CANYON CREEK SALVAGE ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

Environmental Assessment Number OR-080-07-12

July 12, 2007

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

Responsible Agency:	USDI - Bureau of Land Management
Responsible Official:	Trish Wilson Field Manager Marys Peak Resource Area 1717 Fabry Road SE Salem, OR 97306 or (503) 315-5969
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BLM
Salem District

Abstract: This environmental assessment (EA) discloses the predicted environmental effects of one project on federal land located in Township 7 South, Range 6 West, Section 28, Willamette Meridian and within the Rickreall Creek Watershed. The project proposes to remove a portion of recently blown down trees on approximately 14 acres within 50 to 100 year old forest stands. The action would occur within Adaptive Management Area (AMA) and Riparian Reserve (RR) Land Use Allocations (LUA) within the North Coast Adaptive Management Area.

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.

BLM/OR/WA/PL-07/059+1792

FINDING OF NO SIGNIFICANT IMPACT

Introduction

The BLM (Bureau of Land Management) has conducted an environmental analysis (Environmental Assessment Number OR080-07-12) for a proposal to remove a portion of recently blown down trees within 50 and 100 year-old stands in AMA (Adaptive Management Area) and RR (Riparian Reserve) LUAs (Land Use Allocation's) within the NCRAMA (North Coast Range Adaptive Management Area). The project proposes to remove a portion of these trees to reduce the risk of the population build-up in bark beetles, and the resulting infestation of adjacent healthy trees, as well as reduce the likelihood of fire killing the remaining live trees by meeting a need to reduce high surface fuel loadings. The project area is on BLM managed lands in Township 7 South, Range 6 West, Section 28, Willamette Meridian.

Implementation of the proposed action will conform to management actions and direction contained in the attached *Canyon Creek Salvage Environmental Assessment* (Canyon Creek Salvage EA). The Canyon Creek Salvage EA is attached to and incorporated by reference in this FONSI (Finding of No Significant Impact) determination. The analysis in this EA is site-specific and supplements analyses found in the *Salem District Proposed Resource Management Plan/Final Environmental Impact Statement*, September 1994 (RMP/FEIS) (EA p. 2). The Canyon Creek Salvage project has been designed to conform to the *Salem District Record of Decision and Resource Management Plan*, May 1995 (RMP) and related documents which direct and provide the legal framework for management of BLM lands within Marys Peak Resource Area (EA pp. 2-3). Consultation with U.S. Fish and Wildlife Service and National Marine Fisheries Service is described in Section 6.1 of the EA.

The EA and FONSI will be made available for public review July 11, 2007 to July 25, 2007. The notice for public comment will be published in a legal notice by the *Polk County Itemizer Observer* newspaper. Comments received by the Marys Peak Resource Area of the Salem District Office, 1717 Fabry Road SE, Salem, Oregon 97306, on or before August 9, 2007 will be considered in making the decisions for this project.

Finding of No Significant Impact

Based upon review of the Canyon Creek Salvage 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 documented 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 Rickreall Creek 5th-field Watershed and the project area boundaries. The proposed action would occur on approximately 14 acres of BLM AMA and RR LUA's within the NCRAMA, encompassing less than 0.01% of the forest cover within the Rickreall Creek Watershed [40 CFR 1508.27(a)].

Intensity:

1. *The Project* is unlikely to a have any significant adverse impacts on the affected elements of the environment (EA section 3.1) - vegetation, soils, water, fisheries/aquatic habitat, wildlife and fuels/air quality 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).

   - ✓ Seasonally restricting ground-based yarding, and timber hauling operations to avoid runoff and sedimentation,
   - ✓ Operating equipment on top of slash and logging debris when possible to minimize compaction,
   - ✓ Installing erosion control measures as needed [water bars, sediment traps in ditchlines, silt fences, straw bales, and grass seeding exposed mineral soil areas],
   - ✓ Stream protection zones (no cutting/no yarding) of at least 50 feet slope distance would be established along streams and identified wet areas within the treatment area.
   - ✓ Existing snags and a portion of coarse woody debris would be reserved, except within road rights of way, yarding corridors/skid trails or for safety reasons.

   With the implementation of the project design features described in EA section 2.3.2, potential effects to the affected elements of the environment anticipated to be site-specific and/or not measurable (i.e. undetectable over the watershed, downstream, and/or outside of the project area) The project is designed to meet RMP standard and guidelines, modified by subsequent direction (EA section 1.3); and the effects of this project would not exceed those effects described in the RMP/FEIS [40 CFR 1508.27(b) (1), EA section 3.2].

2. *The Project* would not affect:
   - ✓ Public health or safety [40 CFR 1508.27(b)(2)];
   - ✓ Unique characteristics of the geographic area [40 CFR 1508.27(b)(3)] because there are no historic or cultural resources, parklands, prime farmlands, wild and scenic rivers, wilderness, or ecologically critical areas located within the project area (EA sections 3.1);
   - ✓ Districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places, nor would the proposed action cause loss or destruction of significant scientific, cultural, or historical resources [40 CFR 1508.27(b)(8)] (EA section 3.1).

3. *The Project* is not unique or unusual. The BLM has experience implementing similar actions in similar areas without highly controversial [40 CFR 1508.27(b)(4)], highly uncertain, or unique or unknown risks [40 CFR 1508.27(b)(5)].

4. *The Project* does not set a precedent for future actions that may have significant effects, nor does it represent a decision in principle about a future consideration [40 CFR 1508.27(b)(6)]. The BLM has experience implementing similar actions in similar areas without setting a precedent for future actions.

5. The interdisciplinary team evaluated the project in context of past, present and reasonably foreseeable actions [40 CFR 1508.27(b)(7)]. Potential cumulative effects are described in the attached EA. These effects are not likely to be significant because of the project's scope (effects are likely to be too small to be measurable), scale (project area of 14 acres, encompassing less than 0.01% of the forest cover within the Rickreall Creek Watershed), and duration [direct effects would occur over a maximum period of 4-6 years (EA section 3.2)].

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)].

   Wildlife: To address concerns for effects to listed wildlife species and potential modification of critical habitats, the proposed action was consulted upon with the U.S. Fish and Wildlife Service, as required under Section 7 of the Endangered Species Act. The proposed action would follow all applicable terms and conditions from the following document: Letter of Concurrence for Effects to Northern Bald Eagles, Northern Spotted Owls, and Marbled Murrelets from the North Coast Province Fiscal Year 2007-2008 activities that may affect, but are not likely to adversely affect, due to activities that modify habitat and create disturbance, U.S. Department of the Interior; Bureau of Land Management, Eugene District and Salem District, and the U.S. Department of Agriculture; Siuslaw National Forest, Tracking Number: 1-7-2006-I-0190 (dated 10/4/2006). The proposed action would have no effect to northern spotted owl and marbled murrelet because there is no spotted owl or marbled murrelet habitat in or near the project area.

   Fish: Proposed treatments: timber felling, timber yarding, and hauling were addressed under the Canyon Creek Commercial Thinning Timber Sale Project Biological Assessment (January 16, 2004). The NMFS Letter of Concurrence (February 17, 2004) agreed with the BLMs determination that these proposed actions were 'may affect, not likely to adversely affect'. The proposed salvage action would have no impacts beyond those previously analyzed which may affect UWR steelhead trout. Project design features from the BA and LOC include no harvest activity within stream protection zones and dry season hauling intended to prevent impacts to aquatic habitats.

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: Andy Frazier III — 7/9/07
Andy Frazier III, Team Lead — Date

Reviewed by: Gary J Humbard — 7/9/07
Gary Humbard, (NEPA) — Date

Approved by: Trish Wilson — 7/9/07
Trish Wilson, Field Manager
Marys Peak Resource Area — Date

Abstract: This environmental assessment (EA) discloses the predicted environmental effects of one project on federal land located in Township 7 South, Range 6 West, Section 28, Willamette Meridian and within the Rickreall Creek Watershed. The project proposes to remove a portion of recently blown down trees on approximately 14 acres within 50 to 100 year old forest stands. The action would occur within Adaptive Management Area (AMA) and Riparian Reserve (RR) Land Use Allocations (LUA) within the North Coast Adaptive Management Area.

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BLM/OR/WA/PL-07/059+1792

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Intensity:

1. *The Project* is unlikely to a have any significant adverse impacts on the affected elements of the environment (EA section 3.1) - vegetation, soils, water, fisheries/aquatic habitat, wildlife and fuels/air quality 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).

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2. *The Project* would not affect:
   - ✓ Public health or safety [40 CFR 1508.27(b)(2)];
   - ✓ Unique characteristics of the geographic area [40 CFR 1508.27(b)(3)] because there are no historic or cultural resources, parklands, prime farmlands, wild and scenic rivers, wilderness, or ecologically critical areas located within the project area (EA sections 3.1);
   - ✓ Districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places, nor would the proposed action cause loss or destruction of significant scientific, cultural, or historical resources [40 CFR 1508.27(b)(8)] (EA section 3.1).

3. *The Project* is not unique or unusual. The BLM has experience implementing similar actions in similar areas without highly controversial [40 CFR 1508.27(b)(4)], highly uncertain, or unique or unknown risks [40 CFR 1508.27(b)(5)].

4. *The Project* does not set a precedent for future actions that may have significant effects, nor does it 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.

Glossary: Abbreviations, Acronyms, and Terms

ACS	Aquatic Conservation Strategy. A set of objectives developed to restore and maintain the ecological health and aquatic habitat of watersheds
ACS/FSEIS	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
Adaptive Management	The continuing process of implementing policy decisions as scientifically driven management experiments that test predictions and assumptions in management plans, and using the resulting information to improve the plans.
Alternative	Proposed project (plan, option, choice)
AMA	Adaptive Management Area. Landscape units designated for development and testing of technical and social approaches to achieving desired ecological, economic, and other social objectives.
Anadromous fish	Species that migrate to oceans and return to freshwater to reproduce.
BA	Biological Assessment…
Basal Area (BA)	The cross section area of a tree measured in square feet.
BLM	Bureau of Land Management. Federal agency within the Department of Interior responsible for the management of 275 million acres.
Blow down	Trees uprooted or blown over by wind events.
BMP	Best Management Practice(s). Design features and mitigation measures to minimize environmental effects.
BO	Biological Opinion. The document resulting from formal consultation that states the opinion of the Fish and Wildlife Service or National Marine Fisheries Service as to whether or not a federal action is likely to jeopardize the continued existence of listed species or results in destruction or adverse modification of critical habitat.
CEQ	Council of Environmental Quality, established by the National Environmental Policy Act of 1969
CEQ Regulations	Regulations that tell how to implement NEPA
Commercial thinning	Cutting trees to take to the mill for processing.
Cumulative effects	Past, present, and reasonably foreseeable effects added together (regardless of who or what has caused, is causing, and might cause those effects)
CWD	Coarse Woody Debris refers to a tree (or portion of a tree) that has fallen or been cut and left in the woods. Usually refers to pieces at least 20 inches in diameter as described in Northwest Forest Plan.
DBHOB	Diameter at breast height outside diameter.
Density Management	Reduction and composition of trees in a stand for purposes other than timber production.
EA	Environmental Assessment. A systematic analysis of site-specific activities used to determine whether such activities have a significant effect on the quality of the human environment.
EFH	Essential Fish Habitat. (Scott needs to add more info)
EIS	(Final Supplemental Envirionmental Impact Statement to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines, January

