

## **Wooden Lobster Restoration Project**

### **Environmental Assessment and Finding of No Significant Impact**

Environmental Assessment Number OR-080-07-04

February 6, 2007

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

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Abstract: This environmental assessment (EA) discloses the predicted environmental effects of one project on federal land located in Township 14 South, Range 8 West, Section 32, and Township 15 South, Range 8 West, Sections 15 and 22, and on private land located in Township 14 South, Range 8 West, Section 31, Willamette Meridian and within the Five Rivers – Lobster Creek Watershed. The project proposes to restore the distribution, diversity, and complexity of watershed and landscape features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted on approximately 4½ miles of anadromous fish bearing streams. The action will occur within Late-Successional Reserve (LSR) and Riparian Reserve (RR) Land Use Allocations (LUA).

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 Bureau of Land Management (BLM) has conducted an environmental analysis (Environmental Assessment Number OR080-07-04) for a proposal to implement one large woody debris project as follows: The enhancement of 3.5 miles of three stream segments within Lobster Creek, Little Lobster Creek, and Briar Creek. Green trees would be felled from adjacent BLM Late Successional Reserve lands within the Five Rivers-Lobster Creek fifth-field watershed and helicopter transported to stream channels. Additional BLM logs would be placed on private lands, under a cooperative agreement, on up to one mile of Little Lobster Creek downstream of federal lands. The project is on BLM managed lands in Township 15 South, Range 8 West, Sections 15 & 22 and Township 14 South, Range 8 West, Section 32 and on private land in Township 14 South, Range 8 West, Section 31, Willamette Meridian.

Implementation of the proposed action would conform to management actions and direction contained in the attached *Wooden Lobster Restoration Environmental Assessment* (Wooden Lobster Restoration EA). The Wooden Lobster Restoration EA is attached to and incorporated by reference in this Finding of No Significant Impact (FONSI) determination. The analysis in this EA is site-specific and supplements analyses found in the *Salem District Proposed Resource Management Plan/Final Environmental Impact Statement*, September 1994 (RMP/FEIS) (EA p. 1). The Wooden Lobster project has been designed to conform to the *Salem District Record of Decision and Resource Management Plan*, (RMP) May 1995, and related documents which direct and provide the legal framework for management of BLM lands within Marys Peak Resource Area (EA pp. 2-4). Consultation with the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) is described in Section 7.1 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 Projects) from January 25, 2007 to February 23, 2007. 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 February 23, 2007 will be considered in making the decisions for this project.

### Finding of No Significant Impact

Based upon review of the Wooden Lobster 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 context of the Five Rivers – Lobster Creek 5th-field watershed and the project area boundaries. The proposed action would occur on approximately 3 acres of LSR and RR LUA land, encompassing less than 0.004% of the forest cover within the affected 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, soils, water, fisheries/aquatic habitat, wildlife and visual resources). The following is a summary of the design features that would reduce the risk of affecting the above resources (EA section 2.2.2).

- Follow ODFW guidelines for timing for in-water work (July 1 to August 31).
- Use whole trees of sufficient size and aggregated in a manner to mimic natural accumulation.
- All stream side trees would be felled toward stream channels to the extent practicable.
- If mineral soil is exposed during log placement, the area would be sown with Oregon Certified (blue tagged) red fescue (*Festuca rubra*) as a rate equal to 40 pounds per acre or sown/planted with other native species as approved by the resource area botanist.

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 detectable (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 these project would not exceed those effects described in the RMP/FEIS [40 CFR 1508.27(b) (1), EA sections 3.2].

2. The Project would not affect:
  - ü Public health or safety [40 CFR 1508.27(b)(2)];
  - ü 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);
  - ü 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 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 detectable), scale (project area of 3 acres, encompassing less than 0.004% of the forest cover within the Five Rivers – Lobster Creek Watershed), and duration (direct effects would occur over a maximum period of 4-6 years) (EA section 3.0).

6. *The Project* is not expected to adversely affect endangered or threatened species or habitat under the Endangered Species Act (ESA) of 1973 [40 CFR 1508.27(b)(9)].

*Fisheries:*

Consultation with National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) for aquatic habitat restoration actions was completed February 25, 2003 *Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for US Forest Service and Bureau of Land Management Programmatic Activities in Northwest Oregon*. The programmatic consultation addressed affects determinations, specific design features, and reporting requirements for the proposed actions. No listed fish species are known to occupy the project area stream at this time. The proposed action was determined to be a no affect for ESA listed species. The proposed actions are consistent with design features described in the NMFS programmatic package for Aquatic and Riparian Habitat Projects and are anticipated to Adversely Affect Essential Fish Habitat (EFH). The proposed action is not anticipated to exceed the typical range of effects for aquatic restoration actions as described in the Biological Assessment for Programmatic USDA Forest Service and USDA Bureau of Land Management Activities (October 9, 2002). Therefore, no additional consultation on EFH is necessary for project implementation.

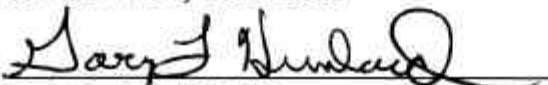
*Wildlife:*

To address concerns for impacts to federally listed wildlife species and their critical habitat, the proposed action has been consulted on with the U.S. Fish and Wildlife Service, as required under Section 7(a) of the Endangered Species Act. This proposed action has been designed in accordance with standards set forth in a Biological Assessment (BA, USDA-FS and USDI-BLM 2006) that was used to facilitate consultation. In a Letter of Concurrence (received 10/4/2006, reference # 1-7-2006-I-0190) the Service agreed that projects designed in accordance with the standards set forth in the BA would not result in adverse impacts to spotted owls, marbled murrelets, or their designated critical habitat. All pertinent design standards from the BA have been incorporated into this proposed action.

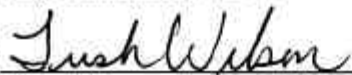
7. The Project does not violate any known Federal, State, or local law or requirement imposed for the protection of the environment [40 CFR 1508.27(b)(10)].

Prepared by:   
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1/22/07  
Date

Reviewed by:   
Gary Humbard, NEPA

1/22/07  
Date

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

1/22/07  
Date

# ENVIRONMENTAL ASSESSMENT

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## **1.0 Introduction**

### **1.1 Project Covered in this EA**

The Wooden Lobster Restoration Project would implement large woody debris (LWD) enhancement on 3.5 miles over three stream segments in Lobster Creek, Little Lobster Creek, and Briar Creek. This project is a cooperative effort between ODFW and BLM to increase habitat complexity in the Lobster/Five Rivers Watershed. The BLM will provide trees to be used in the wood placement project. ODFW would contract for the felling, helicopter yarding, and placement of trees in the stream consistent with design features outlined in this EA. Green trees would be felled from adjacent BLM Late Successional Reserve (LSR) and Riparian Reserve (RR) lands within the Five Rivers-Lobster Creek fifth-field watershed and helicopter transported to stream channels. Additional BLM logs would be placed on private lands, under a cooperative agreement, on up to one mile of Little Lobster Creek downstream of federal lands.

### **1.2 Project Area Location**

The project is located approximately 8 air miles south of Alsea, Oregon, in Benton County on forested land managed by the Marys Peak Resource Area, Salem District of the Bureau of Land Management (BLM). The project area is located on BLM managed land in Township 15 South, Range 8 West, Sections 15 & 22 and Township 14 South, Range 8 West, Section 32 and on private land in Township 14 South, Range 8 West, Section 31, Willamette Meridian.

### **1.3 Conformance with Land Use Plans, Policies, and Programs**

The proposed action is in conformance with the *Salem District Record of Decision and Resource & Management Plan (RMP)*, dated May 1995; *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl and Standard and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl*, dated April, 1994; *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 (SSSP); *Record of Decision Amending Resource Management Plans for Seven Bureau of Land Management Districts and Land and Resource Management Plans for Nineteen National Forests Within the Range of the Northern Spotted Owl - Decision to Clarify Provisions Relating to the Aquatic Conservation Strategy*, dated March 2004.

The analysis in the Wooden Lobster EA is site-specific and supplements analyses found in the *Salem District Proposed Resource Management Plan/Final Environmental Impact Statement*, September 1994 (RMP/FEIS). The RMP/FEIS includes the analysis from the *Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl*, February 1994 (NWFP/FSEIS), *Supplemental Environmental Impact Statement to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines*, January 2004 (SSSP/SEIS) and the *Final Supplemental Environmental Impact Statement, Clarification of Language in the 1994 Record of Decision for the Northwest Forest Plan National Forests and Bureau of Land Management Districts Within the Range of the Northern Spotted Owl*, October 2003 (ACS/FSEIS).

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

The following documents provided additional direction in the development of the Wooden Lobster project: *Late Successional Reserve Assessment for Oregon Coast Province –Southern Portion – [LSRA (Late-Successional Reserve RO267 & RO268 )]*, 1997; *Five Rivers – Lobster Creek Watershed Analysis*, 1997.

All of the above documents, along with the Wooden Lobster interdisciplinary team (IDT) reports (EA section 9.1.1), are hereby incorporated by reference in the Wooden Lobster EA and are available for review in the Salem District Office. Additional information about the proposed project is available in the Wooden Lobster Project EA Analysis File (NEPA file), also available at the Salem District Office.

The Marys Peak Resource Area (RA) 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. The RA is also aware of the recent January 9, 2006, Court order which:

- 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;
- reinstated 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) (2001 ROD), including any amendments or modifications in effect as of March 21, 2004.

The BLM is also aware of the November 6, 2006, Ninth Circuit Court opinion in Klamath-Siskiyou Wildlands Center et al. v. Boody et al., No. 06-35214 (CV 03-3124, District of Oregon). The court held that the 2001 and 2003 Annual Species Reviews (ASRs) regarding the red tree vole are invalid under the Federal Land Policy and Management Act (FLPMA) and National Environmental Policy Act (NEPA) and concluded that the BLM's Cow Catcher and Cotton Snake timber sales violate federal law.

This court opinion is specifically directed toward the two sales challenged in this lawsuit. The BLM anticipates the case to be remanded to the District Court for an order granting relief in regard to those two sales. At this time, the ASR process itself has not been invalidated, nor have all the changes made by the 2001-2003 ASR processes been vacated or withdrawn, nor have species been reinstated to the Survey and Manage program, except for the red tree vole. The Court has not yet specified what relief, such as an injunction, will be ordered in regard to the Ninth Circuit Court opinion. Injunctions for NEPA violations are common but not automatic.

We do not expect that the litigation over the Annual Species Review process in Klamath-Siskiyou Wildlands Center et al. v. Boody et al will affect this project, because the development and design of this project exempt it from the Survey and Manage program. 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."

The Bureau of Land Management has reexamined the objectives of Wooden Lobster Restoration as described in the Wooden Lobster Restoration EA. The Project consist of obtaining material for placing in-stream and where the stream improvement work is the placement of large wood within LSR and RR LUA's. For the foregoing reasons, the Wooden Lobster Project meets exemption c above. Therefore, the decision to eliminate Survey and Manage is effective on this project.

