structural diversity of the Riparian Reserves.

Objective 9: Alternative B would not contribute to the restoration of habitat to support well-distributed populations of some riparian-dependent species. Under this alternative, there would be no immediate supply of woody debris or snags created in the Riparian Reserves.

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

ISSUE 2: Effects of Road Construction and Yarding on the Spread of Scotch Broom

Alternative B would have effects on the spread of scotch broom similar to those described under the Proposed Action. No new road construction or renovation would occur through scotch broom infested areas.

ISSUE 3: Effects on Dispersal Habitat for Northern Spotted Owls

Alternative B would have similar effects on dispersal habitat as the Proposed Action, except Riparian Reserves would not be thinned and less dispersal habitat would be degraded. Thus, the existing quantity and quality of dispersal habitat in Riparian Reserves would be maintained. No snags would be created and acceleration of late-successional characteristics in Riparian Reserves would not be expected.

E. DIRECT AND INDIRECT EFFECTS OF ALTERNATIVE C (No Action)

ISSUE 1: Effects on Attainment of ACS Objectives

Alternative C includes no management within Riparian Reserves. Alternative C would maintain existing trends. Alternative C would not retard attainment of Objectives 2, 4, or 7. The

following is a site-specific analysis of the effect of Alternative C on attainment of the remaining ACS objectives:

Objective 1: Compared to the Proposed Action, Alternative C would not hasten the development of late-successional structural characteristics in the Riparian Reserves, such as larger diameter trees and canopy layering, by lessening competition. There would be no creation of downed woody debris or snags.

Objective 3: Alternative C would not contribute to the restoration of the physical integrity of the aquatic system. No down woody debris or snags would be created and there would be no thinning in the Riparian Reserves to hasten development of a future supply of down wood.

Objective 5: There would be no risk of increased erosion or sedimentation. There would be no increase in haul-related road use.

Objective 6: This alternative would not affect peak flows because no thinning would occur.

Objective 8: Alternative C would not speed the development of late-successional forest characteristics within the Riparian Reserves, and would not have the immediate supply of large woody debris or snags. Thus, Alternative C would not contribute to the restoration of the structural diversity of the Riparian Reserves.

Objective 9: Alternative C would not contribute to the restoration of habitat to support well-distributed populations of some riparian-dependent species. Under this alternative, there would be no immediate supply of woody debris or snags created in the Riparian Reserves.

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

ISSUE 2: Effects of Road Construction and Yarding on the Spread of Scotch Broom

Under Alternative C, the existing trends in scotch broom populations would continue. The areas known to contain larger infestations of scotch broom would not be disturbed under this alternative. No new risk to the project area would occur.

ISSUE 3: Effects on Dispersal Habitat for Northern Spotted Owls

Alternative C would result in no degradation of dispersal habitat for spotted owls. Long term improvement of habitat, resulting from the acceleration of development of late-successional characteristics would not be expected.

G. CUMULATIVE EFFECTS

This analysis incorporates 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 described in this document would have cumulative effects on resources beyond those effects analyzed in the above environmental impact statements. The following section supplements those analyses, providing site specific information and analysis particular to the alternatives considered here.

The Siuslaw Watershed is located in Lane and Douglas Counties, southwest of the city of Eugene, and contains the town of Lorane. The watershed lies at the southeast headwaters of

the Siuslaw River Basin, which also includes the Lake Creek and Wolf Creek watersheds for which watershed analyses have been completed. The Umpqua River Basin lies immediately to the south of the watershed, and the Willamette River Basin lies immediately to the east and northeast of the watershed. The Siuslaw Watershed covers 104,683 acres; of this, slightly more than 43,000 acres are public land managed by BLM.

Most of the Siuslaw Watershed is forest Industry or BLM administered land, with a small amount of private nonindustrial land ownership, and very minor amounts of State and County land ownership. Land use in the watershed is primarily forest management in the western two-thirds of the watershed and a mixture of forest management and agriculture in the eastern third, with agricultural use especially concentrated in the Lorane Valley.

It is unlikely that BLM-administered forest lands in the Siuslaw Watershed would be treated with regeneration harvests because of the predominance of Late Successional Reserves in the watershed. Thinning harvests have and may continue to occur on BLM-administered lands in the watershed. BLM has sold two recent timber sales in the Siuslaw Watershed, "Tyrrell Density Management," harvested in 1999 and 2000, which is located in Section 9 southwest of the proposed project area, and "Fawn Creek Density Management," sold in 2001 but not yet harvested.

