

**Upper and Lower Alsea River Watershed Fish Passage Restoration
Environmental Assessment and
Finding of No Significant Impact**

Environmental Assessment Number OR-080-08-15

November 19, 2008

United States Department of the Interior
Bureau of Land Management
Oregon State Office
Salem District
Marys Peak Resource Area

Responsible Agency: USDI – Bureau of Land Management

Responsible Official: Trish Wilson, Field Manager
Marys Peak Resource Area
1717 Fabry Road SE
Salem, OR 97306 or
(503) 315-5969

For further information, contact: Scott Snedaker, Project Lead
Marys Peak Resource Area
1717 Fabry Road SE
Salem, OR 97306
(503) 315-5928



Abstract: This (EA) environmental assessment discloses the predicted environmental effects of the Upper and Lower Alsea Watershed Fish Passage Restoration Project in the vicinity of Alsea, Oregon. The actions would occur within RR (Riparian Reserve) LUA (Land Use Allocation) on BLM managed lands and on private lands.

As the Nation's principal conservation agency, the Department of Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering economic use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

FINDING OF NO SIGNIFICANT IMPACT

Introduction

The BLM (Bureau of Land Management) has conducted an environmental analysis (Environmental Assessment Number OR080-08-15) for a proposal to restore fish passage for anadromous and resident fish by replacing and/or improving six stream crossing culverts and removing a portion of a trash rack within the Upper and Lower Alsea River 5th field Watersheds. The project would provide the following:

- Restore fish passage to approximately three miles of anadromous fish and resident fish habitat.
- Restore instream and aquatic habitat.
- Follow ODFW guidelines for timing for in-water work (July 1 to August 31).

Implementation of the proposed action will conform to management actions and direction contained in the attached *Upper and Lower Alsea River Watershed Fish Passage Restoration Environmental Assessment* (Upper and Lower Alsea River Watershed Fish Passage Restoration EA). The Upper and Lower Alsea River Watershed Fish Passage Restoration EA is attached to and incorporated by reference in this FONSI (Finding of No Significant Impact) determination. The analysis in this EA is site-specific and supplements analyses found in the RMP/FEIS (*Salem District Proposed Resource Management Plan/Final Environmental Impact Statement*, September 1994) (EA p. 5). The Upper and Lower Alsea River Watershed Fish Passage Restoration EA has been designed to conform to the RMP (*Salem District Record of Decision and Resource Management Plan*, May 1995), and related documents which direct and provide the legal framework for management of BLM-managed lands within Marys Peak RA (Resource Area) (EA pg. 3). Consultation with the U.S. Fish and Wildlife Service and NOAA (National Oceanic and Atmospheric Administration) NMFS (National Marine Fisheries Service) is described in Section 6.1 of the EA.

The EA and FONSI will be made available for public review at the Salem District office and on the internet at Salem BLM's website, <http://www.blm.gov/or/districts/salem/index.htm> (under Plans and Project) from November 20, 2008 to December 19, 2008. The notice for public comment will be published in a legal notice by the *Corvallis Gazette Times* newspaper. Comments received by the Marys Peak Resource Area of the Salem District Office, 1717 Fabry Road SE, Salem, Oregon 97306, on or before December 19, 2008 will be considered in making the decisions for this project.

Finding of No Significant Impact

Based upon review of the Upper and Lower Alsea River Watershed Fish Passage Restoration EA and supporting documents, I have determined that the proposed action is not a major federal action and would not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. No site specific environmental effects meet the definition of significance in context or intensity as defined in 40 CFR 1508.27. Therefore, supplemental or additional information to the analysis done in the RMP/FEIS through a new environmental impact statement is not needed. This finding is based on the following information:

Context: Potential effects resulting from the implementation of the proposed action have been analyzed within the Upper and Lower Alsea River 5th-field Watersheds.

The proposed action would occur at six stream crossing sites, all located within the RR LUA and private land, altering access on approximately 1 percent of the roads and 0.1 percent of the streams within the Lower Alsea River Watershed and approximately 0.3 percent of the roads and 0.2 percent of the streams within the Upper Alsea River watershed [40 CFR 1508.27(a)].

Intensity:

1. The *Project* is unlikely to have any significant adverse impacts on the affected elements of the environment (EA section 3.2 – vegetation, fuels/air quality, wildlife, soils, water, and fisheries/aquatic habitat).

With the implementation of the project design features described in EA section 2.2.2, potential effects to the affected elements of the environment are anticipated to be site-specific and/or not measurable (i.e. undetectable over the watershed, downstream, and/or outside of the project areas). The project is designed to meet RMP Standards and Guidelines, modified by subsequent direction (EA section 1.3); and the effects of the project would not exceed those effects described in the RMP/FEIS [40 CFR 1508.27(b) (1), EA section 3.2].

2. The *Project* would not affect:
 - ✓ Public health or safety [40 CFR 1508.27(b)(2)];
 - ✓ Unique characteristics of the geographic area [40 CFR 1508.27(b)(3)] because there are no historic or cultural resources, parklands, prime farmlands, wild and scenic rivers, wilderness, or ecologically critical areas located within the project areas (EA section 3.1);
 - ✓ Districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places, nor would the proposed action cause loss or destruction of significant scientific, cultural, or historical resources [40 CFR 1508.27(b)(8)] (EA section 3.1).
3. The *Project* is not unique or unusual. The BLM has experience implementing similar actions in similar areas without highly controversial [40 CFR 1508.27(b)(4)], highly uncertain, or unique or unknown risks [40 CFR 1508.27(b)(5)].
4. The *Project* does not set a precedent for future actions that may have significant effects, nor do they represent a decision in principle about a future consideration [40 CFR 1508.27(b)(6)]. The BLM has experience implementing similar actions in similar areas without setting a precedent for future actions.
5. The interdisciplinary team evaluated the *Project* in context of past, present and reasonably foreseeable actions [40 CFR 1508.27(b)(7)]. Potential cumulative effects are described in the attached EA. These effects are not likely to be significant because of the project's scope (effects are likely to be too small to be measurable), scale (proposed action would occur at six stream crossing sites, all located within the RR LUA and private land, altering access on approximately 1 percent of the roads and 0.1 percent of the streams within the Lower Alsea River Watershed and approximately 0.3 percent of the roads and 0.2 percent of the streams

within the Upper Alsea River watershed) and duration (direct effects would occur over a maximum period of one year following replacement) (EA section 3.2).

6. The Project is expected to adversely affect Endangered or Threatened Species listed under the Endangered Species Act (ESA) of 1973 [40 CFR 1508.27(b) (9)].

NOAA (National Oceanic Atmospheric Administration) NMFS (National Marine Fisheries Service)

Consultation with NOAA NMFS is required for all actions which ‘may affect’ listed fish species and critical habitat under the ESA (Endangered Species Act of 1973) [40 CFR 1508.27 (b)(9)].

Proposed actions which ‘May Affect’ would comply with existing programmatic consultation and relevant design criteria, and no additional consultation would be necessary. Existing programmatic consultation covers culvert replacement for in-stream restoration projects. Culvert replacement for in-stream restoration is covered under NOAA NMFS *Endangered Species Act Section 7 Formal Programmatic Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for Fish Habitat Restoration Activities in Oregon and Washington, CY2007-CY2012*.

Protection of EFH (Essential Fish Habitat) as described by the Magnuson/Stevens Fisheries Conservation and Management Act and consultation with NOAA NMFS is required for all projects which may adversely affect EFH of Chinook and coho salmon. The proposed actions in the Upper and Lower Alsea River Watershed Fish Passage Restoration EA are anticipated to adversely affect EFH. Programmatic consultation coverage for adverse affects to EFH due to culvert replacement for in-stream restoration projects is also under NOAA NMFS *Endangered Species Act Section 7 Formal Programmatic Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for Fish Habitat Restoration Activities in Oregon and Washington, CY2007-CY2012*.

U. .S. Fish and Wildlife Service

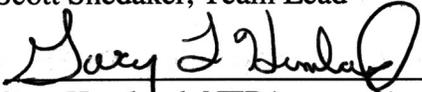
No effects to northern spotted owl, northern spotted owl critical habitat, and marbled murrelet critical habitat would occur from replacing six culverts in the Upper and Lower Alsea River Watersheds.

A “may affect, not likely to adversely affect” determination was made for marbled murrelet during the breeding period July 1 to August 31 due to replacing six culverts in the Upper and Lower Alsea River Watersheds. Actions associated with this project have been consulted upon under the *Biological assessment for activities intended to enhance habitat for native fish species in Oregon and Washington, Region 6 FS and Oregon State Office BLM, Portland, OR (2006)*, and *Final modifications to proposed action: biological assessment for activities intended to enhance habitat for native fish species in Oregon and Washington, Region 6 USFS, Oregon State Office, BLM, Portland, OR (2007)*. A letter of concurrence and biological opinion was issued by the USFWS based upon the information provided in the biological assessment (USFWS reference #13420-2007-F-0055, June 14, 2007).

7. The *Project* does not violate any known Federal, State, or local law or requirement imposed for the protection of the environment [40 CFR 1508.27(b)(10)].

Prepared by: 
Scott Snedaker, Team Lead

11/13/08
Date

Reviewed by: 
Gary Humbard, NEPA

11/13/08
Date

Approved by: 
Trish Wilson, Field Manager
Marys Peak Resource Area

11/19/08
Date

Glossary: Abbreviations, Acronyms, and Terms

Glossary Item	Definition
ACS	Aquatic Conservation Strategy. A set of objectives developed to restore and maintain the ecological health and aquatic habitat of watersheds
Alternative	Proposed project (plan, option, choice)
Anadromous fish	Species that migrate to oceans and return to freshwater to reproduce
BLM	Bureau of Land Management. Federal agency within the Department of Interior responsible for the management of 275 million acres
BMP	Best Management Practice(s). Design features and mitigation measures to minimize environmental effects
CEQ	Council of Environmental Quality, established by the National Environmental Policy Act of 1969
CEQ Regulations	Regulations that tell how to implement NEPA
Cumulative Effects	Past, present, and reasonably foreseeable effects added together (regardless of who or what has caused, is causing, and might cause those effects)
CWD	Coarse Woody Debris refers to a tree (or portion of a tree) that has fallen or been cut and left in the woods. Usually refers to pieces at least 20 inches in diameter as described in Northwest Forest Plan
EA	Environmental Assessment
ESA	Endangered Species Act. Federal legislation that ensures federal actions would not jeopardize or elevate the status of living plants and animals
FEIS	Final Environmental Impact Statement
FLPMA	Federal Land Policy Management Act
FONSI	Finding of No Significant Impact
Invasive Plant	Any vascular plant that 1) are not part of (if exotic), or are a minor component of (if native), the original plant community or communities; 2) have the potential to become a dominant or co-dominant species on the site if their future establishment and growth is not actively controlled by management and growth is not actively controlled by management interventions; or 3) are classified as exotic or noxious plants under state or federal law. Species that become dominant for only one to several years (eg. short-term response to drought or wildfire) are not invasive plants
LSRA	Late Successional Reserve Assessment for Oregon’s Northern Coast Range Adaptive Management Area, USDA Forest Service, USDI BLM 1998)
LUA	Land Use Allocation. NWFP designated lands to be managed for specific objectives

Glossary Item	Definition
LWD	Large Woody Debris. Woody material found within the bankfull width of the stream channel and is specifically of a size 23.6 inches diameter by 33 feet length (per ODFW - Key Pieces)
NEPA	National Environmental Policy Act (1969)
NMFS	National Marine Fisheries Service. Federal agency within NOAA which is responsible for the regulation of anadromous fisheries in the U. S.
NOAA	National Oceanic Atmospheric Administration. Agency within the Department of Commerce responsible for regulating migratory fisheries
Non-Native Plant	Any species that historically does not occur in a particular ecosystem or were introduced
Non-Point	No specific site
Noxious weed	A plant species designated by federal or state law as generally possessing one or more of the following characteristics: aggressive and difficult to manage; parasitic; a carrier or host of serious insects or diseases; or non-native, new, or not common to the United States
NWFP	Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Related Species within the Range of the Northern Spotted Owl (1994) (Northwest Forest Plan)
ODEQ	Oregon Department of Environmental Quality
ODFW	Oregon Department of Fish and Wildlife. Oregon State Agency responsible for the management and protection of fish and wildlife
RMP	Salem District Record of Decision and Resource Management Plan (1995)
RMP/FEIS	Salem District Proposed Resource Management Plan / Final Environmental Impact Statement (1994)
ROD	Record of Decision. Document that approves decisions to the analyses presented in the FEIS
RR	Riparian Reserves (NWFP land use allocation). Lands on either side of streams or other water feature designated to maintain or restore aquatic habitat
Rural Interface	BLM-managed lands within ½ mile of private lands zoned for 1 to 20 acre lots. Areas zoned for 40 acres and larger with homes adjacent to or near BLM-managed lands
Seral	One stage of a series of plant communities that succeed one another.
Snag	A dead standing tree lacking live needles or leaves

Glossary Item	Definition
SPZ	Stream Protection Zone is a buffer along streams where no material would be removed and heavy machinery would not be allowed. The minimum distance is 50 feet
Turbidity	Multiple environmental sources which causes water to change conditions
USDI	United States Department of the Interior
USEPA	United States Environmental Protection Agency
VRM	Visual Resource Management, all lands are classified from 1 to 4 based on visual quality ratings

Upper and Lower Alsea River Watershed Fish Passage Restoration Environmental Assessment