#### **1.4 Decision to be Made**

The decision to be made by the Acting Marys Peak Field Manager is

- Whether to approve the Wooden Lobster Restoration Project, as proposed, not at all, or to some other extent.
- Whether site specific impacts would require supplemental/additional information to the analysis done in the RMP/FEIS through a new EIS.

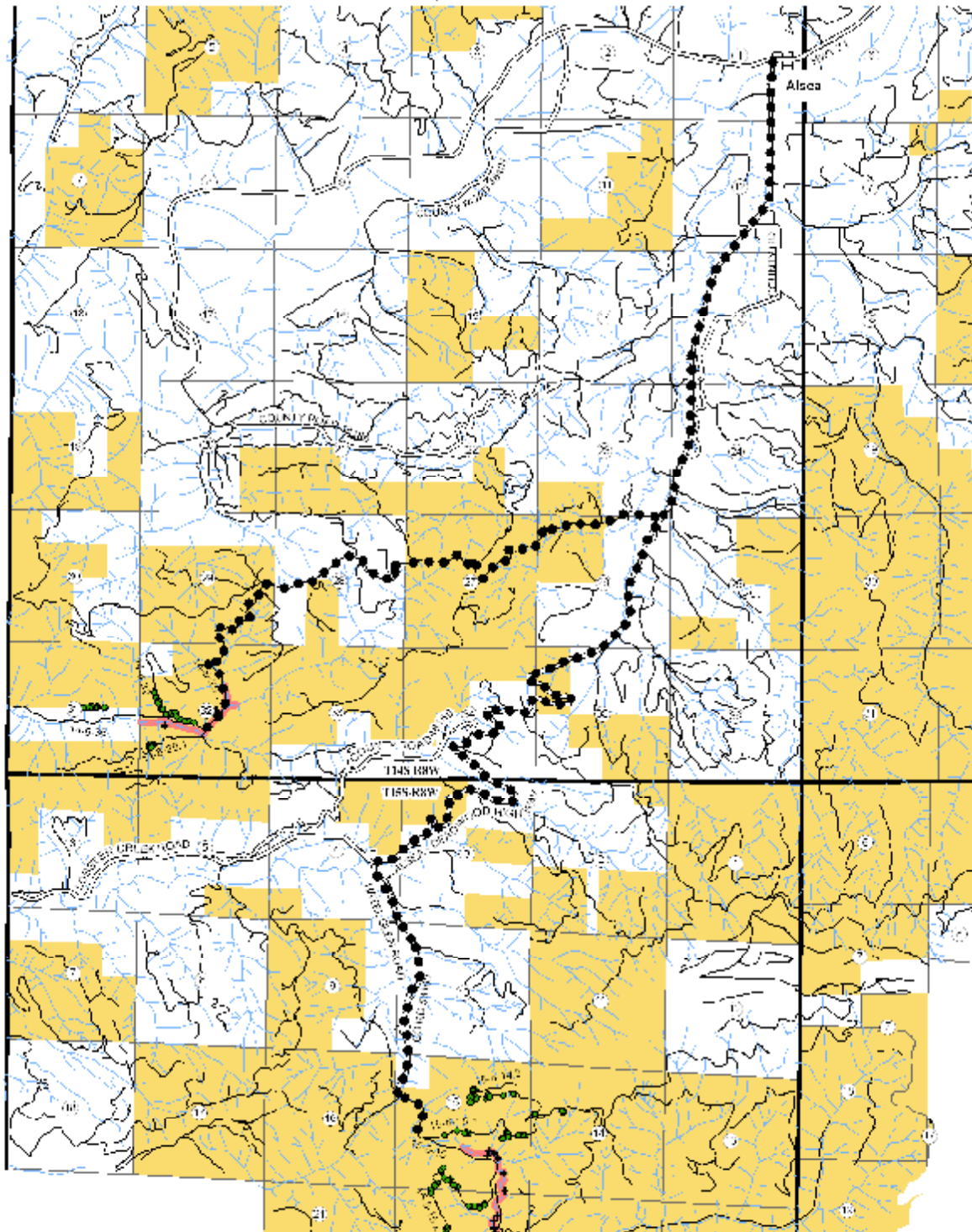
# Location Map

November 21, 2006

United States Department of the Interior  
BUREAU OF LAND MANAGEMENT

## Wooden Lobster Location Map

T 14 S, R 8 W & T 15 S, R 8 W SALEM DISTRICT OREGON



## **2.0 Large Woody Debris Enhancement**

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

The proposed action would place conifer trees in the channels of Lobster Creek, Little Lobster Creek, and Briar Creek to provide a base for meeting the standard of “80 pieces/mile of large woody debris, greater than 24 inch minimum diameter and greater than 50 feet in length” as identified in the *Lobster/Five Rivers Watershed Analysis* (p.31, January 1997). In addition, the proposed project would meet or exceed desirable large woody debris stocking levels as outlined by ODFW aquatic habitat inventory benchmark criteria (Foster et al 2001). Approximately 114 trees in the adjacent late and mid-seral timber stands would be felled and placed in the channels by helicopter. Helicopter placement is preferred over other mechanical methods because of minimal disturbance to surface soils, stream banks, and floodplains.

This action would help to “restore the distribution, diversity, and complexity of watershed and landscape features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted;” one of the objectives identified in the Aquatic Conservation Strategy (ACS) on page 5-6 of the RMP. All applicable direction in the Northwest Forest Plan is incorporated in the RMP.

### **2.2 Alternatives**

#### **2.2.1 Alternative Development**

Pursuant to Section 102 (2) (E) of NEPA (National Environmental Policy Act of 1969, as amended), 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. This EA will analyze the effects of the Alternative 1 (Proposed Action) and Alternative 2 (No Action).

#### **2.2.2 Alternative 1 (Proposed Action)**

This restoration project is a cooperative effort between the Salem District, Bureau of Land Management and the Mid Coast District, Oregon Department of Fish and Wildlife (ODFW). The project proposes to remove approximately 114 selected trees from mid and late-seral stands. The selected trees would be scattered over five Sections. The majority of selected trees would be located within 300 feet of access roads, except trees located in section 31 which are located along the BLM and private property boundary. The proposed restoration would include the placement of individual logs and log structures on federal lands to improve fish habitat along two miles of stream in Lobster Creek, up to one mile of stream in Little Lobster Creek, and up to a half mile of stream in Briar Creek. Additional logs would be placed on private lands, under a cooperative agreement, on up to one mile of Little Lobster Creek.

The Marys Peak Resource Area of the Salem District Bureau of Land Management is proposing to provide ODFW with approximately 120 large trees that would be placed via helicopter transport in Lobster Creek, Little Lobster Creek, and Briar Creek to restore instream habitat conditions. Lobster Creek, Little Lobster Creek, and Briar Creek are anadromous fish-bearing streams with Oregon Coast (OC) Coho Salmon and OC Winter Steelhead in the affected reaches and these

streams have been identified as being suitable for LWD enhancement (From Chapter 6: Management Opportunity, Pages 124 and 136, of Lobster/Five Rivers Watershed Analysis 1997). (see Map 2).

Log structural stability would be achieved by placing at least two trees in conjunction with each other, each with lengths of at least two times the bankful width. In general, whole tree lengths between 70-170 feet would be incorporated into each structure. Some existing downed logs have been identified as suitable for use in in-stream structure with lengths between 33 to 90 feet. Placement of trees which exceed 24 inch diameter breast height (DBH) is preferred for in-stream structure; however, in the Lobster Creek drainage, 12 trees less than 24" DBH have been identified as being at risk for blowdown (root sprung) which are intended to be incorporated into the in-stream enhancement project. Standing trees would be felled with chainsaws. All logs would be lifted from the forest floor, flown to instream treatments sites, and placed into the streams with a helicopter.

In general, felling of trees adjacent to the stream is not anticipated to occur as part of this project; however, falling of individual alder trees adjacent to the stream channel may be necessary to safely and effectively place LWD in the stream channel. No more than 50 trees adjacent to the stream reaches would be felled and none would exceed 16 inches in DBH.

#### Design Features:

- Follow Project Design Features (PDFs) described in Aquatic and Riparian Habitat Projects as addressed in the 2003 ESA Section 7 & Magnuson-Stevens Fishery Conservation and Management Act EFH Consultation on 10 Categories of Forest Service and BLM Programmatic Activities in Northwest Oregon.
- Follow ODFW guidelines for timing for in-water work (July 1 to August 31).
- Follow ODFW guidelines for LWD enhancement projects.
- Develop/Implement a spill containment plan.
- Refuel equipment at least 150 feet from water bodies.
- Use whole trees of sufficient size and aggregated in a manner to mimic natural accumulation.
- Any falling of stream side trees would be directionally felled toward the stream to the extent practicable. .
- If any additional conifer trees would be severed the resource area botanist would survey for any federal or Oregon state T&E and bureau special status or survey and manage species prior to cutting.
- Any debris created within the road prism during felling and removal of conifers would be removed and scattered outside of the road prism.
- If extensive areas of mineral soil are exposed during log placement, as determined by the authorized officer the area 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.
- Proposed project would comply with the Oregon Division of State Lands General Authorization for Fish Habitat Enhancement and with the U.S. Army Corps of Engineers Regional General Permit for Stream Restoration.
- Implementing project activities on private lands should include efforts to protect existing access and privately owned infrastructure. The following design features could be implemented to protect access and infrastructure where conflicts may exist:

- Ü Moving of the private access road to higher terrain, above the floodplain, is encouraged. Moving the road would likely provide the greatest benefits, reducing the impacts to the road from increased flooding.
- Ü Expediting recovery of scour resistant vegetation (planting willows), alders and conifers in the riparian areas would protect banks and minimize lateral erosion which could undermine the existing road.
- Ü Incorporation of LWD or placement of boulders in the stream channel and floodplain nearest the road, designed to direct high flows away from the road.
- Ü Log structures, should be placed in such a manner as to reduce lateral channel migration and should be located in areas where the road is higher than the existing floodplain.
- Ü Where possible, include the placement of additional logs across the full length of the floodplain to prevent un-checked chute cutoffs.
- Conduct project implementation in conformance with the applicable Biological Opinion or Letter of Concurrence concerning federally listed wildlife species. Pertinent Terms and Conditions from these consultation documents would include:
  - Ü All green trees selected for placement in streams would be inspected and approved by Resource Area Biologist to ensure that they do not currently provide nesting structure for spotted owls or marbled murrelets and that no trees greater than 36 inches DBH would be removed.
  - Ü Felling and helicopter yarding of selected trees would occur after August 5 and before April 1 in any year.
  - Ü Felling and helicopter yarding conducted between August 6 and September 15 would be restricted to occur during the period from two hours after sunrise to two hours before sunset.
  - Ü The Resource Area Biologist would be notified if any federally listed wildlife species are found occupying stands proposed for green tree selection during project activities.

### **2.2.3 No Action Alternative**

The BLM would not implement the action alternative at this time. This alternative serves to set the environmental baseline for comparing effects to the proposed action.