Private forest lands within the watershed would 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 would be converted to nonforest land.

The Siuslaw Watershed Analysis analyzed the road network for its potential to impact aquatic resources. Over 91% of the roads in the Siuslaw Watershed do not deliver sediment or flow to stream channels. All high traffic routes are paved. Almost 80% Of the remaining 9% of roads, almost 80% that have access to channels are rocked sufficiently to reduce sediment yielding potential by approximately 80%. The calculated increase of sediment over natural background due to roads is approximately 1 to 2%. This is extremely small relative to natural fluctuations and is unlikely to impact the health of aquatic resources. All new construction would be subsoiled upon completion of harvest and would not alter the road sediment or flow effects previously analyzed.

In the short term (approximately 10-40 years), the Proposed Action, together with current harvesting and other disturbances within the watershed, would contribute to the degradation or elimination of habitat for species preferring heavy canopy cover stands. Species that cannot tolerate disturbance would be affected. Beyond 40 years, the Proposed Action and other density management treatments on BLM-administered lands, and protection of other BLM-administered lands, would have a cumulative effect of increasing mature and late-successional canopy structure of both the uplands and treated Riparian Reserves.

The timber harvest proposed under the Proposed Action would have a cumulative effect of setting back the natural successional patterns in the lower canopy and herbaceous layer. This increases the tendency for non-native species to monopolize habitats once occupied by more complex communities of co-adapted natives.

The Proposed Action, 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 along with road and yarding design features, 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 minor and short-lived, limiting the potential for cumulative effects with other actions. The density management treatment would maintain future silvicultural management options in the stands, consistent with the objectives in the standards and guidelines for the Matrix land use allocation (RMP EIS, Chapter 2, pp.62-63)

The cumulative effects of Alternative A would be similar to the Proposed Action, except the added road renovation and road construction of Spur F1 would increase the likelihood of non-native species such as scotch broom occupying the habitats of native species on a long-term or permanent basis.

Alternative B would have similar cumulative effects as the Proposed Action for the uplands. Without treatment, late-successional characteristics within the Riparian Reserves would develop at a slower rate than in the uplands.

Alternative B, 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 along with road and yarding design features, a cumulative effect of increased water flow and yield is unlikely.

Alternative B could cause a short-term increase in sediment inputs. Because of the density of trees retained on the landscape, the protection of Riparian Reserves, and the planned BMPs, a cumulative effect together with other harvesting and road construction would be less than the Proposed Action or Alternative A.

Alternative C (No Action) would continue current trends in stand development. As the stand ages, the ability to respond to an increase in growing space is lost. Stand density is approaching the point at which overtopped or suppressed trees are beginning to die. As these trees die, the ability to recover any monetary value of the dead or dying timber is lost. Competition within the stand would slow the diameter growth of the entire stand. Maintaining a closed canopy condition would decrease crown retention and development. However, spotted owl dispersal habitat would not be degraded in the CHU.

H. MITIGATION MEASURES

The Proposed Action may result in the incidental take of the northern spotted owl. The U.S. Fish and Wildlife Service has issued incidental take provided that the BLM: 1) prohibit timber harvest activities within a quarter mile (or greater if deemed necessary by an agency biologist) of any known owl activity center between March 1 and July 7 (or later if deemed necessary by an agency biologist), unless surveys indicate nesting has not occurred, and; 2) report on the progress and completion of the project to the U.S. Fish and Wildlife Service.

VI. CONSULTATION AND COORDINATION

A. LIST OF PREPARERS

The Proposed Action and alternatives were developed and analyzed by the following interdisciplinary team of BLM specialists:

Carla Alford	Wildlife and Threatened and Endangered Species
Jeff Apel	Engineering
Mike Blow	Wildlife and Threatened and Endangered Species
Rick Colvin	Landscape Planner
Alan Corbin	Timber Management
Phil Dills	Fire
Richard Hardt	Ecology
Pete O'Toole	Silviculture
Kim Revia	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 was completed with the Fish and Wildlife Service on this proposed action, along with other actions proposed in the Eugene District for Fiscal Year 2002. The Fish and Wildlife Service issued its amended Biological Opinion on August 1, 2001, completing consultation.