1.0	INTRODUCTION	1
1.1	Project Covered in this EA	1
1.2	Project Area Location	1
1.3	Conformance with Land Use Plans, Policies, and Programs.....	6
1.4	Decision Criteria/Project Objectives.....	8
1.5	Results of Scoping	8
1.6	Purpose of and Need for Action.....	8
2.0	ALTERNATIVE DEVELOPMENT	9
2.1	Alternative 1 (No Action)	9
2.2	Alternative 2 (Proposed Action)	9
	2.2.1 Project Design Features	9
	2.2.2 Comparison of Alternatives With Regard to Purpose and Need	11
3.0	AFFECTED ENVIRONMENT AND ENVIRONMENTAL EFFECTS - COMMON TO PROJECT LOCATIONS.....	16
3.1	Identification of Affected Elements of the Environment.....	16
3.2	Affected Environment and Environmental Effects.....	19
	3.2.1 Fisheries/Aquatic Habitat.....	19
	3.2.2 Water.....	26
	3.2.3 Soils.....	29
	Because the effects of the proposed action on soils are expected to be short-term and localized, cumulative effects are not anticipated. The combined effect of the proposed action is not expected to exceed those described above for each individual action.....	29
	3.2.4 Vegetation.....	30
	There would be no effect to SS botanical and fungal species since none are known from the areas and potential habitat is not present. As mentioned above, the risk rating for any adverse effects with the implementation of this project is low.....	31
	3.2.5 Fuels.....	31
	3.2.6 Wildlife	32
	3.2.7 Recreation/Rural Interface/Visual Resources	34
4.0	Compliance with the Aquatic Conservation Strategy	35
5.0	LIST OF PREPARERS.....	38
6.0	CONTACTS AND CONSULTATION	38
6.1	Agencies, Organizations, and Persons Consulted (ESA Section 7 Consultation)	38
6.2	Cultural Resources - Section 106 Consultation and Consultation with State Historical Preservation Office	39
6.3	Public Scoping and Notification-Tribal Governments, Adjacent Landowners, General Public, and State County and local government offices	39
	6.3.1 EA public comment period	40
7.0	MAJOR SOURCES.....	40
7.1	Interdisciplinary Team Reports.....	40
7.2	Additional References.....	40

1.0 INTRODUCTION

1.1 Project Covered in this EA

One project will be analyzed in this EA. Upper and Lower Alsea River Watershed Fish Passage Restoration is a proposal to restore fish passage to approximately three miles of anadromous and resident fish habitat. The project would replace six stream crossing culverts that currently block fish passage with six culverts that would allow fish passage. The project would also remove a portion of a trash rack that also blocks fish passage.

1.2 Project Area Location

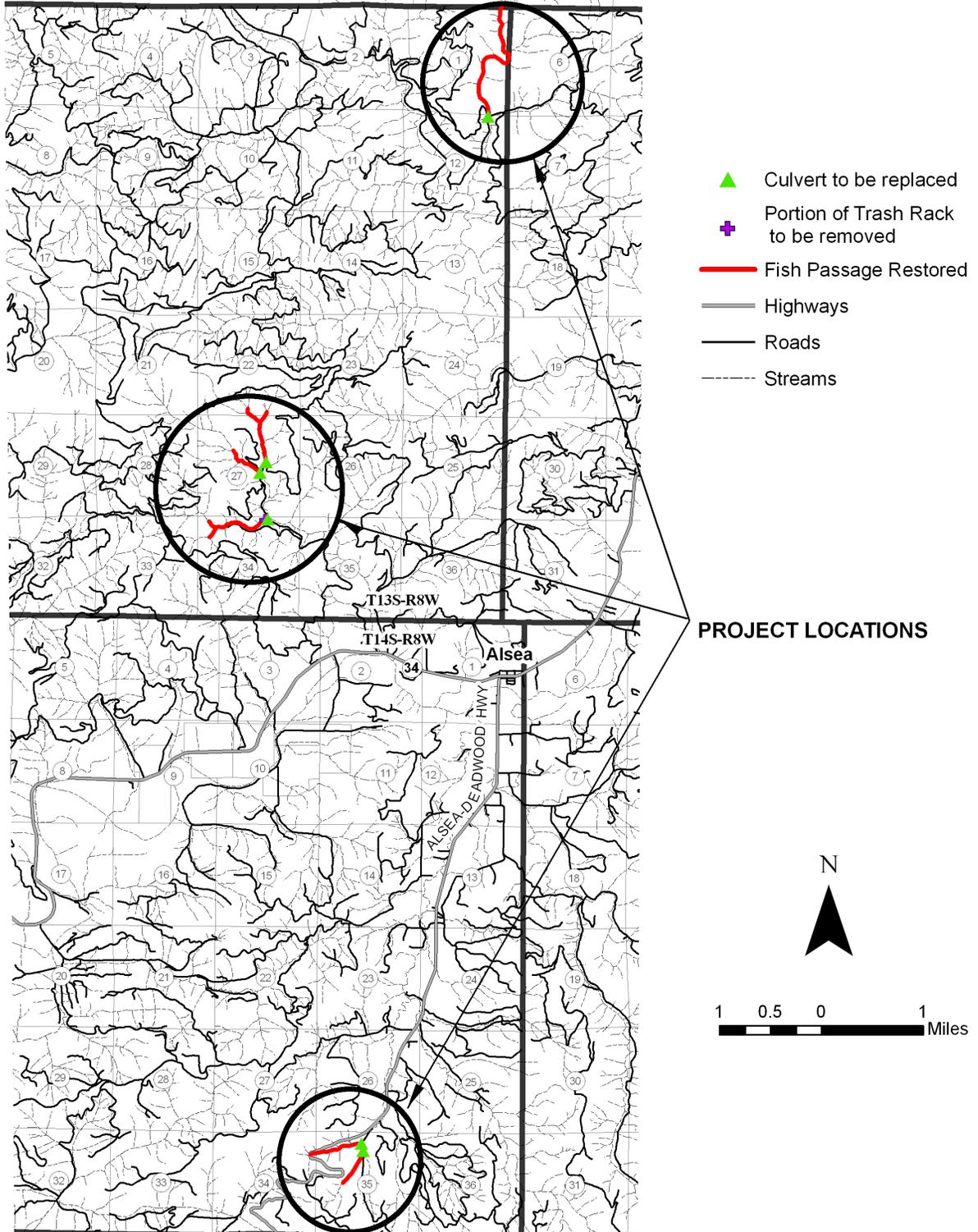
The project area is located approximately 15 air miles southwest of Corvallis, Oregon, in Benton County on forested land managed by the Marys Peak Resource Area, Salem District of the Bureau of Land Management (BLM), Weyerhaeuser Company and Starker Forests Inc. The project area lies within the Upper and Lower Alsea River Watersheds and is within Township 13 South, Range 8 West, Sections 12, 27 and 34 and Township 14 South, Range 8 West, Section 35 Willamette Meridian.

The proposed project is within the RR (Riparian Reserve) LUA (land use allocation) and on private lands in the Marys Peak Resource Area of the Salem District.

October 15, 2008

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Upper and Lower Alsea River WA Fish Passage Restoration
PROJECT LOCATION MAP

T. 13 S., R. 8 W., Sections 12, 27 & 34 and T. 14 S., R. 8 W., Section 35, W.M. - SALEM DISTRICT, OREGON





Culvert blocking Fish Passage on West Fork Mill Creek in the Lower Alsea River Watershed (2008).

Example Culvert Replacement Restoring Fish Passage on Fall Creek in the Lower Alsea River Watershed (2005)



1.3 Conformance with Land Use Plans, Policies, and Programs

The Upper and Lower Alsea River Watershed Fish Passage Restoration Project has been designed to conform to the following documents, which direct and provide the legal framework for management of BLM-managed lands within the Salem District:

- RMP (*Salem District Record of Decision and Resource Management Plan*, May 1995);
- NWFP (the Northwest Forest Plan or *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl*, April 1994);
- *2007 Record of Decision To Remove the Survey and Manage Mitigation Measure Standards and Guidelines from Bureau of Land Management Resource Management Plans Within the Range of the Northern Spotted Owl* (July 2007) and Instruction Memorandum No. OR-2008-038 (Transmittal of State Director's Special Status Species List, February, 2008).

The analysis in the Upper and Lower Alsea River Watershed Fish Passage Restoration EA is site-specific and supplements analyses found in the RMP/FEIS (*Salem District Proposed Resource Management Plan/Final Environmental Impact Statement*, September 1994). The RMP/FEIS includes the analysis from the NWFP/FSEIS (*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). The RMP/FEIS is amended by the *2007 Final Supplement to the 2004 Final Supplemental Environmental Impact Statement to Remove or Modify The Survey and Manage Mitigation Measure Standards and Guidelines* (June 2007).

The proposed action is located within the coastal zone as defined by the Oregon Coastal Management Program.

The following documents provided additional direction in the development of the Upper and Lower Alsea River Watershed Fish Passage Restoration Project: 1/ *Late Successional Reserve Assessment, Oregon Coast Province - Southern Portion* (June 1997), 2/ *North Fork Alsea River Watershed Analysis*, July 1996; *South Fork Alsea Watershed Analysis*, October 1995 and *Lower Alsea River Watershed Analysis*, December 1999.

These documents are available for review in the Salem District Office. Additional information about the proposed project is available in the Upper and Lower Alsea River Watershed Fish Passage Restoration Project EA Analysis File (NEPA file), also available at the Salem District Office.

Survey and Manage Review

The Bureau of Land Management (BLM) is aware of the August 1, 2005, U.S. District Court order in *Northwest Ecosystem Alliance et al. v. Rey et al.* which found portions of the *Final Supplemental Environmental Impact Statement to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines* (January, 2004) (EIS) inadequate. Subsequently in that case, on January 9, 2006, the Court ordered:

- set aside the 2004 Record of Decision *To Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines in Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern spotted Owl* , (March, 2004) (2004 ROD) and
- reinstate the 2001 *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measure Standards and Guidelines*, January, 2001), including any amendments or modifications in effect as of March 21, 2004.

In Northwest Ecosystem Alliance et al. v. Rey et al the U.S. District Court modified its order on October 11, 2006, amending paragraph three of the January 9, 2006 injunction. This most recent order directs:

"Defendants shall not authorize, allow, or permit to continue any logging or other ground-disturbing activities on projects to which the 2004 ROD applied unless such activities are in compliance with the 2001 ROD (as the 2001 ROD was amended or modified as of March 21, 2004), except that this order will not apply to:

- a. Thinning projects in stands younger than 80 years old;
- b. Replacing culverts on roads that are in use and part of the road system, and removing culverts if the road is temporary or to be decommissioned;
- c. Riparian and stream improvement projects where the riparian work is riparian planting, obtaining material for placing in-stream, and road or trail decommissioning; and where the stream improvement work is the placement large wood, channel and floodplain reconstruction, or removal of channel diversions; and
- d. The portions of project involving hazardous fuel treatments where prescribed fire is applied. Any portion of a hazardous fuel treatment project involving commercial logging will remain subject to the survey and management requirements except for thinning of stands younger than 80 years old under subparagraph a. of this paragraph."

On July 25, 2007, the Under Secretary of the Department of Interior signed a new Record of Decision *To Remove the Survey and Manage Mitigation Measure Standards and Guidelines from Forest Service Land and Resource Management Plans Within the Range of the Northern Spotted Owl* that removed the survey and manage requirements from all of the BLM resource management plans (RMPs) within the range of the northern spotted owl. In any case, this project falls within at least one of the exceptions (exception b) listed in the modified October 11, 2006 injunction.

Compliance with the Aquatic Conservation Strategy

On March 30, 2007, the District Court, Western District of Washington, ruled adverse to the USFWS (US Fish and Wildlife Service), NOAA-Fisheries (National Oceanic and Atmospheric Administration) and USFS and BLM (Agencies) in *Pacific Coast Fed. of Fishermen's Assn. et al v. Natl. Marine Fisheries Service, et al and American Forest Resource Council*, Civ. No. 04-1299RSM (W.D. Wash) (PCFFA IV). Based on violations of ESA (the Endangered Species Act) and NEPA (the National Environmental Policy Act), the Court set aside:

- the USFWS Biological Opinion (March 18, 2004),
- the NOAA-Fisheries Biological Opinion for the ACS Amendment (March 19, 2004),
- the ACS Amendment Final Supplemental Environmental Impact Statement (FSEIS) (October 2003), and
- the ACS Amendment adopted by the Record of Decision dated March 22, 2004.

Previously, in *Pacific Coast Fed. Of Fishermen's Assn. v. Natl. Marine Fisheries Service*, 265 F.3d 1028 (9th Cir. 2001)(PCFFA II), the United States Court of Appeals for the Ninth Circuit ruled that because the evaluation of a project's consistency with the long term, watershed level ACS objectives could overlook short term, site-scale effects that could have serious consequences to a listed species, these short term, site-scale effects must be considered.

1.4 Decision Criteria/Project Objectives

The Marys Peak Resource Area Field Manager will use the following criteria/objectives in selecting the alternative to be implemented. The field manager would select the alternative that would best meet these criteria. The selected action would:

- Meet the purpose and need of the project (EA section 1.6)
- Comply with the *Salem District Record of Decision and Resource Management Plan*, May 1995 (RMP) and related documents which direct and provide the legal framework for management of BLM-managed lands within the Salem District (EA section 1.3)
- Would not have significant impact on the affected elements of the environment beyond those already anticipated and addressed in the RMP EIS.

1.5 Results of Scoping

A scoping letter, dated August 30, 2008, was sent to 21 potentially affected and/or interested individuals, groups, and agencies. One supportive response was received during the scoping period.