	2004
Endangered Species	Any species of plant or animal defined through the Endangered Species Act as being in danger of extinction throughout all or a significant portion of its range, and published in the Federal Register.
ESA	Endangered Species Act. Federal legislation that ensures federal actions would not jeopardize or elevate the status of living plants and animals.
FEIS	Final Environmental Impact Statement
Fish and Wildlife Service	F&WS. A division within the U.S. Department of the Interior
Fish-bearing stream	Any stream containing any species of fish for any period of time.
FLPMA	Federal Land Policy Management Act
FONSI	Finding of No Significant Impact
FSEIS	Final Supplemental Environmental Impact Statement
Fuel loading	The amount of combustible material present per unit of area, usually expressed in tons per acre.
Ground base yarding	Moving trees or logs by equipment operating on the surface of the ground to a landing where they can be processed or loaded
Harvester/Forwarder Equipment (cut to length system)	A logging system which uses "harvesters" to fell and delimb a tree and then cut it into logs, paired with a tracked "forwarder" that has a long reach, gathers up the logs and transfers them to a log truck. Many of these systems are known for their low PSI (pounds per square inch) impact to the ground.
Interdisciplinary Team	IDT. A group of individuals assembled to solve a problem or perform a task.
Intermittent stream	Any nonpermanent flowing drainage feature having a definable channel and evidence of scour or deposition. Includes ephemeral streams if they meet these two criteria.
Invasive Plant	Any plant species that is aggressive and difficult to manage.
Landing	Any designated place where logs are laid after being yarded and are awaiting subsequent handling, loading and hauling
Late-successional	Forest conditions consisting of larger trees and multiple canopy layers that support numerous plant and animal species.(Scott needs to check)
LUA	Land Use Allocation. NWFP designated lands to be managed for specific objectives
LWD	Large Woody Debris. Woody material found within the bankfull width of the stream channel and is specifically of a size 23.6 inches diameter by 33 feet length (per ODFW - Key Pieces)
Native Plant	Species that historically occurred or currently occur in a particular ecosystem and were not introduced
NCRAMA	North Coast Range Adaptive Management Area.
NEPA	National Environmental Policy Act (1969)
NMFS	National Marine Fisheries Service. Federal agency within NOAA which is responsible for the regulation of anadromous fisheries in the U. S.
NOAA	National Oceanic Atmospheric Administration. Agency within the Department of Commerce responsible for regulating migratory fisheries
Non-native plant	Any species that historically does not occur in a particular ecosystem or were introduced
Noxious weed	A plant species designated by federal or state law as generally possessing one or more of the following characteristics: aggressive and difficult to manage;

	parasitic; a carrier or host of serious insects or diseases; or non-native, new, or not common to the United States.
NWFP	Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Related Species within the Range of the Northern Spotted Owl (1994) (Northwest Forest Plan).
NWFP/FSEIS	Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl (February 1994)
ODEQ	Oregon Department of Environmental Quality
ODFW	Oregon Department of Fish and Wildlife. Oregon State Agency responsible for the management and protection of fish and wildlife.
Old-growth	Usually 180-220 year-old trees.
Oregon Smoke Management Plan	The State of Oregon's plan for implementing the National Clean Air Act in regards to burning of forest fuels
Perennial stream	A stream that typically has running water on a year-round basis.
RMP	Salem District Record of Decision and Resource Management Plan (1995)
RMP/FEIS	Salem District Proposed Resource Management Plan/Final Environmental Impact Statement (1994).
ROD	Record of Decision. Document that approves decisions to the analyses presented in the FEIS.
RR	Riparian Reserves (NWFP land use allocation). Lands on either side of streams or other water feature designated to maintain or restore aquatic habitat.
Rural Interface	BLM lands within ½ mile of private lands zoned for 1 to 20 acre lots. Areas zoned for 40 acres and larger with homes adjacent to or near BLM lands.
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).
Seral	One stage of a series of plant communities that succeed one another.
Silviculture	The manipulation of forest stands to achieve desired structure.
Skid trails	Path through a stand of trees on which ground-based equipment operates.
Snag	A dead standing tree lacking live needles or leaves partially dead, or defective tree at least 10 inches diameter and 6 feet tall
Soil Compaction	An increase in bulk density and a decrease in soil porosity resulting from applied loads, vibration, or pressure.
Soil Productivity	Capacity or suitability of a soil, for establishment and growth of a specified crop or plant species, primarily through nutrient availability.
Special Status Species	Plant or animal species falling in any of the following categories: Threatened or endangered, Proposed threatened or endangered, Candidate species, State listed species, Bureau sensitive species, or Bureau assessment species.
SPZ	Stream Protection Zone is a buffer along streams where no material would be removed and heavy machinery would not be allowed. The minimum distance

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	is 50 feet.
Threatened species	Those plant and animal species likely to become endangered species throughout all or a significant portion of their range within the foreseeable future and published in the Federal Register.
Turbidity	Multiple environmental sources which causes water to change conditions.
USDI	United States Department of the Interior
USEPA	United States Environmental Protection Agency
VRM	Visual Resource Management, all lands are classified from 1 to 4 based on visual quality ratings.
Waterbars	A ridge of compacted soil or loose rock or gravel constructed across disturbed rights-of-way and similar sloping areas.
Watershed	The drainage basin contributing water, organic matter, dissolved nutrients, and sediments to a stream or lake.
Weed	A plant considered undesirable and that interferes with management objectives for a given area at a given point in time.

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1.0 INTRODUCTION

1.1 Project Covered in this EA

One project will be analyzed in this EA. Canyon Creek Salvage is a proposal to remove a portion of recently blown down trees on approximately 13 acres of a 50 year-old stand and approximately one acre of a 100 year-old stand. The project is located within AMA (Adaptive Management Area) and RR (Riparian Reserve) LUAs (Land Use Allocations).

The majority of the blow down areas occurred adjacent to the west boundary of the previous Canyon Creek Thinning Timber Sale area and along a property line between the BLM and a private forest management company (Meriwether Northwest Land and Timber). Recent (2006) removal of trees from Meriwether NW Oregon Land and Timber LLC owned land, in conjunction with a wind event, produced areas where scattered and groups of trees blew down. Blow down is common where trees that were previously sheltered in dense stands are exposed to even moderate winds by harvesting (Kimmins, 1997).

1.2 Project Area Location

The project area is located approximately 7 air miles west of Dallas, Oregon, in Polk County on forested land managed by the Marys Peak Resource Area, Salem District of the Bureau of Land Management (BLM). The project area lies within the Rickreall Creek Watershed and is within Section 28, Township 7 South, Range 6 West, Willamette Meridian (Map 1).

1.3 Conformance with Land Use Plans, Policies, and Programs

The Canyon Creek Salvage project has been designed to conform to the following documents, which direct and provide the legal framework for management of BLM lands within the Salem District: 1/ *Salem District Record of Decision and Resource Management Plan*, May 1995 (RMP): The RMP has been reviewed and it has been determined that the Canyon Creek Salvage project conforms to the land use plan terms and conditions (e.g. complies with management goals, objectives, direction, standards and guidelines) as required by 43 CFR 1610.5 (BLM Handbook H1790-1). Implementing the RMP is the reason for doing this project (RMP pp.1-3); 2/ *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl*, April 1994 (the Northwest Forest Plan, or NWFP); 3/ *Record of Decision and Standards and Guidelines for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M ROD, January 2001) and results of the Annual Species Review (ASR) 2001 (BLM IM OR 2002-064), 2002 ASR (BLM IM OR 2003-050) and 2003 ASR (BLM IM OR-2004-034).

The analysis in the Canyon Creek Salvage 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). The RMP/FEIS is amended by the *Final Supplemental Environmental Impact Statement For Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M FSEIS, November 2000).

The following document provided additional direction in the development of the Canyon Creek Salvage project: 5/ *Rowell, Mill, Rickreall Creeks and Luckiamute River Watershed Analysis*, 1998 (MEGA WA).

All of the above documents, along with the Canyon Creek Salvage interdisciplinary team (IDT) reports (EA section 7.1.1), are hereby incorporated by reference in the Canyon Creek Salvage EA and are available for review in the Salem District Office. Additional information about the proposed project is available in the Canyon Creek Salvage Project EA Analysis File (NEPA file), also available at the Salem District Office.

Compliance with Survey and Manage

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.

The RA reexamined the individual project record for the Canyon Creek Salvage Project in light of the Court ordered remedy. The wildlife and botanical compliance reviews are included in Appendix 3. As stated above, the RA completed all pre-disturbance surveys and site management as required by survey protocols and management recommendations in compliance with the 2001 ROD.

Based on the preceding information regarding the status of surveys for Survey & Manage wildlife and botany species and the results of those surveys, the Canyon Creek Salvage Project complies with the provisions of the 2001 ROD, as amended or modified as of March 21, 2004. For the foregoing reasons, this EA is in compliance with the 2001 ROD as stated in Point (3) on page 14 of the January 9, 2006, Court order.

Compliance with the Aquatic Conservation Strategy

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

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

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

Existing Watershed Condition (EA p. 15)

The Canyon Creek Salvage project area is in the 117,145-acre Rickreall Creek 5th field watershed which drains into the Willamette River. Approximately three percent of the watershed is managed by BLM, less than one percent is Forest Service, and 96% is managed by other landowners, mainly industrial timber companies. The MEGA WA (1998) describes the events that contributed to the current condition such as

early hunting/gathering by aboriginal inhabitants, road building, agriculture, water diversions, wildfire, and timber harvest.

Late seral (greater than 80 years old) forests comprise 8 percent of the federal ownership in the watershed. We can infer then, that commercial harvest or stand replacement fire has occurred on approximately 92% of the Federal lands in the watershed. The earliest harvests have been regenerated and are progressing towards providing mature forest structure. Most of the private industrial lands have been and will continue to be moved from mid condition class to the early condition class. Current riparian vegetation on federal lands is composed of greater than 29 percent timber.

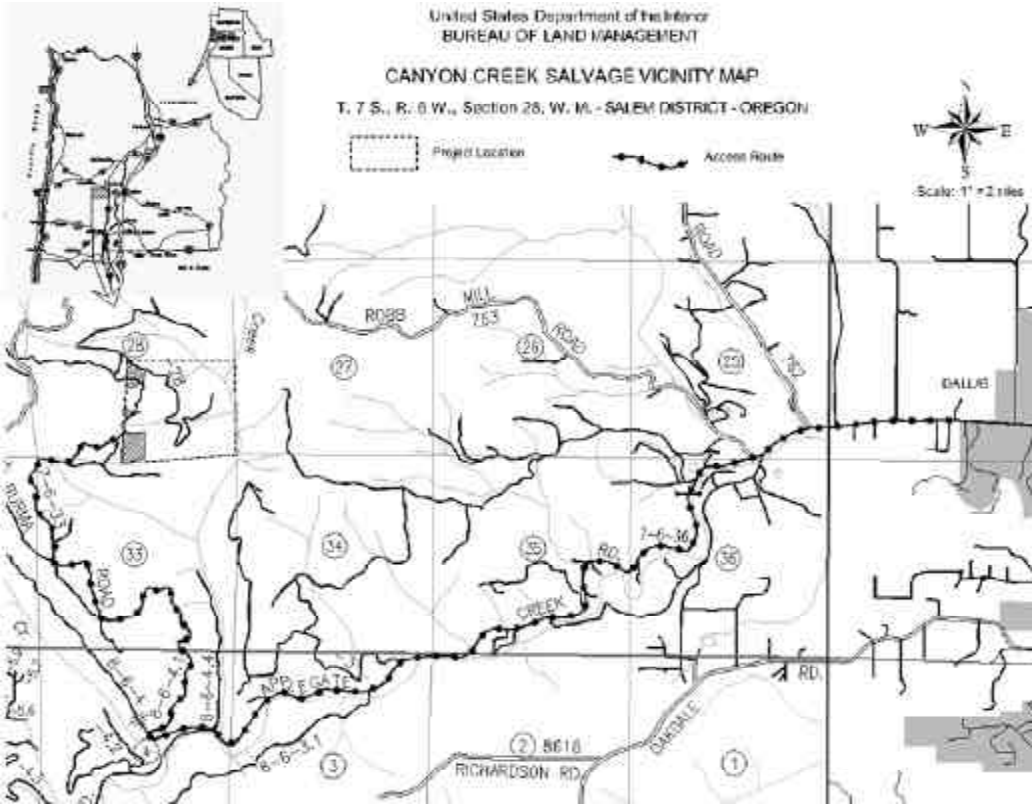
Alternative 2 proposes salvage logging on 14 BLM managed acres (less than 0.01% of the total watershed). Foreseeable harvest on BLM managed land consists of the K-Line Late Successional Reserve Enhancement, 200 acres. Private industrial landowners are expected to continue with a similar harvest rotation as has occurred in the watershed since the 1940s.

1.4 Decision to be made

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

- Whether to approve the Canyon Creek Salvage project, as proposed, not at all, or to some other extent.
- Whether site specific impacts would require supplemental/additional information to the analysis documented in the RMP/FEIS through a new EIS.

Map 1: Vicinity Map



1.5 Purpose of and Need for Action

On December 14, 2006, a severe storm brought unusually heavy rains and strong winds to the Oregon Coast Range and the Willamette Valley, causing trees to blow down in various locations in the RA. This project consists of salvaging blow down timber within approximately 13 acres of a 50 year-old stand (recent Canyon Creek Timber Sale) and also within approximately one acre of an adjacent 100 year-old stand. The project would occur within AMA and RR LUAs and would be implemented through a timber sale (Canyon Creek Salvage).

The purpose for the proposed salvage activities is to maintain a healthy forest ecosystem with habitat to support plant and animal populations and protect riparian areas and water resources. The project would also allow for the completion of timber sale contract requirements as stated in Canyon Creek Thinning (OR-080-05-301) Sec. 41. ff (site preparation work).

There is an immediate need to remove a portion of the blow down trees to reduce the risk of bark beetle infestations and the fire hazard associated with the high loading of surface fuels and to allow for the excavator and/or hand piling of slash in the patch cut areas within the blow down group areas as shown on the EA map.

Douglas-fir bark beetles can be attracted to freshly killed Douglas-fir trees over approximately 8 - 12 inches in diameter. It has been observed that disturbances that produce large numbers of dead trees can cause a population build-up in bark beetles, and result in infestation of adjacent healthy trees. If all blown down trees were to remain in the proposed project areas, there is a risk that such infestations could occur, which could result in killing many of the reserved trees as well as green trees outside the proposed treatment areas. Removal of a portion of the blow down trees would likely reduce this risk (see Silviculture Report).

