

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SALEM DISTRICT OFFICE
MARYS PEAK RESOURCE AREA**

**ENVIRONMENTAL ASSESSMENT AMENDMENT AND FINDING OF NO
SIGNIFICANT IMPACT FOR
Fiscal Year 2001-2002 Road Related Watershed Restoration Projects**

EA NUMBER : OR-080-00-10
PREPARED BY: Interdisciplinary Team; Steve Liebhardt, Team Lead
AREA ENVIRONMENTAL COORDINATOR: Belle Smith
DATE PREPARED: May 13, 2002

Summary: This document is an environmental assessment amendment and finding of no significant impact for the proposed Log Placement and Road Decommissioning. The project area is located in Township 13 South, Range 8 West, Sections 6, 7 and 8, Willamette Meridian, Lincoln County. The land use allocations are Late-Successional Reserve and Riparian Reserve.

The environmental analysis focuses on the following issues identified through scoping and by an interdisciplinary team of BLM resource specialists:

Vegetation: Effects on special status/special attention species and habitats and noxious weeds.

Soils/Fuels: Effects of sedimentation and erosion. Effects on fuel loading and fire risk.

Water/Riparian: Effects on stream flow, channel conditions and water quality.

Wildlife: Effects on special status, special attention and other wildlife species and their habitats.

Fisheries: Effects on fisheries and their habitats.

For further information, contact Steve Liebhardt (503-315-5928), Russ Buswell (503) 315-5989 or Steve Cyrus (503)- 315-5988. 1717 Fabry Rd. S.E., Salem, Oregon, 97306. Comments on this environmental assessment amendment are due May 30, 2002.

FINDING OF NO SIGNIFICANT IMPACT

Introduction

The Bureau of Land Management (BLM), Marys Peak Resource Area has analyzed the potential effects of logs added to the upper drainage of Fall Creek (T. 13 S., R. 8 W., Sec. 7) and of changes to the Bear Creek Road Decommissioning (13-8-8.1) in the Lower Alsea River Watershed, Marys Peak Resource Area, Lincoln County, Oregon. As authorized by the Decision Record for the Fiscal Year 2001-2002 Road -Related Watershed Restoration Projects (EA# OR-080-01-10), signed June 19, 2000, the Fall Creek culverts will be replaced with a larger culvert to allow fish passage. After followup discussions with Marys Peak Area resource specialists, it was recommended that the culvert replacement on Fall Creek should have wood added to the channel to stabilize the amount of bed load movement, provide cover for fish and add to habitat complexity. The objectives are to provide more channel roughness and slow the water velocity down to allow material to settle out in the channel, thus having the channel aggrade.

The replaced culvert would have bed load material placed inside the culvert to prevent too much head cutting of the stream channel. Large boulders would be placed in front of the new larger culvert to prevent further head cutting and scouring, and keep bed load inside the new culvert.

With the work at this site, the opportunity exists to do an additional riparian treatment. Approximately fifteen conifers would be released by having competing alders felled to provide additional sun light for the remaining conifers.

The action described in this environmental assessment amendment is proposed to add large woody debris (LWD) to the channel of Fall Creek to capture bed load as the channel reaches it's new substrate level. This will provide channel complexity and habitat diversity within the Fall Creek Channel.

As authorized by the Decision Record for the Fiscal Year 2001-2002 Road -Related Watershed Restoration Projects (EA# OR-080-01-10), signed June 19, 2000, the Bear Creek Road (13-8-8.1) decommissioning project will proceed, however, resource area specialist recommended that the road not be ripped and that road sides not be pulled up to avoid more disturbance. The project would include the removal of the culvert and all road embankment material from the Bear Creek stream channel and flood plain. The culvert would be taken from the project area by the Contractor for his reuse or optional disposal at an approved facility. The recovered embankment material would be transported to stable locations outside the riparian area and placed within the excavated portion of the decommissioned roadbed. The material would primarily be used to fill in the ditch line, blending into the natural contours. The road bed would be reshaped in an out-sloped pattern to help restore natural hydrologic function. No material would be wasted upon any existing side cast fill.

The decision to decommission Bear Creek Road, covered by the original environmental assessment has been further considered. Specialists have determined that to reduce the spread of non-native plants and the amount of soil disturbance, all culverts would be removed but the road

would not be ripped or require a full pull back of the sides. This EA amendment is tiered to FY 2001-2002 Road Related Watershed Restoration Projects (EA #OR-080-00-10). The Environmental Assessment Amendment is attached to and incorporated by reference in this Finding of No Significant Impact (FONSI) determination. This FONSI and the Amendment are being made available for public review prior to making a decision on the action. The public notice of availability for review will be published in *Corvallis Gazette-Times* on May 16, 2002 and through notification of interested individuals, organizations, and state and federal agencies. Documents will also be available for review on the internet at this address: <http://www.or.blm/salem> (under planning).

Finding Rationale

For the alternatives analyzed, significant impacts on the quality of the human environment would not occur based on the following criteria:

1) The alternatives are in conformance with the following documents which describe the objectives, land use allocations, and management actions/direction for BLM-administered lands in the Marys Peak Resource Area:

- *Record of Decision and Standards and Guidelines for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M ROD, January 2001).

- *Final Supplemental Environmental Impact Statement For Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M FSEIS, November 2000).

- *Salem District Record of Decision and Resource Management Plan* (RMP, May 1995)

- *Salem District Proposed Resource Management Plan/Final Environmental Impact Statement* (PRMP/FEIS, September 1994).

- *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* (ROD, April 1994) and the *Final Supplemental Environmental Impact Statement on Management of Habitat for Late Successional Forest Related Species Within the Range of the Northern Spotted Owl* (SEIS, February 1994) (also known as the Northwest Forest Plan).

- *Late-Successional Reserve Assessment, Oregon Coast Province- Southern Portion* (RO267, RO268), version 1.3 June 1997 (LSRA; USDA FS and USDI BLM 1997)

Relationship of Alternatives to the Aquatic Conservation Strategy (RMP, pp.5-7)

Component	Relationship of This Action
Interim Riparian Reserves	Alt. 1 (Proposed Action): Live Douglas-fir trees would be felled within Riparian Reserves. Young Conifers would be released to provide for future shading and Large Woody Debris. Bear Creek Road would have cross drains pulled and be water barred (winterized). Alt. 2: Riparian Reserves would remain undisturbed.
Key Watersheds	The proposed project area is not in a Key Watershed.
Watershed Restoration	Log placement would target restoration of the distribution, diversity, and complexity of watershed features.
Watershed Analysis	The first iteration of the <i>Lower Alsea Watershed Analysis</i> was completed September 1999.