1.6 Purpose of and Need for Action

The BLM proposes to restore fish passage to approximately three miles of anadromous and resident fish habitat. These activities would include the replacement of six stream crossings located on BLM-managed land (Mill Creek and North Fork Mill Creek) and within BLM administered roads located on private land (Brown Creek, West Fork Mill Creek, and Parker Creek). The existing culverts at these sites are undersized for meeting 100 year flow events, are increasingly at risk of failure due to age and deterioration, and are currently blocking fish passage. The LUA for this activity is RR.

The following describe the purpose for the action:

- Promote the rehabilitation of at-risk fish stocks and their habitat as directed (RMP p. 27).
- Rehabilitate streams and other waters to enhance natural populations of anadromous and resident fish. Rehabilitation measures may include, but not be limited to fish passage improvements (RMP p. 27).
- Improve habitat conditions for coho salmon, steelhead and cutthroat trout and assist in restoring and improving ecological health of watersheds and aquatic systems by replacing failing culverts and improving fish passage (RMP, p. 62).

There is a need to:

- Replace culverts located within six stream crossing locations on the following BLM administered roads: 13-8-1, 14-8-26.3 and 14-8-3.1 and remove a portion of a trash rack (see attached maps). The new structures would meet 100 year flood criteria, would be counter-sunk and placed at a gradient to facilitate anadromous and resident fish passage, and would approximate the normal bank-full stream width.

There is tentative approval for funding to replace three culverts in FY 2009. The remainder of the project would be considered when funding becomes available.

2.0 ALTERNATIVE DEVELOPMENT

Pursuant to Section 102 (2) (E) of the National Environmental Policy Act of 1969, as amended (NEPA), Federal agencies shall “Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.” No unresolved conflicts were identified. Therefore, this EA will analyze the effects of the Alternative 1 (No Action) and Alternative 2 (Proposed Action).

2.1 Alternative 1 (No Action)

The BLM would not implement the proposed action at this time. Under this alternative, the existing processes would proceed without intervention of any management action beyond standard maintenance activities. This alternative serves to set the environmental baseline for comparing effects to the action alternative.

2.2 Alternative 2 (Proposed Action)

The project would replace six culverts within anadromous and resident fish bearing streams with culverts that meet fish passage and 100 year flood criteria.

2.2.1 Project Design Features

The following is a summary of the design features that reduce the risk to the affected elements of the environment described in EA section 3.2.

Culvert Design

- Existing structures would be replaced with a countersunk culvert designed to meet 100 year peak flood events and hydraulic capacity would compensate for expected deposition in the culvert bottom.
- Excavated fill material removed during replacement of culverts would be temporarily stored on, or immediately adjacent to, the existing road. Excavated material deemed excess or unsuitable for reuse (waste material) would be end hauled to suitable, stable locations nearby.
- Waste material would be placed on slopes less than 50 percent and not adjacent to head walls or streams. Waste piles would be sloped with gentle back slopes approximately 2:1.
- To replace the existing culverts some trees may need to be felled. Felled trees, slash and cut brush would be removed and disposed of in the following manner:
 - With approval of the area fisheries biologist, larger material would be placed in adjacent stream channels, left on site, or placed down stream of culverts.
 - Minimal amounts of brush would be scattered on site in the areas away from the road surfaces, but no accumulations would be created.

- Accumulated piles of debris would be disposed of by chipping or would be end hauled and deposited at approved sites.

Botanical

- The resource area biologist or botanist would be notified if any animal or plant Special Status (SS) species are found occupying proposed treatment sites during project activities. If the species is a federal listed Endangered Species Act (ESA) species then all of the known sites would be withdrawn from any treatments. If the species is other than a federal listed ESA species, then appropriate mitigation action would be taken.
- All soil disrupting equipment moved into the project area would be required to be clean of dirt and vegetation as directed by the Authorized Officer.
- All large areas of exposed mineral soil, as determined by the Authorized Officer and all excess soil "waste areas" would be sown with Oregon Certified (blue tagged) red fescue (*Festuca rubra*) at a rate equal to 40 pounds per acre or sown/planted with other native species as approved by the resource area botanist.

Fisheries/Hydrology/Soils

- The relevant *Design Criteria* and *Conservation Measures* described as part of the Fish Passage and Bridge Project would be followed as outlined in *Endangered Species Act Section 7 Formal Programmatic Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for Fish Habitat Restoration Activities in Oregon and Washington, CY2007-CY2012*, June 27, 2008.
 - Fish passage culverts would be designed as a minimum to bankfull width conditions.
 - Fish passage culverts would be installed at six percent gradient or less.
 - Closed bottom culverts (round, pipe-arch, or box culverts) would be countersunk into the streambeds to a minimum of 20 percent of culvert height.
 - Stream banks would be stabilized where necessary using on site logs and boulders.
 - Use of large rock riprap would be minimized and limited to use as scour protection on the road embankments adjacent to the culverts and placed above bankfull height.
 - Grade control structures may be used above or below the culvert to prevent headcutting.
 - To minimize sedimentation downstream of the project sites, stream water would be pumped or piped through the construction areas.
 - Conduct fish salvage at all dewatered reaches.
 - All equipment used for instream work shall be cleaned and leaks repaired prior to entering the work area. Remove external oil and grease, along with dirt and mud, prior to construction. Inspect equipment daily for leaks or accumulations of grease, and fix any identified problems before entering streams or areas that drain directly to streams.
 - Power equipment would be staged and refueled outside the riparian zone, at designated locations where no spilled material may reach flowing water.
- The road running surfaces would be re-rocked.

Wildlife

- All project activities that are implemented between April 1 and September 15 would not begin until two hours after sunrise and would end two hours before sunset.
- The resource area wildlife biologist would be notified if any additional sites of federally listed wildlife species are found occupying stands within 0.25 miles of project areas.

Archaeology

- The project area occurs in the Oregon Coast Range. Survey techniques are based on those described in Appendix D of the *Protocol for Managing Cultural Resource on Lands*

Administered by the Bureau of Land Management in Oregon. Post-project survey would be conducted according to standards based on slope defined in the Protocol appendix. Ground disturbing work would be suspended if cultural material is discovered during project work until an archaeologist can assess the significance of the discovery.

Table 2: Season of Allowable Operation/Operating Conditions

Season of Operation or Operating Conditions	Applies to Operation	Objective
July 1 to August 31	In-stream work	Minimize soil erosion/stream sedimentation

2.2.2 Comparison of Alternatives With Regard to Purpose and Need

Table 3: Comparison of Alternatives with Regard to Purpose and Need

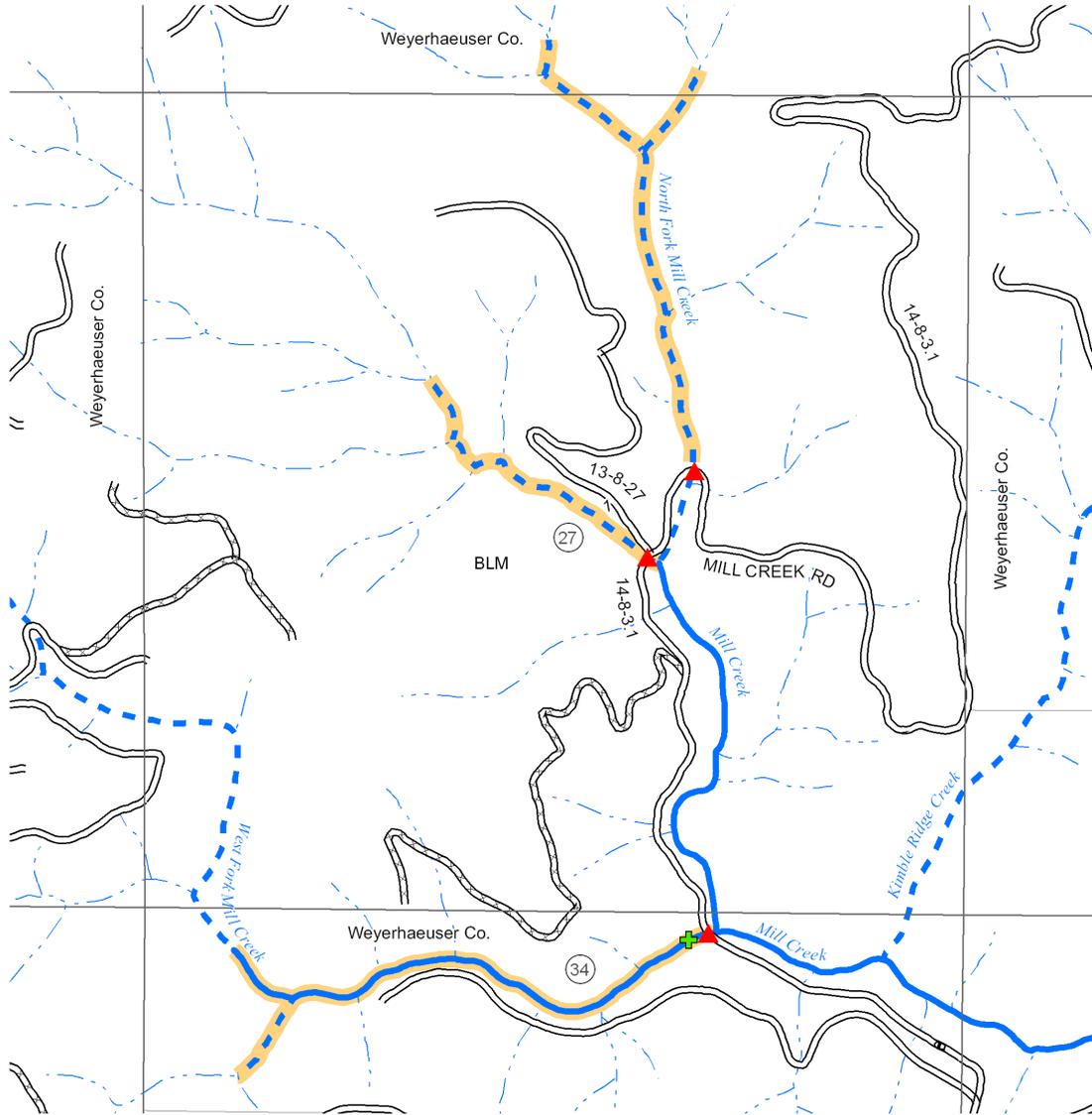
Purpose and Need (EA section 1.6)	Alternative 1 (No Action)	Alternative 2 (Proposed Action)
Number of stream crossing treatments which would improve habitat conditions for coho salmon, steelhead and cutthroat trout and assist in restoring and improving ecological health of watersheds and aquatic systems by replacing failing culverts and improving fish passage.	0	6

United States Department of the Interior - BUREAU OF LAND MANAGEMENT
Upper and Lower Alsea WA Fish Passage Restoration EA Map

Sheet 1 of 3

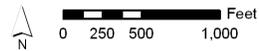
T.13 S., R. 8 W., Section 27 & 34, W.M.

SALEM DISTRICT - OREGON



- | | |
|-------------------------------------|------------------------------|
| Fish Passage Restored | Found Corner |
| Culvert to be replaced | Highway |
| Portion of Trash Rack to be removed | Existing Road |
| EFH/ESA | Jeep or Dirt Road |
| Non-Fishbearing stream | Overgrown or Impassable Road |
| Fish-bearing stream | |

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Data was compiled from multiple sources and may not meet U.S. National Mapping Accuracy Standard of the Office of Management and Budget.



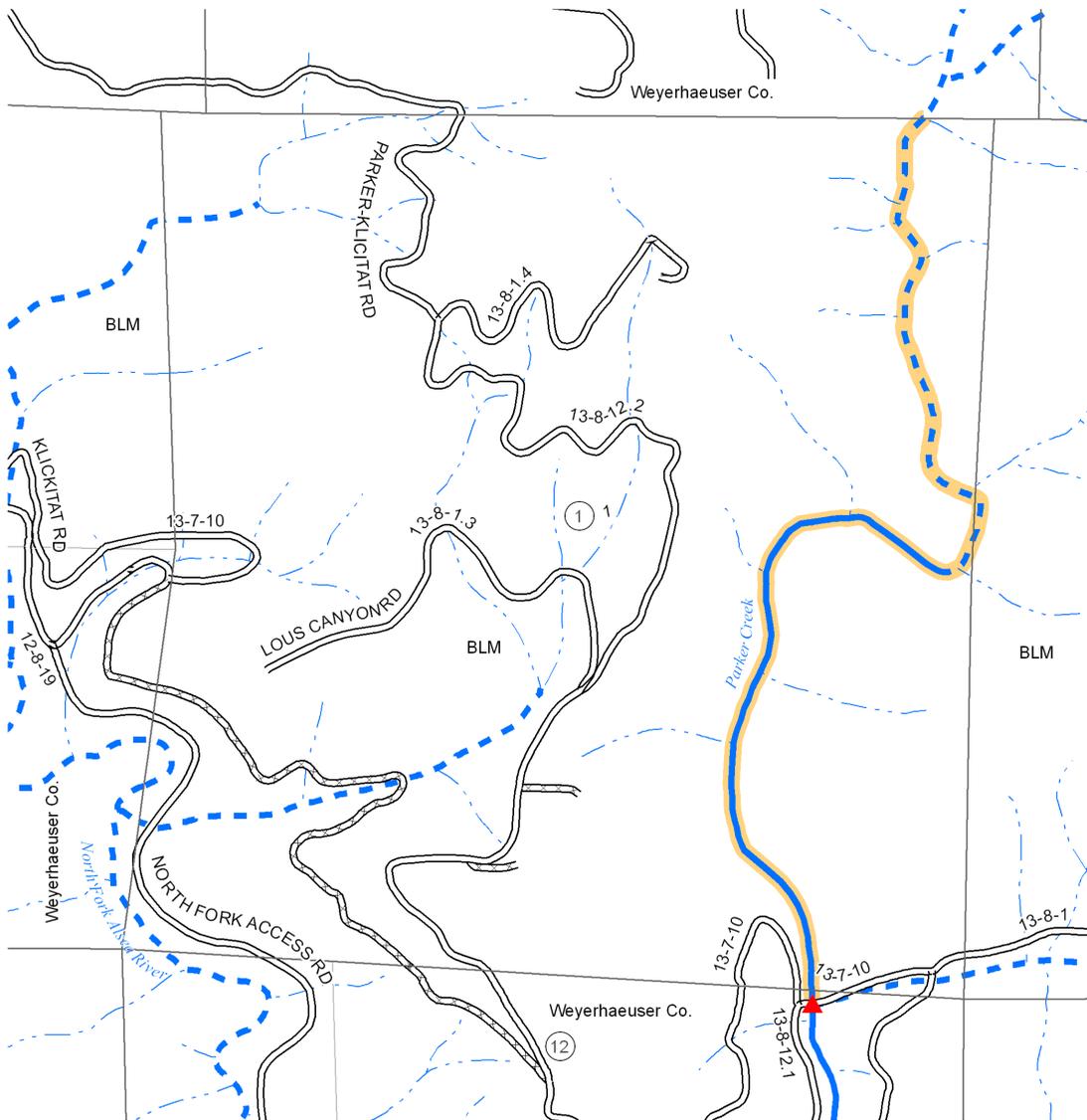
August 29, 2008

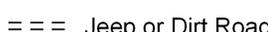
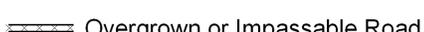
United States Department of the Interior - BUREAU OF LAND MANAGEMENT
Upper and Lower Alsea WA Fish Passage Restoration EA Map

Sheet 2 of 3

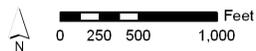
T. 13 S., R. 8 W., Section 1 & 12. W.M.