The risk of a fire and the rate of its spread would be highest during the first 1 to 2 years following the blow down incident, and would not return to pre-blow down risk levels for 5 to 10 years. The resistance to control, determined by the amount and size of fuels would remain significantly higher than normal for 15 to 25 years. A high loading of surface fuels would increase the likelihood of fire spreading upward into the canopy and into snags, further increasing the difficulty of controlling a wildfire. Consequently, desired structural characteristics such as snags and multi-layered canopies would be at a greater risk of loss.

To further the purposes of the AMA (develop and test new management approaches) limited activities may occur within the Canyon Creek Salvage riparian area (RMP pg. 19). The management approach to be assessed is a design feature that is intended to protect CWD (coarse woody debris) both near and further from the SPZ (stream protection zone) and protect small downed wood closer to the SPZ. The design feature is intended to maintain/protect water quality, maintain/protect LWD/CWD, and minimize soil disturbance while at the same time protecting the remaining riparian stands closely associated with the blow down from bark beetle infestation and fire risk.

2.0 ALTERNATIVES

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. Therefore, this EA will analyze the effects of the Alternative 1 (No Action) and Alternative 2 (Proposed Action).

2.2 Alternative 2 (No Action Alternative)

The BLM would not implement the action alternative at this time. The No Action Alternative would leave trees where they fell except where they are blocking roads or could potentially block culverts. These trees if moved would be left on site but away from roads and culverts. It is expected that a short lived (3-4 year) Douglas-fir bark beetle infestation would kill some of the remaining standing Douglas-fir trees. Without the removal of logs within the patch cut areas fuels treatments would not be completed as required in the 2003 Canyon Creek Thinning Timber Sale. In addition, without the removal of a portion of the blow down trees, fire risk and hazard would remain high. The alternative serves to set the environmental baseline for comparing effects to the proposed action.

2.3 Alternative 2 (Proposed Action)

This project consists of salvaging blow down timber within approximately 13 acres of a 50 year-old stand that was recently (2006) commercially thinned, and within approximately one acre of an adjacent 100 year-old stand. Approximately 14 acres would be salvaged as a portion of the blow down and/or damaged trees would remain on site following harvest operations. The intent of the proposed action is to remove blow down and damaged trees to reduce the potential for bark beetle infestations while retaining an adequate amount of CWD to meet wildlife and aquatic habitat needs. The proposed action would also decrease overall fire hazard and resistance to control the spread of fire and allow the timber sale purchaser of Canyon Creek Thinning (OR-080-05-301) to complete the site preparation contract requirement. A timber sale would be offered in fiscal year 2007. Trees would be ground based yarded on approximately 14 acres.

2.3.1 Connected Actions

1. **Fuels Treatments**: Fuel treatment strategies would be implemented on portions of the project areas. Strategies would include a reduction of surface fuels in order to reduce both the intensity and severity of potential wildfires in the long term. Fuels reduction may be accomplished by burning of slash piles, by machine processing of slash on-site, or by a combination of these techniques. In order to mitigate fire risk, the area would be monitored for the need of closing or restricting access during periods of high fire danger. During the closed fire season the first year following harvest activities, while fuels are in the "red needle" stage, the entire area would be posted and closed to all off road motor vehicle use.

2.3.2 Project Design Features

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

General

All logging activities would utilize the Best Management Practices (BMPs) required by the Federal Clean Water Act (as amended by the Water Quality Act of 1987) (RMP Appendix C pp. C-1 through C-10).

Table 1: Season of Operation/Operating Conditions

Season of Operation or Operating Conditions	Applies to Operation	Objective
During periods of low soil moisture, generally July 15-October 15	Ground based yarding (Tractor)	Minimize soil erosion/compaction
During periods of low soil moisture, generally June 15-October 31,	Ground based yarding (Harvester/Forwarder)	Minimize soil erosion/compaction
During periods of low precipitation, generally May 1-October 31	Timber Hauling	Minimize soil erosion/stream sedimentation

Project Design Features by RMP Objectives

To minimize soil erosion as a source of sedimentation to streams and to minimize soil productivity loss from soil compaction, loss of slope stability or loss of soil duff layer:

- Ground based yarding with either crawler tractors, hydraulic loaders or harvester/forwarders would take place generally on slopes less than 35%.
- Hydraulic loader use would require utilization of pre-designated skid trails spaced at least 40 feet apart where they intersect boundaries and utilize existing skid trails as much as practical. Use of skid trails should be limited to one pass in and one pass out.
- Harvester/forwarder use would require that logs be transported free of the ground. The equipment would be either rubber tired or track mounted, and have rear tires or tracks greater than 18 inches in width. Skid trails would be spaced approximately 60 feet apart and be less than 15 feet in width. Logging debris would be placed in skid trails in front of equipment to minimize the need for machines to operate on bare soil.
- Crawler tractor use would require utilization of pre-designated skid trails spaced approximately 150 feet apart where they intersect boundaries and utilize existing skid trails as much as practical.
- Skid trails used in 2006 for the thinning would be reused for the salvage so no additional ground would be impacted. There are two exceptions to the reuse of skid trails; 1) there is approximately one acre of salvage outside the thinning unit which would be removed with ground based yarding, 2) there is also a small area that was skyline yarded with the thinning sale but because of the direction the blow down trees fell allows them to be removed with ground based yarding.
- Waterbars would be constructed where they are determined to be necessary by the Authorized Officer.
- All locations where mineral soil is exposed (cat/skid roads and landings) would be sown with Oregon Certified (blue tagged) red fescue (*Festuca rubra*), and/or sown with a wildlife vegetation mix and applied at a rate equal to 40 pounds per acre or sown/planted with other native species as approved by the resource area botanist.

- During periods of rainfall when water is flowing off of road surfaces, the contract administrator may restrict log hauling to minimize water quality impacts, and/or require the Purchaser to install silt fences, barkbags or apply additional road surface rock.

- **To meet the objectives of the "Aquatic Conservation Strategy (ACS)" Riparian Reserves (ACS Component #1):**
- Stream protection zones (SPZs) would be established along all streams and identified wet areas within the harvest area. These zones would be a minimum of approximately 50 feet from the high water mark.
- To protect water quality, no yarding would be permitted in or through all SPZs within the harvest area.
- To protect existing CWD within blow down group areas in the Riparian Reserve, any whole tree which fell into the SPZ would be retained if tree diameter at SPZ location is 6 inches diameter outside bark or greater. Trees which fell into the SPZ and are less than 6 inches diameter outside bark at SPZ location would be bucked at the SPZ location and removed. The top would be retained within the SPZ. Pre-implementation and post-implementation photos at three representative treatment sites wouldbe taken in each riparian area entered as part of the project. Following completion of project, BLM personnel shall document efficacy of design feature implementation in a memo to the NEPA file.

To protect and enhance stand diversity and wildlife habitat components:
- Within blow down group areas containing more than 53 standing green trees/acre, a minimum of 2 trees per acre would be retained on site to function as CWD at the completion of harvest operations.
- Within blow down group areas containing less than 53 standing green trees/acre, a minimum of 6 trees per acre would be retained on site to function as CWD at the completion of harvest operations.
- Canyon Creek Thinning EA and timber sale contract (OR-080-TS05-301) required at least 2 trees per acre to be left on site upon completion of operations to meet CWD needs. If located within the blow down group areas, these trees would be credited toward meeting the above CWD requirements.
- Within existing patch cuts in blow down group areas, 2 trees per acre would be left on site.
- Protect all existing hard (decay class 1) snags in and adjacent to the blow down area.
- Post-harvest wind throw and bark beetle kill in response to new accumulations of slash would result in CWD creation.
- Trees to be left on site for CWD would be approximately the stand average diameter or larger.
- A variety of tree species would be planted within areas where the majority of trees blew down in the project area.

To reduce fire hazard risk and protect air quality:
- Light accumulations of debris along roads that would remain in drivable condition following the completion of the project would be scattered along the length of rights-of-way.
- Large accumulations of debris on landings and along existing roads that would remain in drivable condition would be machine and/or hand piled. At least 90% of the slash in the ¼" to 6" diameter range within 50 feet of the road edge would be piled for burning.
- During the late summer before the onset of fall rains, all machine and hand piles to be burned, would be covered at least 80% with 4 mil polyethylene plastic.
- All burning would occur under favorable smoke dispersal conditions in the fall, in compliance with the state Smoke Management Plan (RMP pp. 22, 65).

To protect Threatened and Endangered and Bureau Special Status Plants and Animals:

- Site management of Survey and Manage Species would be accomplished in accordance with the *Record of Decision and Standards and Guidelines for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M ROD, January 2001) and the *Final Supplemental Environmental Impact Statement For Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M FSEIS, November 2000) and results of the Annual Species Review (ASR) 2001 (BLM IM OR 2002-064), 2002 ASR (BLM IM OR 2003-050) and 2003 ASR (BLM IM OR-2004-034).
- The Resource Area Biologist and/or Botanist would be notified if any Threatened and Endangered and Bureau Special Status Plants and Animal species are found occupying stands proposed for treatment during project activities. All of the known sites would be protected according to bureau policy.

To protect Cultural Resources:

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.

2.4 COMPARISON OF ALTERNATIVES WITH REGARD TO PURPOSE AND NEED

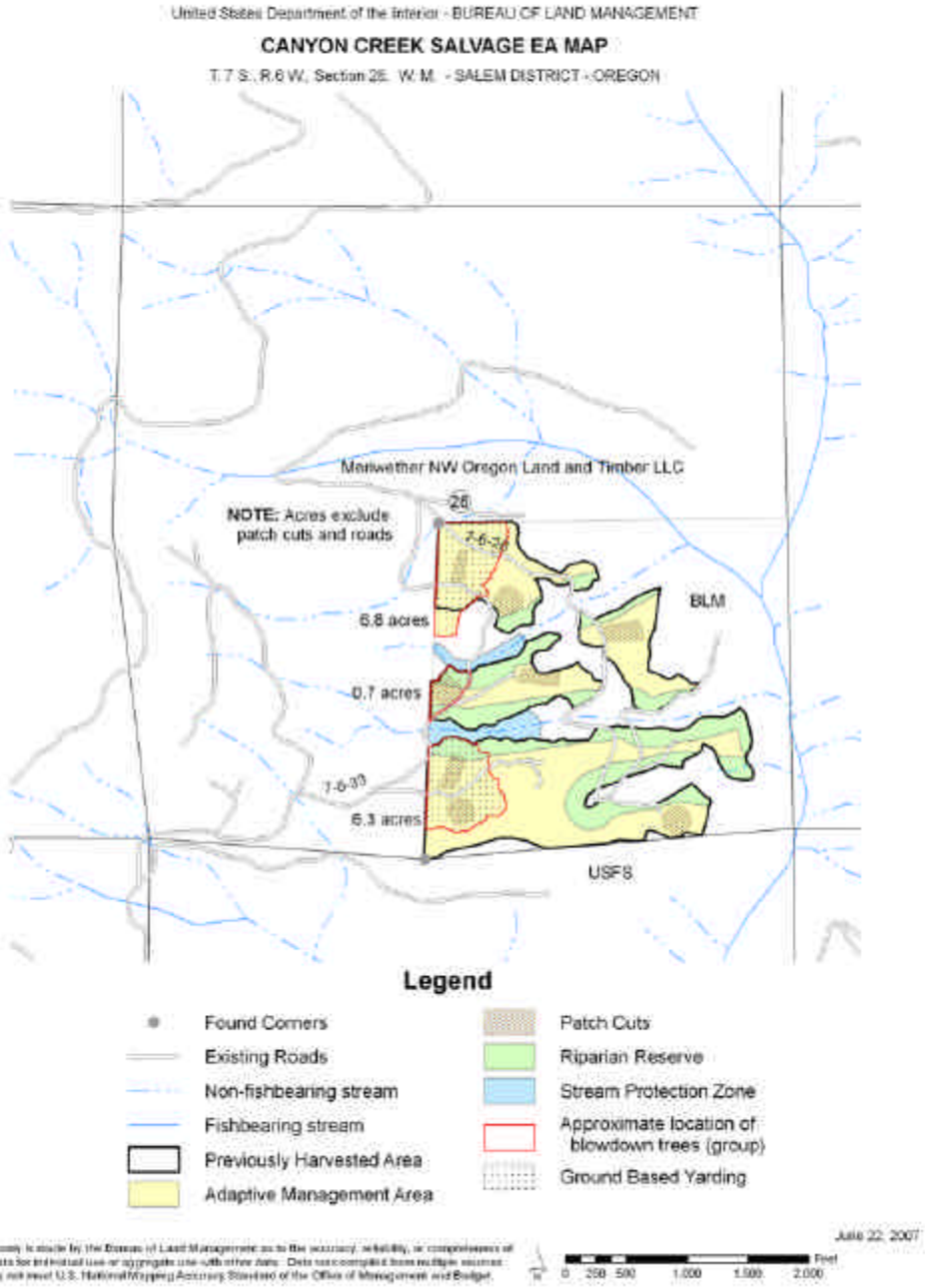
2.5 Comparison of Alternatives With Regard to the Purpose and Need

Table 7: Comparison of Alternative by Purpose and Need

Purpose and Need (EA section 2.1)	No Action	Proposed Action
Remove a portion of the blow down trees to reduce the risk of bark beetle infestations and the fire hazard associated the high loading of surface fuels.	Does not meet. If an infestation and/or wildfire occurred, it could result in the death of numerous adjacent live trees. This could result in the delay of a healthy forest ecosystem by reducing future large trees, down wood and snag development.	Meets. Removal of some of the blow down trees would meet the need to reduce the risk of infestations and wildfire that could result in the death of some green trees within and adjacent to the proposed project areas.
Allow for the completion of timber sale contract requirements as stated in Canyon Creek Thinning (OR-080-05-301) Sec. 41. ff (site preparation work).	Does not meet. Without the removal of blow down trees located within the patch cut areas, site preparation requirements can not be completed. Consequently, appropriate reforestation of the site would be delayed and in some areas would not be accomplished.	Meets. Allows for the removal of blow down trees currently preventing site preparation requirements as stated in the Canyon Creek Thinning Timber Sale Contract.