Biologists from the Bureau of Land Management have completed a biological assessment of the Proposed Action for the Oregon Coastal Coho Salmon, and have determined that the Proposed Action *may affect, but is not likely to adversely affect* coho. Pursuant to the Endangered Species Act, the biological assessment has been transmitted to the National Marine Fisheries Service, and a Letter of Concurrence with BLM's assessment has been requested.

The Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians were notified of the project during a consultation process for a number of potential timber harvests in their ancestral area, requesting information regarding tribal issues or concerns relative to the project. They responded by letter dated September 29, 1997 in which they raised a concern about "...the state of dwindling resources of a cultural nature..." Follow-up conversations with their cultural coordinator revealed that they had no specific information regarding use areas within the proposed project area, nor did they have specific concerns regarding the Proposed Action.

C. PUBLIC PARTICIPATION

A public notice advertising the availability of this EA and preliminary FONSI will be published in the Eugene Register-Guard on February 6, 2002. Additionally, the environmental assessment will be sent to nine groups or businesses, eight state or local government agencies, and 27 individuals. A 30-day public comment period for the EA closes on March 8, 2002.

VII. REFERENCES

Bossard, Carla. April 1996. Distribution, dispersal and control of invasive woody legumes in California forests. Presentation given at the International Broom Symposium. Portland Oregon.

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 Proposed Resource Management Plan/Environmental Impact Statement. Eugene District Office, Eugene, Oregon.

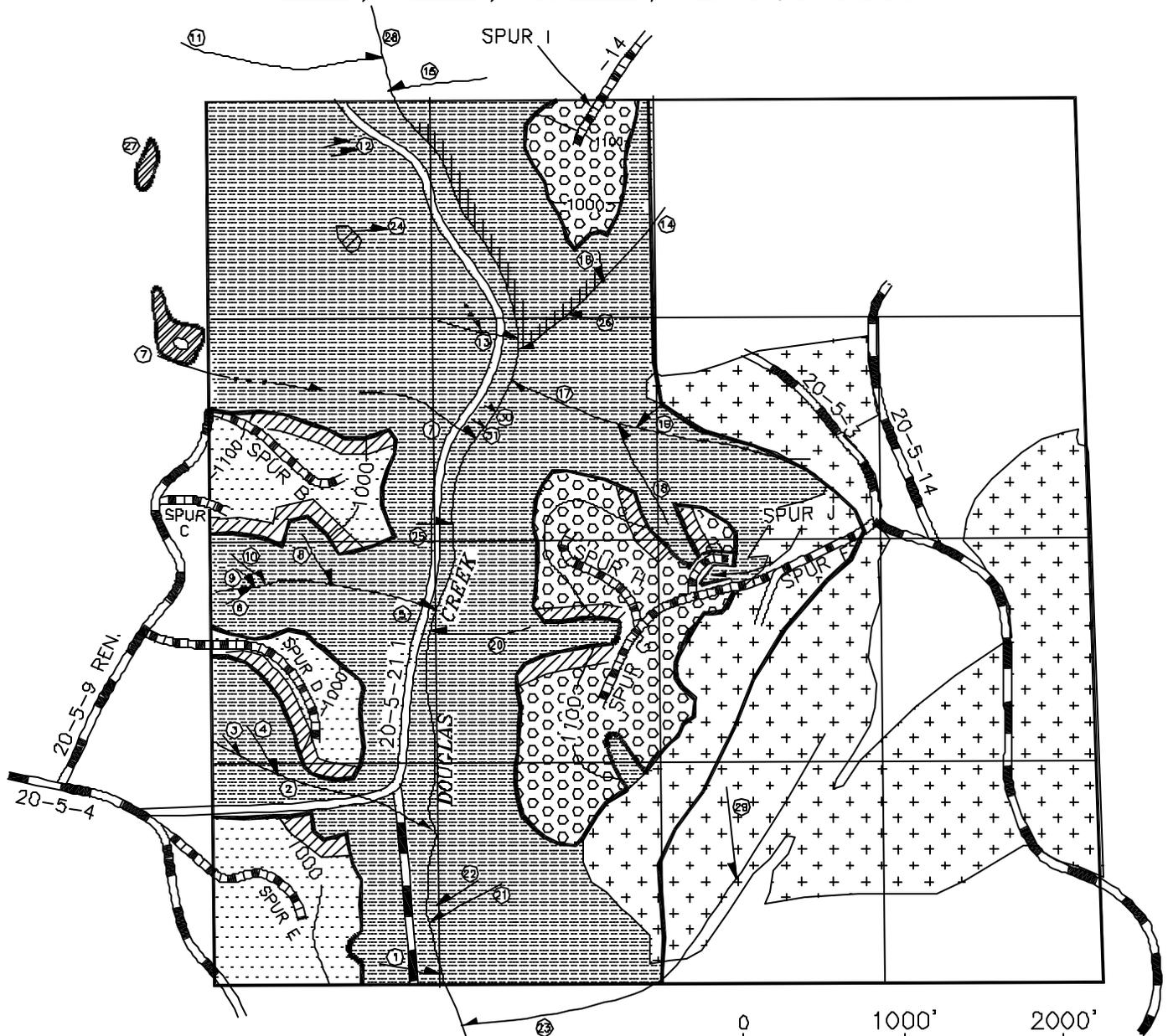
USDI, Bureau of Land Management. June 1994. Eugene District Record of Decision and Resource Management Plan. Eugene District Office, Eugene, Oregon.