2) The proposed action and alternatives are in conformance with the RMP, which describes the general management objectives, land use allocations, and management actions/direction for BLM-administered lands in the Marys Peak Resource Area

3) No wild and scenic rivers, prime or unique farmlands occur within the project area

4) No known cultural or paleontological resources occur in the project area. A post-harvest survey would be done upon completion of the project according to *Protocol for Managing Cultural Resources on Lands Administered by the BLM in Oregon, August 5, 1998*.

5) No hazardous materials or solid waste were observed in the project area nor would they be created by the proposed action. Any chemicals or fuel used on the site would be handled using best management practices (RMP, Appendix C).

6) Conformance of the alternatives with the Aquatic Conservation Strategy (ACS) components listed in the RMP (pp. 5 and 6) are displayed in Appendix C.

7) The project area does not qualify for potential wilderness nor has it been nominated as an area of critical environmental concern.

8) Project design features would assure that potential impacts to water quality from this project would be in compliance with the State of Oregon's In-stream Water Quality Standards and thus the Clean Water Act.

9) In accordance with the RMP (see pp. 21-22), the amount of late-successional forest (i.e., 80 years and older) on federal lands was determined for the Lower Alsea Watershed. The 80+ forest

age classes occur on approximately 41 percent of the federal lands in the Lower Alsea. This exceeds the RMP standard of 15 percent. Approximately ½ acre of late-successional forest stands would be affected by this action.

10) The proposed action is within the coastal zone as defined by the Oregon Coastal Management Program. This proposal is consistent with the objectives of the program and the state planning goals which form the foundation for compliance with the requirements of the Coastal Zone Act. Management actions/direction found in the RMP were determined to be consistent with the Oregon Coastal Management Program.

11) This project is considered a *may affect not likely to adversely affect northern spotted owls, marbled murrelets and bald eagles*, and a *no effect for owl and murrelet critical habitat* (April 10, 2002, Log # 1-7-02-I-477).

12) This project meets the terms and conditions of The Incidental Take Statement for Programmatic Biological Opinion Covering U.S. Forest Service and Bureau of Land Management Administrative Units Within the Oregon Coast Range Province, Oregon (December 20, 2001) as directed by NMFS.

13) Project would not have disproportionately high or adverse human health or environmental effects on minority populations or low income populations.

14) Future energy resources would not be restricted by the completion of this project thereby complying with the National Energy Policy.

The proposed action is local in nature, and potential adverse impacts would be short-term. Impacts were determined based on observation, professional training and experience of the interdisciplinary team of BLM natural resource specialists. Determining such environmental effects reduces the uncertainties to a level which does not involve unique risks. The design features identified in the EA would assure that no significant site-specific or cumulative impacts would occur to the human environment other than those already addressed in the EIS.

Finding of No Significant Impact Determination

Based on the analysis of information in the attached EA Amendment , my determination is that a new EIS or supplement to the existing EIS are unnecessary and will not be prepared. The proposed action would not result in significant environmental impacts affecting the quality of the human environment greater than those addressed in the existing EIS.



Acting

Marys Peak Field Manager

05/15/02
Date

Comments regarding this environmental assessment should be received by the Bureau of Land Management, Marys Peak Resource Area, by May 30, 2002.

ENVIRONMENTAL ASSESSMENT AMENDMENT

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ENVIRONMENTAL ASSESSMENT AMENDMENT

I. PURPOSE AND NEED

A. Introduction

The proposed action, described and analyzed herein, is intended to restore fish access and add habitat complexity as directed by the *Salem District Record of Decision and Resource Management Plan* (hereafter referred to as the RMP; see pp. 27 and 28). All applicable direction 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*, also known as the Northwest Forest Plan, is incorporated in the RMP. These projects are being amended to reduce impacts and disturbance to stream channel, and riparian areas (addition of wood to channel) and to reduce the amount of disturbance and potential infestation of non- native plant species. The EA amendment is tiered to FY 2001-2003 Road Related Watershed Restoration Projects (EA #OR-080-01-10)

This environmental assessment amendment is tiered to the *Salem District Record of Decision and Resource Management Plan (RMP, May 1995)* and the *Salem District Proposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS, Sept., 1994)*. The *FEIS* analyzed broad scope issues and impacts within the Northwest Forest Plan's direction to meet the need for forest habitat and forest products (p. 1). The *RMP* provides a comprehensive ecosystem management strategy for BLM managed lands in the Salem District in strict 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 (ROD, April 1994)*.

The RMP was signed by the Oregon/Washington State Director of the Bureau of Land Management (BLM) on May 12, 1995. It is based on a comprehensive ecosystem management strategy for federal lands consisting of management objectives, land use allocations, and management actions/direction. This environmental assessment amendment analyzes the proposed action, which would involve adding wood (ten trees) to the Fall Creek channel and proposed changes to Road Decommissioning in Late-Successional Reserve and Riparian Reserve lands.

Objectives of the proposed culvert replacement and wood placement are to allow for fish passage and obtain habitat complexity. The objective of the proposed road decommissioning is to restore natural hydrologic function in Bear Creek with a minimal amount of disturbance.

The Lower Alsea Watershed Analysis was completed in 1999. This watershed analysis recommends road decommissioning and culvert upgrades for watershed restoration (pp. 90-91).

This environmental assessment is also tiered to the *Western Oregon Program-Management of Competing Vegetation Final Environmental Impact Statement (VMFEIS, February 1989)* and the *Western Oregon Program-Management of Competing Vegetation Record of Decision (August 1992)*. The *VMFEIS* analyzed broad scope issues and impacts for an integrated vegetation management strategy consisting of various treatments. The Record of Decision identifies treatments and provides processes to meet vegetation management objectives

(p. 3) and resource management goals (p. 33).

This EA amendment is a site-specific analysis of the proposed action and alternatives prepared under general management guidance provided in the RMP. The RMP is available for review in the Salem District Office. A general description of the project area may be found in this EA under Description of Affected Environment/Environmental Consequences. Additional information about the proposed project is available in the *Road Related Project EA file*.

B. Scoping

Efforts to involve the public in decisions leading up to this proposed action were as follows:

- ! The general area was shown as Riparian Reserve and Late-Successional Reserves in the Northwest Forest Plan and the RMP. These documents were widely circulated in the state of Oregon and elsewhere, and public review and comment were requested at each step of the planning process.
- ! A news release announcing availability of the *Fiscal Year 2001-2003 Road Related Watershed Restoration Projects EA* for public review and comment was submitted to the *Corvallis Gazette-Times* on 5/25/01. Letters with the same information were mailed to interested individuals.
- ! The Decision Rationale was signed on 6/19/01.
- ! Copies of the EA amendment are being mailed to individuals, interest groups and agencies.