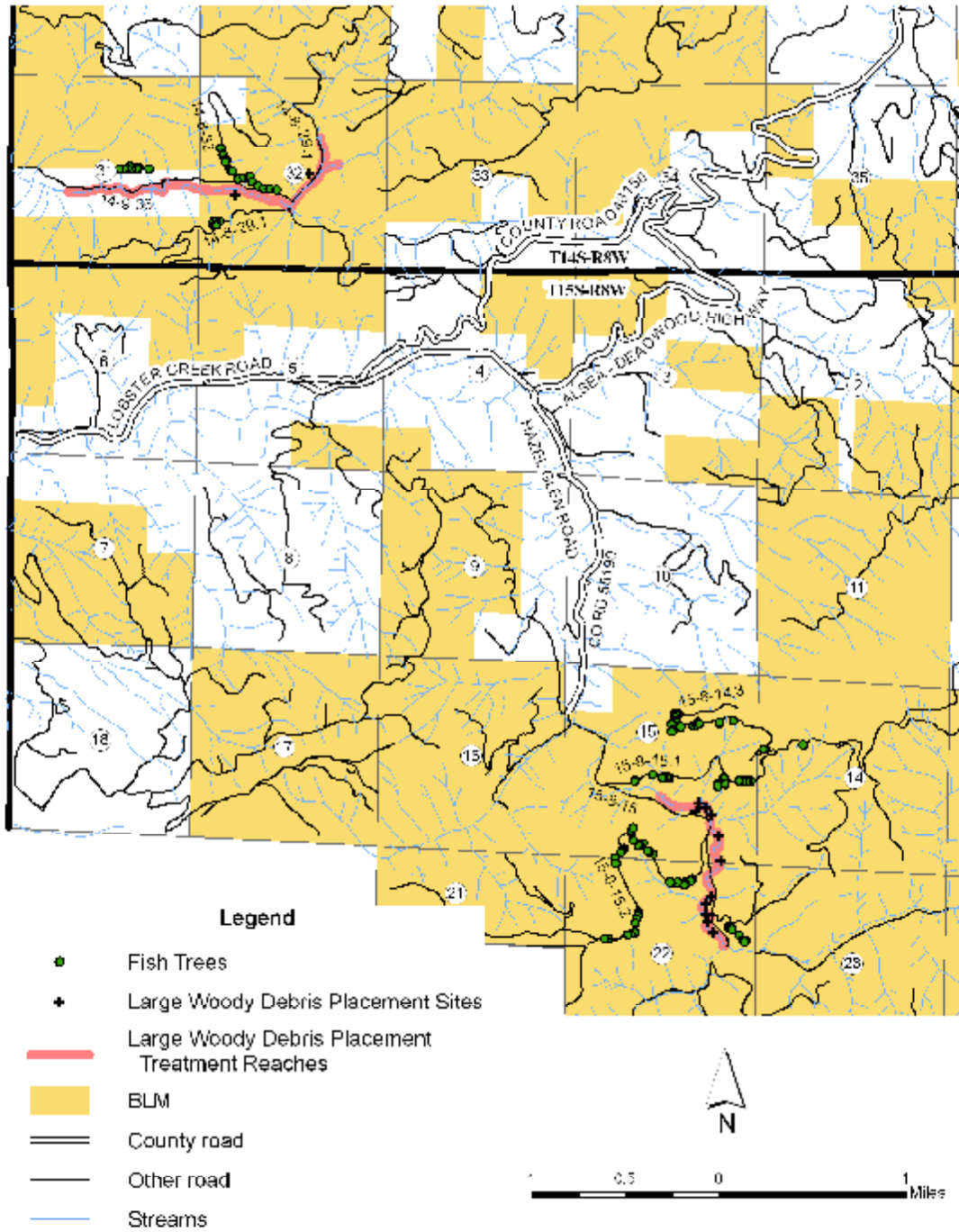
# Project Map

January 12, 2007

United States Department of the Interior  
BUREAU OF LAND MANAGEMENT

## Wooden Lobster Restoration Project EA

T 14 S, R 8 W & T 15 S, R 8 W SALM DISTRICT OREGON



### 3.0 Affected Environment and Environmental Effects

#### 3.1 Identification of Affected Elements of the Environment

The interdisciplinary team reviewed the elements of the environment, required by law, regulation, Executive Order and policy, to determine if they will be affected by the proposed action. Table 1 (Critical Elements of the Environment from BLM H-1790-1, Appendix 5) and Table 2 (Other Elements of the Environment) summarize the results of that review. Affected elements are **bold**. All entries apply to the action alternative, unless otherwise noted.

**Table 1: Environmental Review for the Critical Elements of the Environment (BLM H-1790-1, Appendix 5)**

Critical Elements Of The 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	The proposed action is not anticipated to have any effect on air quality as no burning would take place.
Areas of Critical Environmental Concern	Not Present	No	
Cultural, Historic, Paleontological	Not Affected	No	Cultural resource sites in the Coast Range, both historic and prehistoric, occur rarely. The probability of site occurrence is low because the majority of BLM managed 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%. (Cultural Resource/ Archeological Report pp.2)
Energy (Executive Order 13212)	Not Affected	No	There are no known energy resources located in the project area. 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 adverse human health or environmental effects on minority populations and low-income populations.
Prime or Unique Farm Lands	Not Present	No	
<b>Flood Plains (Executive Order 11988)</b>	<b>Affected</b>	<b>No</b>	<b>Addressed in text (EA sections 3.2.2 and 3.2.3, Soils/Hydrology Report pp. 4 and Fisheries Report, pp. 11)</b>
Hazardous or Solid Wastes	Not Present	No	
<b>Invasive, Nonnative Species (Executive Order 13112)</b>	<b>Affected</b>	<b>No</b>	<b>Addressed in text (EA section 3.2.5 and Botanical Report)</b>

Critical Elements Of The Environment		Status: (i.e., Not Present , Not Affected, or Affected)	Does this project contribute to cumulative effects? Yes/No	Remarks
Native American Religious Concerns		Not Affected	No	No new ground disturbance is anticipated. Past projects of this type within this area have not resulted in tribal identification of concerns.
<b>Threatened or Endangered (T/E) Species or Habitat</b>	Fish	Not present	No	
	Plants	Not Present	No	
	<b>Wildlife (including designated Critical Habitat)</b>	<b>Affected</b>	<b>No</b>	<b>Addressed in text (EA section 3.2.4 &amp; Biological Evaluation pp. 6).</b>
<b>Water Quality (Surface and Ground)</b>		<b>Affected</b>	<b>No</b>	<b>Addressed in text (EA section 3.2.2. (Hydrology/Soils Report pp.4)</b>
Wetlands (Executive Order 11990)		Not Present	No	
Wild and Scenic Rivers		Not Present	No	
Wilderness		Not Present	No	

**Table 2: Environmental Review for the Other Elements of the Environment**

Other Elements Of The Environment		Status: (i.e., Not Present , Not Affected, or Affected)	Does this project contribute to cumulative effects? Yes/No	Remarks
<b>Essential Fish Habitat (Magnuson-Stevens Fisheries Cons. /Mgt. Act)</b>		<b>Affected</b>	<b>No</b>	<b>Addressed in text (EA section 3.2.3 &amp; Fisheries Report, pp. 11)</b>
Fire Hazard/Risk		Not Affected	No	To the extent practical some or all of the limbs would be left on the tree bole and placed in the stream. Limited amounts of slash could be generated due to accumulation of limbed branches at each green tree removal site and branches broken at each LWD placement site. Minimal changes to fire hazards/risks are anticipated due to the limited quantity and dispersed nature of any slash generated.
Forest Productivity		Not Affected	No	The dispersed nature of the green tree removal portion of the project and the minor site level compaction expected suggest no detectable effects to forest productivity would occur.
Land Uses (right-of-ways, permits, etc)		Not Affected	No	Existing right-of-ways would not be affected by the LWD project.
<b>Late successional / old growth</b>		<b>Affected</b>	<b>No</b>	<b>Addressed in text (EA section 3.2.4 &amp; Biological Evaluation, pp. 6)</b>
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		Not Affected	No	No recreation facilities exist in the project area. Dispersed recreation would not be affected.
Rural Interface Areas		Not Present	No	
<b>Soils</b>		<b>Affected</b>	<b>No</b>	<b>Addressed in text (EA section 3.2.1 and (Hydrology/Soils Report pp.4)</b>
Special Areas outside ACECs (Within or Adjacent) (RMP pp. 33-35)		Not Present	No	
<b>other Special Status Species/Habitat</b>	<b>Fish</b>	<b>Affected</b>	<b>No</b>	<b>Addressed in text (EA section 3.2.3 and Fisheries Report, pp. 11)</b>
	Plants	Not Present	No	
	<b>Wildlife</b>	<b>Affected</b>	<b>No</b>	<b>Addressed in text (EA section 3.2.4 and Biological Evaluation pp. 6)</b>
<b>Visual Resources</b>		<b>Affected</b>	<b>No</b>	<b>Addressed in text (EA section 3.2.6 and Recreation report pp. 3)</b>
<b>Water Resources (except Water Quality)</b>		<b>Affected</b>	<b>No</b>	<b>Addressed in text (EA section 3.2.2 and Hydrology/Soils Report pp.4)</b>
Other Wildlife Structural or Habitat Components (Snags /CWD / Special Habitats, road densities)		Not Affected	No	No special habitats would be disturbed and no road construction/decommissioning would occur.

### 3.2 Affected Environment and Environmental Effects

Those elements of the human environment that were determined to be affected are *soils, water, fisheries, wildlife, vegetation, and 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 Soils

##### Affected Environment

A variety of similar, highly productive soils prevail in the area of the proposed action. There are alluvial silts and sands in the areas comprising the stream flood plains and terraces. The upland areas have a variety of predominantly clay loam and gravelly loam textured soils. Representative soil series are: Bohannon gravelly loam, Blachly clay loam, Bohannon-Slickrock gravelly loam, Klickitat gravelly clay loam and Marty silty clay loam. Much of the area adjacent to the streams is classified as Sandy alluvial land, Loamy alluvial land, or Colluvial and Alluvial land. Soils issues are limited to potential surface compaction (uplands) and disturbance leading to erosion (all areas).

##### Environmental Effects

#### 3.2.1.1 Alternative 1 (Proposed Action)

It is unlikely that the proposed action would increase the risk for surface erosion on these sites. Compaction of the surface soil would be minor and dispersed so as to be negligible. The amount of disturbance to surface soils and vegetation would also be very slight. The major disturbance would occur where trees are felled and removed. On flat stable ground, such as this project area, this disturbance is unlikely to lead to surface erosion and stream turbidity increases. Effects on long term soil productivity are expected to be negligible due to the narrow, dispersed zone of impact.

Cumulative Effects: The proposed project would not contribute to watershed-level cumulative effects to soils. At the site-scale, some soil displacement/compaction would occur at each green tree falling site, and each LWD placement site.

### *3.2.1.2 No Action Alternative*

The upland green trees would be left in place, no stream bank disturbances would occur, and there would be no effect on soil resources.

## **3.2.2 Water**

### **Affected Environment**

The project setting is characterized by a forest and river setting and accessed by gravel forest and paved roads. Evidence of man-made modifications (roads, timber harvest, utilities, and residential development) is common on both private and public lands in surrounding areas. Eighty-100 inches of precipitation is dispersed throughout the winter months (October –May) in long duration, low intensity storms off the Pacific Ocean. Deep, organic rich soils and heavy vegetative cover eliminate most surface run-off and erosion. Sediment supply to streams is primarily a function of land-sliding in steep uplands during high intensity storm events. Hydrology issues are limited to concerns for the protection/restoration of a “normal” range of in-stream flows.