SALEM DISTRICT - OREGON



- | | |
|---|---|
|  Fish Passage Restored |  Found Corner |
|  Culvert to be replaced |  Highway |
|  Portion of Trash Rack to be removed |  Existing Road |
|  EFH/ESA |  Jeep or Dirt Road |
|  Non-Fishbearing stream |  Overgrown or Impassable Road |
|  Fish-bearing stream | |

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Data was compiled from multiple sources and may not meet U.S. National Mapping Accuracy Standard of the Office of Management and Budget.



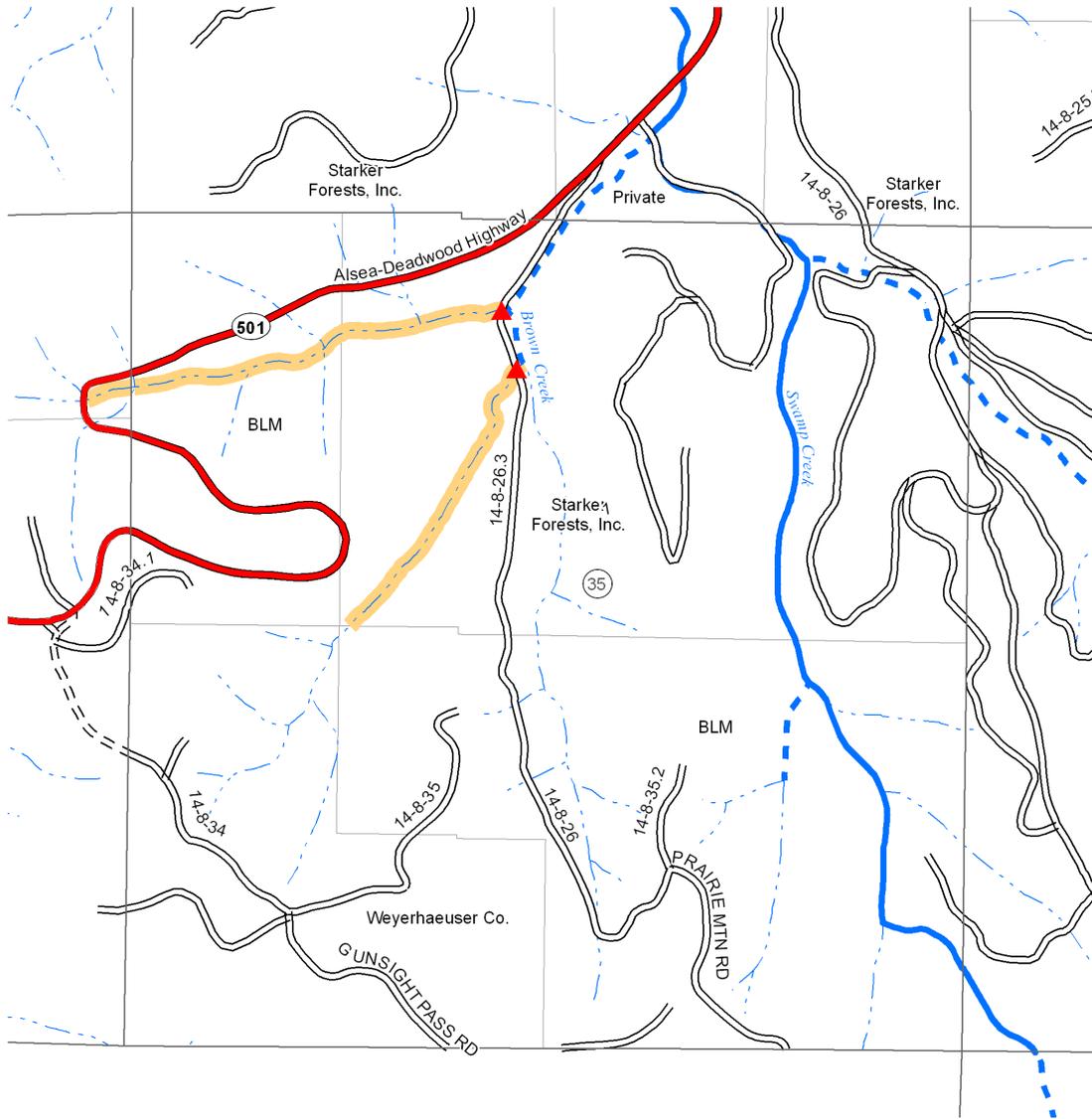
August 29, 2008

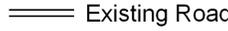
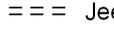
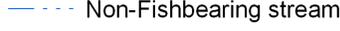
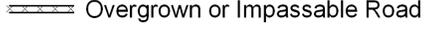
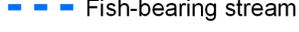
United States Department of the Interior - BUREAU OF LAND MANAGEMENT
Upper and Lower Alsea WA Fish Passage Restoration EA Map

Sheet 3 of 3

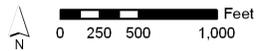
T. 14 S., R. 8 W., Section 35, W.M.

SALEM DISTRICT - OREGON



- | | |
|---|---|
|  Fish Passage Restored |  Found Corner |
|  Culvert to be replaced |  Highway |
|  Portion of Trash Rack to be removed |  Existing Road |
|  EFH/ESA |  Jeep or Dirt Road |
|  Non-Fishbearing stream |  Overgrown or Impassable Road |
|  Fish-bearing stream | |

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Data was compiled from multiple sources and may not meet U.S. National Mapping Accuracy Standard of the Office of Management and Budget.



October 15, 2008

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL EFFECTS - COMMON TO PROJECT LOCATIONS

3.1 Identification of Affected Elements of the Environment

The interdisciplinary team reviewed the elements of the human environment, required by law, regulation, Executive Order and policy, to determine if they would be affected by the proposed action. Table 5 (“Critical Elements of the Human Environment”) and Table 6 (Other Elements of the Environment) summarize the results of that review. Affected elements are **bold**. All entries apply to the proposed action, unless otherwise noted.

Table 4: Review of “Critical Elements of the Human Environment” (BLM H-1790-1, Appendix 5) for All Project Locations

“Critical Elements Of The Human Environment”	Status: (i.e., Not Present , Not Affected, or Affected)	Does this project contribute to cumulative effects? Yes/No	Remarks
Air Quality (Clean Air Act)	Not Affected	No	No burning would occur.
Areas of Critical Environmental Concern	Not Present	No	
Cultural Resources	Not Affected	No	Cultural resource sites in the Oregon Coast Range, both historic and prehistoric, occur rarely. The probability of site occurrence is low because the majority of BLM managed Oregon Coast Range land is located on steep upland mountainous terrain that lack concentrated resources humans would use. Post-disturbance inventory would be completed on slopes less than 10 percent.
Energy (Executive Order 13212)	Not Affected	No	There are no known energy resources located in the project areas. The proposed action would have no effect on energy development, production, supply and/or distribution.
Environmental Justice (Executive Order 12898)	Not Affected	No	The proposed action is not anticipated to have disproportionately high and/or adverse human health or environmental effects on minority populations and/or low income populations.
Prime or Unique Farm Lands	Not Present	No	
Flood Plains (Executive Order 11988)	Not Affected	No	The proposed action does not involve occupancy or modification of floodplains, and would not increase the risk of flood loss.
Hazardous or Solid Wastes	Not Present	No	

“Critical Elements Of The Human Environment”		Status: (i.e., Not Present , Not Affected, or Affected)	Does this project contribute to cumulative effects? Yes/No	Remarks
Invasive, Nonnative Species (plants) (Executive Order 13112)		Affected	No	Addressed in text (EA section 3.2.4) and Botanical Report Upper Lower Alsea River Fish Passage EA pp. 1-7.
Native American Religious Concerns		Not Affected	No	No Native American religious concerns were identified during the public scoping period.
Special Status Species or Habitat	Fish	Affected	No	Addressed in text (EA section 3.2.1) and Upper and Lower Alsea Fish Passage Restoration Fisheries Report pp. 1-9.
	Plant	Not Present	No	
	Wildlife (including designated Critical Habitat)	Affected	No	Addressed in text (EA section 3.2.6) Biological Evaluation for Upper and Lower Alsea Fish Passage Restoration pp. 1-3.
Water Quality (Surface and Ground)		Affected	No	Addressed in text (EA section 3.2.2) and Upper and Lower Alsea Fish Passage Restoration Hydrology/Soils Report pp. 1-8.
Wetlands (Executive Order 11990)		Not Present	No	
Wild and Scenic Rivers		Not Present	No	
Wilderness		Not Present	No	

Table 5: Review of Other Elements of the Environment for All Project Locations

Other Elements of the Environment	Status: (i.e., Not Present , Not Affected, or Affected)	Does this project contribute to cumulative effects? Yes/No	Remarks
Fire Hazard/Risk	Affected	No	Addressed in text (EA section 3.2.5).
Essential Fish Habitat	Affected	No	Addressed in text (EA section 3.2.1) and Upper and Lower Alsea Fish Passage Restoration Fisheries Report pp. 1-9.
Land Uses (right-of-ways, permits, etc)	Not Present	No	
Late Successional and Old Growth Habitat	Not Affected	No	No late successional or old growth habitat would be disturbed.
Mineral Resources	Not Present	No	

Other Elements of the Environment	Status: (i.e., Not Present, Not Affected, or Affected)	Does this project contribute to cumulative effects? Yes/No	Remarks
Recreation	Affected	No	Addressed in text (EA section 3.2.7) and Upper and Lower Alsea Fish Passage Restoration Recreation/Rural Interface/VRM Report pp. 1-3.
Rural Interface Areas	Affected	No	Addressed in text (EA section 3.2.7) and Upper and Lower Alsea Fish Passage Restoration Recreation/Rural Interface/VRM Report pp. 1-3.
Soils	Affected	No	Addressed in text (EA section 3.2.3) and Upper and Lower Alsea Fish Passage Restoration Hydrology/Soils Report pp. 1-8).
Special Areas outside ACECs (Within or Adjacent) (RMP pp. 33-35)	Not Present	No	
Visual Resources	Affected	No	Addressed in text (EA section 3.2.7) and Upper and Lower Alsea Fish Passage Restoration Recreation/Rural Interface/VRM Report pp. 1-3.
Water Resources – Other(303d listed streams, DEQ 319 assessment, Downstream Beneficial Uses; water quantity, Key watershed, Municipal and Domestic)	Affected	No	Addressed in text (EA section 3.2.2) and Upper and Lower Alsea Fish Passage Restoration Hydrology/Soils Report pp. 1-8.
Wildlife Structural or Habitat Components - Other (Snags/CWD/ Special Habitats, road densities)	Not Affected	No	Proposed treatments are limited to the existing road network. No snags or identified special habitats are present in the project area. No large pieces of CWD are present in the project area. Individual small diameter alders and sapling conifer may be removed from culvert fill slopes associated with culvert replacements. However, the limited number of trees impacted is unlikely to affect wildlife structural or habitat components as they relate to CWD availability.

3.2 Affected Environment and Environmental Effects

Those elements of the human environment that were determined to be affected are *fisheries/aquatic habitat, water, soils, vegetation, fuels, wildlife, and recreation/rural interface/visual resources*. This section describes the current condition and trend of those affected elements, and the environmental effects of the alternatives on those elements.

3.2.1 Fisheries/Aquatic Habitat

(IDT Reports incorporated by reference: Fisheries Report - pp. 1-9, Project Environmental Assessment Abstract - Fisheries)

Affected Environment

Aquatic Habitat

The proposed project is contained within two 5th field watersheds; Lower Alsea River Watershed and the Upper Alsea River Watershed. The relevant fish bearing streams affected by the proposed project are Parker Creek, Mill Creek, and Brown Creek all of which drain to the Alsea River.