C. Management Objectives by Land Use Allocation and Resource Program

As directed by the Northwest Forest Plan and the RMP, the primary management objectives for the project area are as follows:

Riparian Reserves (RMP pp. 9-15)

1. Provide habitat for special status, *Supplemental Environmental Impact Statement (SEIS)* special attention and other terrestrial species.
2. Meet Aquatic Conservation Strategy objectives.

Late-Successional Reserves (RMP pp. 15-18)

1. Late-Successional Reserves (LSR) are to be managed to protect and enhance conditions of late-successional and old-growth forest ecosystems, which serve as habitat for late-successional and old-growth forest-related species including the northern spotted owl and marbled murrelet.
2. Maintain a functional, interacting, late-successional and old-growth forest ecosystem.

Water and Soil Resources (RMP pp 22-24)

1. Comply with State of Oregon water quality requirements to restore and maintain water quality and to protect recognized beneficial uses in watersheds.
2. Improve and/or maintain soil productivity.

Special Status and SEIS Special Attention Species (RMP pp 29-31)

1. Protect, manage and/or conserve habitat for these species so as not to elevate their status to any higher level of concern.

II. ALTERNATIVES, INCLUDING THE PROPOSED ACTION

A. INTRODUCTION

This section describes alternatives identified by the interdisciplinary (ID) team that helped develop this project. They comply with the Standards and Guidelines specified in Appendix A of the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (ROD, April 1994)*. Copies of these documents can be obtained in the Salem District Office or the internet at www.or.blm.gov/salem.

B. SUMMARY OF ALTERNATIVES

Alternative 1 (Proposed Action)

After followup discussions with Marys Peak Area resource specialists, it was recommended that the culvert replacement on Fall Creek should have wood added to the channel to stabilize the amount of bed load movement, provide cover for fish and add to habitat complexity. The objectives are to provide more channel roughness and slow the water velocity down to allow material to settle out in the channel, thus having the channel aggrade.

The replaced culvert would have bed load material placed inside the culvert to prevent too much head cutting of the stream channel. Large boulders would be placed in front of the new larger culvert to prevent further head cutting and scouring, and keep bed load inside the new culvert.

With the work at this site, the opportunity exists to do an additional riparian treatment. Approximately fifteen conifers would be released by having competing alders felled to provide additional sun light for the remaining conifers.

Bear Creek Road decommissioning will consist of the following:

The initial 1.77 miles of Bear Creek Road was constructed in 1970; the remainder in 1977. In the years following construction, the road embankment has remained stable except for the first 900 feet, where a newly constructed private industrial road altered upslope hydrology. This has resulted in cut bank raveling, culvert plugging and roadbed and embankment scour, sending sediment into the Bear Creek riparian area below. This decommissioning project will not correct the upslope hydrology, but it will allow for better drainage by creating a permanent channel to divert the altered flow from the present road fill.

As authorized by the Decision Record for the Fiscal Year 2001-2002 Road -Related Watershed Restoration Projects (EA# OR-080-01-10), signed June 19, 2000, the Bear Creek Road (13-8-8.1) decommissioning project will proceed, however, resource area specialist recommended that the road not be ripped and that road sides not be pulled up to avoid more disturbance. The project would include the removal of the culvert and all road embankment material from the Bear Creek stream channel and flood plain. The culvert would be taken from the project area by the Contractor for his reuse or optional disposal at an approved facility. The recovered embankment material would be transported to stable locations outside the riparian area and placed within the excavated portion of the decommissioned roadbed. The material would primarily be used to fill in the ditch line, blending into the natural contours. The road bed would

be reshaped in an out-sloped pattern to help restore natural hydrologic function. No material would be wasted upon any existing side cast fill.

The natural drainage patterns affected by the original road construction would be restored and preserved by removing all (approximately 30) cross drain culverts and leaving open drainage channels in their place. The removed cross drain culverts would be taken from the project area by the Contractor for his reuse or for disposal at an approved facility. Numerous additional drain dips / water bars would be constructed diagonally across the road surface to improve the out-slope oriented drainage and to minimize the risk of roadbed scour and associated sedimentation.

(Refer to Section II. D, Project Design Features for further details.)

Alternative 2 (No trees felled)

With this alternative no trees would be felled, no large woody debris would be placed in stream channels and bed load movement would continue. Short segments of Riparian reserves would not have small conifers released.

Bear Creek Road would be decommissioned with road sides pulled up and the road bed ripped in accordance with the existing decision.

C. ALTERNATIVE 1 (PROPOSED ACTION)

1. Scoping Issues

The following issues were identified in the original EA through public scoping and by an ID team of BLM natural resource specialists representing various fields of science (see Section V, Interdisciplinary Team Members). No additional issues were identified for this amendment. Issues that were considered but eliminated from further analysis are documented in Appendix B, Environmental Elements Review Summary.

Vegetation: Effects on special status/ SEIS special attention species and habitats and noxious weeds.

Soils/Fuels: Effects on soil displacement and compaction. Effects on fuel loading and fire risk.

Water/Riparian: Effects on stream flow, channel conditions and water quality.

Wildlife: Effects on special status, SEIS special attention and other wildlife species and their habitats.

Fisheries: Effects on fisheries and their habitats.

D. PROJECT DESIGN FEATURES, MITIGATION MEASURES AND BEST MANAGEMENT PRACTICES

Project design features are operating procedures that would be included in the design and implementation of the proposed action alternative. They also include measures proposed to mitigate potential adverse environmental effects. The design features of this proposal are described below. Best Management Practices are described in Appendix C, of the RMP.

General

Riparian Reserve

- ! Up to ten conifer trees on Riparian Reserve and Late-Successional Reserve lands would be felled into Fall Creek.
- ! Approximately fifteen small conifers would be released in the general area of the Fall Creek culvert.

Wildlife

- ! Impose a seasonal restriction by allowing work to be done only from August 6 through February.
- ! From August 6 to September 15 impose a daily time restriction by allowing work to be done only from two hours after sunrise until two hours before sunset.
- ! Place trees in the streams at the same time the culverts are pulled and replaced to minimize the duration of the noise disturbance.

Botany

- ! Management of Survey and Manage Species found as a result of inventories would be accomplished in accordance with the *Record of Decision and Standards and Guidelines for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M ROD, January 2001) and the *Final Supplemental Environmental Impact Statement For Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M FSEIS, November 2000).
- ! Management of all survey and manage known sites located within the proposed project area would be accomplished in accordance with management direction listed on pages 8 through 14 of the standards and guidelines S&M ROD, January 2001. All of the known sites would be withdrawn from project areas which would minimize any soil disturbance and protect the known site micro-climate.
- ! All exposed mineral soil areas (roads to be constructed, cat/skid roads, landings) would be grass seeded with Oregon Certified (Blue tagged) red fescue (*Festuca rubra*) as a rate equal to 40 pounds per acre. Grass seed would be applied by the resource area fisheries

biologist at the completion of the contract.