Tributary stream channels in the project areas are primarily small 1st and 2nd order headwater streams; they are “source” reaches, following the classification of Montgomery and Buffington (1993). These streams are generally narrow, with moderate gradient, low sinuosity and shallow to moderate entrenchment. Channel substrate is predominantly fines with steeper headwalls containing larger cobbles and some boulders. Most channels contain scattered pieces of CWD with low levels of LWD.

The channels proposed for treatment vary from meandering, low gradient (less than 2%) in moderately restrained valleys with well-developed floodplains and periodic sand/pebble bars to moderately incised, 2-4% gradient channels with gravel/cobble substrate. The primary issues in these channels are effects to channel stability and sediment supply and transport.

The water quality in the headwater streams proposed for treatment is generally high with a neutral pH, low dissolved salts, low turbidity, cool temperatures and little or no incidence of pollution from heavy metals or organic compounds. Water quality concerns in these streams are generally limited to excess levels of fine sediment as a result of disturbance within stream channels or adjacent uplands and high stream temperatures during base flow (July-September). The primary beneficial use affected by these conditions is the cold water fishery (anadromous fish) which rely upon sorted, well oxygenated gravel beds and cool water refugia during summer base flow for high reproduction success.

## **Environmental Effects**

### ***3.2.2.1 Alternative 1 (Proposed Action)***

#### Hydrology:

Small areas (less than 100 ft. sq.) of compaction and disturbance of surface soils would likely result as a consequence of the falling of trees. Alterations in the capture, infiltration and routing (both surface and subsurface) of precipitation are theoretically possible but would remain too small to measure. Some surface runoff near the active channel may be routed directly into the channel from trees which have fallen across streambanks and compact the surface or gouge banks. However, the flat grade in the area and the deep duff and vegetative layers covering the soil surface are expected to keep disturbance to a minimum. At these low levels of disturbance dispersed over a large area detectable alteration to streamflows are highly unlikely. For this same reason, increases in surface erosion and fine sediment inputs to the channel, from disturbed surfaces adjacent to the active channel, are unlikely to be significant.

#### Stream Channels and Floodplains:

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

Overall, the increase in LWD in the channel is expected to decrease transit time for organic and inorganic materials moving through the system, increase hydraulic “complexity,” increase bank erosion (for the first several years), increase the quantity of sediment transported in the channel but reduce its rate of transport, increase sediment storage, increase complexity and alter the ratio of bed forms (i.e, pools and riffles), and increase over bank flood flows. This increased complexity could lead to increased floodplain development. Actual channel adjustments would be determined primarily by stream flows in the years following project implementation.

Effects are anticipated to be highest immediately after project implementation with a gradual reduction until a new baseline condition is reached. Again, this can be anticipated but not precisely predicted because timing of this process would be highly dependent upon the timing, quantity and size of winter peak flow events, which are random in nature. In addition, overtime the retained logs are expected to trap wood moving downstream; trees in the riparian canopy would continue to grow, age and eventually fall into the channel. This would result in continued increases in the quantity and complexity of wood in the channel over the next century.

#### Water quality:

A small area of Riparian Reserve in the project area would be affected by tree felling. Within these areas, substantial portions of the riparian canopy would be retained, therefore maintaining riparian microclimate conditions and protecting streams from increases in temperature. Log placement in the channel would provide additional cover and shading from solar radiation and increased solar heating. This proposal is unlikely to result in a detectable increase in stream temperatures in the

project reaches and may help reduce temperatures by adding cover and increasing pool depth at some locations.

Channel widening with increased bank erosion is a common process that occurs in unstable streams that have incised into alluvial valleys. It can be anticipated that bank erosion would continue in portions of the project streams, with or without the proposed project, until these channels have achieved a gradient, sinuosity and geometry that is in balance with stream flow, sediment transport and channel roughness elements. It is expected that additions of wood would speed this process and this may result in short term increases in sediment supply and turbidity, especially during winter storm events. However, increases in wood (channel roughness) would also slow sediment transport rates and increase storage of sediment and organic material which would be trapped behind obstructions and deposited in bars or on flood plains. These processes, overtime, are expected to reduce fine sediment transport in this channel and improve water quality. In the short term, increases in fine sediment supply and transport from the proposal would be too small to measure relative to background turbidity and sediment supply.

To mitigate potential increases in bank erosion due to additions of wood, placement of trees would be done with consideration for bank erosion processes. Attempts would be made to fall trees in a manner to direct flows away from unstable banks.

Cumulative Effects: The placement of LWD in Lobster Creek, Little Lobster Creek, and Briar Creek would likely have a positive cumulative effect by improving overall aquatic habitat conditions in the Five Rivers - Lobster Watershed. Private land owners are likely to continue to harvest lands in the watershed, which would continue to supply the stream system with finer-grained materials.

### ***3.2.2.2 No Action Alternative***

Conditions and trends for hydrologic resources would be expected to continue as described in the Affected Environment section of the Hydrology Resources analysis, and the *Five Rivers/Lobster Watershed Analysis* document. Lobster Creek, Little Lobster Creek, and Briar Creek would continue to be depleted of functioning LWD, as there is little potential for LWD recruitment from much of the existing riparian vegetation.

### **3.2.3 Fisheries**

#### **Affected Environment**

The Lobster Creek drainage provides habitat for Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*O. kisutch*), steelhead trout (*O. mykiss*), sea-run and resident cutthroat trout (*O. clarkii*) and other aquatic species. All of these fish species are known to access and utilize each of the stream reaches in the project area (USFS and BLM 1997). Salmonid densities in East Fork Lobster Creek and Upper Lobster Creek upstream of the Lobster Creek project reach have been assessed since 1987 (ODFW 2003). The average number of summer rearing salmonids between 1987 and 2002, combining both reaches, is 6,191 fish per mile per year. No fish density information was available for the Little Lobster/Briar Creek drainages.

The project area includes lands with differing levels of landslide risks (USFS and BLM 1997). Between 1952 and 1997 natural landslide events appear to be rare, with most landslides attributed to roads or harvest activities. Lack of LWD was described as a considerable problem

in many stream reaches covered in the watershed analysis and delivery of LWD from upslope areas is impaired by numerous channel crossings on roads. Road densities and extensive timber harvest have contributed to fine sediment levels above reference conditions. Fine sediment levels were noted as impairing pool depth and rearing habitats. High stream temperatures were noted for limiting the abundance and distribution of salmonids in the watershed. Little Lobster Creek was noted as being above reference conditions for temperatures. Upper Lobster Creek, including the project area, was noted as being near reference conditions for temperatures.

Partial stream cleaning of large woody debris occurred on Lobster Creek in the mid 1960s (House and Boehne 1987) reducing the available LWD. Structural enhancement projects, including LWD and boulders structures, have been installed in many tributaries through out the Lobster Creek watershed in order to improved stream complexity and salmonids rearing habitat (House et al 1989). The proposed project area of Lobster Creek is located between past structural enhancement projects conducted the 1980s and the 1990s. In Little Lobster Creek project area rock weir structures installed in the mid 1980s are largely non-functional and in some cases are contributing to accelerated bank erosion due to weir orientation.

Based on field review and ODFW habitat surveys, Little Lobster and Briar Creek are controlled by entrenched channels, while Lobster Creek is more controlled by valley constraint. These different controlling features result in different responses due to increased sedimentation, simplified riparian conditions, and/or lack of large wood debris. The high levels of bank erosion noted in Little Lobster and Briar Creek is evidence of entrenchment. The level of bank erosion results from stream flows unable to access floodplains, thus increasing erosive power against banks during high flows. Portions of Lobster Creek (the upper and lower segments) in the project area, appear to be entrenched responding in similar fashion as Little Lobster and Briar. The middle segment of Lobster Creek appears to have adequate access to the floodplain but an excess of sediment deposition as indicated by the high rates of lateral channel movement and wide active channels.

Based on field reconnaissance of Lobster Creek the riparian areas adjacent to the stream is predominately an alder stand with very few older conifers and recruitment potential was assumed to be low. Field review in 2006 indicated that only 2 pieces of key wood (less than 24" diameter and greater than 50' length) appeared to be functioning in the 2 mile treatment reach of Lobster Creek. One piece of key wood per mile is well below the ODFW's desirable benchmark of at least 48 pieces per stream mile (Foster et al 2001) and 80 pieces per mile standard noted in the Lobster/Five Rivers Watershed Analysis (USFS and BLM 1997). No ODFW stream surveys were conducted on the project reach of Lobster Creek.

ODFW has conducted stream surveys in both Little Lobster and Briar Creeks. The Little Lobster survey overlaps the proposed project reach (ODFW 1999). Riparian vegetation was predominately small deciduous trees such as alder. Approximately 5 pieces of key wood was noted per mile and 34% of the stream reach had actively eroding banks. The Briar Creek survey extends through the project area (ODFW 2000A). Riparian vegetation was predominately mixed sizes of deciduous trees. No key pieces of LWD were identified in this reach and 27% of the stream reach had actively eroding banks.

### **Threatened and Endangered Fish Species**

Oregon Coastal (OC) Coho Salmon was de-listed under the Endangered Species Act on January 19, 2006. No ESA listed fish species are known to occur in the affected drainages. No effects to listed fish or their habitats are anticipated due to the proposed actions.

Consistent with BLM Manual (6840), OC Coho Salmon are considered a special status species (SSS), designated Bureau Sensitive, during a monitoring period of five years following delisting. In addition, OC Coho Salmon is listed in critical condition by the State of Oregon (ONHP 2005). Oregon Coast Winter Steelhead is also a Special Status Species, designated Bureau Sensitive, due to the former candidate classification of this species under the ESA.

### **Essential Fish Habitat –**

Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, as amended, an assessment of proposed actions effects to Essential Fish Habitat (EFH) and consultation with NOAA NMFS is necessary for projects which may adversely affect EFH. For purposes of this analysis the affected stream reaches are known to contain populations of Chinook and coho salmon, and are considered Essential Fish Habitat. The proposed action would meet the Project Design Criteria established in the *Endangered Species Act Section 7 Formal Consultation for U.S. Forest Service and Bureau of Land Management Programmatic Activities in Northwest Oregon*, February 25, 2003. An Essential Fish Habitat adverse affect determination is covered by this Programmatic.

### **Environmental Effects**

#### **3.2.3.1 Alternative 1 (Proposed Action)**

Both the felling of stream side alder and the placement of LWD would increase the level of disturbances at each treatment site and temporarily altering fish behavior. Since fish are mobile and can move away from work areas, the probability of falling alder, or any LWD placements, causing mortality is highly unlikely. Juvenile salmonids, and other resident fish species, would be disturbed from their normal feeding and resting behavior at each treatment site. This disturbance would be limited in time to only when trees are felled or placed into the stream channel. Fish would be expected move away from the activity and would reoccupy abandoned feeding and resting areas and resume normal behaviors upon cessation of project activities.