Oregon Department of Fish and Wildlife habitat surveys have been conducted on Parker Creek and North Fork Mill Creek through the project areas (see Fisheries Report - Table 2; ODFW 1997; BLM 1996a). Habitat surveys were conducted immediately downstream of the West Fork Mill growth of streamside vegetation likely have altered some of the components related to stream conditions; however, it is assumed that conditions have largely remained unchanged from these surveys.

Habitat features within surveyed reaches were variable in condition. Shade was adequate in all surveyed reaches. Degraded habitat conditions were noted for pools, fine sediment, key wood, and width to depth ratios, except for width to depth in North Fork Mill Creek which was desirable.

Fish Distribution

No surveys for upper limits of fish distribution were conducted upstream of the treatment areas. Based on previous habitat surveys the upper limit of anadromous fish distribution in West Fork Mill Creek, North Fork Mill Creek, and Parker Creek are at waterfalls (Snedaker 2008; BLM 1996a, ODFW 1997). StreamNet GIS Data (2005) maps identify salmon and steelhead distribution near the project areas and several of the passage barriers in proximity to the project areas which may limit fish migration. Rapid Bio-Assessments conducted in Swamp Creek document presence of coho juveniles up to the outfall of both Brown Creek Culverts (MCWC 2000).

Based on existing stream surveys and GIS data, the distribution of various fish species relative to project treatment sites can be estimated in the project area (see Fisheries Report-Table 3). Chinook salmon are located in the lower reaches of the project area streams, at least 0.5 miles downstream from project sites. Coho salmon are present at the project sites on Parker Creek, West Fork Mill Creek, and the Brown Creek tributaries. Coho salmon are between 0.1 and 0.2 miles downstream from the Mill Creek and North Fork Mill Creek project sites. Steelhead is adjacent to all project sites. Speckled dace and lamprey species were assumed to be present in the project area drainages concurrent with steelhead distribution; therefore, these species would be expected to occur adjacent to all project sites. Sculpin species were assumed to be present concurrent with cutthroat trout

distribution. Cutthroat trout utilize habitat upstream of all affected culverts; therefore, sculpin species are considered present at all project sites.

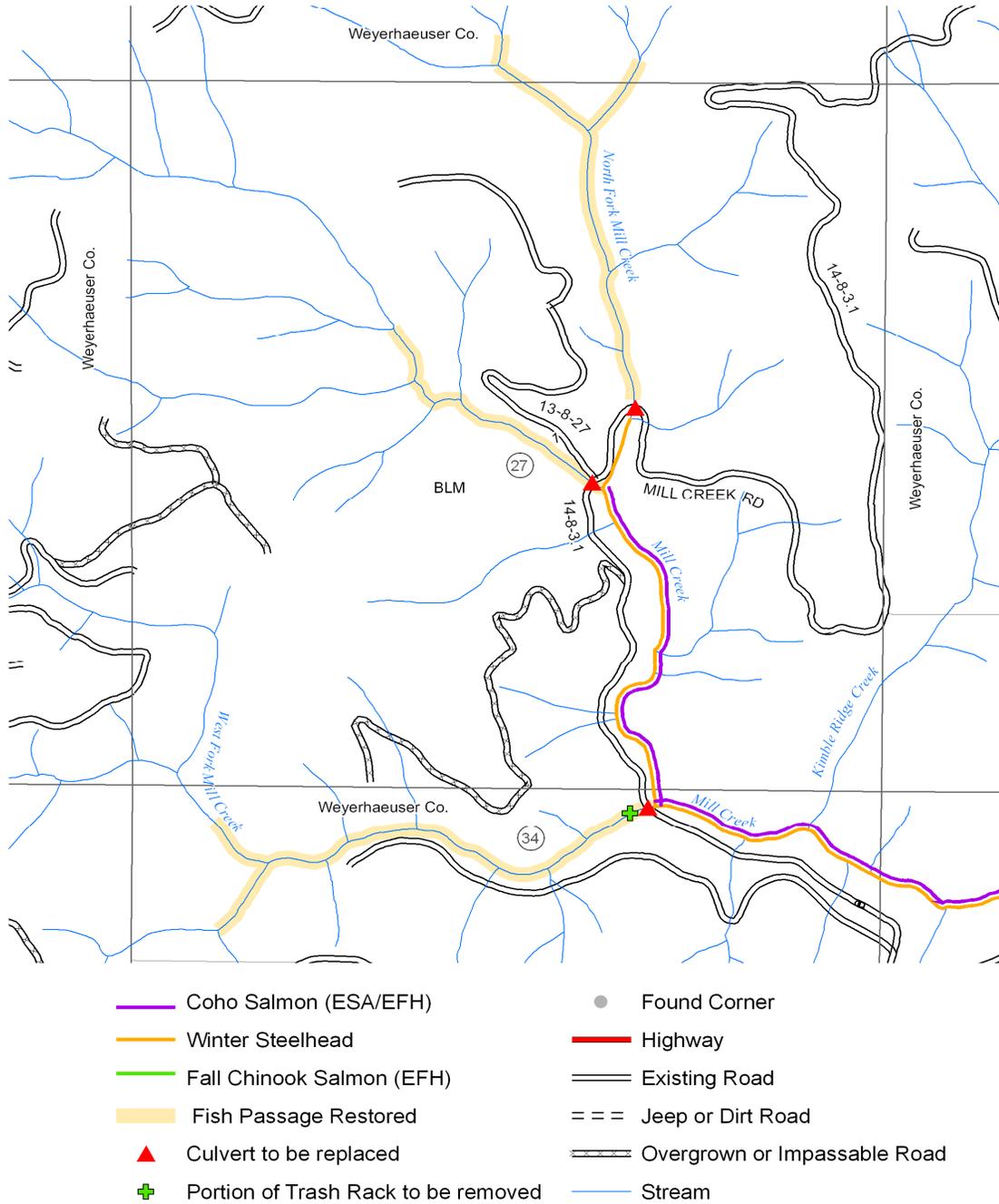
Map 3: Anadromous Fish Distribution

United States Department of the Interior - BUREAU OF LAND MANAGEMENT
Upper and Lower Alsea WA Fish Distribution Map

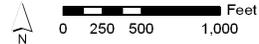
Sheet 1 of 3

T.13 S., R. 8 W., Section 27 & 34, W.M.

SALEM DISTRICT - OREGON



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Data was compiled from multiple sources and may not meet U.S. National Mapping Accuracy Standard of the Office of Management and Budget.

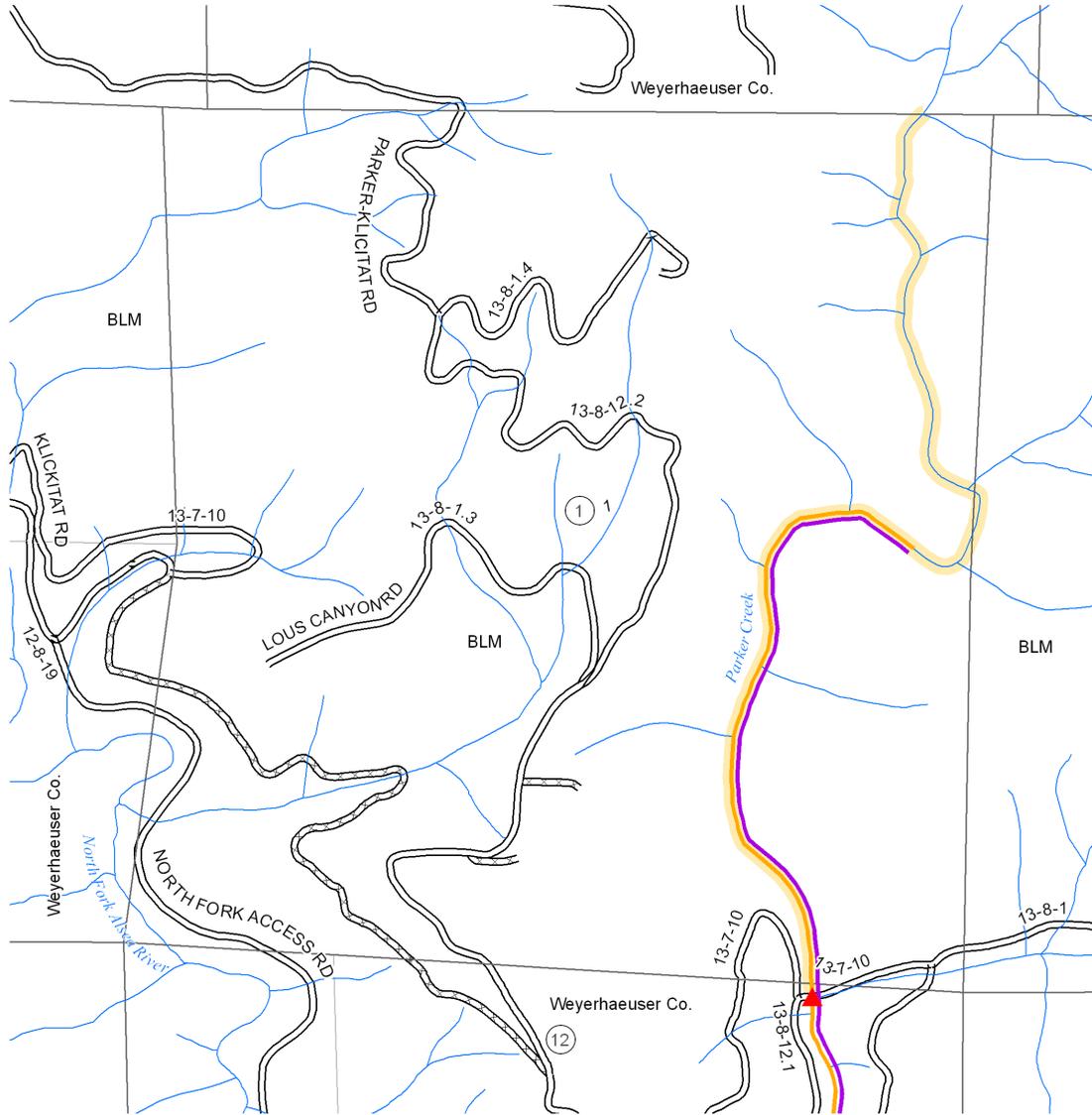


September 4, 2008

Upper and Lower Alsea WA Fish Distribution Map

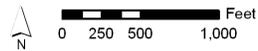
T. 13 S., R. 8 W., Section 1 & 12. W.M.

SALEM DISTRICT - OREGON



- | | |
|-------------------------------------|------------------------------|
| Coho Salmon (ESA/EFH) | Found Corner |
| Winter Steelhead | Highway |
| Fall Chinook Salmon (EFH) | Existing Road |
| Fish Passage Restored | Jeep or Dirt Road |
| Culvert to be replaced | Overgrown or Impassable Road |
| Portion of Trash Rack to be removed | Stream |

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Data was compiled from multiple sources and may not meet U.S. National Mapping Accuracy Standard of the Office of Management and Budget.

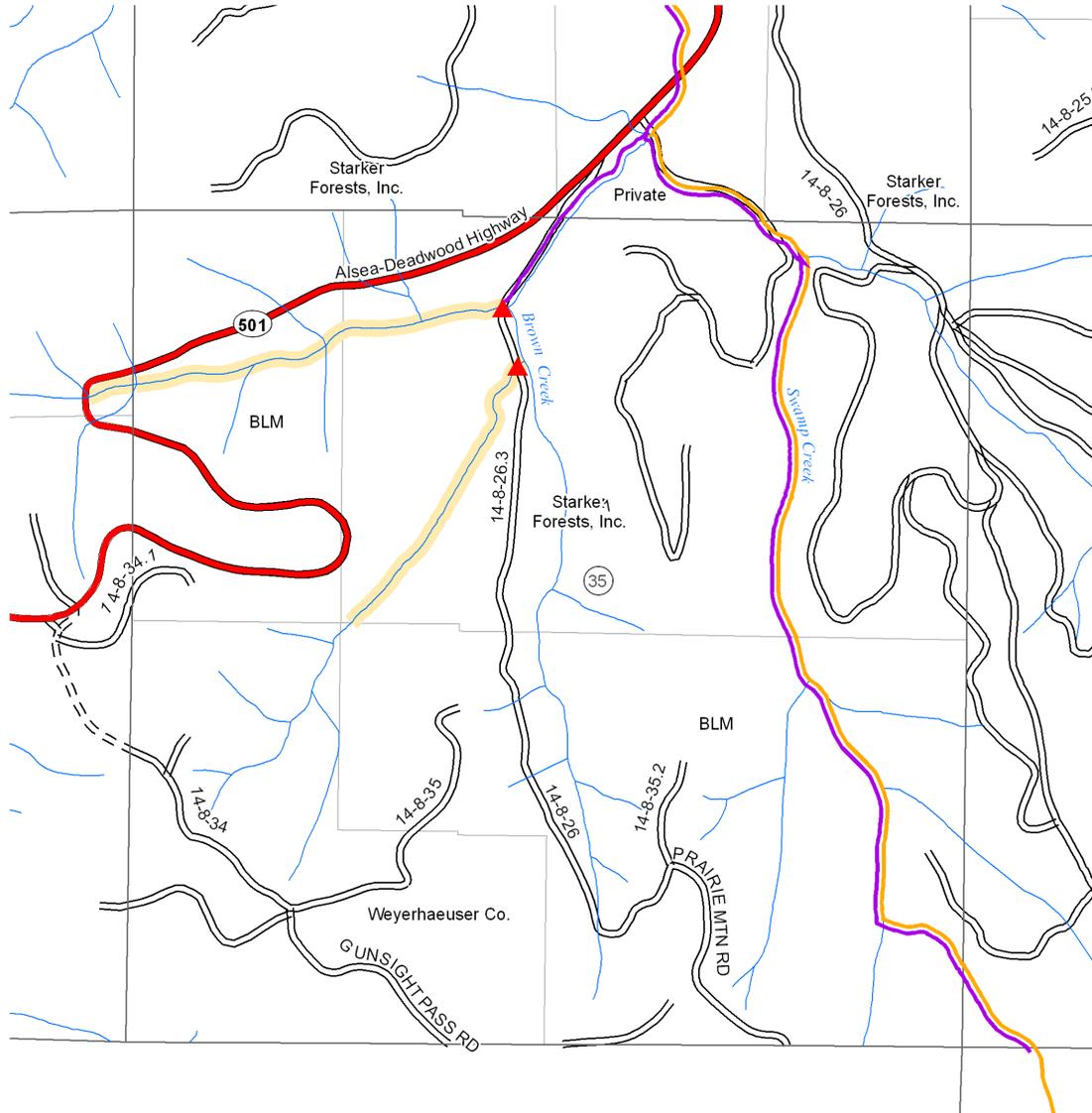


September 4, 2008

Upper and Lower Alsea WA Fish Distribution Map

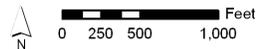
T. 14 S., R. 8 W., Section 35, W.M.