- ! All known sites of any special attention vascular plant, lichen, bryophyte and fungi species within the proposed project area previously listed in the Northwest Forest Plan which are included in Table 1-2, *Species Removed from Survey and Manage, Protection Buffers and Protect From Grazing in all of Part of Their Range*, page 53, S&M ROD, or future amended tables would not receive any special protection from this proposed action.

Fish

- ! Follow ODFW Guidelines for timing of in-water work. (July 1 to September 15)
- ! Stabilize potential erosion areas.
- ! Minimize the number of access points through the riparian areas
- ! Minimize time in which heavy equipment is in the stream channel.
- ! Include an approved spill containment plan.
- ! Control sedimentation.
- ! No conifers should be felled in the riparian area unless conifers are fully stocked.
- ! Ensure culvert removal restores natural drainage pattern.
- ! Pull all culverts (approximately 30)
- ! Drain dip road approximately every 100 feet
- ! Seasonal restrictions of heavy machinery to times of low soil moisture

Comparison of Environmental Consequences, by Alternative, for Identified Issues.

Issue	Alternative 1	Alternative 2
Vegetation	Ten trees would be felled into Fall Creek Channel, seedlings released, and a minimal amount of disturbance for road decommission .	Trees would remain on bank, salmon berry would remain undisturbed.
Soils	Minor surface displacement and disturbance due to tree falling.	Soils would remain undisturbed where trees would be felled.
Water/Riparian/Fish	Enhanced channel complexity, restored hydrological flow regime and minimal disturbance from road project	Channel complexity would remain low. Bed load would move down stream and out of the reach.
Wildlife	Project would be of a disturbance nature only. No suitable habitat of older forest species would be altered.	Wildlife would not be affected by noise disturbance of falling of trees or the pull back of road sides.

III. DESCRIPTION OF THE AFFECTED ENVIRONMENT/ ENVIRONMENTAL CONSEQUENCES

This section describes the environmental features affected by culvert replacement, instream structure placement and associated activities, and the environmental consequences which would result from implementing the alternatives. A documentation of no affect to resources where review is required by statute, regulation, or executive order is included Appendix B. Resource values are not described in this section if there are no anticipated site-specific impacts, site-specific impacts are considered negligible, or the cumulative impacts described in the existing RMP EIS are considered adequate.

A. GENERAL

The proposed project area is located in T. 13 S., R. 8 W., Sections 7, and 8, W.M., in Lincoln County. The project area is in the Lower Alsea River Watershed. Land use allocations for the project area are Riparian Reserve and Late-Successional Reserve.

B. TOPOGRAPHY

The project area is situated primarily within the Riparian Reserve of Fall Creek and Bear Creek Road.

C. VEGETATION

Issue: Effects on special status/special attention species and habitats and noxious weeds.

Botany: Affected Environment

Special Status and Special Attention Species:

There are no known sites of any special status and/or special attention vascular plant, lichen, bryophyte and fungi species within any of the "new" proposed project areas. However, vascular plant, lichen, bryophyte and fungi surveys have not been conducted to protocol within any of these "new" proposed areas. These areas would be surveyed to protocol in the spring/early summer of 2002 prior to any activities within the project area.

None of the new proposed project area include habitat for *Bridgeoporus nobilissimus*. Thus, any fungi surveys would not be required.

Botany: Affected Environment

From a botanical point of view, not ripping the road surface will reduce the amount of mineral soil exposure. Exposed mineral soil enhances germination of many noxious weed species that we are attempting to control on this district. All areas of exposed mineral soil resulting from this project will be seeded with Red fescue a native grass.

D. SOILS/FUELS

Issue: Effects on soil displacement and compaction. Effects on fuel loading and fire risk.

Soils: Affected Environment

Soil material in the general vicinity of this project is composed primarily of mixed deposits of coarse textured colluvial and alluvial material. This material in the active flood plain has not remained in place long enough to develop distinct soil horizon characteristics and is generally called colluvial alluvial land. Further away from the streams there are increasing amounts of colluvial material and clay size particles. Above the flood plain zone Bohannon gravelly loam soils are predominant.

Fuels: Affected Environment

Mature Douglas-fir timber stand with salmonberry, vine maple and salal under story brush and associated timber litter fall.

Soils: Environmental Consequences

Replacing the culvert would only affect soil material in the road prism. This area is dedicated to "non forest road" use and productivity is not a consideration. Soil material removed to replace the culvert would be reused when installing the new pipe. Minor disturbance to soil surface and vegetation in the immediate area where trees hit the bank and slide toward the stream will occur. Existing duff and thick vegetation will minimize soil exposure and displacement.

Bear Creek Road

All of the drainage channels, drain dips and water bars would be built in stable locations. In isolated areas, the cut slopes have historically raveled during years with above normal precipitation. This in turn has resulted in ditch blockage and culvert inlet plugging. The culvert removal/drain dip/ water bar construction would allow free drainage from the road prism regardless of future raveling.

The road prism would remain fairly intact. The road bed is primarily full bench constructed with only small amounts of side cast. The excavated material was end hauled to stable ground. Side cast pullback would only occur in areas identified as potentially unstable. By leaving the minor amounts of existing side cast material intact, the stabilizing effect of the existing vegetation (including trees) would be maintained.

The roadbed would not be ripped. Past experience with ripping road subgrades lying over impermeable bed rock resulted in channeling of water in the furrows and saturation of subsurface material. By keeping most of the water on the surface, it will drain across the roadbed and onto the porous soil outside of the roadbed. There, it will spread out and percolate into the less disturbed soil profile and move downslope in the normal subsurface manner. This process will minimize saturation of the fill and reduce the already low risk of embankment failure.

Fuels: Environmental Consequences

Logs would be placed in the stream channel where much of the wood will remain moist and therefore not be available as fuel. The small amount of slash created from limbs and brush would be scattered on the site and not have a significant effect on risk of a fire start. This proposed action would not change the long term fire risk for this area. Short term, the increased risk of fire occurrence, resulting from operating power machinery in a forested environment would be low and can be mitigated by complying with standard ODF fire regulations. The stream environment itself is a mitigating factor due to the higher humidity, moister fuels, shading and close proximity to available water.

Alternative 2 (No Action)

Under the no action alternative current conditions would continue.

E. WATER/RIPARIAN

Issue: Effects on watershed hydrology, stream channels, and water quality.