Purpose and Need (EA section 2.1)	No Action	Proposed Action
Develop and test new management approaches relating to activities that would occur within the Canyon Creek Salvage riparian area.	Does not meet. Would not allow for the development and testing of new management approaches to protect large wood while removing a portion of blow down trees within riparian stands.	Meets. Allows for the protection of large wood both near and further from the SPZ while protecting the remaining riparian stands closely associated with the blow down from bark beetle infestation and fire risk.

Map 2: Map of the Action Alternative



3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL EFFECTS - COMMON TO ALL PROJECT AREAS

3.1 Identification of Affected Elements of the Environment

The interdisciplinary team reviewed the elements of the human environment, required by law, regulation, Executive Order and policy, to determine if they would be affected by the proposed action. Table 3 ("Critical Elements of the Human Environment") and Table 4 (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 2: Review of the "Critical Elements of the Human Environment" (BLM H-1790-1, Appendix 5)

"Critical Elements Of The Human Environment"	Status: (i.e., Not Present , Not Affected, or Affected)	Does this project contribute to cumulative effects? Yes/No	Remarks
Air Quality (Clean Air Act)	**Affected**	**No**	**Addressed in text (EA section 3.2.2 & Canyon Creek 2007 Salvage Sale Proposal Fuels / Soils Report pp. 1-7)**
Areas of Critical Environmental Concern	Not Present	No	
Cultural Resources	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%.
Energy (Executive Order 13212)	Not Affected	No	There is 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	
Flood Plains (Executive Order 11988)	Not Affected	No	
Hazardous or Solid Wastes	Not Present	No	

"Critical Elements Of The Human Environment"		Status: (i.e., Not Present , Not Affected, or Affected)	Does this project contribute to cumulative effects? Yes/No	Remarks
Invasive, Nonnative Species (plants) (Executive Order 13112)		**Affected**	**No**	**Addressed in text (EA section 3.2.1).**
Native American Religious Concerns		Not Affected	No	No Native American religious concerns were identified during the public scoping period.
Threatened or Endangered (T/E) Species or Habitat	**Fish**	**Affected**	**No**	**Upper Willamette River (UWR) steelhead trout are approximately 1 mile downstream in Canyon Creek, tributary to Rickreall Creek. The proposed salvage activities falling, yarding, and hauling would have no additional impacts beyond those previously consulted for UWR steelhead trout (February 17, 2004). Project design features from the BA and the LOC including no harvest activity within SPZs and dry season hauling are intended to prevent impacts to aquatic habitats. UWR Chinook salmon may occur approximately 14 miles downstream in Rickreall Creek. Critical Habitat for UWR Chinook salmon is an additional 10 miles further downstream in the Willamette River. No effects are anticipated to UWR Chinook salmon due to distance to proposed actions to listed fish or critical habitat. Addressed in text (EA section 3.2.6)**
	Plant	Not Present	No	
	Wildlife (including designated Critical Habitat)	**Affected**	**No**	**Addressed in text (EA section 3.2.3 & Biological Evaluation pp. 1 -4).**
Water Quality (Surface and Ground)		**Affected**	**No**	**Addressed in text (EA section 3.2.5, Hydrology Report pp. 1-9).**
Wetlands (Executive Order 11990)		Not Affected	No	Wetlands (i.e., near stream areas with actual riparian vegetation or characteristics) would be designated as SPZs and buffered out of the treatment areas.
Wild and Scenic Rivers		Not Present	No	
Wilderness		Not Present	No	

Table 3: Review of 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
Coastal zone	Not Affected	No	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.
Fire Hazard/Risk	**Affected**	**No**	**Addressed in text (EA section 3.2.2 & Canyon Creek 2007 Salvage Sale Proposal Fuels / Soils Report pp. 1-7)**
Other Fish Species with Bureau Status and Essential Fish Habitat	**Affected**	**No**	**MSA EFH species Cohosalmon occupy aquatic habitat approximately 1.25 miles downstream from the proposed salvage areas. With incorporation of project design features and due to distance of all activities associated with the Canyon Creek Salvage project from occupied Essential Fish Habitat (EFH) the proposed actions are not expected to adversely affect EFH. Coastal cutthroat trout and Pacific lamprey are considered a Bureau Tracking species by the BLM. Addressed in text (EA section 3.2.6).**
Land Uses (right-of-ways, permits, etc)	Not Present	No	
Late Successional and Old Growth Habitat	Not Present	No	
Mineral Resources	Not Present	No	
Recreation	Not Affected	No	Dispersed use by recreationist (hunting). The area is isolated and is behind locked gates on all access routes.
Rural Interface Areas	Not Present	No	
Soils	**Affected**	**No**	**Addressed in text (EA section 3.2.4 & Canyon Creek 2007 Salvage Sale Proposal Fuels / Soils Report pp. 1-7)**
Special Areas outside ACECs (Within or Adjacent) (RMP pp. 33-35)	Not Present	No	
Other Special Status Species / Habitat (including Survey and Manage) Plants	Not Affected	No	There are no known SS botanical of fungal species known from the project area. The project area was surveyed July 5, 2007 and May 5, 6, 2003.
Wildlife	**Affected**	**No**	**Addressed in text (EA section 3.2.3 & Biological Evaluation pp. 1-4)**
Visual Resources	Not Affected	No	Project is located within VRM Class IV land. Changes to the landscape character are expected to be low and comply with Class IV guidelines.

Other Elements of the Environment	Status: (i.e., Not Present, Not Affected, or Affected)	Does this project contribute to cumulative effects? Yes/No	Remarks
Water Resources – Other (303d listed streams, ODEQ 319 assessment, Downstream Beneficial Uses; water quantity, Key watershed, Municipal and Domestic)	**Affected**	**No**	**Addressed in text (EA section 3.2.5, Hydrology Report pp. 1-9)**
Wildlife Structural or Habitat Components - Other (Snags/CWD/ Special Habitats, road densities)	**Affected**	**No**	**Addressed in text (EA section 3.2.3 & Biological Evaluation pp. 1-4)**

3.2 Affected Environment and Environmental Effects

Those elements of the human environment that were determined to be affected are *vegetation, fuels/air quality, wildlife, soils, water and fisheries/aquatic habitat*. 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 Vegetation

(IDT Reports incorporated by reference*: Marys Peak 2007 Canyon Creek Salvage EA Vegetation Input)*

Affected Environment

The approximate 14 acre project area occurs in a coniferous forest consisting mainly of Douglas-fir (*Pseudotsuga menziesii*). Approximately 13 acres of the project area are located in a 55 year-old recently thinned stand (2006) and approximately one acre occurs in an approximate 100 year-old stand. Stand density within the group blow-down areas have been reduced well below the full stocking level.

The 55 year old stand received a commercial thinning and density management treatment in 2006 (see Canyon Creek Silviculture Prescription and Botanical Reports). Seventy-seven acres of the 140 acre area were treated including 8 one acre gaps. An average of 150 square feet of basal area (BA) was retained in the AMA LUA and an average of 120 square feet of BA was retained in the Riparian Reserve LUA. The remaining 63 acres of untreated forest consisted of stream protection zones, appropriately stocked stands and logging feasibility problem areas. Salal is the dominant shrub in the project area.

Federal and Oregon State Threatened/Endangered, Bureau Special Status and Bureau SEIS (Survey and Manage) Special Attention Botanical and Fungal Species:

There are no known sites of any federal or Oregon T&E, bureau special status or survey and manage vascular plant, lichen, bryophyte or fungal species within the project area.
There are no "unique" habitat areas (caves, cliffs, meadows, waterfalls, ponds, lakes) within the proposed project area.

Invasive Species: (Noxious weeds, Invasive Non-native Species):

The following noxious weeds are known from within or adjacent to 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

3.2.1.1 Alternative 1 (No Action Alternative)

No blow down trees would be removed from the site. The trees would be allowed to remain on site and decay. It is expected that a short lived (3-4 year) Douglas-fir bark beetle infestation within the conifer stand would kill some of the remaining standing Douglas-fir trees.

No new skid roads would be constructed within the stand. Any new invading noxious weed infestations would be limited to the exposed soil around the root wads.

Reforestation in the wind-thrown areas may not be feasible due to the overlapping boles and thick concentrations of limbs and needles. Reforestation would be accomplished through natural seeding.

3.2.1.2 Alternative 2 (Proposed Action)

A portion of the total blow down conifer trees, currently on the ground or leaning and 'root-sprung' would be removed from the stand. Many of the larger diameter trees would provide short-term habitat for the Douglas-fir bark beetle. Removing many of the larger diameter conifer stems would reduce the threat of a large infestation of Douglas-fir bark beetles and reduce the number of green trees killed in the following years. The remaining blow down trees, smaller diameter tops, branches and broken stems would remain on site to decay.

Creating new skid roads could disrupt additional vegetation. There are no new roads to be constructed or renovated in this project.

Removal of the conifer stems would allow for successful reforestation of the site. However, since the area currently receives more sunlight, shrubs such as salal and vine maple would compete with any planted tree species and may need to be managed until the planted species are established.

Federal and Oregon State Threatened/Endangered, Bureau Special Status and Bureau SEIS (Survey and Manage) Special Attention Botanical and Fungal Species:
Since there are no known sites for any federal or Oregon State threatened or endangered or Bureau special status or Bureau SEIS (survey and manage) special attention vascular plants, lichen, bryophyte and fungi species within or adjacent the project area, known sites would not be affected. The implementation of this project would not contribute to the need to list any vascular plant, lichen, bryophyte, or fungi species.

Invasive Species: (Noxious weeds, Invasive Non-native Species):
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 project design feature of revegetating 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. In addition, the area would be monitored for any establishment of noxious weeds and treated if

needed. This would comply with the BLM's policy on early detection and rapid response to noxious weeds.

3.2.1.3 Cumulative Effects:

There would be no cumulative effects to the vegetation, as the effects from the project would be local, and there would be no other uses affecting this resource.

3.2.2 Fuels\Air Quality

(IDT Report incorporated by reference: ***Canyon Creek 2007 Salvage Sale Proposal Summary Fuels / Soils Report)***

Affected Environment

The project area is presently occupied by stands of commercially thinned second growth Douglas-fir timber with varying minor components of western hemlock, western red cedar, big leaf maple and red alder trees. Undergrowth is a moderate growth of: salal, Oregon grape, vine maple, ocean spray and red huckleberry. In addition to the blown down trees, there is moderate accumulation of dead woody material and recent logging slash on the ground. There are a few moderate sized old, down logs left from the original 1950's logging. Small snags are scattered through the stand but many were knocked over during the recent thinning operation. Large snags (over 20" diameter) are less than 2 per acre. The estimated total dead fuel loading for these stands varies from 30-110 tons per acre.

Environmental Effects

3.2.2.1 Alternative 1 (No Action Alternative)

With a No Action Alternative there would be no change from the current conditions for the fuels resource. Conditions would remain as they are at present. Without the removal of logs and application of fuels treatment, fire risk and hazard would remain high. The project area is accessible to the public during hunting season when the fire danger is typically high. If a fire did start it would be harder to control due to the higher fuel loadings and more continuous array of fuels than if the proposed action was implemented.

3.2.2.2 Alternative 1 (Proposed Action)

Fuels: Fuel loading, risk of a fire start, fire intensities and the resistance to control a fire, would all be reduced as a result of the proposed action. Removing tree boles and piling and burning some of the slash would reduce the total fuel loading and break up the fuel continuity. For the treated areas, the fuel model would shift from a timber and light to medium logging slash model toward a timber with litter and understory type of fuel model. This shift in fuel models would result in lower fire intensities and less resistance to control as well as a reduction in the overall risk of a fire starting.