Preliminary LWD structural designs developed between ODFW and BLM fisheries staff suggest approximately 20 project sites incorporating multiple pieces of LWD could be constructed. Each site, based on preliminary design, would be expected to affect up to 300 feet of stream. The 300 feet of stream estimated is a rough estimate based on the average distribution pattern of trees placed at each location and the typical length of trees utilized. Assuming the full width and length of stream was actually disturbed the average number of fish that might move away from project activities could be up to 350 fish per site; based on fish per mile calculations from the ODFW (2003) report. This is a worst case estimate which could affect up to 33% of the fish that rear in the affected project reach in Lobster Creek. The total number of fish disturbed in Little Lobster Creek and Briar Creek would be substantially less than Lobster Creek, as only a few treatment sites are proposed. The proposed project could affect up to 3 percent of the approximately 110 miles of anadromous salmonid habitat in the Lobster/Five Rivers Watershed (Streamnet 2006; USFS and BLM 1997).

### Tree Falling

*Peak and Base Flows* - Canopy removal can alter flow characteristics such as peak and base flow. The project would remove up to 120 conifer trees and up to 50 alder trees which could reduce canopy closure levels. These trees are largely isolated individuals dispersed over several sections. No large openings would be created. The limited number of trees affected, dispersed over a several sections, indicates that the effect to peak/base flows would be so minor that it would not be detectable at any scale. Since no changes in peak and base flows are anticipated, no effects to fish habitat would result from the proposed timber falling.

*Temperature* - Tree removal, used for LWD, would occur well away from stream channels and would not result in any changes in shading to streams and therefore would not affect stream temperatures. Alders fallen to facilitate LWD placement could occur adjacent to the stream channel. These actions would be limited to treatment sites identified along the two mile stretch of Lobster Creek and the sites identified on Little Lobster and Briar Creeks on one and half miles of stream. The hydrology report indicated that the project would maintaining riparian microclimate conditions and anticipated no negative changes in stream temperatures due to the limited alder removal (Hawe 2006). No effects to fish habitat are expected from the proposed upland and riparian tree removal.

*Sediment*- Trees intended to be used for LWD are not located near any known stream channels. All trees are more than 200 feet from the nearest stream channels. Because the distances between the LWD trees and stream channels is more than 200 feet, no sediment would reach streams and would not have any affect to aquatic habitat. Felling of alder adjacent to the stream could result in local soil disturbance in close proximity to the stream. A minutia of sediment may reach the project channels. This minor site effect would be dispersed over the 2 miles of Lobster Creek and 1.5 miles of Little Lobster/Briar Creek affected reaches. The hydrology analysis indicated this affect would be so negligible that they cannot be measured (Hawe 2006). As this impact would have no detectable effect to hydrology, no detectable effects would be anticipated to aquatic habitat.

*Large Woody Debris Recruitment* - The trees proposed for LWD would be transported from hillsides away from any stream channels. The proposed action would not directly affect LWD recruitment to tributary or mainstem channels. Trees falling under undisturbed conditions would not be expected to reach stream channels and would not be expected to contribute to the LWD levels of stream channels. Removal of trees from hillslopes prone to landslides could indirectly negatively affect LWD recruitment. Recruitment of LWD to streams could be less due to the reduced number of trees (potential LWD) on hillslopes in the event of a landslide. Trees targeted for removal were dispersed over lands with differing levels of landslide risks (USFS and BLM 1997). Alterations to infiltration and water routing due to compaction from falling was described as so negligible that they cannot be measured at the site level (Hawe 2006). The dispersed nature of the tree removal, over several sections, combined with the undetectable impact on infiltration strongly suggests that no additive risks to hillside movement would be expected from the proposed action. Since no changes in landslide risks would be expected, no changes in wood recruitment would be expected to occur from upslope timber removal. The proposed project would contribute direct beneficial affects to LWD recruitment by transporting trees from hillslopes which would not normally provide LWD to stream channels, (except thru landslides), thus increasing LWD without the concurrent impact of mass erosion typically associated with landslides.

### LWD Placement

*Peak and Base Flows* – No direct effects to peak and base flow would occur due to placement of LWD in the stream channels. The placement of LWD would not result in any changes in the

timing, magnitude or duration of water entering stream channels, thus no effects to fish would occur. However, indirect impacts may occur due to changes in floodplain connectivity and increased sub-surface storage of water as LWD is incorporated into the bedload. This analysis assumes that the incorporated structures could raise bed elevation either due to the structures directly raising the bed or indirectly due to increased sinuosity. If one or both of these changes in bed elevations occurs, lower magnitude winter freshets could access the floodplain, compared to the existing condition, slightly reducing peak flows during floodplain recharge periods. Storage potential of adjacent floodplains would be very small in comparison to the total volume of water typical of winter high flows, thus the extent of peak flow reductions would be so negligible that it could not be measured compared to the existing condition. The higher bed elevation could also retain higher water tables in floodplains later into the dry seasons and could increase base flows. Increases in base flow could occur due to increased storage capacity and could provide improvement in water quality and habitat connectivity during summer months. The magnitude of this improvement to aquatic habitat is likely to be undetectable at the reach level, due to the small amount of stream directly affected by the proposed action. However, important micro-site improvements in aquatic habitat would occur and would quickly be utilized by fish as bed elevation adjusts to the LWD.

*Temperature* - Helicopter placement of LWD is likely to result in short term negative affects to the overhead canopy during installation of the LWD due to adjacent trees branches and tops breaking while placement is occurring. Alterations in canopy closure could negatively affect stream temperature due to increased solar radiation reaching stream waters. The proposed action would have a undetectable impact on temperature at the site scale over existing conditions due to the very small areas of affect spread out over 3.5 miles of stream. The overhead canopy would be expected to recover to pre-project closure by the following growing season. In addition, the new LWD would provide overhead cover at the site and prevent some sunlight from reaching water surfaces. Over the long term, minor site level improvements in stream temperatures may occur due to increased cover and deeper pools which could occur as logs are incorporated into the active channel (Hawe 2006). Beneficial effects to aquatic habitat may occur due to reduced temperatures associated with cover and pool depth from log placements. Modest temperature improvements can contribute to increased survival and production of aquatic organisms.

*Sediment* - The placement of the wood, both alder and conifers, during low flows could mobilize fine sediments locally as a result of local water hydraulic changes altering bed and bank scour and deposition at each treatment site. During high flows, LWD would further alter the stream bank and bottom as the channel adjusts to the new coarse elements during progressively higher flows. The hydrology analysis indicated that effects of the project on sediment and turbidity during high flows would likely be so negligible that they could not be measured compared to background turbidity (Hawe 2006). Bed and bank scour and deposition would return to background levels following the first bankful flow, typically within the first or second winter following project implementation. Beneficial improvements in sediment transport rates should be realized in the long term with the placement of large wood. Increased habitat complexity and pool formation associated with new structures should move project reaches toward sediment transport rates consistent with historical wood dominated stream systems. Assuming that bed elevations increase due to LWD placement, bank erosion would be reduced as flood flows have improved connectivity to the floodplain. Subsequently, transportation of sediment from actively eroding banks would be reduced.

*Large Woody Debris Recruitment* - The proposed placement of LWD into project reaches would immediately increase the quantity of key pieces of LWD by approximately 114 pieces, 81 identified pieces in Lobster and 33 identified pieces in Little Lobster and Briar Creek. The



proposed treatment in Lobster Creek would meet ODFW benchmark (Foster et al 2001) immediately following treatment. Little Lobster and Briar Creek were noted to contain approximately 5 pieces of LWD in the BLM portions of the project area. The proposed addition of 33 pieces of LWD would move these streams towards ODFW desirable benchmark, a combined 38 pieces per mile of new and old LWD, but would still be below the desirable target of 48 pieces per mile. Coarse woody debris (CWD) abundance could also locally improve due to recruitment from stream side alders boles and limbs which potentially could break during placement. The placement of wood in these streams is expected to increase habitat complexity. Installed LWD would be expected to remain onsite, in placed structure for substantial time frames, decades, until natural processes moves wood downstream. Over time log decay and flood flow events would be expected to break down, or otherwise result in smaller woody debris pieces, which would move some distances downstream. This process of decay and subsequent transport of the wood pieces, or recruitment of additional debris to structure placement sites, would be expected to result in additional changes in aquatic habitat over the long term (up to 100 years).

Cumulative Effects: During scoping of this project, a downstream landowner of the project area in Little Lobster Creek indicated that a past LWD placement project had negatively impacted the access route to his property. Based on photographs provided by the landowner, the stream channel appears to have eroded around placed wood, undercutting a short segment of the fill supporting the access road to their property. The stream channel appears to be entrenched thru the affected area, with high percentage of exposed banks on both sides of the channel. The road of concern is located at the floodplain height of the Little Lobster Creek valley.

The majority of the LWD placement sites would occur approximately 1 mile upstream of the road of concern. A least one multi-log structure would be placed in channel and cover the width of the floodplain in Little Lobster Creek. The site design on Little Lobster Creek is intended to check bed elevation in the channel and maintain floodplain stability upstream of the project. The size of all the LWD material intended for in-stream placement, both in diameter and length, combined with the moderate size of the watershed to which the structures would be installed, make it highly unlikely that any structures or individual placed logs would be transported any distance. Implementation of design features intended to minimize lateral channel erosion is recommended for any work proposed in proximity to floodplain accessible roads. As portions of the log structures begin to decay and break off some pieces of project placed wood may transport downstream over the long term. Most of this material would be captured in meander bends or incorporated into the floodplain during flood events before traveling long distances. Some broken pieces of placed LWD could eventually be incorporated into other LWD structures downstream including on private property. This material should be indiscernible from naturally recruited LWD/CWD.

Overall the proposed action would largely result in beneficial cumulative effects to fisheries habitat with the implementation of the proposed action. Increased survival of juvenile and adult salmonids would be expected to occur much sooner with the proposed action than the no-action as sediment transport rates and base flow conditions improve with LWD incorporation into the bedload. Fish survival would also benefit from increased habitat complexity arising from the proposed action when compared to the No Action Alternative as increased complexity improves age-class and species distribution and survival in the affected reaches. Habitat quality would also improve as water quality is anticipated to improve at a micro-site level, which cumulatively over the 3.5 treated miles should result in more resting and feeding habitat. Compared to the no-action alternative temperature improvement would increase fish distribution temporally and spatially in the affected reaches.

The proposed action would experience a short term spike in disturbance during implementation. This disturbance spike would be followed by the same low levels of recruitment as the no-action until riparian stands mature. Riparian stand restoration work conducted in Little Lobster and Lobster Creek, mostly alder to conifer conversions, would eventually provide naturally occurring LWD sources under either the no-action or proposed action (Haynes 2006). As the riparian stands mature over the next 60 to 100 years, both the No Action and the Proposed Action Alternatives would begin to experience similar levels of wood recruitment. The no-action would be expected to remain below LWD benchmark targets for a longer period until sufficient timber was recruited to stream channel to meet benchmark. The proposed action would be expected to retain LWD at or near benchmark levels until riparian recruitment begins to replace in-stream structure. Concurrent to the BLM restoration project, ODFW is also pursuing LWD restoration work on Preacher Creek with the U S Forest Service. Preacher Creek is tributary to Lobster Creek, approximately 2.25 stream miles upstream from the confluence of Little Lobster with Lobster, and approximately 7.25 stream miles downstream of the project reach in Lobster Creek. Cooperative efforts implementing in-stream LWD projects and riparian conversion projects in the Lobster/Five Rivers Watershed would contribute to improving the LWD baseline conditions. There are no other known BLM projects in the Middle Lobster or Upper Lobster drainages which may result in any cumulative effects to LWD recruitment. Private lands including riparian stands in the Middle Lobster and Upper Lobster drainages would be assumed to be managed consistent with Oregon Forest Practices requirements including streamside protection buffers and basal area retention which protect some of the LWD on these lands.