Hydrology: Environmental Consequences

Fall Creek-

Alternative 1 (Proposed Action)

Watershed hydrology and sediment transport

Alterations in the capture, infiltration and routing (both surface and subsurface) of precipitation, as a consequence of the felling of trees, are theoretically possible. Some surface runoff near the active channel may be routed directly into the channel from trees which have fallen downslope and across streambanks and compacted the surface. However, the relatively small number of trees and the deep duff and vegetative layers covering the soil surface are expected to keep disturbance to a level that is within the range of “natural” disturbance events (e.g. windthrow and large storm events). At these low levels of disturbance dispersed over a large area, alterations to watershed hydrology are virtually unmeasurable. For this same reason, increases in surface erosion and fine sediment inputs to the channel, from disturbed surfaces adjacent to the active channel, are unlikely to increase turbidity above state water quality standard thresholds (< a 10% increase in turbidity between the above and below treatment reaches).

Channel morphology and function

Falling trees into the channel is anticipated to directly effect streamflow and channel morphology by altering channel geometry, reducing stream velocity and redirecting flow around the obstructions. Site specific affects can be anticipated, but cannot be precisely predicted. These include: reductions in stream gradient and flow velocity upstream of obstructions with consequent deposition of suspended materials and a fining of (i.e., reduction in the medium particle size) of channel substrates; bed scour and increased velocities downstream of obstructions; increased bank erosion in areas where logs divert stream flow into the bank; reductions in bank erosion in areas where logs divert flows away from the banks. Overall, the

increase in large wood in the channel is expected to decrease transit time for organic and inorganic materials moving through the system, increase hydraulic “complexity,” increase bank erosion (for the first several years), increase the quantity of sediment transported in the channel but reduce its rate of transport, increase sediment storage, increase complexity and alter the ratio of bed forms (i.e, pools and riffles), increase the frequency of over bank flood flows.

All of these affects are anticipated to be highest immediately after project implementation with a gradual diminution until a form of dynamic equilibrium is reached. Again, this can be anticipated but not precisely predicted because timing of this process will be highly dependent upon the timing, quantity and size of winter peak flow events, which are highly stochastic in nature. In addition, over time the retained logs are expected to trap wood moving downstream and trees in the riparian canopy will continue to grow, age and eventually fall into the channel. This will result in continued increases in the quantity and complexity of wood in the channel over the next century. It is anticipated that these alterations to channel morphology and hydraulics will directly increase habitat diversity, aquatic community complexity and structure, and the diversity of aquatic organisms to the benefit of aquatic species in Fall Creek (Wallace et al., 1995).

Stream Temperature

Shading along the project reach is currently adequate and this proposal will not substantially alter stream side shading here. The moderately steep hillslopes along this reach already provide a great deal of topographic shading. It is anticipated that small holes in the riparian canopy (less than 10 sq-meters) will occur in the vicinity of trees that are felled. While this has the potential to slightly increase the amount of water surface exposed to direct solar radiation, it is not expected to result in an increase in stream temperatures because the fallen trees will also provide additional shading directly over the channel and riparian canopies will quickly fill in where additional light is available. Over time, increases in the quantity of stored substrates and pools may lead to a slight decrease in summer stream temperatures in the main channel.

Alternative 2 (No Action)

High channel transport efficiency has likely exacerbated the poor habitat conditions in the main Fall Creek channel and the no action alternative would maintain these conditions. Placement of trees in the channel at this location is proposed, in part, to offset the expected effects to channel function and water quality that are anticipated to occur following the replacement of the Fall Creek culvert. Large quantities of substrate that have deposited upstream of the culvert will be available for scour and transport; increasing channel roughness downstream should reduce transport efficiency and help to retain more of this material for a longer period of time. The no action alternative will maintain channel roughness and transport efficiency at current levels, which are considered to be much higher than typically occurred in this system under a natural disturbance regime.

Environmental Consequences

Issue: Effects on watershed hydrology, stream channels, and water quality.

Bear Creek

Alternative 1 (Proposed Action)

Alterations in the capture, infiltration and routing (both surface and subsurface) of precipitation, as a consequence of the treatment and closure of the road, are probable. Out-sloping of the road bed and installation of rain-dips, if properly constructed, should act to disperse water off the road surface and onto stable slopes for infiltration. This would have the effect of partially restoring the timing and spatial routing of water that is currently captured on the road surface and routed to ditch relief culverts as well as directly to channels.

Since this road is below the typical elevation zone of rain-on-snow events (ROS), alterations to watershed hydrology resulting from snow accumulation and subsequent melting on the road surface would probably not be effected by this proposal.

Removal of stream crossing culverts would have the effect of restoring the natural sediment transport regime and would eliminate the potential for culvert and fill failure at those locations. In addition, channel morphology at the stream crossing location would recover, over a period of several years to decades, to approximately pre-disturbance condition. This proposal could result in small increases in stream turbidity at stream crossing locations during the period of channel adjustment. However, these are likely to be of short duration (visible only during large storm event) and are not likely to exceed State of Oregon turbidity standards.

No research was located for this analysis which has demonstrated any consistent advantage to ripping and side-cast pull back in all situations. In this case, side-cast materials from the initial road construction are well vegetated, show no indications of creep or instability, and have remained in place since road construction. Under these circumstances, it was determined that the risks that would result from the disturbance of side-cast materials likely outweigh the benefits.

Further, it was determined that sub-soiling of the road surface, in lieu of side-cast pullback, would be of little benefit to subsurface flow and routing and could potentially result in the destabilization of fills that are currently stable.

This proposal would alter very little riparian vegetation and would have little or no effect on stream shading. Therefore, it would be unlikely to have a measurable effect on the stream temperature regime in Bear Creek or its tributaries.

Alternative 2 (No Action)

The no action alternative would retain all of the current effects of this road to hillslope hydrology channel form and water quality as well as the inherent risks associated with infrequent repair of the road surface and culverts.

Beneficial uses associated with streams in the project area

Stream (Watershed)	Project Action	Beneficial Use	Distance from Project Action	Information Source
Lower Alsea River	Tree felling, conifer release, downed tree yarding into channel	Anadromous fish	Immediate	BLM
		Resident fish	Immediate	BLM
		Domestic use	> 10 miles	WRIS*
		Irrigation/live-stock watering	5 miles	WRIS*

* WRIS = *Water Rights Information System* of the Oregon Department of Water Resources

F. WILDLIFE/FISHERIES

Issue: Effects on special status, special attention and other wildlife species and their habitats.
Effects on fisheries and their habitats.