Air Quality Burning scattered, cured, piled fuels under favorable atmospheric conditions in the coast range is not expected to result in any long term negative effects to air quality in the air shed. Locally within ¼ - ½ mile of the piles there may be some very short term smoke impacts after piles are ignited resulting from drift smoke. Burning of slash would always be coordinated with ODF in accordance with the Oregon State Smoke Management Plan which serves to coordinate all forest burning activities on a regional scale to prevent negative impacts to local and regional air sheds.

3.2.2.3 Cumulative Effects:

Fuels

Although there would be an increase in fuel loading and resultant fire hazard, when looked at from a watershed scale, the removal of a portion of blow down trees on approximately 14 acres of forest habitat would slightly reduce the long term (5 years or more) potential of the area to carry a ground or crown fire within the treated area. The reduction of fuel loadings would result in a lower intensity and slower rate of spread if a fire did start.

Air Quality

There would be few cumulative effects to this resource, as the effects from the project would be local, and there would be no other uses affecting this resource. Burning of slash would always be coordinated with the Oregon State Smoke Management Plan which serves to coordinate all forest burning activities on a regional scale to prevent negative impacts to local and regional air sheds. Based on this control of smoke production there are no expected cumulative effects from the planned fuels treatment under this proposal.

3.2.3 Wildlife

IDT Report incorporated by reference*: Biological Evaluation for Terrestrial Wildlife (pp. 1-4)*

Affected Environment

The blow down area predominately occurs within a conifer forest that was part of a mid-seral stand of 55 year old Douglas-fir which was thinned to an average of 152 trees per acre in 2006 (Canyon Creek Thinning). The desired future condition for this mid-seral stand at age 80+ years is a density of at least 53 trees per acre. There are patches now within the blow down area that fall well below the 53 trees per acre goal. A one acre stand of 100 year old trees adjacent to the Canyon Creek Thinning area also sustained blow down with at least 53 remaining trees per acre.

Wildlife Structural or Habitat Components: Special Habitats/ Special Habitat components (snags, down logs, remnant old-growth trees):

There are no known special habitats (cliffs, caves, talus, wet/dry meadows, lakes, ponds etc.) in or adjacent to the project area.

Before the wind disturbance event in December of 2006 there was an average of two trees per acre of CWD scattered over the 14 acre area. The post-disturbance CWD density averages approximately 66 down trees per acre, but this level varies greatly within the 14 acre area. The wind disturbance event also created several new snags scattered throughout the 14 acres.

Threatened or Endangered Wildlife Species or Habitat:

Northern Spotted Owl
The project area is not within designated critical habitat, Reserve Pair Area habitat, dispersal habitat, or suitable nesting habitat for the owl. The project is not adjacent to unsurveyed suitable owl habitat.

Marbled Murrelet
The project area is not within marbled murrelet designated critical habitat, suitable habitat, or potential habitat and is not adjacent to unsurveyed suitable marbled murrelet habitat.

Other Special Status Species (including Survey and Manage Species):

Mollusks
There are five Bureau Sensitive mollusks (three slugs and two snails), which may occur within the MPRA but have not been found (mollusk surveys began within the MPRA in 1997 and the project area was surveyed for mollusks in 2002). These mollusks are not suspected to occur within the project area.

Bureau SEIS (Survey and Manage) Special Attention Species

Red Tree Vole
There is no suitable habitat for red tree voles within the salvage project area.

Evening Fieldslug
The evening fieldslug is suspected to occur within the resource area but has never been found (mollusk surveys began in 1997 and the project area was surveyed for mollusks in 2002). The slug is closely associated with riparian zones and standing water.

Environmental Effects

3.2.3.1 Alternative 1 (No Action Alternative)

If no action is taken there would be no negative impacts to wildlife species which utilize high levels of CWD for nesting, foraging, dispersal, resting, and escape habitat within mid-seral forest stands.

3.2.3.2 Alternative 2 (Proposed Action)

Wildlife Habitats and Habitat Components
Many wildlife species depend upon dead wood structure, both standing (snags) and down (CWD), for nesting and/or foraging in the conifer forests of the Oregon Coast Range. How differences in CWD quantity, quality (size and hardness or decay class), and spatial distribution affect individual species and their populations is unclear at this time. However, it is known that natural disturbances like wind and fire leave a tremendous amount of dead wood across the landscape and this complex structural component serves many functions in maintaining a healthy forest ecosystem.

The Canyon Creek stand was 55 years old with about 152 trees per acre when the wind event blew down over 600 trees on 14 acres. The desired future condition for this stand at age 80-110 is at least 53 standing green trees per acre (12 for snags, 16 for CWD, and 25 for green legacy trees). A moderate or typical level of CWD is required to meet the management objectives for the NCRAMA in younger stands that have fallen below desired future condition levels. DecAid, a tool for managing dead wood in the Pacific Northwest, reveals that a moderate range for CWD appropriate for this area would be 6 to 16 trees per

acre. Leaving all the snags and at least six trees per acre for CWD should mitigate the effects of salvaging most of the CWD from those areas with less than 53 standing green trees per acre. In areas with more than 53 trees per acre leaving the existing two trees per acre on the ground created during the previous thinning operation in 2006 would mitigate the effects of removing CWD at this stage of stand development.

Removing a portion of the blow down trees within one acre of the 100 year old stand would not adversely affect wildlife species or their habitat since approximately 6 blow down trees would remain on site following harvest operations.

Threatened and Endangered Species and their Habitat:

No effect to northern spotted owl and marbled murrelet and their habitats from the removal of most of the down trees within the blow down area.

Other Special Status Species (Including Survey and Manage):

No substantial impacts to the red tree vole or to several mollusk species would occur from the removal of most of the down trees within the group blow down area.

3.2.3.3 Cumulative Effects

The BLM land that includes the project area is surrounded by private lands on three sides. Under their current management objectives these private timber lands provide early and mid-seral forest habitat with low levels of dead wood. Since these private forest lands are never expected to provide late-seral or old-growth forest habitat any treatments which maintain or enhance the characteristics of older forests would have a positive affect on species, systems, and functions which depend upon these forest types.

3.2.4 Soils

(IDT Reports incorporated by reference: ***Canyon Creek 2007 Salvage Sale Proposal Summary Fuels / Soils Report)***

Affected Environment

The predominant soil series on and around the salvage sites is: Honeygrove silt clay loam. Slopes vary from 5 to 40%. Honeygrove soils are prone to becoming compacted when subjected to pressure from heavy equipment, dragging logs etc. The degree and depth of compaction would generally be higher when the soil moisture levels are high. Compaction of the soil can reduce site productivity and can result in increased rates of surface water accumulation and run off. The hazard of erosion can be high for bare soil areas on slopes exceeding 35%.

Environmental Effects

3.2.4.1 Alternative 1 (No Action Alternative)

This alternative would result in no change to the affected environment. Short-term impacts to soils would be avoided.

3.2.4.2 Alternative 2 (Proposed Action)

Compaction and disturbance/displacement of soil:
Following completion of salvage operations, the majority of vegetation and root systems would remain, along with the surface soil litter and some slash from salvaged trees. Expected additional amounts of surface soil displacement, surface erosion and soil compaction resulting from timber harvest and fuels treatment operations should be minimal and dispersed. Some additional soil compaction can be expected to result from this project, but the aerial extent and degree would remain well below the established district guidelines (10% or less). Much of this disturbance would occur on existing skid road surfaces.

With some slash and most of the existing undergrowth being left on nearly all of the area, no measurable amounts of surface erosion are expected from the forested lands treated under this proposed alternative. No increase in surface erosion is expected from burning piled slash.

Water-barring and blocking skid roads would promote out-slope drainage and prevent water from accumulating in large quantities, running down the skid road surfaces and causing erosion severe enough that it could reach streams. A small amount of localized erosion can be expected on some of the tractor skid roads the first year of two following yarding. Eroded soil is not expected to move very far from its source and would be diverted by the water bars or out sloping to would spread out in the vegetated areas adjacent to the trails and infiltrate into the ground. After several seasons, the accumulated liter fall on the skid roads would reduce the impact of rain fall droplets on the soil surface further reducing the potential for erosion of the skid roads.

Site Productivity:
Fuels Treatments:
No reduction in site productivity is expected from burning piled slash.

Logging:
For crawler tractor systems, if the suggested design measures are followed, (soils are dry and equipment operates on some slash), soil impacts would be expected to result in moderate to heavy, fairly continuous compaction within the landing areas and the main yarding roads. Impacts would be light to moderate and less continuous on less traveled portions of yarding roads. Worst case expected reduction in productivity for the landings and yarding roads is a 10%-20% reduction in yield on those limited areas (most of the landing areas would be on existing roads). When impacts are averaged out over the 14 acre project area, the effect is expected to be well under a 1% reduction in productivity over the next rotation.

Mitigation would only be in the form of limiting soil disturbance and compaction by yarding on top of slash as much as possible and doing ground based yarding during periods of low soil moisture with a minimum of yarding roads.

3.2.4.3 Cumulative Effects:

The Original Canyon Creek thinning timber sale was completed in 2006. That sale resulted in a cumulative impact to soils in the unit of 5% detrimental disturbance. The effects of the proposed action on soils are expected to be short-term and localized, and new cumulative effects are expected to add less than another 1% of detrimental disturbance for a total of 6%. The greatest cumulative effect on the site would likely be a reduction in overall site productivity from top soil displacement and compaction. The total extent of disturbance would be "moderate" over the longer term (with some soil recovery) and local to the project site. There are no other known actions, aside from those described above, which would be enhanced or diminished by the proposed action.

3.2.5 Water

(IDT Reports incorporated by reference: Hydrology Report Canyon Creek Salvage Timber Sale pp 1-9

Affected Environment

The project area contains two intermittent headwater tributaries to Canyon Creek. Neither Canyon Creek nor the project area streams are on the Oregon 303d list of impaired streams. However, Canyon Creek flows into Rickreall Creek which is listed for exceeding summer temperature standards.

Project area water quality and beneficial uses

Fine sediment and turbidity
During field review of stream channels in the project area, channels were observed to be mostly stable and functional with sediment supplies in the range expected for these stream types. No quantitative turbidity data was located for this analysis.

Stream Temperature
The two streams draining the project area are primarily intermittent with ephemeral headwaters which dry up during the summer months. The perennial extent of the southern tributary is below the area proposed for salvage. No long-term stream temperature data for Canyon Creek or Rickreall Creek was found for this analysis. Streams in the project area are classified by the watershed analysis as having a "low" risk of detrimental changes in water temperature (USDI 1998).

Single sample temperature measurements were made on Canyon Creek on August 6, 2003 between 1:30 pm and 3: l5 pm (U.S.D.I. 2003). Temperatures ranged from 12.2 ° C to 12.8 ° C, well below the state standard (17.8°C). Based on field observations and aerial photo reviews of the perennial extent of streams in the project area, current streamside vegetation and valley topography appears adequate to shade surface waters during summer base flow and it is likely that stream temperatures consistently meet the Oregon state standard.

Other Water Quality Parameters
Additional water quality parameters (e.g. nutrients, dissolved oxygen, pesticide and herbicide residues, etc.) are unlikely to be affected by this proposal and were not reviewed for this analysis.

Oregon Department of Environmental Quality (DEQ)
The Oregon Department of Environmental Quality's (DEQ) 2003 303d List of Water Quality Limited Streams (http://waterquality.deq.state.or/wq/3o3dpage.htm) is a compilation of streams which do not meet the state's water quality standards. A review of the listed streams for the Upper Rickreall Creek watershed was completed for this report. Neither Canyon Creek nor tributaries are listed on the 2003 303d report. However, these project area streams flow directly into Rickreall Creek which is listed from

its mouth to Rock Creek (downstream of the project area) for exceeding summer temperature standards (ibid).

Beneficial Uses
There are no known municipal or domestic water users in the project area. There are no water rights listed for Canyon Creek. Water rights are listed for Rickreall Creek approximately 3 miles downstream from the project area for domestic use, fish, irrigation and a registered groundwater point of diversion (WRIS 03). Additional recognized beneficial uses of the stream-flow in the analysis area include anadromous fish, resident fish, recreation, and esthetic value. Best management practices and project design features would be implemented to help eliminate and/or minimize any potential impacts to beneficial uses of the project watershed.

Environmental Effects

3.2.5.1 Alternative 1 (No Action Alternative)

The No Action Alternative would leave trees where they fell except where they are blocking roads or could potentially block culverts. These trees if moved would be left on site but away from roads and culverts. The No Action Alternative would result in a continuation of the condition and trends described in the Affected Environment section of this report and in the Mega Watershed Analysis document. However, retention of trees nearest the road does increase fire hazard for this area. A fire could lead to additional sediment in the stream, as well as negatively affecting standing and CWD.