### ***3.2.3.2 No Action Alternative***

No wood placement or stream side alder would be felled or placed in the stream channel, thus fish would experience minimal disturbance as background CWD/LWD recruitment events appear to be rare.

*Peak and Base Flows* – The No Action Alternative would not result in any modifications to the existing upland or riparian canopy or result in any increased levels of compaction. The no-action alternative would not result in any direct changes to evapo-transpiration and infiltration which could alter the timing, magnitude or duration of water entering stream channels, which could negatively affect fish habitat. However, the stream channels in Little Lobster and Briar Creeks would continue to widen as demonstrated by relatively high percentage of actively eroding stream banks noted in stream surveys (ODFW 1999; 2000A). Channel entrenchment reduces access of winter flows to floodplains and reduces the stream/floodplain storage potential in hyporheic zones. The no-action alternative would not alter the ongoing process of bank erosion, which is contributing to degrading water storage in the stream side hyporheic zones. Over the long term, this bank erosion process would generally result in lower stream flows during dry periods, and higher peak flows during winter freshets, until a new water/sediment transport balance is reached at some point in the future when bed/bank stability is achieved.

*Temperature* – No changes in solar radiation reaching water would occur due to the no-action alternative thus no changes stream temperatures is anticipated in short term. However, over the long term the streams in the project area would tend toward lower summer flows under the no-action alternative. Low flow periods are when streams are least capable of buffering changes in ambient air temperatures. The thermal capacity of water to buffer changes in temperature is poorest under lower volume of waters (Poole et al 2001). As base flow continues to decline, the trends in stream temperatures under the no – action alternative would tend toward greater

fluctuations in daily temperature and is more at risk of increased maximum daily temperatures. This trend would likely result in water quality conditions that are less desirable for salmonid habitat. Reductions in flows which contribute to degrading water quality would likely continue to until the sediment budget of the affected streams reaches equilibrium.

*Sediment* - Active erosion of stream banks noted in the stream surveys (ODFW 1999; ODFW 2000A) would continue until the streams reach equilibrium between the erosive power of winter high flows and the bank sediments transport potential. This erosion process would typically result in wider channels over time. Generally wider channels results in shallow and simple habitat which would be less suitable for adult and juvenile salmonids.

*Large Woody Debris Recruitment* - Recruitment of LWD to the stream channels would continue at currently low rates, as densities of mature conifer in the project area streams that could be recruited is relatively low. Achievement of ODFW's desirable LWD benchmark (Foster et al 2001) would be delayed, potentially for decades, until natural recruitment occurs from mature and decadent stands. Riparian restoration work has occurred adjacent to stream reaches over the last 15 years. Riparian restoration actions have included slashing alder in small patches, up to one acre in size, and planting conifer species. Large woody debris benefits from these treatments would not be realized until the planted trees reach mature age classes, (probably more than 65 years in the future) and are recruited into the floodplains and active channels. Thus, the volume of wood noted for Lobster Creek would remain at undesirable levels during the intervening years until the natural recruitment processes recover wood volumes. Stream channels in the project area are currently lacking large wood which results in degraded and simplified channel conditions and accelerated bed movement. Structural complexity provided by LWD increases the variety of habitat for fish across multiple age classes (Cederholm et al 1997). Thus lack of LWD in the project area streams can be assumed to negatively impact the quality of aquatic habitat for fish.

### **3.2.4 Wildlife**

#### **Affected Environment**

The affected environment for this project area includes three stream segments and adjacent BLM land within the Five Rivers-Lobster Creek Watershed (a fifth-field watershed). The Lobster Creek, Little Lobster Creek, and Briar Creek stream segments fall within two sixth-field watersheds (used as wildlife analysis area) where BLM manages about 15,000 acres of forest lands. Almost all of the BLM lands within this analysis area are designated as LSR which is intended to maintain and enhance older forest characteristics to support a great diversity of wildlife species, including those listed and sensitive species that are vulnerable to loss of habitat (USDA-FS and USDI-BLM 1994). About 5,250 acres (34.8% of analysis area) are late-seral forest and old-growth stands. This project is designed to allow for up to 120 live conifer trees to be felled from the roadsides and edges of late-seral and mid-seral forest stands within approximately one mile of the affected stream reaches. All of the selected fish trees would be taken within Critical Habitat Units (CHU) that have been designated for the northern spotted owl (CHU= OR-48), and marbled murrelet (CHU=OR-04-j). Some of these late-seral forest patches have not been surveyed and may provide suitable habitat for spotted owls and marbled murrelets. The nearest active spotted owl site lies about 0.7 miles from the trees selected for felling near Little Lobster Creek. An inactive owl nest site lies about 0.3 miles from trees selected for felling near Lobster Creek. The nearest occupied murrelet site lies about 0.25 miles from trees selected for felling near Little Lobster Creek.

The forest stands where trees have been selected for felling may support populations of wildlife species that are closely associated with the habitat components and structures found in late-successional forests. In this analysis area, late-seral forest patches occur on federal lands only. The red tree vole is a Bureau Tracking species that is known to occupy some of the late-seral forest stands where trees have been selected for felling. The analysis area lies within the Mesic Range of the red tree vole (Biswell et al 2002) where vole populations are believed to be stable and well-distributed.

The stream placement sites include the stream channel and may extend a short distance into the riparian forest stands where fish logs would be lodged against the trunks of stream-side trees. These streamside locations are composed primarily of hardwood-dominated forest stands that are mid-seral age (40 to 80 years old) or younger. Hardwood-dominated stands make up about 3,786 acres (25.2%) of BLM lands within the analysis area.

No special habitat types (e.g. wetlands, seeps, dry meadows, etc.) would be affected by this proposed action.

## **Environmental Effects**

### ***3.2.4.1 Alternative 1 (Proposed Action)***

A minor disturbance is anticipated to riparian hardwood canopy and adjacent ground vegetation surrounding log placement sites. This amount of disturbance is discountable, since it affects a very small area (less than 1 acre in total) in the short-term, and it would not noticeably diminish the current structure and function of riparian hardwood forests within the analysis area.

Felling and removing selected trees involves localized effects to forested stands that were evaluated within a site-potential tree height buffer (210 feet radius, 3.18 acres). Of the 114 fish trees selected, 59 are classified in the late-seral age-class having a total buffer area of about 62 acres, which is less than 1.2% of the late-seral stands within the analysis area (5,250 acres). Selected trees are scattered along the edges of stands and along roads averaging about 2.4 fish trees clustered per site-tree buffer. The dispersed nature of this removal occurring around the edges of affected stands would have no discernable impact on structure and function of these late-seral forest stands.

Because this removal would occur within forest stands that may provide suitable habitat for spotted owls and marbled murrelets, this action is considered a “may affect, but not likely adverse affect” to both of these listed species due to potential habitat alteration. In addition, the use of a large helicopter for moving the logs from the forest into the stream reaches would occur in the late breeding season (after August 5th) for both listed species, where the potential noise disturbance may disrupt the breeding behavior of spotted owls and marbled murrelets (Courtney et al. 2004, McShane et al. 2004) if they are present in the adjacent late-seral forest stands within 0.5 miles of the project area. For this reason the potential noise disturbance occurring within the late breeding season is considered a “may affect, but not likely adverse affect” to both the spotted owl and marbled murrelet.

This proposed action is not anticipated to have any adverse effects to listed wildlife species or their suitable habitat for the following reasons:

- The felled trees would be widely spaced along roads and clearcut edges resulting in no discernable difference in the structure and function of affected forest stands,

- None of the selected trees would contain any suitable nesting structure for listed species, and
- Tree felling and transport by helicopter would occur in the late breeding season (August-6 to September-15), or outside of the breeding season and would include a two hour daily timing restriction to further avoid disturbance to murrelets that may be active in early morning hours of the late breeding season.

Selected trees removed from Critical Habitat for the spotted owl and marbled murrelet is considered a “may affect, but not likely adverse affect.” The CHUs are intended to protect suitable nesting habitat (for both species), protect recruitment habitat (murrelets), and maintain adequate dispersal habitat (spotted owls) to allow for recovery of these listed species. Removal of selected fish trees would not reduce the intended conservation role of affected habitat because relatively few trees would be removed (less than 120 trees) from a very small area (1.2% of available habitat within watershed), and the stands would retain their original habitat value for spotted owls and marbled murrelets.

Felling of large trees in late-seral forest stands has the potential to destroy or damage active nests of red tree voles. The selected trees have all been field reviewed to reduce the potential of nesting structures being present, and the forest stands where trees would be removed would continue to function as habitat for this species. Therefore the incidental loss of vole nests is considered to be very minor and would not contribute to the need for elevating the sensitive status of this species.

Cumulative Effects: Almost all BLM and Forest Service lands within this analysis area have been designated as LSR, and there has been no harvest or removal of late-seral forest stands in this analysis area since prior to 1994 when the Northwest Forest Plan was adopted. In addition to the fish tree removal and placement proposed by this action, 5 other late-seral conifer trees have been analyzed for removal as fish logs in a previous BLM stream enhancement action. No similar activities affecting late-successional forests are anticipated on non-federal lands (private lands have no remaining late-seral forest stands), or on Forest Service lands (also LSR designation) within this analysis area. The cumulative total of late-seral forest affected by fish tree removal in this analysis area remains very small (less than 1.3% of 5,250 acres), and this small amount of affected forest stands is expected to retain its structure and function after the project is completed. For this reason no incremental negative effects to wildlife species or their habitats would be discernable in this analysis area as a result of the proposed action.

### ***3.2.4.2 No Action Alternative***

This alternative would avoid the minor loss of some large conifer trees along nearby BLM roads and forest edges, and would avoid potential impacts to federally listed wildlife species and red tree voles. Forest stands within the analysis area would continue to grow and provide habitat for associated wildlife species. Minor loss of large conifer trees would occur within these stands as a result of natural disturbance processes (e.g. windthrow, insects, disease), but generally would not result in severe changes to stand structure or function, except in rare events of severe disturbance.

### **3.2.5 Vegetation**

#### **Affected Environment**

The trees designated for cutting and removal mostly occur in coniferous uplands and are dominated by Douglas-fir and lesser amounts of western hemlock. The shrub layer is mainly vine maple and salal and/or Oregon grape. The forb layer is mainly sword-fern.

The riparian areas where the conifers are targeted for cutting and removal are dominated by hardwoods, mainly red alder and big leaf maples. The shrub layer adjacent the aquatic zone is mainly salmonberry, vine maple and lesser amounts of ninebark, willows, thimbleberry and cascara.