UNITED STATES
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 BUREAU OF LAND MANAGEMENT

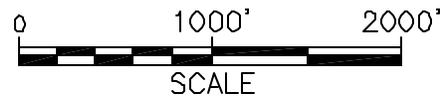
PROPOSED ACTION

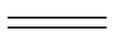
DOUGLAS CREEK E.A. MAP

T. 20S. , R. 5W. , SEC. 3 , WILL. MER., EUGENE DISTRICT



LEGEND



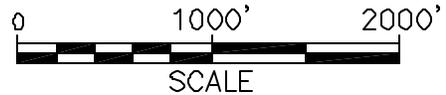
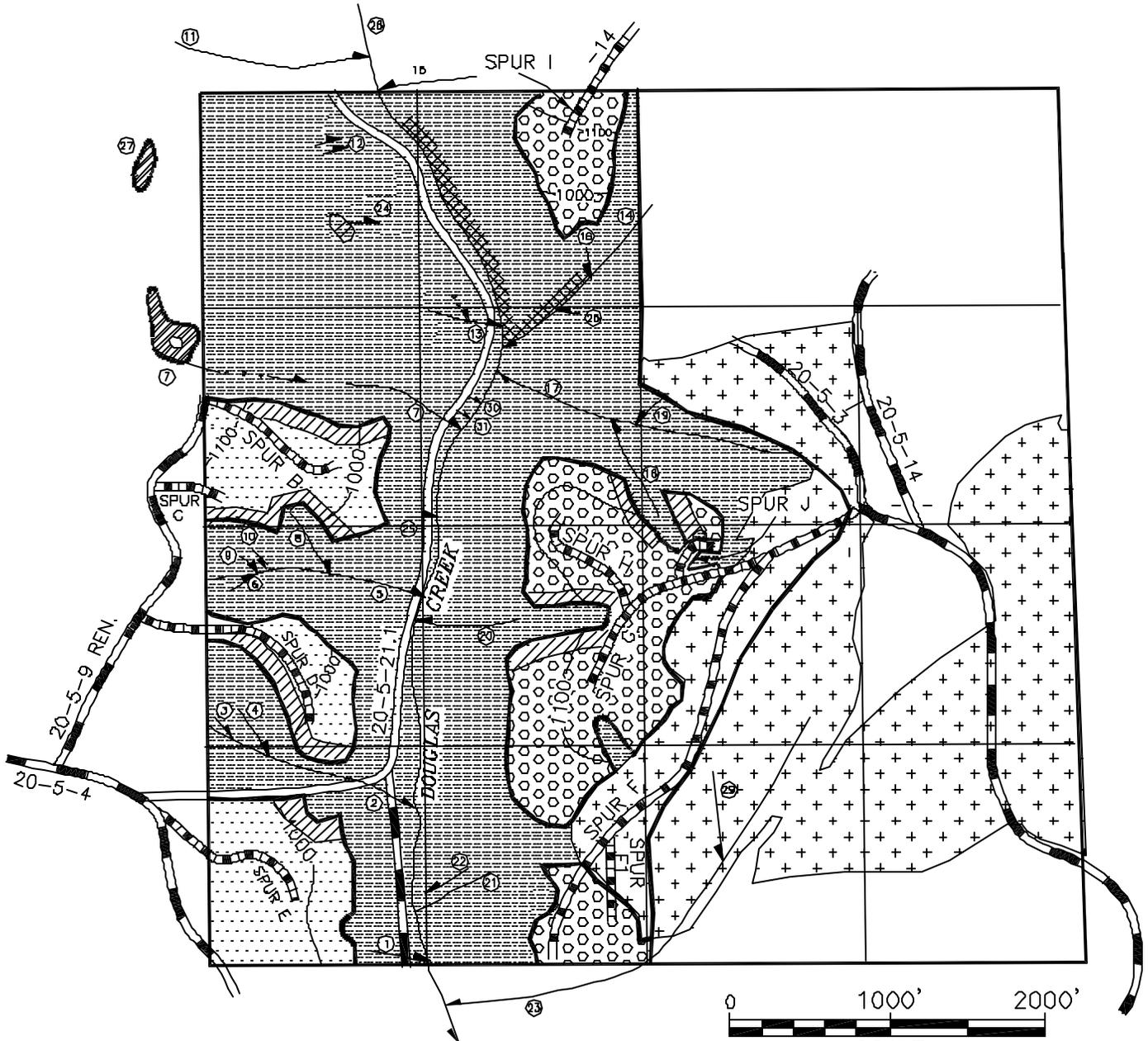
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|  | DENSITY MANAGEMENT - 50 TPA |  | ROCK SURFACED ROAD |
|  | DENSITY MANAGEMENT - 100 TPA |  | EXISTING DIRT ROAD |
|  | RESERVE AREA |  | ROAD TO BE CONSTRUCTED |
|  | OLD CLEARCUT |  | ROAD TO BE RENOVATED |
|  | WET AREA |  | HYDROLOGY FEATURE |
|  | HANGING MEADOWS |  | STREAM |
|  | RIPARIAN TREATMENT AREA |  | INTERMITTENT STREAM |
| | |  | PROJECT AREA BOUNDARY |