3.2.5.2 Alternative 2 (Proposed Action)

Stream Flow
The proposed action is to salvage small areas of downed trees with a combined area of approximately 14 acres. As these trees are not contributing to evapotranspiration, they are not affecting stream flow except indirectly and minimally by contributing to soil cover, which can slow movement of water when overland flow occurs. These effects are very small and are not measurable at this scale.

Temperature
No salvage would occur in the SPZ except where downed trees block roads and could potentially block culverts. The area where this would occur is in the northern part of the project area where trees have fallen across the road and just above a culvert. These trees would also be moved under the No Action Alternative to clear the road and protect the culvert from being blocked. Removing downed trees outside the SPZ would not affect shading of the stream and would not increase temperatures in the streams. These streams are intermittent and would probably be dry during the period the trees would be salvaged.

Sediment Delivery to Streams and Turbidity

Logging:
Logging (thinning) occurred in this area in 2006. No areas of erosion or sediment delivery were seen from the thinned area, to the streams, during field review in June 2007. Given the lack of effect from this thinning and the small additional amount of activity from the proposed salvage, no measurable changes in turbidity or sediment delivery to streams is expected from the salvage operation. As stated above, these streams are intermittent and would probably be dry during the time the downed trees would be salvaged. Habitat and channel conditions are expected to be maintained with implementation of proposed salvage design features, in particular the SPZ buffer.

All ground based equipment would be restricted to the dry season (typically from July 15 to October 31).

Hauling
Timber hauling would be permitted only during periods of dry weather and low soil moisture, generally between May 1 and October 31. Timber hauling during periods when water is flowing on roads and into ditches could potential increase stream turbidity if flows from ditches were large enough to enter streams. All hauling would be restricted at any time of year if necessary to avoid excessive increases in sedimentation.

Fuels Treatments:
The blow down has added an over abundance of CWD (coarse woody debris), making it impossible to pile and burn the fuels created by the thinning sale in 2006. This project is necessary to allow the fuels reduction work to be completed as required by the timber sale contract. Burning piles could lead to patches of soil with altered surface properties that restrict infiltration. However, these areas are surrounded by unburned soils with more normal infiltration properties and with ground cover capable of slowing movement of water and sediment. No piling or burning would occur within the SPZ, leaving a well vegetated buffer to catch any sediment movement.

Stream Protection Zones
For the protection of stream channels and aquatic resources, SPZs would be applied to all stream channels and a wet area in the project area. Stream protection zones would extend at least 50' from stream channels. This zone is sometimes extended upslope during field surveys as far as deemed necessary to protect aquatic resources. There was no change in vegetation type in this area between the area to be salvaged and the SPZ buffer. There is a continuous layer of vegetation and duff that would protect the soil, and buffer the stream from any sediment movement associated with piling and burning slash.

3.2.5.3 Cumulative Effects:

As the proposed project is unlikely to substantially contribute to direct and indirect effects to stream flow or water quality, it would not contribute to cumulative effects. The scale of the project is very small with less than 0.1% of the 7th field watershed (Rickreall Creek Watershed), affected. No living vegetation would be removed except for heavily leaning trees (safety of the loggers and tree planters). No new roads would be built, the majority of the skid trails from the thinning project in 2006 would be used and any burning would be a minor addition to, and occur concurrently, with burning of the slash created in 2006 in the Canyon Creek Thinning Project.

3.2.6 Fisheries/ Aquatic Habitat

Affected Environment

The Canyon Creek Salvage Project area is dissected by two small tributaries that flow into Canyon Creek. These are typical steep headwater streams with steep V-shaped canyons close to Canyon Creek and smaller canyons further upstream. The top half of these tributaries have little or no flow during the summer months. No fish are present within these small headwater streams due to steep channels, limited flow and large amounts of debris. The main stem of Canyon Creek contains cutthroat trout (Oncorhynchus clarkii) and Sculpin (Cottus sp.).

Streams within the project area have moderate amounts of wood and debris from previous logging activities. The project area is approximately one mile above an anadromous fish barrier. Upper Willamette River Steelhead use the lower portions of Canyon Creek for rearing and spawning.

Threatened and Endangered and Special Status Species or Habitat:
Upper Willamette River Steelhead Trout (*Oncorhynchus mykiss*) and UWR Chinook Salmon (*Oncorhynchus tshawytscha)* are listed as threatened under the Endangered Species Act. Steelhead Trout are down stream from the proposed units approximately one mile.
Informal Consultation with the NOAA NMFS was previously completed for project elements addressed in Canyon Creek Commercial Thinning Timber Sale Project. This project would be conducted in accordance with the design features outlined in the BLMs Biological Assessment and NMFS LOC (Letter of Concurrence) for the above timber sale. The proposed salvage action would have no impacts beyond those previously analyzed under the February 2004 LOC, therefore no further consultation with NMFS is required.

Upper Willamette River Chinook Salmon are downstream in Rickreall Creek approximately 14 miles from the project area. Due to the distance to proposed action, no effects are anticipated to listed UWR Spring Chinook and Chinook critical habitat.

Environmental Effects

3.2.6.1 Alternative 1 (No Action Alternative)

Blow down trees in the uplands and riparian areas consist of smaller diameter (~ 12" DBHOB) trees. These smaller diameter trees do not function on the ground and in streams as long or as well as larger diameter trees. Retention of trees nearest the road increases fire hazard, which could negatively affect standing and downed woody debris.

3.2.6.2 Alternative 2 (Proposed Action)

Logging:
The proposed action would have no measurable impacts to local or anadromous fish and fish habitat. Habitat and channel conditions are expected to be maintained with implementation of proposed salvage design features.

All ground based equipment would be restricted to the dry season (typically from July 15 to October 31). All ground based equipment would use existing skid roads where possible. Larger trees in the riparian zone, and smaller trees closest to the SPZ, which fell into the SPZ would be retained and protect CWD values. The small amount and size of timber being hauled out in conjunction with SPZs and seasonal restrictions would keep sediment delivery to a minimal level. The retention trees and limbs, vegetation, duff, and SPZs would keep the chances of mass wasting into streams to a minimal level.

Due to the limited flow in project area streams, SPZs (50 foot minimum), remaining trees, and topographic relief (V-shaped canyons), there is very little chance that these streams would increase in temperature.

Timber Hauling:
Hauling would be seasonally restricted to periods of low precipitation and closely monitored to avoid water quality degradation. With implementation of dry season hauling, impacts to fish species is considered highly unlikely.

Pile Burning:
Proposed pile burning may result in localized impacts to soil and water infiltration. To prevent any potential for sediment transport to stream channels, no piling would occur within SPZs. Implementation of fuel reduction design features outside of the SPZ is not expected to impact the standing riparian timber and stream channels, thus no effects to fish or aquatic habitat is anticipated.

3.2.6.3 Cumulative Effects:

The proposed action would not have any measurable impacts on fish or fish habitat cumulatively due to the small size of the project (14 acres). In addition, cumulative effects to fishery resources would be similar to those previously analyzed in the Canyon Creek Commercial Thinning Timber Sale Project.

4.0 COMPLIANCE WITH THE COMPONENTS OF THE AQUATIC CONSERVATION STRATEGY

Table 4 and Appendix 1 describe the project's compliance with the four components of the Aquatic Conservation Strategy.

Table 4: Projects' Compliance with Components of the Aquatic Conservation Strategy

ACS Component	Project Consistency
Component 1 - Riparian Reserves	The Riparian Reserve boundaries would be established with direction from the Salem District Resource Management Plan (p. 10). Additionally, maintaining canopy cover along all streams would protect stream bank stability and water temperature.
Component 2 - Key Watershed	The project is located within the Rickreall Creek Watershed, which is not designated as key watershed.
Component 3 - Watershed Analysis	Rickreall Creek was analyzed as part of the Rowell, Mill, Rickreall Creek and Luckiamute River Watershed Analysis (USDI, Sept. 1998).
Component 4 - Watershed Restoration	Maintaining appropriate amounts of CWD increases stand diversity in Riparian Reserves and addresses this component.

Canyon Creek Salvage Project - Over the long term, removing a portion of blow down trees (reductions of fire hazard and potential bark beetle infestations), treating the residual fuels and planting seedlings would be expected to result in long-term restoration of a coniferous forest.

5.0 LIST OF PREPARERS

Canyon Creek Salvage Project - Over the long term, removing a portion of blow down trees (reductions of fire hazard and potential bark beetle infestations), treating the residual fuels and planting seedlings would be expected to result in long-term restoration of a coniferous forest.

5.0 LIST OF PREPARERS

Table 5: List of Preparers

Resource	Name	Initial	Date
Cultural Resources	Dave Calver	DHC	7/9/07
Hydrology/Water Quality	Carol Thornton	CT	7/9/07
Silviculture/Riparian Ecology	Bill Caldwell	WBC	7/9/07
Botany TES and Special Status Plant Species	Ron Exeter	RE	7/9/07
Wildlife TES and Special Status Animal Species	Gary Licata	GAL	7/9/07
Fuels/Air Quality/Soils	Tom Tomczyk	TTT	7/9/07
Fisheries	Scott Snedaker	SS	7/9/07
Logging	Andy Frazier	AF	7/9/07
NEPA	Gary Humbard	GLH	7/9/07

6.0 CONTACTS AND CONSULTATION

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

U.S. Fish and Wildlife Service

To address concerns for effects to listed wildlife species and potential modification of critical habitats, the proposed action was consulted upon with the U.S. Fish and Wildlife Service, as required under Section 7 of the Endangered Species Act. The proposed action would follow all applicable terms and conditions from the following document: Letter of Concurrence for Effects to Northern Bald Eagles, Northern Spotted Owls, and Marbled Murrelets from the North Coast Province Fiscal Year 2007-2008 activities that may affect, but are not likely to adversely affect, due to activities that modify habitat and create disturbance, U.S. Department of the Interior; Bureau of Land Management, Eugene District and Salem District, and the U.S. Department of Agriculture; Siuslaw National Forest, Tracking Number: 1-7-2006-I-0190 (dated 10/4/2006). The proposed action would have no effect to northern spotted owl and marbled murrelet because there is no spotted owl or marbled murrelet habitat in or near the project area.

National Marine Fisheries Service

Proposed treatments (timber felling, timber yarding, and hauling) were addressed under the Canyon Creek Commercial Thinning Timber Sale Project Biological Assessment (BA) submitted to NMFS on January 16, 2004. The NMFS Letter of Concurrence, dated February 17, 2004, agreed with the BLM determination that these proposed actions were 'may affect, not likely to adversely affect'. Project design features described in the BA, no harvest activity within SPZs and dry season hauling, are incorporated into the proposed action and would prevent impacts to aquatic habitats. The proposed

6.2 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.

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

- A scoping letter, dated June 7, 2007, was sent to 16 potentially affected and/or interested individuals, groups, and agencies. Two responses were received during the scoping period.

6.3.1 30-day public comment period

- The EA and FONSI will be made available for public review July 11, 2007 to July 25, 2007. The notice for public comment will be published in a legal notice by the *Polk County Itemizer Observer* newspaper. Comments received by the Marys Peak Resource Area of the Salem District Office, 1717 Fabry Road SE, Salem, Oregon 97306, on or before July 25, 2007 will be considered in making the final decisions for this project.

7.0 MAJOR SOURCES AND COMMON ACRONYMS

7.1 Major Sources

7.1.1 Interdisciplinary Team Reports:

Caldwell, W. 2007. Silviculture/Riparian Reserves Report. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR.

Licata , G. 2007. Biological Evaluation. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR.

Thornton, C. 2007. Hydrology for Canyon Creek Salvage 2007. USFS Teams, Enterprise Teams

Tomczyk, T. 2007. Canyon Creek 2007 Salvage Sale Proposal Summary Fuels / Soils Report. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR.

7.1.2 Additional References:

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. 2004b. Final Draft, Biological Assessment of habitat-modification projects proposed during fiscal years 2005 and 2006 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. 1998. Late Successional Reserve Assessment for Oregon's Northern Coast Range Adaptive Management Area (Late-Successional Reserve RO269, RO270 & RO807). Salem, Oregon.

USDA. Forest Service, USDI. Bureau of Land Management. 1994. Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl. Portland, OR.

USDA. Forest Service, USDI. Bureau of Land Management. 1994. Final Supplemental Environmental Impact Statement Management of Habitat for Late Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl. Portland, OR.

USDI. Bureau of Land Management. 1998. Rowell Creek, Mill Creek, Rickreall Creek, and Luckiamute River Watershed Analysis. Salem, Oregon

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.