Fish: Affected Environment

Bear Creek and Fall Creek provide habitat for Steelhead trout (*Onchorynchus mykiss*), Coho salmon (*Onchorynchus kisutch*) and cutthroat trout (*Onchorynchus clarki*). Anadromous habitat extends approximately ½ mile on Bear Creek and ¾ mile on Fall Creek. Dominant substrate in both streams are gravel cobbles and boulders. Substrate above each culvert is predominantly smaller gravels trapped above the culverts. The confluence of Bear and Fall Creek has larger cobbles and boulders with stretches of bed rock and very little channel structure or roughness to slow down high flows and bed load material.

Fish: Environmental Consequences

Removal of fish barriers would allow fish to gain access to the upper reaches of these two streams. Material (substrate) would move down and channel conditions are expected to change as the stream reaches its new grade and levels out. Trees felled into the main stem Fall Creek would slow water velocities down and trap some material. This would aggrade the stream and provide fish with increased cover and habitat diversity.

Short-term negative impacts may occur as channels adjust to new grades and lower reaches fill up with bed load. Impacts would most likely be short term and occur during high flows when material is expected to move down stream.

For listed fish, negative impacts would be minor and short due to the ability to find cover during high flows and higher turbidity at peak flows. Long term impacts for fish would include increased spawning and rearing habitat and increased habitat diversity and channel structure.

Determination

This Large Woody Debris project and Road Decommissioning are *Likely to Adversely Affect Oregon Coast Coho Salmon* within the Oregon Coast Range Province due to increases in turbidity and sediment delivery to streams. This project meets the terms and conditions set forth in The Incidental Take Statement for Programmatic Biological Opinion Covering U.S. Forest Service and Bureau of Land Management Administrative Units Within the Coast Range Province, Oregon (December 21, 2001) for Coastal Coho Salmon, issued by NMFS. .

Wildlife: Affected Environment

The action area lies within the Lower Alsea River Watershed at the confluence of Fall and Bear Creeks. The tree falling occurs in Late-Successional Reserve (LSR), Riparian Reserve (RR), northern spotted owl designated critical habitat, and marbled murrelet designated critical habitat. There are no known active or inactive eagle nests in the general area. The closest known owl or murrelet sites are more than 3 miles to the southeast, however, the action is within 0.25 mile of unsurveyed suitable owl and murrelet habitat. Section 07 is dominated by early-seral forest habitat (stands 5-20 years old) with large patches (134 total acres) of late-seral (140 years old) habitat and with hardwood dominated areas. The ten trees marked for cutting come from three small clumps located in the stream-influence-zone between the Fall Creek Road and Fall Creek (see attached map; clumps are not to scale). The size of the clumps and the trees to be cut are as follows:

Clump	Trees in Clump	DBH of trees marked for cutting
A	13	30, 33, 36
B	14	28, 34
C	51	30, 31, 43, 31, 31

Clump A is the closest to the stream and the culvert, while clump C is farthest from the stream and culvert. Several of the trees marked for cutting are within a site-tree length of each other. The largest trees within each clump would remain uncut.

Wildlife: Environmental Consequences

This project is considered a *may affect not likely to adversely affect northern spotted owls, marbled murrelets and bald eagles*, and a *no effect for owl and murrelet critical habitat* for the following reasons:

1. Although most of the trees in each of the three clumps have reached the age and/or size to be considered suitable nesting habitat for eagles, owls and murrelets, they lack the structure necessary to be nest trees at this time.
2. Suitable nesting habitat occurs within close proximity to these three clumps where there are 134 acres of late-seral habitat present in several large patches in section 07. In addition to these patches the adjacent BLM sections have a significant amount of late-seral habitat.
3. The extremely small size of the clumps, their location adjacent to a well traveled road, and the fact that they will remain isolated from the existing late-seral stands may make them unsuitable nesting habitat for at least the next 80 years.

IV. MONITORING

Monitoring would be accomplished through contract administration and in accordance with monitoring guidelines in Appendix J of the RMP.

V. CONSULTATION

The proposed project was submitted for consultation to the U.S. Fish and Wildlife Service (FWS) in March, 2002. A Letter of Concurrence Log # 1-7-02-I-477 was received on April 10, 2002 regarding this project. The proposed action is considered a “may affect, not likely to adversely affect” northern spotted owls, marbled murrelets and bald eagles.

This project meets the terms and conditions of *The Incidental Take Statement for Programmatic Biological Opinion Covering U.S. Forest Service and Bureau of Land Management Administrative Units Within the Oregon Coast Range Province, Oregon* (December 20, 2001). Although the area where trees would be felled are established only in clumps, (not fully stocked) the falling of ten trees would not adversely affect future woody debris loading in the Fall Creek Channel. Young stands of conifers as well as older stands are well represented within the reach, outside of the clumps where trees would be felled. The Fall Creek Channel is confined by hillslopes (topographic shading). Due to the fact that future large wood potential is still high within this reach and shade is not impacted this condition from the programmatic would be met and maintained.

Appropriate permits would be obtained through the Division of State Lands and Oregon Department of Fish and Wildlife.