In general both the Little Lobster Creek and Lobster Creek have had several restoration projects in the past. Both have had aquatic structures constructed and the riparian vegetation manipulated by thinning hardwoods and planting conifers or releasing conifers.

#### Threatened/Endangered and Special Status Botanical and Fungal Species

Inventories and surveys for threatened and endangered, bureau special status and survey and manage (special attention) vascular plant, lichen, bryophyte and fungi species were all conducted in conformance with the 2001 ROD and species survey protocols. Since these inventories are in compliance with the 2001 ROD they also comply with the 2004 ROD. This is due to the fact both the 2004 ROD and the 2001 ROD required botanical and fungal surveys to be conducted in accordance to the same species protocol documents.

Inventories and surveys for threatened and endangered, bureau special status and survey and manage (special attention) wildlife species were not required because there is no suitable habitat for any of these species that would be affected by this proposed action.

In addition, the riparian areas of Little Lobster and Lobster Creek have been surveyed prior to all of the past projects within the areas.

There are no “known sites” of any federal or Oregon state listed T&E or bureau special status or survey and manage vascular plant, lichen, bryophyte or fungi species within the proposed project area nor were any found during subsequent surveys.

#### Noxious Weeds

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*) and Scot’s broom (*Cytisus scoparius*).

### **Environmental Effects**

#### ***3.2.5.1 Alternative 1 (Proposed Action)***

This project would cut approximately 120 conifer trees that are located mostly adjacent to roadways in 3-4 sections of conifer stands. The conifers would be felled and limbed and the main trunks removed by helicopter to locations in Little Lobster, Lobster Creek and Briar Creek. The portion of conifer tops, small broken stems and limbs would remain on site. Any portion of the trees that remain within the road prism would be scattered outside of the road prism. Some limbs and tops of reserved conifer trees may be broken by felling the ‘target’ conifer tree. No additional conifers would be cut.

Some soil disturbance is expected when the logs are placed in Little Lobster, Lobster Creek and Briar Creek. However, the disturbance would be minimized by utilizing a helicopter for placement of the material into the creeks. In a few instances, some hardwoods adjacent to streams may be severed to facilitate placement of logs into streams. Any hardwoods cut would be felled toward the

stream where possible and reserved. Additional hardwood limbs may be broken when the logs are placed in the creeks by helicopters. Some shrubs and riparian vegetation would be covered by logs and or soil movement after the logs are placed.

A short term Douglas-fir bark beetle infestation would occur in the logs placed in Little Lobster and Lobster Creek. Any additional trees killed by the short-term infestation are not anticipated.

#### Threatened/Endangered and Special Status Botanical and Fungal Species

This project would not directly affect any federal or Oregon State threatened and endangered and bureau special status or survey and manage vascular plant, lichen, bryophyte and fungal species since there are no known sites within the project area or adjacent to the project.

#### Noxious Weeds

This project would be in compliance with the Mary's Peak integrated non-native plant management plan. The risk rating for the long-term establishment of noxious weed species and consequences of adverse effects on this project area is low and adverse effects from noxious weeds within the project area are not anticipated for the following reasons: The Wooden Lobster Restoration project design feature of re-vegetating exposed soil areas by sowing with Oregon Certified (blue tagged) red fescue (*Festuca rubra*), and/or sowing with a wildlife vegetation mix and applied at a rate equal to 40 pounds per acre or sowing/planting with other native species as approved by the resource area botanists are expected to abate the establishment of noxious weeds and ground disturbances are expected to be minimal since all log transportation operations would occur using a helicopter.

Cumulative Effects: There would be no watershed-scale cumulative effects to the vegetation resources or the spread of invasive non-native plants resulting from this project, as the effects from the project would be small and localized. Over the long term, the growth of the conifers planted in riparian areas adjacent to the project reaches is likely to shade out these brush species and encourage the establishment of native species in the Riparian understory.

### **3.2.5.2 No Action Alternative**

No trees would be severed within the 3-4 sections of BLM lands and no trees would be added to the riparian areas in Little Lobster, Lobster Creek and Briar Creek. There would not be an increase in bark beetle populations within the proposed 'target' area within the creeks.

#### Threatened/Endangered and Special Status Botanical and Fungal Species-

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

#### Noxious Weeds

Without any new human caused disturbances in the proposed project area the established noxious weed populations would remain low. There would not be a need to sow any vascular plants within the project area.

### **3.2.6 Visual Resource Management (VRM)**

#### **Affected Environment**

The checkerboard land ownership pattern between public and private forest land in the vicinity of the proposed project is less than in other portions of the Marys Peak Resource Area but still 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 is in VRM Class 4. VRM Class 3 exists within Section 32 of T. 14 S., R. 8 W., where Lobster Creek meets the western boundary of the project area.

- VRM Class 3 - The RMP calls for managing these lands for moderate levels of change. Management activities may attract attention but should not dominate the view of the casual observer. Objectives are to partially retain the existing character of the landscape.
- VRM Class 4 - The RMP calls for managing these lands for moderate levels of change with the allowance for major modifications to the existing landscape character. Management activities may dominate the view and be the major focus of viewer attention. Objectives are to allow management activities which require major modification of the existing character of the landscape.

This project area is seldom seen. No part of the project is observable from major public travel routes, recreation areas, or other key observation points. No special visual features or specific concerns were identified. The forest blocks the project view from surrounding public roads.

## **Environmental Effects**

### ***3.2.6.1 Alternative 1 (Proposed Action)***

Changes to the landscape character are expected to be low and would comply with Class 3 and 4 guidelines. Most of the disturbance would be associated with modifications to vegetation. The proposed restoration would maintain most of the canopy cover and is expected to return to a more natural appearance within five years. Log jams seen by the public could be obtrusive or natural based on their personal preference. Limbs would gradually change color as the needles die which should last, at the most, two summers.

Cumulative Effects: The proposed action of in-stream log placement for fish habitat would not alter the landscape. The Wooden Lobster Restoration project would contribute to the amount of timber cut in the watershed, but the amount taken is minimal compared to that of a timber sale or what is happening on private lands.

### ***3.2.6.2 No Action Alternative***

No modifications to the landscape character of the project area would be expected to occur. Modifications to the landscape character in the general area around the project would still be expected, as a result of activities on other lands.



## 4.0 Compliance with Components of the Aquatic Conservation Strategy

### 4.1 Aquatic Conservation Strategy Review

Table 3 shows the project’s effect on the 4 components of the Aquatic Conservation Strategy (Riparian Reserves, Key Watersheds, Watershed Analysis and Watershed Restoration).

*Table 3: Aquatic Conservation Strategy Review Summary (RMP pages 5-7)*

Components	Effect	Remarks /References
Riparian Reserves	None	Project seeks to enhance Riparian Reserve function by the recruitment of LWD for anadromous fish bearing streams.
Key Watershed	None	Upper Lobster Creek is a designated key watershed.
Watershed Analysis	None	Five Rivers/Lobster Creek Watershed Analysis, January, 1997.
Watershed Restoration	None	The project is specifically designed for watershed restoration. The project would maintain and restore stream habitat conditions and help restore stream flows.

## 5.0 Comparison of Alternatives With Regard to the Purpose and Need

**Table 4: Comparison of Alternative by Purpose and Need**

Purpose and Need (EA section 2.1)	Proposed Action	No Action
Provide a base for meeting the standard of large woody debris in Lobster Creek, Little Lobster Creek, and Briar Creek” as identified in the <i>Lobster/Five Rivers Watershed Analysis</i> (p.31, January 1997).	Conifer trees in the adjacent timber stands would be felled and placed in the channels of Lobster Creek, Little Lobster Creek, and Briar Creek by helicopter to meet the baseline of “80 pieces/mile, greater than 24 inch minimum diameter and greater than 50 feet in length.	Lobster Creek, Little Lobster Creek and Briar Creek would continue to provide poor fish habitat with the potential for conditions to further degrade, as natural recruitment of LWD from the adjacent alder-dominated stands is unlikely.

## 6.0 Documentation of the Project’s Consistency with the Nine Aquatic Conservation Strategy Objectives

Unless otherwise specified, the No Action Alternative would not prevent the attainment of any of the nine ACS objectives. Current conditions and trends would continue and are described in EA Sections 3.2 and 6.6. EA section 4.0 describes the project’s consistency with the Aquatic Conservation Strategy Objectives.

**Table 5: Project’s Consistency with the Nine Aquatic Conservation Strategy Objectives**

Aquatic Conservation Strategy Objectives (ACSOs)	Project – Large Woody Debris Placement
<i>1. Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features.</i>	Does not prevent the attainment of <i>ACSO 1</i> . The addition of LWD into Lobster Creek, Little Lobster Creek, and Briar Creek would help to restore the diversity and complexity of watershed features to which native aquatic and riparian species are uniquely adapted. Current levels of LWD are severely depleted compared to historic (“natural”) conditions. (EA sections

Aquatic Conservation Strategy Objectives (ACSOs)	Project – Large Woody Debris Placement
	3.2.2, 3.2.3)
2. <i>Maintain and restore spatial and temporal connectivity within and between watersheds.</i>	Does not prevent the attainment of <b>ACSO 2</b> . The spatial connectivity within the watershed would be restored by providing an unobstructed physical route (habitat) to areas critical for fulfilling life history requirements of aquatic and riparian-dependent species. The project would restore temporal connectivity in the watershed by restoring a more natural streamflow regime. (EA sections 3.2.2, 3.2.3)
3. <i>Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.</i>	Does not prevent the attainment of <b>ACSO 3</b> . LWD placements and individual hardwood felling along Lobster Creek, Little Lobster Creek, and Briar Creek would enhance variability in stream flow velocities. This in turn would help restore the physical integrity of the aquatic system by causing sediment deposition in some areas and sediment scour in others (including banks, floodplains, and the stream bed). (EA section 3.2.2)
4. <i>Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.</i>	Does not prevent the attainment of <b>ACSO 4</b> . By shading the stream from solar radiation, log structures could reduce stream temperatures, thereby maintaining and restoring water quality conditions necessary to support healthy aquatic ecosystems. Regulating stream temperatures would benefit the survival, growth, reproduction, and migration of the aquatic community. (EA section 3.2.2)
5. <i>Maintain and restore the sediment regime under which aquatic ecosystems evolved.</i>	Does not prevent the attainment of <b>ACSO 5</b> . Log structures would trap gravels and other substrate materials, thereby restoring the stream's sediment regime; includes the timing, volume, rate and character of sediment input, storage, and transport. (EA sections 3.2.2, 3.2.3)
6. <i>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 <b>ACSO 6</b> . By regulating stream flows, structures would maintain and restore in-stream flows sufficient to create and sustain riparian and aquatic habitats and to retain patterns of sediment, nutrient, and wood routing (the movement of woody debris through the aquatic system). (EA sections 3.2.2, 3.2.3)
7. <i>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 <b>ACSO 7</b> . The presence of LWD structures is likely to increase the frequency, and possibly the duration of floodplain inundation, as well as promote floodplain development. (EA sections 3.2.2, 3.2.3)
8. <i>Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands.</i>	Does not prevent the attainment of <b>ACSO 8</b> . LWD placement is not likely to greatly affect riparian plant species diversity or composition as the amount of riparian vegetation disturbed (during project implementation) would be very small. (EA sections 3.2.2, 3.2.3, 3.2.5)
9. <i>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 <b>ACSO 9</b> . LWD structures would provide additional habitat for populations of native invertebrate and vertebrate riparian-dependent species. (EA sections 3.2.2, 3.2.3, 3.2.4, 3.2.5)

## **7.0 Contacts and Consultation**

### **7.1 Agencies, Organizations, and Persons Consulted (ESA Section 7 Consultation)**

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

- **Wildlife:** To address concerns for impacts to federally listed wildlife species and their critical habitat, the proposed action has been consulted on with the U.S. Fish and Wildlife Service, as required under Section 7(a) of the Endangered Species Act. This proposed action has been designed in accordance with standards set forth in a Biological Assessment (BA, USDA-FS and USDI-BLM 2006) that was used to facilitate consultation. In a Letter of Concurrence (received 10/4/2006, reference # 1-7-2006-I-0190) the Service agreed that projects designed in accordance with the standards set forth in the BA would not result in adverse impacts to spotted owls, marbled murrelets, or their designated critical habitat. All pertinent design standards from the BA have been incorporated into this proposed action.