DATE: 12/19/01

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 DOUGLAS CREEK E.A. MAP

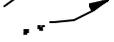
ALTERNATIVE A

T. 20S. , R. 5W. , SEC. 3 , WILL. MER., EUGENE DISTRICT



LEGEND

SCALE: 1" = 1,000 FT.

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|  | DENSITY MANAGEMENT - 50 TPA |  | ROCK SURFACED ROAD |
|  | DENSITY MANAGEMENT - 100 TPA |  | EXISTING DIRT ROAD |
|  | RESERVE AREA |  | ROAD TO BE CONSTRUCTED |
|  | OLD CLEARCUT |  | ROAD TO BE RENOVATED |
|  | WET AREA |  | HYDROLOGY FEATURE |
|  | HANGING MEADOWS |  | STREAM |
|  | RIPARIAN TREATMENT AREA |  | INTERMITTENT STREAM |
| | |  | PROJECT AREA BOUNDARY |

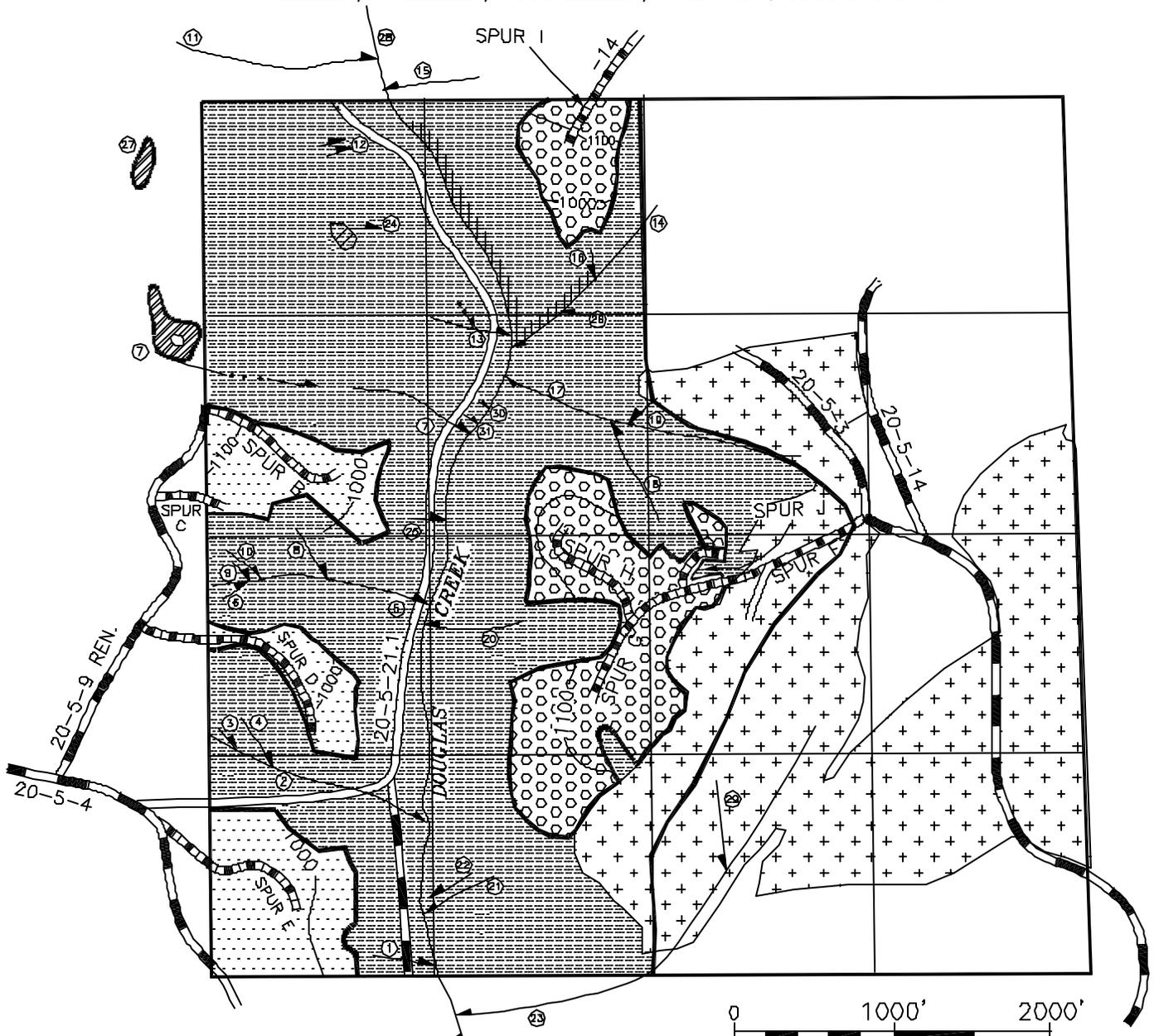
DATE: 12/19/01

UNITED STATES
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ALTERNATIVE B

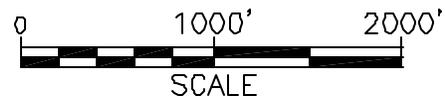
DOUGLAS CREEK E.A. MAP

T. 20S. , R. 5W. , SEC. 3 , WILL. MER., EUGENE DISTRICT



LEGEND

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|  | DENSITY MANAGEMENT - 50 TPA |  | ROCK SURFACED ROAD |
|  | DENSITY MANAGEMENT - 100 TPA |  | EXISTING DIRT ROAD |
|  | RESERVE AREA |  | ROAD TO BE CONSTRUCTED |
|  | OLD CLEARCUT |  | ROAD TO BE RENOVATED |
|  | WET AREA |  | HYDROLOGY FEATURE |
|  | HANGING MEADOWS |  | STREAM |
|  | RIPARIAN TREATMENT AREA |  | INTERMITTENT STREAM |
| | |  | PROJECT AREA BOUNDARY |



DATE: 12/19/01

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

Finding of No Significant Impact
for
Douglas 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: _____

Field Manager, South Valley Resource Area

ENVIRONMENTAL ASSESSMENT NO. OR090-02-04

Douglas Creek
Timber Sale Tract No. E-99-375

Prepared by
Debra Wilson
February 2002

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