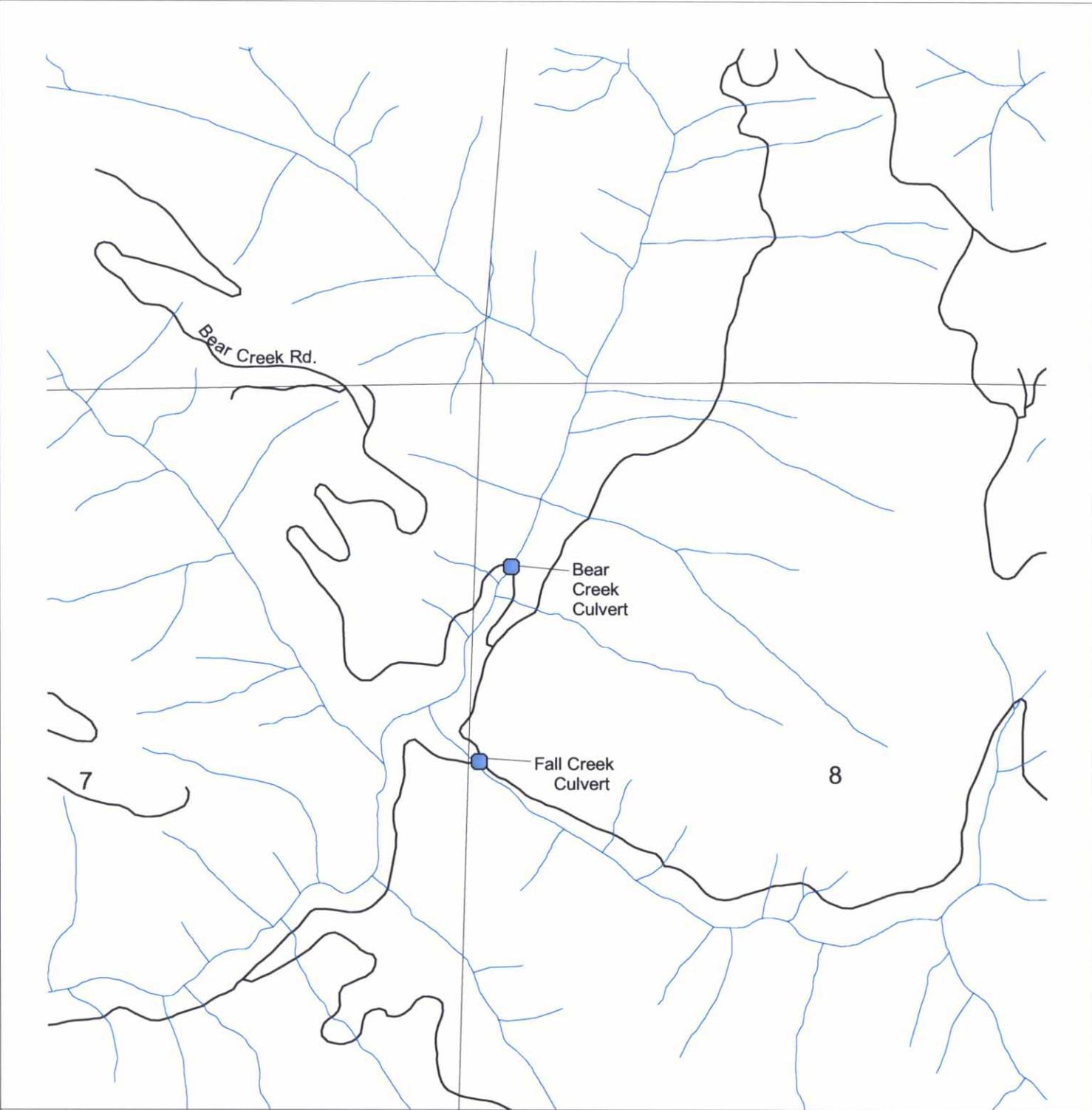
VI. INTERDISCIPLINARY TEAM MEMBERS

NAME	TITLE	DATE/INITIAL
Gary Licata	Wildlife Biologist	5/7/02 gal
Tom Tomczyk	Soil Scientist/Fuels Specialist	5/8/02 TST
Ron Exeter	Botanist	MAY 8, 2002 R.E.
Hugh Snook	Ecologist	MAY 8, 2002 HWS
Tom Vanderhoof	Cultural Specialist	TRV 5/9/02
Steve Liebhardt	Fisheries Biologist	SL 5/7/02
Patrick Hawe	Hydrologist	Patrick Hawe 5/7/02
Russ Buswell, Steve Cyrus	Civil Engineer	S.C. / PAB 5/7/02
Belle Smith	NEPA Coordinator	BS May 8, 2002

APPENDIX A: PROJECT MAPS

Map 1: Project Area

Map 2: Tree Clump Map



BEAR/ FALL CREEK RESTORATION PROJECT

Section 7,8 T. 13S.,R8W.

-  Streams
-  Roads
-  Section Boundary
-  Culvert Location



Fall Creek Log Placement

LEGEND

- T13S, R08W, Sec 07
- Green=Late-seral
- Yellow=Early-seral
- Blue=Hardwoods
- White Hatched=Private
- Clumps not to scale
- Scale 7"=1 mile