SALEM DISTRICT - OREGON



- | | |
|-------------------------------------|------------------------------|
| Coho Salmon (ESA/EFH) | Found Corner |
| Winter Steelhead | Highway |
| Fall Chinook Salmon (EFH) | Existing Road |
| Fish Passage Restored | Jeep or Dirt Road |
| Culvert to be replaced | Overgrown or Impassable Road |
| Portion of Trash Rack to be removed | Stream |

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Data was compiled from multiple sources and may not meet U.S. National Mapping Accuracy Standard of the Office of Management and Budget.



October 15, 2008

Special Status Species or Habitat:

The Oregon Coast (OC) Coho Salmon is listed as threatened under the Endangered Species Act, as amended (73 FR 7816-7873). Oregon Coast coho salmon are present at most treatment areas, except Mill Creek and North Fork Mill Creek where upper limits are thought to be 0.1 to 0.2 miles downstream.

Environmental Effects

3.2.1.1 *Alternative 1 (No Action)*

Existing conditions at culvert sites would be maintained. No soil disturbing activities would occur under the no-action; therefore, no short-term negative impacts to aquatic habitat would be expected. Access to approximately 3 miles of aquatic habitat would continue to be impaired. Expected benefits, including increased available habitat and free movement to refuge habitats, from restoring access would not be realized. Large wood routing thru project sites would continue to be impaired due to undersized culverts and the trash rack capture of woody debris. Undersized culverts would be at greater risk of future blockage from large wood capture and could result in mass wasting erosive events which would in turn impair downstream aquatic habitat. Continued maintenance during storm events at each culvert site would be required to prevent, or reduce the hazard of, potential culvert failure. These maintenance interventions impair the quality of instream large wood, as maintenance typically includes cutting large logs into shorter pieces to pass through culverts. Small woody debris tends to have shortened retention time and has less hydrologic influence on stream channels, when compared to larger pieces.

3.2.1.2 *Alternative 2 (Proposed Action)*

Six culverts would be replaced as part of this project. Direct and indirect short-term negative impacts to aquatic habitat and individual fish would occur from the proposed replacement of these culverts.

Approximately 40 to 60 feet of stream bank on either side of the channel would be disturbed at each culvert location. Rehabilitating disturbed stream banks by seeding native grasses upon completion would accelerate recovery of riparian vegetation and protect bank stability. Banks and riparian vegetation disturbed by construction would stabilize after the first winter.

A limited number of alders adjacent to each treatment site would be felled. The creation of six small openings spread over three different drainages would be unlikely to degrade existing shade conditions. No more than site level changes to solar exposure of the stream beds would occur. No changes to water quality are anticipated from the proposed action (Wegner 2008). With no changes in water quality anticipated, these small openings are unlikely to influence aquatic habitat in the short-term. Growth of understory vegetation overhanging the streambanks would be expected to restore stream shade within a year following the proposed treatments.

Bed mobility may be locally increased as a result of construction activity in the stream channels loosening stream substrates. The trash-rack treatment associated with West Fork Mill Creek would increase the extent of stream channel disturbance beyond the existing culvert footprint. Erosion control features, silt fences and bark bags installed down stream of the construction sites in the

dewatered reach below the project would minimize turbidity during construction. Research on culvert removals suggests that sediment and turbidity would not be transported more than ½ mile downstream from treatment sites (Foltz et al 2008). Upon completion of the project, the reconstructed stream bed thru the culvert sites would simulate natural substrate characteristics (per Musser et al 2003). Placement of oversized material as part of stream simulation would reduce risk of increased scour thru pipe and protect upstream bed stability during the first winter freshets. Incorporation of finer sediment into the simulated substrate would accelerate recovery of surface flow thru the culvert. Sediment movement, from culvert replacement and trash-rack treatment, would be expected to recover to background levels after the first winter pulses in flow.

Dewatering the project sites during construction could limit movement of native fish during project implementation. Dewatering also includes the risk of stranding fish in pools and pocket water thru the dewatered reach. For replacement of the project culverts, the stream channels would be dewatered via an upstream berm and either pumped or piped to around the project site. At West Fork Mill Creek, due to the proximity of the mainstem of Mill Creek, a portion on Mill Creek may also be dewatered through the project area to prevent water seepage into the outfall pool on West Fork Mill Creek. Implementing instream project activities during the ODFW (2008) In-water Work Timing between July 1 and August 31 would minimize the number of fish impacted. Salvaging fish within the project reaches would minimize direct impacts to fish present in the project area during construction. Use of a gravity fed system for diverting water around the project site would provide downstream passage opportunities for resident fish. Screening intakes of mechanical pumps, and suspending the intake away from the stream edge, would minimize the risk of entrainment of small fish into the pumping system and limit mortality impacts.

Proposed project timing is not anticipated to negatively impair migrating anadromous salmonids. Resident and over-summering species migrate thru the project area based on several mechanisms and may move through the project area during the in-water work timing. Generally, movement of migratory anadromous salmonids occurs in the Fall thru Spring (adults in the Fall or Spring, and smolts in the Spring). Resident and over-summering fish would be indirectly negatively impacted as a result of proposed dewatering or displacement due to machinery in the stream channel. The change to aquatic species movement would be short-term, (one summer) assuming that surface flows and substrate would recover to pre-project conditions after the first winter freshets. In the long-term the proposed culvert treatments would restore habitat access to at least 3 miles of aquatic habitat, and allow recovery of the stream through the project sites to near natural function.

In the long-term the proposed culvert and trash rack treatments would reduce the risk of culvert failure and improve wood debris routing through the project area. Required site maintenance would be minimized with larger culverts and the risk of culvert failure would be reduced. Therefore the risk of sediment and wood debris impacts noted under the no-action alternative would be minimized.

3.2.1.3 Cumulative Effects

The proposal is not likely to result in detectable direct, indirect, or cumulative effects to channel or wetland function, peak flows, and water quality (Wegner 2008). Sediment and turbidity impacts may occur in the short-term as a result of project implementation; however, these impacts would not be detectable at the 7th Field Watershed scale. As the hydrologic elements are not anticipated to

have any cumulative effects at a watershed scale, these elements would not be anticipated to result in cumulative effects to fish or aquatic habitat.

A cumulative increase to the availability of anadromous and resident habitat would be realized with implementation of the proposed action. The proposed actions may increase access to approximately 0.3 percent of estimated fish bearing habitat in the Lower Alsea River Watershed. The proposed actions may increase access to approximately 1 percent of the estimated fish bearing habitat in the Upper Alsea River Watershed. The areas above four of the culvert treatment sites are at the upper most extreme of usable habitat, in terms of slope and drainage area, and actual benefits would most likely be local or episodic in nature. Restoring access above Parker Creek and West Fork Mill Creek would provide access to important summer and winter refugial habitat on these larger streams, particularly for juvenile salmonids during most years. The release of fish population from habitat limiting bottlenecks, such as limited access to summer or winter rearing, could result in beneficial increases in productivity of stream reaches associated with treatment sites. However, the relatively small amount of habitat provided as a result of proposed actions is unlikely to appreciably contribute to changes in productivity of resident and anadromous salmonids at the watershed scale.

Reduced maintenance needs at treatment sites may have a cumulative benefit on large woody debris (LWD) recruitment. Larger culverts would route large wood through project sites during high flow events which would in turn protect and enhance LWD recruitment downstream of treatment areas in both the Upper and Lower Alsea River Watersheds. However, the site level improvement in wood routing from 6 treatments sites is unlikely to appreciably contribute to changes in aquatic habitat and fish productivity in either of the affected watersheds.

3.2.2 Water

(IDT Reports incorporated by reference: Upper and Lower Alsea River Watershed Fish Passage Restoration Environmental Assessment Soils/Hydrology Report, Cumulative Effects Analysis for Upper and Lower Alsea River Watershed Fish Passage Restoration)

Affected Environment

The project areas are located in the Oregon Coast Range at elevations ranging from 400 to 2,200 feet. The project areas lie below the transient snow zone (TSZ), an elevation zone subject to rain-on-snow events (ROS) that have the potential to increase peak flows during winter or spring storms. This zone varies but, in the coast range of Western Oregon it is assumed to lie between 2,000 to 3,000 feet in elevation. The general project areas receive approximately 64 to 70 inches of rain annually. The project areas are located in three 7th field watersheds (Mill Creek, Parker Creek and Bummer Creek). All of the proposed culvert replacements ultimately drain to the Alsea River and none of the culvert replacements are located in key watersheds.

Project area stream flow

Project streams are similar to other Western Oregon streams where highest discharge takes place during winter storm events. Summer base-flow normally begins in perennial channels sometime in July and continues from August-October. All of the proposed project locations have perennial flow but are ungaged, so no flow records are available for this review.

Project area stream channels

Stream channels in the main project areas are primarily 2nd and 3rd order headwater streams; these are “source” reaches, following the classification of Montgomery and Buffington (1993). On the steeper slopes (20 to 70 percent), these have developed into constrained, step-pool channels. All of these channels have limited supplies of large wood from nearby riparian forest and are well shaded. These streams have ample supplies of gravel sized materials that are actively transported.

Project area wetlands

No wetland/pond complexes are identified within the project areas. These sites mostly coincide with high water tables identified in the BLM GIS Timber Production Capability Classification (TPCC).

Oregon Department of Environmental Quality (DEQ) Standards

The Oregon Department of Environmental Quality’s (DEQ) 1998 303d List of Water Quality Limited Streams (<http://waterquality.deq.state.or/wq/303dpage.htm>) is a compilation of streams which do not meet the state’s water quality standards. Bummer Creek is 303d-listed for exceeding summer temperature standards from river mile 0 to 8.2, which includes the project area of two culvert replacements.

The DEQ also published an assessment, the 319 Report, which identifies streams with potential non-point source water pollution problems (1988 Oregon Statewide Assessment of Nonpoint Sources of Water Pollution). None of the project streams are listed in the 319 report.

Beneficial Uses

The only known domestic water rights are located in the Bummer Creek Watershed. Those water rights are located approximately 4 miles downstream from the project area. There are no known municipal water users in the project areas. Irrigation and livestock watering occur in the Alsea Valley several miles downstream from the project area. Additional recognized beneficial uses of the stream-flow in the project area include anadromous fish, resident fish, recreation, and esthetic value.

Environmental Effects

3.2.2.1 Alternative 1 (No Action)

The existing water quality conditions, stream flows, and channel conditions at the project sites would continue their current trends.

3.2.2.2 Alternative 2 (Proposed Action)

The proposed actions would mostly be confined to the existing road prisms, at a through fill of material borrowed from the adjacent roadbed during construction. Based on observation of existing culverts and stream crossings, effects from the replacement of the culverts would be limited to the site of disturbance and unlikely to result in any alterations to channels or floodplains downstream or elsewhere in the watershed. It would benefit the channels by providing for improved stream flow and passage of sediment, organic materials and aquatic organisms and would eliminate any chronic erosion and turbidity at the sites. One project involves the removal of a portion of a trash rack

which will require actions to take place in the stream and on its banks. The location of the work will be within approximately 150 feet of an existing road crossing.

The risk of short-term (during the action and the first winter following) increases in stream turbidity as a result of the projects may contribute to increased turbidity levels directly below the project areas. The BLM is required by state law to maintain turbidity below the limits set by the Oregon State Department of Environmental Quality. This is accomplished by visual inspection of water clarity above and below the project. If turbidity increases beyond legal limits, the project would be suspended and additional erosion control design features such as placement of bark bags and/or silt fencing would be implemented until sediment sources are controlled. Foltz et al. (2007) have found cumulatively, the limited magnitude (not visible more than 800 meters downstream of the crossings) and duration (primarily in the first winter following culvert replacements) of this effect would be non-detectable on the scale of the 7th field watershed and would be unlikely to have any effect on any designated beneficial uses.