#### **National Oceanic Atmospheric Administration National Marine Fisheries Service**

- **Fish:** Consultation with National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) for aquatic habitat restoration actions was completed February 25, 2003 *Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for US Forest Service and Bureau of Land Management Programmatic Activities in Northwest Oregon*. The programmatic consultation addressed affects determinations, specific design features, and reporting requirements for the proposed actions. No listed fish species are known to occupy the project area stream at this time. The proposed action was determined to be a no affect for ESA listed species. The proposed actions are consistent with design features described in the NMFS programmatic package for Aquatic and Riparian Habitat Projects and are anticipated to Adversely Affect Essential Fish Habitat (EFH). The proposed action is not anticipated to exceed the typical range of effects for aquatic restoration actions as described in the Biological Assessment for Programmatic USDA Forest Service and USDA Bureau of Land Management Activities (October 9, 2002). Therefore, no additional consultation on EFH is necessary for project implementation.

### **7.2 Cultural Resources - Section 106 Consultation and Consultation with State Historical Preservation Office:**

The project area occurs in the 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.

### **7.3 Public Involvement**

In compliance with the National Environmental Policy Act, the proposed action was listed since September 2004 in the quarterly edition of the *Salem District Project Update*, which were mailed to over 1,200 addresses. Thirty four scoping letters were mailed to potentially affected and/or

interested individuals, groups, and agencies. All adjacent land owners to the project area were sent scoping letters. One public comment was received in response to this scoping.

### 7.3.1 Summary of comments and BLM responses

The following addresses comments raised in one letter from the public received as a result of scoping (40 CFR Part 1501.7). Additional supporting information can be found in Specialists' Reports in the NEPA file.

#### ***Robert and Anette Abendroth (March 14, 2006)***

##### **1. Road Access**

*Comment: Constructed log jams on Little Lobster Creek resulted in excessive flooding hindering access to property and flood damaged the only access road to commenter's property in the winter of 2005. Commenter states they requested action from BLM and Fish and Wildlife (Oregon) to mitigate impacts. Commenter states they were told that no help would be offered because there were no funds and no liability on the agencies part. Based on this past experience the commenter does not support the proposed action.*

**Response:** Clarification of land base administration is important to understand the context of the commenter's standing regarding this issue. The commenter owns land in T14 R8 Section 31 up stream of land owned by Weyerhauser in T14 R9 Section 36. The commenter is provided legal access to their property thru a right-of-way agreement or easement over Weyerhauser lands on a roadway that in places is near Little Lobster Creek. Weyerhauser, in cooperation with ODFW, implemented habitat enhancement on their lands in the Little Lobster Creek drainage. The BLM was not a cooperator in, or a party to, the previous log placement work on Weyerhauser lands in Little Lobster Creek.

E-mail communication with ODFW's Jason Kirchner indicates that the portion of roadway that was being eroded is located on Weyerhauser lands in Section 36. At the road segment where the erosion is evident, natural recruitment of whole alders and maples occurred first and then habitat logs from upstream placement sites washed down and jammed up into the existing alder/maple structure. Based on photographs provided by the landowner the stream channel appears to have eroded around the log jam structure formed with naturally recruited and artificially placed wood. The erosion process undercut a short segment of the fill material supporting the access road.

Based on a review of the photographs provided by the commenter the stream channel appears to be entrenched adjacent to the area of concern. Classifying this stream as entrenched is based on the high percentage of eroding banks apparent on both sides of the channel, which is typical of channel unable to access floodplains under annual high flow events. The road of concern appears to be located at the historic floodplain height of the Little Lobster Creek valley. Restoration actions near the access road which increase connectivity of the channel to its historic floodplain may result in changes in stream channel location and flood occurrence impairing access and stability of the road.

In general, the majority of the LWD placement sites are upstream of the commenter's lands on BLM administered parcels approximately 1 mile upstream of the road of concern. A least one multi-log structure would be placed in channel and cover the width of the floodplain in Little Lobster Creek. The site design on Little Lobster Creek is intended to check bed elevation in the channel and maintain floodplain stability upstream of the project. The size of all the LWD material

intended for instream placement, both in diameter and length, combined with the moderate size of the watershed to which the structures would be installed, make it highly unlikely that any structures or individual placed logs would be transported any distance. Implementation of design features intended to minimize lateral channel erosion is recommended for any work proposed in proximity to floodplain accessible roads. As portions of the log structures begin to decay and break off some pieces of project placed wood may transport downstream over the long term. Most of this material would be captured in meander bends or incorporated into the floodplain during flood events before traveling long distances. Some broken pieces of placed LWD could eventually be incorporated into other LWD structures downstream including on private property. This material should be indiscernible from naturally recruited LWD/CWD.

No actions would occur on or within the commenter’s property. Placement of logs on willing landowners property upstream of the commenter’s property may occur. ODFW proposes to follow design features that would avoid impacts to the main access road adopting some or all of the design features as described in Section 2.2.2. Structures placed in stream on private properties in Section 31 are unlikely to move as large/whole logs downstream, as noted in the previous paragraph, and would not be expected to impact the commenter’s property.

## 8.0 Interdisciplinary Team

Resource	Name	Initial	Date
Cultural Resources	Dave Calver	<i>DC</i>	1/8/07
Hydrology/Water Quality/Soils	Patrick Hawe	<i>PH</i>	12/6/06
Botany TES and Special Status Plant Species	Ron Exeter	<i>RE</i>	1/8/07
Wildlife TES and Special Status Animal Species	Scott Hopkins	<i>SH</i>	1/10/07
Fuels/Air Quality	Tom Tomczyk	<i>TST</i>	12/5/06
Fisheries	Scott Snedaker	<i>SMS</i>	1/4/07
Recreation	Traci Meredith	<i>TMM</i>	7/25/06
NEPA	Gary Humbard	<i>GH</i>	1/12/07

## 9.0 Major Sources and Common Acronyms

### 9.1 Major Sources

#### 9.1.1 Interdisciplinary Team Reports:

Exeter, R. 2006. Marys Peak Resource Area Botanical Report. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR. 4pp.

Haynes, B. 2006. Silviculture/Riparian Reserves Memo to Wooden Lobster. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR. 1p.

Hawe, P. 2006. Wooden Lobster Environmental Assessment Soils/Hydro Report. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR. 4pp.

Hopkins, S. 2006. Biological Evaluation Wooden Lobster Stream Enhancement. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR. 6pp + appendix

- Meredith, T. 2006. Recreation and Visual Resources Report. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR. 3pp.
- Snedaker, S. 2006. Wooden Lobster Project Fisheries Report. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR. 11pp.
- Vanderhoof, T. 2004. Cultural Resource / Archeological Report. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR. 2pp.

### **9.1.2 Additional References:**

- USDA. Forest Service, USDI. Bureau of Land Management. 2006. Final Draft, Biological Assessment of habitat-modification projects proposed during fiscal years 2007 and 2008 in the North Coast Province, Oregon that would affect bald eagles, northern spotted owls, or marbled murrelets, or would modify the critical habitats of the northern spotted owl or the marbled murrelet. Salem District BLM, Salem, Oregon. Unpublished document.
- USDA. Forest Service, USDI. Bureau of Land Management. 2001. Record of Decision and Standards and Guidelines for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines. Portland, OR.
- USDA. Forest Service, USDI. Bureau of Land Management. 1997. Lobster/Five Rivers Watershed Analysis. Siuslaw National Forest, Corvallis, Oregon and Salem District BLM, Salem, Oregon.
- USDA. Forest Service, USDI. Bureau of Land Management. 1994a. 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.
- USDA. Forest Service, USDI. Bureau of Land Management. 1994b. 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.
- USDI. Bureau of Land Management. 1995. Salem District Record of Decision and Resource Management Plan. Salem, OR.
- USDI. Bureau of Land Management. 1994. Salem District Proposed Resource Management Plan/Final Environmental Impact Statement. Salem, OR.
- U.S. Department of the Interior, Fish and Wildlife Service [USDI-FWS]. 2006. Biological Opinion and Letter of Concurrence for Effects to Bald Eagles, Spotted Owls, Marbled Murrelets, Spotted Owl Critical Habitat and Marbled Murrelet Critical Habitat from the U.S. Department of Interior, Bureau of Land Management, Eugene District and Salem District, and U.S. Department of Agriculture, Siuslaw National Forest fiscal year 2007/2008 habitat modification activities within the North Coast Province. USDI, Fish and Wildlife Service, Oregon Fish and Wildlife Office, Portland, Oregon. Dated December 01, 2004. [Reference Number 1-7-2006-I-0190].

## 9.2 Common Acronyms

ACS	-----	Aquatic Conservation Strategy
BLM	-----	Bureau of Land Management
BMP	-----	Best Management Practice(s)
BO	-----	Biological Opinion
CWD	-----	Coarse Woody Debris
DBH	-----	Diameter Breast Height
EA	-----	Environmental Assessment
ESA	-----	Endangered Species Act
FONSI	-----	Finding of No Significant Impact
LUA	-----	Land Use Allocation
LSRA	-----	Late Successional Reserve Assessment
LWD	-----	Large Woody Debris
NEPA	-----	National Environmental Policy Act (1969)
NMFS	-----	National Marine Fisheries Service
NOAA	-----	National Oceanic Atmospheric Administration
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
RMP	-----	Salem District Record of Decision and Resource Management Plan (1995)
RMPFEIS	-----	Salem District Proposed Resource Management Plan / Final Environmental Impact Statement (1994)
RR	-----	Riparian Reserves (land use allocation)
S&M FSEIS	---	Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and Other Mitigation Measures Standards and Guidelines (2000)
S&M ROD	---	Record of Decision and Standards and Guidelines for Amendment to the Survey and Manage, Protection Buffer, and Other Mitigation Measures Standards and Guidelines (2001)
USDI	-----	United States Department of the Interior
USFWS	-----	United States Fish and Wildlife Service