USDI Fish and Wildlife Service. 2006. Letter of Concurrence for Effects to Northern Bald Eagles, Northern Spotted Owls, and Marbled Murrelets from the North Coast Province Fiscal Year 2007-2008 activities that may affect, but are not likely to adversely affect, due to activities that modify habitat and create disturbance, U.S. Department of the Interior; Bureau of Land Management, Eugene District and Salem District, and the U.S. Department of Agriculture; Siuslaw National Forest. Oregon Fish and Wildlife Office, Portland, Oregon. Tracking Number: 1-7-2006-I-0190 (dated 10/4/2006), Unpublished Document.

8.0 APPENDICES

8.1 Appendix 1 - Aquatic Conservation Strategy Objectives

8.1.1 Documentation of the Projects' 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 Section 3.2. EA section 4.0 describes the project's consistency with the Aquatic Conservation Strategy Objectives.

Table 6: Projects' Consistency with the Nine Aquatic Conservation Strategy Objectives

Aquatic Conservation Strategy Objectives (ACSOs)	Project 1 - Alternative 1 (EA section 2.4)
1. Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features.	Does not prevent the attainment of ACSO 1. Treatments would likely reduce the potential for bark beetles to kill live green trees, thus protecting the remaining stands diversity and complexity locally. The small scale of the proposed project would have no effects on distribution, diversity, and complexity at a watershed scale. Treatments adjoining roads would protect remaining stands from fire risk and protection to surrounding stands from catastrophic impacts thus protecting the distribution, diversity, and complexity.
2. Maintain and restore spatial and temporal connectivity within and between watersheds.	Does not prevent the attainment of ACSO 2. Long term connectivity of terrestrial watershed features would be improved by increasing the availability and proximity of functioning riparian habitat.
3. Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.	Does not prevent the attainment of ACSO 3. No-treatment buffers adjacent to all surface water would maintain the physical integrity of the aquatic system.
4. Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.	Does not prevent the attainment of ACSO 4. No measurable effects to water quality would be anticipated from the proposed action. Stream buffers of at least 50 feet would eliminate disturbance of streamside vegetation; no trees would be cut from the stream bank or where roots are stabilizing the stream bank. Activities that would take place directly in or adjacent to stream channels is intended to protect the stream function, to reduce impacts to downstream channels due to culvert blockage.
5. Maintain and restore the sediment regime under which aquatic ecosystems evolved.	Does not prevent the attainment of ACSO 5. The proposed project is designed to minimize the risk of a mass soil movement event (slump/landslide). No-treatment buffers and project design features would minimize any potential sediment from harvest, burning, and road-related activities from reaching water bodies.

Aquatic Conservation Strategy Objectives (ACSOs)	Project 1 - Alternative 1 (EA section 2.4)
6. Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing.	Does not prevent the attainment of ACSO 6. The proposed alternative would not measurably alter instream flows. The proposed timber harvest would affect only 0.01% of the forest cover in the Rickreall Creek watershed– well below the 20% threshold for measurable effects. Only salvage of blow down trees, not live trees is proposed. Removal of downed trees would not affect flows.
7. Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.	Does not prevent the attainment of ACSO 7. Project design features, such as no-treatment buffers, coupled with the small % of vegetation proposed to be removed, would maintain groundwater levels and floodplain inundation rates.
8. Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands.	Does not prevent the attainment of ACSO 8. Vegetation management within the Riparian Reserve would help restore structural diversity. Treatments would also reduce beetle kill and fire hazard thus protecting species composition and diversity from radical changes.
9. Maintain and restore habitat to support well-distributed populations of native plant, invertebrate and vertebrate riparian-dependent species.	Does not prevent the attainment of ACSO 9. The SPZ maintains populations of riparian dependent species. Retaining diverse CWD features in the RR, consistent with design features, should maintain habitats disturbed from blow down events while at the same time reducing beetle mortality and fire hazards in the remaining stands thus protecting the habitat of native plants, invertebrates, and vertebrate riparian dependent species.

8.2 Appendix 2 - Response to Scoping Comments

A scoping letter, dated June 7, 2007, was sent to 16 potentially affected and/or interested individuals, groups, and agencies. Two responses were received during the scoping period.

8.2.1 Summary of comments and BLM responses

The following addresses comments raised in two letters 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.

8.2.1.1 Oregon Wild (June 8, 2007)

1. **Comment:** *"Concern that there may be cumulative impacts associated with the proposed project and the recently implemented Canyon Creek Thinning". Need to analyze and disclose these impacts in the EA/FONSI.*

   Response: Cumulative effects impacts was completed on all affected resources and disclosed within the EA/FONSI.

8.2.1.2 American Forest Resource Council (June 19, 2007)

1. **Comment:** *The most important aspect of a salvage harvest is to harvest the timber in a timely manner*.

   Response: We agree that salvaging of timber should be done in a timely manner and we are attempting to accomplish this goal. The current plan is to allow the harvesting of blow down timber to commence during the summer of 2007.

2. **Comment:** *Appropriate harvesting systems should be used and the BLM should remove all dead trees and trees likely to die utilizing patch cuts or regeneration harvest methods. This will provide early successional habitat typically not provided by thinning treatments*

   Response: Ground based yarding was determined to be the appropriate harvesting system to be utilized for the project area. This was determined after considering the project area topography consisted of 0 to 30% slopes and no identified soil concerns. The objective of the NCRAMA is to manage for the restoration and maintenance of late-successional forest habitat. Snags and CWD are important components of late successional forests and would be managed. Regeneration harvest is only appropriate in the NCRAMA when a disturbance, caused by such agents as disease or insects, creates a risk high enough that action must be taken to prevent negative effects on existing and/or potential late-successional habitat. The proposed action would reduce the potential negative effects caused by bark beetles and/or wildfire, subsequently, regeneration harvest would not be appropriate.

3. **Comment:** Due to fire and wildlife restrictions which make it difficult to complete timber sales, AFRC would like to see a option to complete this salvage sale during the winter season.

   Response: Design features would include using ground based equipment and the need to haul the timber (adjacent to listed anadromous fish) during the dry season. The proposed project would include the harvest of approximately 10 acres of blow down timber, (a relatively small amount of timber) which should require a minimal amount of time to harvest and haul the timber from the site.

8.3 Appendix 3 – Compliance with Current Survey and Manage Direction

Glossary: Abbreviations, Acronyms, and Terms

ACS	Aquatic Conservation Strategy. A set of objectives developed to restore and maintain the ecological health and aquatic habitat of watersheds
ACS/FSEIS	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
Adaptive Management	The continuing process of implementing policy decisions as scientifically driven management experiments that test predictions and assumptions in management plans, and using the resulting information to improve the plans.
Alternative	Proposed project (plan, option, choice)
AMA	Adaptive Management Area. Landscape units designated for development and testing of technical and social approaches to achieving desired ecological, economic, and other social objectives.
Anadromous fish	Species that migrate to oceans and return to freshwater to reproduce.
BA	Biological Assessment…
Basal Area (BA)	The cross section area of a tree measured in square feet.
BLM	Bureau of Land Management. Federal agency within the Department of Interior responsible for the management of 275 million acres.
Blow down	Trees uprooted or blown over by wind events.
BMP	Best Management Practice(s). Design features and mitigation measures to minimize environmental effects.
BO	Biological Opinion. The document resulting from formal consultation that states the opinion of the Fish and Wildlife Service or National Marine Fisheries Service as to whether or not a federal action is likely to jeopardize the continued existence of listed species or results in destruction or adverse modification of critical habitat.
CEQ	Council of Environmental Quality, established by the National Environmental Policy Act of 1969
CEQ Regulations	Regulations that tell how to implement NEPA
Commercial thinning	Cutting trees to take to the mill for processing.
Cumulative effects	Past, present, and reasonably foreseeable effects added together (regardless of who or what has caused, is causing, and might cause those effects)
CWD	Coarse Woody Debris refers to a tree (or portion of a tree) that has fallen or been cut and left in the woods. Usually refers to pieces at least 20 inches in diameter as described in Northwest Forest Plan.
DBHOB	Diameter at breast height outside diameter.
Density Management	Reduction and composition of trees in a stand for purposes other than timber production.
EA	Environmental Assessment. A systematic analysis of site-specific activities used to determine whether such activities have a significant effect on the quality of the human environment.
EFH	Essential Fish Habitat. (Scott needs to add more info)

EIS	(Final Supplemental Envirionmental Impact Statement to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines, January 2004
Endangered Species	Any species of plant or animal defined through the Endangered Species Act as being in danger of extinction throughout all or a significant portion of its range, and published in the Federal Register.
ESA	Endangered Species Act. Federal legislation that ensures federal actions would not jeopardize or elevate the status of living plants and animals.
FEIS	Final Environmental Impact Statement
Fish and Wildlife Service	F&WS. A division within the U.S. Department of the Interior
Fish-bearing stream	Any stream containing any species of fish for any period of time.
FLPMA	Federal Land Policy Management Act
FONSI	Finding of No Significant Impact
FSEIS	Final Supplemental Environmental Impact Statement
Fuel loading	The amount of combustible material present per unit of area, usually expressed in tons per acre.
Ground base yarding	Moving trees or logs by equipment operating on the surface of the ground to a landing where they can be processed or loaded
Harvester/Forwarder Equipment (cut to length system)	A logging system which uses "harvesters" to fell and delimb a tree and then cut it into logs, paired with a tracked "forwarder" that has a long reach, gathers up the logs and transfers them to a log truck. Many of these systems are known for their low PSI (pounds per square inch) impact to the ground.
Interdisciplinary Team	IDT. A group of individuals assembled to solve a problem or perform a task.
Intermittent stream	Any nonpermanent flowing drainage feature having a definable channel and evidence of scour or deposition. Includes ephemeral streams if they meet these two criteria.
Invasive Plant	Any plant species that is aggressive and difficult to manage.
Landing	Any designated place where logs are laid after being yarded and are awaiting subsequent handling, loading and hauling
Late-successional	Forest conditions consisting of larger trees and multiple canopy layers that support numerous plant and animal species.(Scott needs to check)
LUA	Land Use Allocation. NWFP designated lands to be managed for specific objectives
LWD	Large Woody Debris. Woody material found within the bankfull width of the stream channel and is specifically of a size 23.6 inches diameter by 33 feet length (per ODFW - Key Pieces)
Native Plant	Species that historically occurred or currently occur in a particular ecosystem and were not introduced
NCRAMA	North Coast Range Adaptive Management Area.
NEPA	National Environmental Policy Act (1969)
NMFS	National Marine Fisheries Service. Federal agency within NOAA which is responsible for the regulation of anadromous fisheries in the U. S.
NOAA	National Oceanic Atmospheric Administration. Agency within the Department of Commerce responsible for regulating migratory fisheries

Non-native plant	Any species that historically does not occur in a particular ecosystem or were introduced
Noxious weed	A plant species designated by federal or state law as generally possessing one or more of the following characteristics: aggressive and difficult to manage; parasitic; a carrier or host of serious insects or diseases; or non-native, new, or not common to the United States.
NWFP	Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Related Species within the Range of the Northern Spotted Owl (1994) (Northwest Forest Plan).
NWFP/FSEIS	Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl (February 1994)
ODEQ	Oregon Department of Environmental Quality
ODFW	Oregon Department of Fish and Wildlife. Oregon State Agency responsible for the management and protection of fish and wildlife.
Old-growth	Usually 180-220 year-old trees.
Oregon Smoke Management Plan	The State of Oregon's plan for implementing the National Clean Air Act in regards to burning of forest fuels
Perennial stream	A stream that typically has running water on a year-round basis.
RMP	Salem District Record of Decision and Resource Management Plan (1995)
RMP/FEIS	Salem District Proposed Resource Management Plan/Final Environmental Impact Statement (1994).
ROD	Record of Decision. Document that approves decisions to the analyses presented in the FEIS.
RR	Riparian Reserves (NWFP land use allocation). Lands on either side of streams or other water feature designated to maintain or restore aquatic habitat.
Rural Interface	BLM lands within ½ mile of private lands zoned for 1 to 20 acre lots. Areas zoned for 40 acres and larger with homes adjacent to or near BLM lands.
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).
Seral	One stage of a series of plant communities that succeed one another.
Silviculture	The manipulation of forest stands to achieve desired structure.
Skid trails	Path through a stand of trees on which ground-based equipment operates.
Snag	A dead standing tree lacking live needles or leaves partially dead, or defective tree at least 10 inches diameter and 6 feet tall
Soil Compaction	An increase in bulk density and a decrease in soil porosity resulting from applied loads, vibration, or pressure.
Soil Productivity	Capacity or suitability of a soil, for establishment and growth of a

	specified crop or plant species, primarily through nutrient availability.
Special Status Species	Plant or animal species falling in any of the following categories: Threatened or endangered, Proposed threatened or endangered, Candidate species, State listed species, Bureau sensitive species, or Bureau assessment species.
SPZ	Stream Protection Zone is a buffer along streams where no material would be removed and heavy machinery would not be allowed. The minimum distance is 50 feet.
Threatened species	Those plant and animal species likely to become endangered species throughout all or a significant portion of their range within the foreseeable future and published in the Federal Register.
Turbidity	Multiple environmental sources which causes water to change conditions.
USDI	United States Department of the Interior
USEPA	United States Environmental Protection Agency
VRM	Visual Resource Management, all lands are classified from 1 to 4 based on visual quality ratings.
Waterbars	A ridge of compacted soil or loose rock or gravel constructed across disturbed rights-of-way and similar sloping areas.
Watershed	The drainage basin contributing water, organic matter, dissolved nutrients, and sediments to a stream or lake.
Weed	A plant considered undesirable and that interferes with management objectives for a given area at a given point in time.