Stream channels: Direct and Indirect Effects

There would be limited direct alteration of the physical features of the project area stream channels under this proposal. Depending on the exact conditions found while work is ongoing, some amount of channel stabilization may be needed to maintain the stability of the stream and the new structures. This is especially true for the partial removal of a trash rack and its associated debris. The extent of the instream work would be limited to gradient control structures that match the geomorphic conditions of the channels and would be constructed with materials from the project area. Any structure work would follow published design and installation guidelines (Rosgen, 1996). The proposed actions would not affect stream flow in a measurable manner and therefore any indirect effects to stream channels as a result of increases in peak flows is unlikely. Thus, the proposed actions would be unlikely to result in any measurable effects, such as increases in bank erosion, channel incision, loss of floodplain connectivity or alteration of local wetland hydrology.

Watershed Hydrology: Direct and Indirect Effects

Mean Annual Water Yield

This proposal does not include any merchantable timber removal and would not result in detectable changes in peak flows in the 3 project watersheds.

Peak Flow effects from Roads

This proposal would not alter existing roads in a way that would likely reduce or increase effects to peak flows attributable to the current road network and thus it would maintain the current condition and trends relative to hydrology and stream flow.

Water quality: Direct, Indirect and Cumulative Effects

The water quality parameters such as stream temperature, dissolved oxygen (DO) concentrations (both inter-gravel and in water), hydrogen ion concentration (pH), and turbidity are not expected to be impacted by this proposal. For that reason there are no expected direct, indirect or cumulative effects to water quality from the completion of this proposal.

3.2.2.3 Cumulative Effects

Since the proposal is not likely to result in measurable direct or indirect effects to channel or wetland function, and all effects are within the range of those disclosed in the RMP, the proposal would be unlikely to contribute to any potential cumulative effects in these watersheds. The current condition of the watersheds in the project areas indicate low risk for an existing augmentation of peak flows from forest management. Since the proposal is not likely to result in a detectable direct or indirect effect to peak flow the proposal would not contribute cumulatively to any existing augmentation of peak flow in these watersheds.

3.2.3 Soils

(IDT Reports incorporated by reference: Upper and Lower Alsea River Watershed Fish Passage Restoration Environmental Assessment Soils/Hydro Report pp. 1-8)

Affected Environment

The road surfaces consist of existing disturbed soils (i.e., portions of surface soil and organic matter removed and remaining soil compacted and augmented with rock from off site sources). The culverts are corrugated metal pipe and the fill material surrounding the culverts are previously disturbed soil from sedimentary, basalt, and intrusive rocks.

Environmental Effects

3.2.3.1 Alternative 1 (No Action)

The failing culverts would not be replaced. The existing culverts could fail which could result in an increase in erosion and sedimentation.

3.2.3.2 Alternative 2 (Proposed Action)

The proposed action is located within existing road prisms and would not change the existing level of soil disturbance in the project watersheds.

Direct and Indirect Effects

Direct effects would include the digging up of the existing culverts and the mixing of soil layers when the new culverts are installed. Indirect effects would be the continuation of lower soil productivity due to the mixing of the soil layers and the loss of soil productivity in the road prism.

3.2.3.3 Cumulative Effects

Because the effects of the proposed action on soils are expected to be short-term and localized, cumulative effects are not anticipated. The combined effect of the proposed action is not expected to exceed those described above for each individual action.

3.2.4 Vegetation

(IDT Reports incorporated by reference, Upper and Lower Alsea River Watershed Fish Passage Restoration Botanical Report pp.1-7)

Affected Environment

This project occurs within right-of-ways and within road maintenance zones. The right-of-ways consist of a mix of hardwood and conifer trees ranging from 30 to 60 years of age. The primary ground cover is moss. The primary shrub species is salal.

There are no “unique” habitat areas (caves, cliffs, wet meadows, waterfalls, ponds, lakes) within the project area.

Special Status Botanical and Fungal Species

Inventory of the project area for vascular plant, lichen, bryophyte and fungal SS species were accomplished through review of; 1) existing survey records and spatial data, 2) habitat evaluation and evaluation of species-habitat associations and presence of suitable or potential habitat, and 3) field clearances, field reconnaissance and inventories utilizing intuitive controlled surveys, in accordance with survey protocols for the specific groups of species.

There are no “known sites” of any vascular plant, lichen, bryophyte or fungi SS species within the project area nor were any found during subsequent surveys.

Invasive (Noxious Weeds, Invasive Non-native Species)

The following noxious weeds are known from within or adjacent the project area, Tansy ragwort (*Senecio jacobaea*), bull and Canadian thistles (*Cirsium vulgare* and *C. arvense*), St. John’s wort (*Hypericum perforatum*), Himalayan blackberry (*Rubus armeniacus*), and Scot’s broom (*Cytisus scoparius*).

Environmental Effects

3.2.4.1 Alternative 1 (No Action)

Special Status Botanical and Fungal Species

Not affected, since no known sites exist within the project areas.

Invasive (Noxious Weeds, Invasive Non-native Species)

Without any new human caused disturbances in the proposed project area the established noxious weed populations would remain low. However, due to unrelated project vehicle travel, false brome is rapidly becoming infested throughout the upper and lower South Fork Alsea River and it is anticipated to become established within or near these project areas within the next 2-5 years. False brome is being targeted for removal in the area by the Marys Peak Resource Area under separate NEPA documentation.

3.2.4.2 *Alternative 2 (Proposed Action)*

Special Status Botanical and Fungal Species

The project would not directly affect vascular plant, lichen, bryophyte or fungi SS species since there are no known sites within the project area or adjacent to the project.

This project could affect any species that are not practical to survey for and known sites were not located during subsequent surveys. These species would mainly include special status hypogeous fungi species. The habitat required for these species is poorly understood, but generally is not considered in hardwood dominated stands within riparian areas. In addition, the majority of these species have no known sites within or near the project area.

Invasive (Noxious Weeds, Invasive Non-native Species)

Exposed mineral soil often creates environments favorable for the establishment of non-native plant species. All exposed mineral soil areas (culvert installation sites, fill staging areas and excess fill sites) pose the greatest risk of exposing mineral soil with the implementation of this project.

Any adverse effects from non-native plants infestations within or near the project area are not anticipated. The risk rating for the long-term establishment of noxious weed species and consequences of adverse effects on this project area is low because:

- the implementation of the Marys Peak integrated non-native plant management plan allows for early detection and rapid response of non-native plant species,
- sowing seed on exposed soil areas tends to abate the establishment of non-native weeds by reducing the amount of habitat (exposed mineral soil) available for infestations.
- the size of the project is very small.

3.2.4.3 *Cumulative Effects*

There would be no effect to SS botanical and fungal species since none are known from the areas and potential habitat is not present. As mentioned above, the risk rating for any adverse effects with the implementation of this project is low.

3.2.5 **Fuels**

Affected Environment

The project contains stream channels passing under the affected road right-of-ways. The fuels resource is minimal. The only concern would be effects of the project on the fuels adjacent to the work areas proposed in the areas. There are light to moderate accumulations of dead woody material on the ground adjacent to the roads affected by this project. Larger downed logs and large snags are present but scattered.

Environmental Effects

3.2.5.1 Alternative 1 (No Action)

With a No Action Alternative, there would be no change from the current conditions for the fuels resource. Conditions would remain as they are at present. No changes in aerial extent of disturbed fuel loadings would occur.

3.2.5.2 Alternative 2 (Proposed Action)

Effects of the proposed project on fuels would have some minor impact to brush and existing debris in the areas adjacent to the streams where culverts are to be replaced. Some brush and small trees may be crushed or torn out as the hydraulic loader removes old pipes and reshapes the stream channels to accept the new pipes. Fuel loading, risk of a fire start and the resistance to control a fire would not be substantially affected by culvert replacement. Any slash created would be minor and can be mitigated on site by scattering or moving off site by end hauling. Any large logs that are dug out would be placed in the stream channel for structure or outside of the right-of-way for CWD. Only small size material would be end hauled or scattered.

3.2.5.3 Cumulative Effects

There would be few cumulative effects, as the effects from the project would be local, and there would be no other uses affecting this resource. There would be a slight increase in fuel loading and resultant fire hazard in the short-term.

3.2.6 Wildlife

(IDT Reports incorporated by reference: Biological Evaluation pp. 1-3)

Affected Environment

Special Status Species or Habitats

Northern Spotted Owl

The northern spotted owl affected environment has a geographic scope of 0.25 mile from each culvert replacement site and a timeframe of March 1 to September 30 of the year of replacement. The six culvert replacements would not downgrade or remove owl dispersal, suitable or critical habitats. The six culvert replacements are located more than 0.25 mile from any known active owl core areas, and from any unsurveyed suitable owl habitat (all suitable habitat around the culverts has been surveyed as part of an ongoing demographic study).

Marbled Murrelet

The marbled murrelet affected environment has a geographic scope of 0.25 mile from each culvert replacement site and a timeframe of April 1 to September 15 of the year of replacement. The six culvert replacements would not downgrade or remove marbled murrelet potential, suitable or critical habitats. The six culvert locations are all more than 0.25 mile from any known occupied marbled murrelet sites. The two Brown Creek culvert sites, main-stem Mill Creek and North Fork Mill Creek culverts are all within 0.25 mile of unsurveyed suitable marbled murrelet habitat. The Parker Creek culvert is within 300 feet of two acres of unsurveyed suitable marbled murrelet

habitat. The West Fork Mill Creek culvert is within 300 feet of one acre of unsurveyed suitable habitat.

Other Special Status Species

There are no “known sites” of any SS wildlife species within the project area nor were any found during subsequent surveys.

Environmental Effects

3.2.6.1 Alternative 1 (No Action)

Under the no-action alternative there would be no potential for noise disturbance from culvert replacement work to marbled murrelet or northern spotted owl.

3.2.6.2 Alternative 2 (Proposed Action)

The project would have no effect on designated northern spotted owl or its critical habitat.

The culvert replacement work would occur within the road prism of well established logging-road systems. Although the equipment noise during replacement work would not be above ambient logging road noise it would last for approximately one week on most of the culverts, and possibly up to three weeks on one. The work must be done during the murrelet breeding season because in-stream restoration work must occur between July 1 and August 31 in order to minimize impacts to fish. There are a total of three acres (one at West Fork Mill Creek and two at Parker Creek) that fall within the noise disruption footprint of the culvert replacement work. The probability of murrelets nesting on these three acres is very low, and while adverse effects are possible, they are negligible and not reasonably certain to occur. Murrelets nesting in close proximity to the affected roads would likely have grown accustomed to the road noise. Delaying construction activities until two hours after sunrise and ending work two hours before sunset, would further reduce the potential for impacts to nesting murrelets. Due to the location and nature of the proposed culvert replacement work impacts on the breeding behavior of marbled murrelets in the Upper and Lower Alsea River Watersheds is expected to be insignificant.

3.2.6.3 Cumulative Effects

The scope of cumulative effects to murrelet breeding behavior is very small due to the small size of the impact areas (0.25 mile from each culvert replacement), the short timeframe (6.5 months), the low likelihood of murrelets nesting in the impact areas, and the low likelihood of any other actions occurring within the impact areas during the same timeframe.

3.2.7 Recreation/Rural Interface/Visual Resources

(IDT Reports incorporated by reference: Recreation/Rural Interface/VRM Report pp. 1-3)

Affected Environment

Recreation

The project setting is characterized by a forest and river setting and accessed by gravel and paved forest roads. Evidence of human-made modifications (roads and timber harvest) is common on both private and public lands in surrounding areas. There are no developed recreational facilities within or near any of this project. Activities that may occur in the area include hunting, target shooting, driving for pleasure, and special forest product harvest. The project area lands are open to off highway vehicle use.

Rural Interface Within Township 14 South, Range 8 West, Section 35 is a rural interface zone according to the Salem District Resource Management Plan (RMP p. 39).

Visual Resource Management (VRM) The checkerboard land ownership pattern between public and private forest land in the vicinity of the proposed project greatly limits the BLM's ability to manage this area as a contiguous viewshed. Timber harvest activities near or adjacent to the project are observable from private and public lands.

Most of the project areas are seldom visible. The portion off the Deadwood Highway may be visible but the other areas are not observable from major public travel routes, recreation areas, or other key observation points. No special visual features or specific concerns were identified through scoping.

Environmental Effects

3.2.7.1 Alternative 1 (No Action)

With the exception of unexpected changes (i.e. wildfire or disease), the project area would continue to provide a forest and river setting to recreation users, dispersed recreational activities and local residents. A short-term increase in noise and other inconveniences related to the project would not occur. However, these inconveniences from other lands in the vicinity would most likely continue. Modifications to the landscape character in the area around the project would still be expected, as a result of activities on other lands.

3.2.7.2 Alternative 2 (Proposed Action)

Recreation

Any recreational use in the proposed project areas would be restricted in the short-term during the restoration operations. Restoring fish passages could increase recreational fishing opportunities in the long-term. After restoration operations, recreation users would continue to use public lands as in the past.

Rural Interface

Activities and associated noise and traffic may disturb those living near the project area, but the duration of the disturbance would be short-term.

Visual Resources

Changes to the landscape would be low and comply with Class 4 guidelines. Most of the disturbance would be associated with modifications to vegetation. The proposed restoration areas would maintain most of the canopy cover and vegetation would return to a more natural appearance within five years.

3.2.7.3 Cumulative Effects

The proposed action of culvert replacement and trash rack removal would not alter the landscape. The project would contribute to the amount of visual disturbance in the watershed, but the amount is minimal compared to that on private lands. There are alternative areas in the vicinity to do recreational activities while this project is occurring.

4.0 Compliance with the Aquatic Conservation Strategy

Existing Watershed Conditions

The Upper and Lower Alsea River Watershed Fish Passage Restoration Project area is located within the Upper and Lower Alsea River 5th-field Watersheds. The Upper and Lower Alsea River Watersheds are not key watersheds.