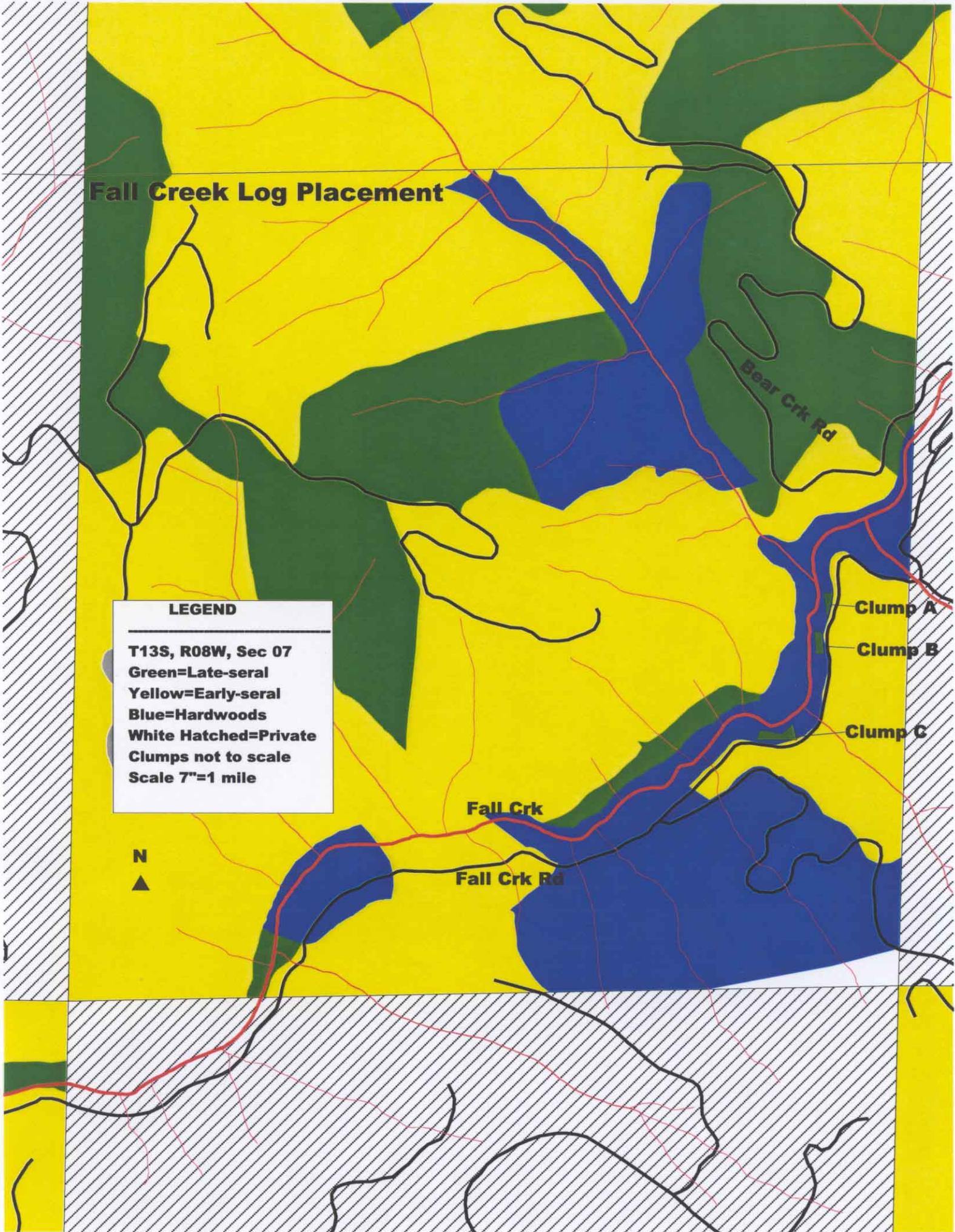


Clump A
Clump B
Clump C

Fall Crk

Fall Crk Rd

Bear Crk Rd



APPENDIX B: ENVIRONMENTAL ELEMENTS REVIEW SUMMARY

The following table summarizes environmental features which the Bureau of Land Management is required by law or policy to consider in all Environmental Documentation (BLM Handbook H-1790-1, Appendix 5: Critical Elements of the Human Environment).

ENVIRONMENTAL FEATURES

Environmental Feature	Affected/Not Affected	Remarks
Air Quality	Not Affected	No action proposed that would affect air quality
Areas of Critical Environmental Concern	Not Affected	Not in or adjacent to ACEC.
Cultural, Historic, Paleontological	Not Affected	No pre-project survey required as outlined in the protocol for managing cultural resources on Land administered by the BLM in Oregon Appendix D- Coast Range Inventory Plan
Prime or Unique Farm Lands	Not Affected	None in area
Flood Plains	Affected	See EA amendment pg. 8
Native American Religious Concerns	Not Affected	None known
Threatened, Endangered, or Special Status Plant Species or Habitat	Affected	All appropriate mitigation has been incorporated into design features. See Special pg 6 of EA amendment.

Threatened, Endangered, or Special Status Animal Species or Habitat	Wildlife: Affected Fish: Affected	All appropriate mitigation has been incorporated into design features. Letter of Concurrence has been received (Log # 1-7-02-I-477). This project adheres to the terms and conditions set forth in The Incidental Take Statement for Programmatic Biological Opinion Covering U.S. Forest Service and Bureau of Land Management Administrative Units Within the Coast Range Province, Oregon (December 21, 2002).
Hazardous or Solid Wastes	Not Affected	None on site. None to be created.
Drinking or Ground Water Quality	Not Affected	See Water / Riparian Section of EA amendment
Wetlands or Riparian Reserves	Affected	See Water / Riparian Section of EA amendment.
Invasive, Nonnative Species	Affected	See Botany Report in EA Amendment.
Environmental Justice	Not Affected	Project would not have disproportionately high or adverse human health or environmental effects on minority populations or low income populations.
Wild and Scenic Rivers	Not Affected	No wild and scenic rivers present.
Wilderness	Not Affected	No wilderness areas adjacent to project area.
National Energy Policy	Not Affected	Future energy resources would not be restricted.

COMMON ISSUES REVIEW

Resources	Affected/May Be Affected/Not Affected	Remarks
Special Attention Animal Species and Habitat	Affected	See Wildlife section in EA amendment. pg 11
Special Attention Plant Species and Habitat	Affected	No sites have been located; additional surveys to be completed in the spring of 2002.
Minerals	Not Affected	No known mining claims or mineral leases within project area.
Land Uses	Not Affected	VRM IV
Soils & Sedimentation	Affected	Minimal Disturbance
Water: DEQ 303(d) Listed Streams Water Temperature Water Quantity	affected	See water quality section pg 8
Rural Interface Areas	Not affected	No rural interface areas in project area.

Appendix C

AQUATIC CONSERVATION STRATEGY OBJECTIVES REVIEW SUMMARY (RMP pages 5-6)		
ACS Objective	Does the project meet ACS objectives?	Remarks / References
1) Maintain and restore distribution, diversity, and complexity of watershed and landscape features to ensure protection of aquatic systems.	Yes <u> X </u> No <u> </u>	This project is designed to enhance stream habitat diversity which will contribute to maintaining the distribution, diversity and complexity of watershed and land scape features. Replacing under-sized culverts will obtain adequate fish passage.
2) Maintain and restore spatial connectivity between watersheds.	Yes <u> X </u> No <u> </u>	This project is designed to reconnect stream channels by replacing culverts. Large woody debris will aid in streams interacting with their flood plains.
3) Maintain and restore physical integrity of the aquatic system including shorelines, banks and bottom configurations.	Yes <u> X </u> No <u> </u>	Replacing under-sized culverts with 100-year flood-size culverts and having them dug down into the channel would have a more natural bottom of the stream.
4) Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.	Yes <u> X </u> No <u> </u>	Small short-term increases in sediment may occur, but design features (seasonal restrictions, short skid trails, etc.) will keep sediment to a minimum. Long-term benefits include higher stream complexity and removal of fish passage barriers.

ACS Objective	Does the project meet ACS objectives?	Remarks / References
<p>5) Maintain and restore the sediment regime under which the system evolved.</p>	<p>Yes <u> X </u> No <u> </u></p>	<p>LWD functions to sort and store sediment in channels. Small short term inputs of sediment may occur, but will be kept to a minimum due to design features. These possible small inputs of sediment at the 5th field watershed scale are negligible.</p>
<p>6) Maintain and restore in-stream flows.</p>	<p>Yes <u> X </u> No <u> </u></p>	<p>Existing flows would not be modified and would have stream flows remain uninterrupted by culvert steps/ barriers</p>
<p>7) Maintain and restore the timing, variability, and duration of flood plain inundation and water table elevation in meadows and wetlands.</p>	<p>Yes <u> X </u> No <u> </u></p>	<p>Placement of LWD would help flows access the flood plain. However, this project would not affect the timing or variability</p>
<p>8) Maintain and restore the species composition and structural diversity of plant communities in riparian zones and wetlands to provide thermal regulation, nutrient filtering, and appropriate rates of bank erosion, channel migration and CWD accumulations.</p>	<p>Yes <u> X </u> No <u> </u></p>	<p>Project design minimizes the riparian disturbance; disturbed areas would be seeded with native grass seed. Due to flood plains having the flow reintroduced, riparian plant communities should benefit from this action.</p>
<p>9) Maintain and restore habitats to support well-distributed populations of native plant, invertebrate, and vertebrate riparian dependent species.</p>	<p>Yes <u> X </u> No <u> </u></p>	<p>There would be benefits to wetland function, riparian plants and other riparian dependant species. LWD would aid in streams interacting with their flood plains.</p>

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