Upper Alsea River Watershed

Fifty-two percent of the Upper Alsea River Watershed is managed by BLM, 47 percent is private and 1 percent is managed by the Forest Service. Approximately 37 percent of the total BLM managed lands consist of stands greater than 80 years old and approximately 27 percent of BLM managed lands are located in riparian areas (within 100 feet of a stream).

Lower Alsea River Watershed

Thirteen percent of the Lower Alsea River Watershed is managed by BLM, 42 percent is managed by the Forest Service and 45 percent is private. Approximately 50 percent of the total BLM managed lands consist of stands greater than 80 years old and approximately 25 percent of BLM managed lands are located in riparian areas (within 100 feet of a stream).

Review of Aquatic Conservation Strategy Compliance:

The Marys Peak Field Manager has reviewed this analysis and has determined that the project complies with the ACS on the project (site) scale. The project would comply with:

Component 1 – Riparian Reserves: Maintaining canopy cover along all streams and the wetlands would protect stream bank stability and water temperature. Riparian Reserve boundaries would be established consistent with direction from the *Salem District Resource Management Plan*.

Component 2 – Key Watershed: establishing the Upper and Lower Alsea River Watershed Fish Passage Restoration Project is not within a key watershed.

Component 3 –Watershed Analysis: The *South Fork Alsea River Watershed Analysis* was completed in 1995, the *North Fork Alsea River Watershed Analysis* was completed in 1996 and the *Lower Alsea Watershed Analysis* was completed in 1999. The following are watershed analysis findings that apply to or are components of this project:

North Fork Alsea River Watershed Analysis

During the 1970s and 1980s, stream inventory data were collected by the Salem BLM, and later analyzed in a habitat analysis report (House 1987). These stream surveys were conducted above the North Fork Alsea Dam, and highlighted the following limiting factors: rearing habitat, spawning habitat, fish passage and instream structure. The evaluation recommended the following projects: logjam passage, riparian revegetation, instream structure, falls passage, pool construction and dam passage (p. 73).

Lower Alsea Watershed Analysis

BLM major access routes (Fall Creek, Bear Creek, Winney, Cove Creek, Grass Mtn., and Lone Springs Mtn. roads) are well maintained and in good condition. Fall Creek and Bear Creek roads are the only major roads that parallel fishery streams closely. Mill Creek Road is also a primary route and is in fair condition. There are several intermittent and perennial streams with culverts that are deteriorating and do not meet the 100-year flood criteria (p. 131).

There are several culverts located on low gradient tributaries. Fish use of these tributaries should be determined and passage provided where needed (p. 91).

Component 4 – Watershed Restoration: The removal of culverts currently blocking fish passage with culverts that would allow fish passage to approximately three miles of streams would be expected to result in long-term restoration.

In addition, the Marys Peak Field Manager has reviewed this project against the ACS objectives at the project or site scale with the following results: The no action alternative does not retard or prevent the attainment of any of the nine ACS objectives because this alternative would maintain current conditions. The proposed action does not retard or prevent the attainment of any of the nine ACS objectives.

Table 6: Project’s Consistency with the Nine Aquatic Conservation Strategy Objectives

Aquatic Conservation Strategy Objectives (ACSOs)	Upper and Lower Alsea River Watershed Fish Passage Restoration Project
<i>1. Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features.</i>	Does not prevent the attainment of ACSO 1 . Replacing six failing culverts with structures designed for 100 year flood events and fish passage would maintain watershed and landscape features to ensure protection of aquatic systems. The proposed action when combined with other proposed actions in the Upper and Lower Alsea River Watersheds are unlikely to have detrimental cumulative effects on the hydrologic regime.
<i>2. Maintain and restore spatial and temporal connectivity within and between watersheds.</i>	Does not prevent the attainment of ACSO 2 . Aquatic connectivity would be enhanced by the replacement of six failing culverts with six culverts designed to allow fish passage and the partial removal of the existing trash rack structure.

Aquatic Conservation Strategy Objectives (ACSOs)	Upper and Lower Alsea River Watershed Fish Passage Restoration Project
<i>3. Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.</i>	Does not prevent the attainment of ACSO 3 . Culvert replacement necessitates operating machinery in the stream channel, which can compact stream bed substrates, alter bed form and increase sedimentation in the stream system. However, any disturbance is likely to be short-term and design features would be implemented to minimize potential impacts to the hydrologic system. In the long-term, the replaced culverts are expected to perform better than the existing worn culverts and improve hydrologic function. Because the new culverts widths would be sized at full bank flows, it is not expected to greatly impede channel function.
<i>4. Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.</i>	Does not prevent the attainment of ACSO 4 . Although some short-term effects to water quality may occur (primarily increased fine sediment loads during culvert replacement), the proposed project would help restore water quality over the long-term by restoring more natural channel conditions.
<i>5. Maintain and restore the sediment regime under which aquatic ecosystems evolved.</i>	Does not prevent the attainment of ACSO 5 . Culvert replacements would help restore the historical sediment regime of the aquatic ecosystem. Based on similar work, this increase in sediment is expected to last less than 2 days before pre-project conditions re-establish themselves at the site.
<i>6. Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing.</i>	Does not prevent the attainment of ACSO 6 . Culvert replacements would not affect the volume of stream flow. However, it would help to restore the routing of instream flows.
<i>7. Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.</i>	Does not prevent the attainment of ACSO 7 . Culvert replacements would help restore floodplain function by increasing the stream's ability to access its floodplain. The project would be unlikely to affect water table elevations. Project design features, coupled with the small percent of vegetation proposed to be removed, would maintain groundwater levels and floodplain inundation rates. Recommendations to restore water flow are consistent with this objective and would not prevent attainment of any ACS objective.
<i>8. Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands.</i>	Does not prevent the attainment of ACSO 8 . Within the culvert replacement project areas, current species composition and diversity of plant communities would be maintained.
<i>9. Maintain and restore habitat to support well-distributed populations of native plant, invertebrate and vertebrate riparian-dependent species.</i>	Does not prevent the attainment of ACSO 9 . Culvert replacements would increase habitat connectivity for riparian-dependent species, in-channel habitat diversity, and riparian functions (floodplain inundation, CWD, increasing nutrients for primary producers, etc.).

5.0 LIST OF PREPARERS

Table 7: List of Preparers

Resource	Name	Initial	Date
Cultural Resources	Dave Calver	DC	11/13/08
Hydrology/Water Quality/Soils	Steve Wegner	SW	11-13-08
Botany SS Plant Species	Ron Exeter	RE	Nov 12, 2008
Wildlife SS Animal Species	Gary Licata	GL	11/13/08
Fuels	Tom Tomczyk	TT	11/12/2008
Fisheries/Aquatic Habitat	Scott Snedaker	SS	11/12/08
Recreation/Rural Interface/Visuals	Traci Meredith	Tmm	11/13/08
Engineering	Steve Cyrus	S.B.C.	11/13/08
NEPA	Gary Humbard	GLH	11/13/08

6.0 CONTACTS AND CONSULTATION

6.1 Agencies, Organizations, and Persons Consulted (ESA Section 7 Consultation)

U. S. Fish and Wildlife Service

The proposed action, with the above wildlife design features implemented, is expected to have the following effects on listed species:

- 1) No effect to northern spotted owl, northern spotted owl critical habitat, and marbled murrelet critical habitat from replacing six culverts in the Upper and Lower Alsea River Watersheds.
- 2) May affect, not likely to adversely affect marbled murrelet during the breeding period July 1 to August 31 from replacing six culverts in the Upper and Lower Alsea River watersheds due to the protection of potential, suitable, and occupied habitats, the implementation of daily time restrictions, the low density of actively nesting marbled murrelets, and the low probability of nesting birds occurring within the disturbance footprints and the one and two acre disruption footprints. While adverse effects are possible, they are not reasonably certain to occur.

Actions associated with this project have been consulted upon under the *Biological assessment for activities intended to enhance habitat for native fish species in Oregon and Washington*, Region 6 FS and Oregon State Office BLM, Portland, OR (2006), and *Final modifications to proposed action: biological assessment for activities intended to enhance habitat for native fish species in Oregon and Washington*, Region 6 USFS, Oregon State Office, BLM, Portland, OR (2007). A letter of concurrence

NOAA NMFS

A preliminary determination has been made that the proposed Upper and Lower Alsea River Watershed Fish Passage Restoration Project includes 'May Affect' action areas to ESA listed threatened Oregon Coast coho salmon. These determinations were primarily derived from the distance of listed fish and critical habitat from treatment areas. Proposed actions which 'May Affect' Oregon Coast coho salmon would comply with existing programmatic consultation and relevant design criteria. Fish passage culvert replacement for in-stream restoration is covered under NOAA NMFS *Endangered Species Act Section 7 Formal Programmatic Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for Fish Habitat Restoration Activities in Oregon and Washington, CY2007-CY2012*.

Protection of EFH as described by the Magnuson/Stevens Fisheries Conservation and Management Act and consultation with NOAA NMFS is required for all projects which may adversely affect EFH of Chinook and coho salmon. The proposed project areas in Parker Creek, West Fork Mill Creek, and the Brown Creek are known to be adjacent to habitat utilized by coho salmon (StreamNet GIS Data 2005; MCWC 2000). The remaining culverts are suspected to be adjacent, at least episodically, to habitat utilized by coho salmon. These proposed projects are expected to adversely affect EFH. Consultation with NOAA NMFS on EFH for restoration projects has been conducted under *Reinitiation of the Endangered Species Act Section 7 Formal Programmatic Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for Fish Habitat Restoration Activities in Oregon and Washington, CH 2007- CY 2012*. Compliance with design features as well as relevant terms and conditions outlined in the programmatic would satisfy EFH consultation requirements.

6.2 Cultural Resources - Section 106 Consultation and Consultation with State Historical Preservation Office

The project area occurs in the Oregon Coast Range. Survey techniques are based on those described in Appendix D of the *Protocol for Managing Cultural Resource on Lands Administered by the Bureau of Land Management in Oregon*. Post-project survey would be conducted according to standards based on slope defined in the Protocol appendix. Ground disturbing work would be suspended if cultural material is discovered during project work until an archaeologist can assess the significance of the discovery.

6.3 Public Scoping and Notification-Tribal Governments, Adjacent Landowners, General Public, and State County and local government offices

- A scoping letter, dated August 30, 2008, was sent to 21 potentially affected and/or interested individuals, groups, and agencies. One response was received during the scoping period, which was supportive of the Proposed Action Alternative.
- A description of the project was included in the September 2008 project update to solicit comments on the proposed project.

6.3.1 EA public comment period

- The EA and FONSI will be made available for public review November 20, 2008 to December 19, 2008. The notice for public comment will be published in a legal notice by the *Gazette-Times* newspaper. Comments received by the Marys Peak Resource Area of the Salem District Office, 1717 Fabry Road SE, Salem, Oregon 97306, on or before December 19, 2008 will be considered in making the final decisions for this project.

7.0 MAJOR SOURCES

7.1 Interdisciplinary Team Reports

- Exeter, R. 2008. Marys Peak Resource Area Botanical Report.. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR. *Botanical Report* NEPA File.
- Licata, G. 2008. *Biological Evaluation for Terrestrial Wildlife, Project*. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR.
- Meredith, T 2008. *Recreation/Rural Interface/VRM Report*. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR.
- Snedaker, S. 2008. *Upper and Lower Alsea River Watershed Fish Passage Restoration Fisheries Report*. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR.
- Wegner, S. 2008. *Upper and Lower Alsea River Watershed Fish Passage Restoration Soils and Hydrology Report*. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR.

7.2 Additional References

- USDA. Forest Service, USDI. Bureau of Land Management. 1994. Final Supplemental Environmental Impact Statement Management of Habitat for Late Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl. Portland, OR.
- USDA. Forest Service, USDI. Bureau of Land Management. 1994. Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl. Portland, OR. Note: The ROD and S&G are collectively referred to herein as the Northwest Forest Plan (NFP)
- USDA Forest Service, USDI Bureau of Land Management. 1997. Late Successional Reserve Assessment Oregon Coast Province –Southern Portion- (RO267, RO268). Salem District BLM Office, Salem, Oregon. Unpublished document. 81 pp.

- USDI. Bureau of Land Management. 1994. Salem District Proposed Resource Management Plan/Final Environmental Impact Statement. Salem, OR.
- USDI. Bureau of Land Management. 1995. Salem District Record of Decision and Resource Management Plan (RMP). Salem District BLM, Salem, OR. 81 pp. + Appendices.
- USDI. Bureau of Land Management. 1998. North Fork Alsea River Watershed Analysis. Salem District BLM, Salem, Oregon, September, 1998. Unpublished document. 126 pp + Maps and Appendices.
- USDI. Bureau of Land Management. 2007. Record of Decision To Remove the Survey and Manage Mitigation Measure Standards and Guidelines from Bureau of Land Management Resource Management Plans Within the Range of the Northern Spotted Owl. Portland, OR.
- USDA. Forest Service, USDI. Bureau of Land Management. 2007. Final Supplement to the 2004 Final Supplemental Environmental Impact Statement to Remove or Modify The Survey and Manage Mitigation Measure Standards and Guidelines. Portland, OR.
- USDI. Bureau of Land Management. 1995. South Fork Alsea Watershed Analysis. Salem District BLM, Salem, Oregon, October, 1995. Unpublished document. 104 pp + Maps and Appendices.
- USDI. Bureau of Land Management. 1999. Lower Alsea River Watershed Analysis. Salem District BLM, Salem, Oregon, December, 1999. Unpublished document. 95 pp + Maps and Appendices.