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1.0 INTRODUCTION

1.1 Project Covered in this EA

One project will be analyzed in this EA. Canyon Creek Salvage is a proposal to remove a portion of recently blown down trees on approximately 13 acres of a 50 year-old stand and approximately one acre of a 100 year-old stand. The project is located within AMA (Adaptive Management Area) and RR (Riparian Reserve) LUAs (Land Use Allocations).

The majority of the blow down areas occurred adjacent to the west boundary of the previous Canyon Creek Thinning Timber Sale area and along a property line between the BLM and a private forest management company (Meriwether Northwest Land and Timber). Recent (2006) removal of trees from Meriwether NW Oregon Land and Timber LLC owned land, in conjunction with a wind event, produced areas where scattered and groups of trees blew down. Blow down is common where trees that were previously sheltered in dense stands are exposed to even moderate winds by harvesting (Kimmins, 1997).

1.2 Project Area Location

The project area is located approximately 7 air miles west of Dallas, Oregon, in Polk County on forested land managed by the Marys Peak Resource Area, Salem District of the Bureau of Land Management (BLM). The project area lies within the Rickreall Creek Watershed and is within Section 28, Township 7 South, Range 6 West, Willamette Meridian (Map 1).

1.3 Conformance with Land Use Plans, Policies, and Programs

The Canyon Creek Salvage project has been designed to conform to the following documents, which direct and provide the legal framework for management of BLM lands within the Salem District: 1/ *Salem District Record of Decision and Resource Management Plan*, May 1995 (RMP): The RMP has been reviewed and it has been determined that the Canyon Creek Salvage project conforms to the land use plan terms and conditions (e.g. complies with management goals, objectives, direction, standards and guidelines) as required by 43 CFR 1610.5 (BLM Handbook H1790-1). Implementing the RMP is the reason for doing this project (RMP pp.1-3); 2/ *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl*, April 1994 (the Northwest Forest Plan, or NWFP); 3/ *Record of Decision and Standards and Guidelines for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M ROD, January 2001) and results of the Annual Species Review (ASR) 2001 (BLM IM OR 2002-064), 2002 ASR (BLM IM OR 2003-050) and 2003 ASR (BLM IM OR-2004-034).

The analysis in the Canyon Creek Salvage 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). The RMP/FEIS is amended by the *Final Supplemental Environmental Impact Statement For Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M FSEIS, November 2000).

The following document provided additional direction in the development of the Canyon Creek Salvage project: 5/ *Rowell, Mill, Rickreall Creeks and Luckiamute River Watershed Analysis*, 1998 (MEGA WA).

All of the above documents, along with the Canyon Creek Salvage interdisciplinary team (IDT) reports (EA section 7.1.1), are hereby incorporated by reference in the Canyon Creek Salvage EA and are available for review in the Salem District Office. Additional information about the proposed project is available in the Canyon Creek Salvage Project EA Analysis File (NEPA file), also available at the Salem District Office.

Compliance with Survey and Manage

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.

The RA reexamined the individual project record for the Canyon Creek Salvage Project in light of the Court ordered remedy. The wildlife and botanical compliance reviews are included in Appendix 3. As stated above, the RA completed all pre-disturbance surveys and site management as required by survey protocols and management recommendations in compliance with the 2001 ROD.

Based on the preceding information regarding the status of surveys for Survey & Manage wildlife and botany species and the results of those surveys, the Canyon Creek Salvage Project complies with the provisions of the 2001 ROD, as amended or modified as of March 21, 2004. For the foregoing reasons, this EA is in compliance with the 2001 ROD as stated in Point (3) on page 14 of the January 9, 2006, Court order.

Compliance with the Aquatic Conservation Strategy

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

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

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

to a listed species, these short-term, site-scale effects must be considered. The following paragraphs show how the Canyon Creek Salvage project meets the Aquatic Conservation Strategy in the context of PCFFA IV and PCFFA II.

Existing Watershed Condition (EA p. 15)

The Canyon Creek Salvage project area is in the 117,145-acre Rickreall Creek 5th field watershed which drains into the Willamette River. Approximately three percent of the watershed is managed by BLM, less than one percent is Forest Service, and 96% is managed by other landowners, mainly industrial timber companies. The MEGA WA (1998) describes the events that contributed to the current condition such as early hunting/gathering by aboriginal inhabitants, road building, agriculture, water diversions, wildfire, and timber harvest.

Late seral (greater than 80 years old) forests comprise 8 percent of the federal ownership in the watershed. We can infer then, that commercial harvest or stand replacement fire has occurred on approximately 92% of the Federal lands in the watershed. The earliest harvests have been regenerated and are progressing towards providing mature forest structure. Most of the private industrial lands have been and will continue to be moved from mid condition class to the early condition class. Current riparian vegetation on federal lands is composed of greater than 29 percent timber.

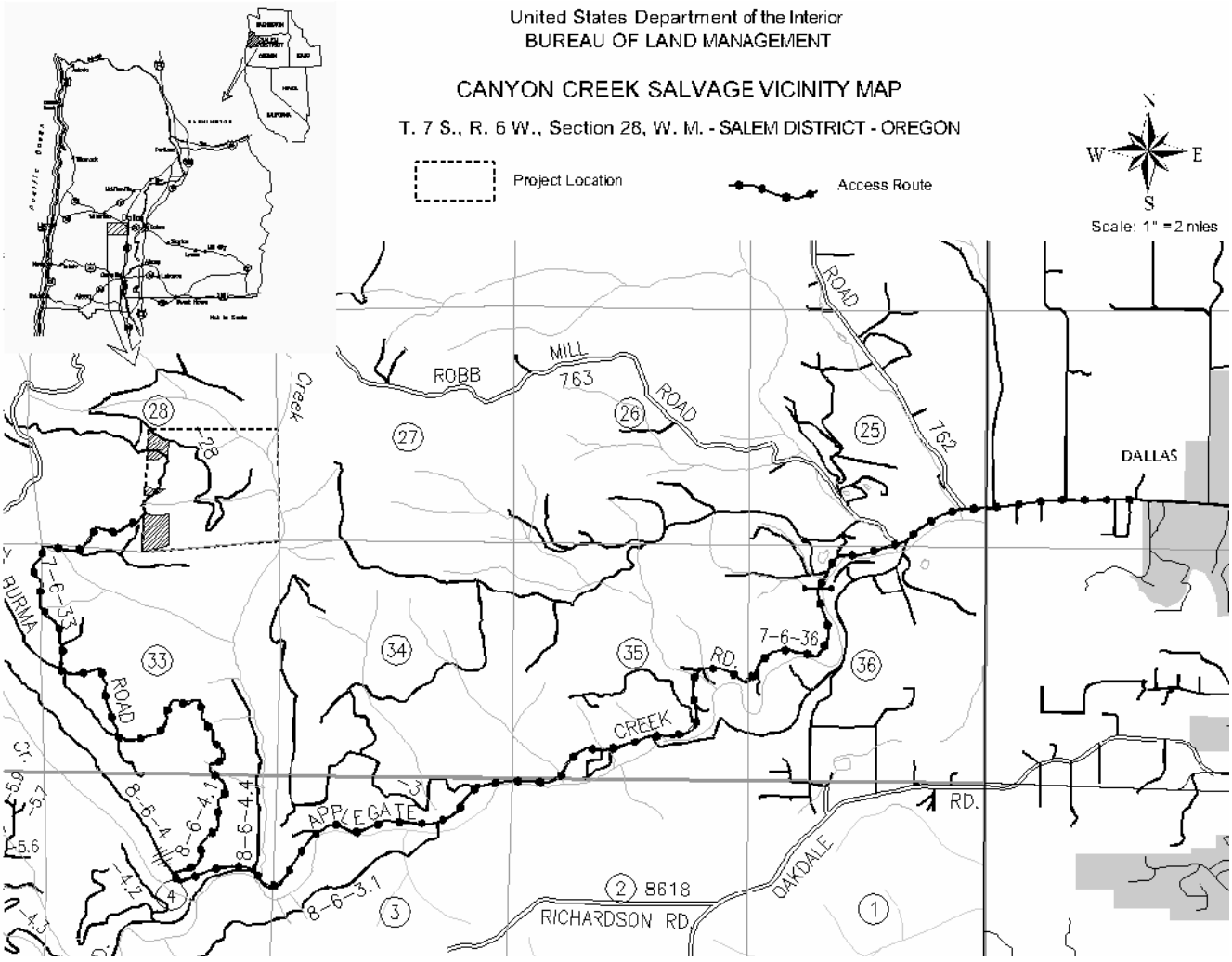
Alternative 2 proposes salvage logging on 14 BLM managed acres (less than 0.01% of the total watershed). Foreseeable harvest on BLM managed land consists of the K-Line Late Successional Reserve Enhancement, 200 acres. Private industrial landowners are expected to continue with a similar harvest rotation as has occurred in the watershed since the 1940s.

1.4 Decision to be made

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

- Whether to approve the Canyon Creek Salvage project, as proposed, not at all, or to some other extent.
- Whether site specific impacts would require supplemental/additional information to the analysis documented in the RMP/FEIS through a new EIS.

Map 1: Vicinity Map



1.5 Purpose of and Need for Action

On December 14, 2006, a severe storm brought unusually heavy rains and strong winds to the Oregon Coast Range and the Willamette Valley, causing trees to blow down in various locations in the RA. This project consists of salvaging blow down timber within approximately 13 acres of a 50 year-old stand (recent Canyon Creek Timber Sale) and also within approximately one acre of an adjacent 100 year-old stand. The project would occur within AMA and RR LUAs and would be implemented through a timber sale (Canyon Creek Salvage).

The purpose for the proposed salvage activities is to maintain a healthy forest ecosystem with habitat to support plant and animal populations and protect riparian areas and water resources. The project would also allow for the completion of timber sale contract requirements as stated in Canyon Creek Thinning (OR-080-05-301) Sec. 41. ff (site preparation work).

There is an immediate need to remove a portion of the blow down trees to reduce the risk of bark beetle infestations and the fire hazard associated with the high loading of surface fuels and to allow for the excavator and/or hand piling of slash in the patch cut areas within the blow down group areas as shown on the EA map.

Douglas-fir bark beetles can be attracted to freshly killed Douglas-fir trees over approximately 8 - 12 inches in diameter. It has been observed that disturbances that produce large numbers of dead trees can cause a population build-up in bark beetles, and result in infestation of adjacent healthy trees. If all blown down trees were to remain in the proposed project areas, there is a risk that such infestations could occur, which could result in killing many of the reserved trees as well as green trees outside the proposed treatment areas. Removal of a portion of the blow down trees would likely reduce this risk (see Silviculture Report).

The risk of a fire and the rate of its spread would be highest during the first 1 to 2 years following the blow down incident, and would not return to pre-blow down risk levels for 5 to 10 years. The resistance to control, determined by the amount and size of fuels would remain significantly higher than normal for 15 to 25 years. A high loading of surface fuels would increase the likelihood of fire spreading upward into the canopy and into snags, further increasing the difficulty of controlling a wildfire. Consequently, desired structural characteristics such as snags and multi-layered canopies would be at a greater risk of loss.

To further the purposes of the AMA (develop and test new management approaches) limited activities may occur within the Canyon Creek Salvage riparian area (RMP pg. 19). The management approach to be assessed is a design feature that is intended to protect CWD (coarse woody debris) both near and further from the SPZ (stream protection zone) and protect small downed wood closer to the SPZ. The design feature is intended to maintain/protect water quality, maintain/protect LWD/CWD, and minimize soil disturbance while at the same time protecting the remaining riparian stands closely associated with the blow down from bark beetle infestation and fire risk.

2.0 ALTERNATIVES

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. Therefore, this EA will analyze the effects of the Alternative 1 (No Action) and Alternative 2 (Proposed Action).

2.2 Alternative 2 (No Action Alternative)

The BLM would not implement the action alternative at this time. The No Action Alternative would leave trees where they fell except where they are blocking roads or could potentially block culverts. These trees if moved would be left on site but away from roads and culverts. It is expected that a short lived (3-4 year) Douglas-fir bark beetle infestation would kill some of the remaining standing Douglas-fir trees. Without the removal of logs within the patch cut areas fuels treatments would not be completed as required in the 2003 Canyon Creek Thinning Timber Sale. In addition, without the removal of a portion of the blow down trees, fire risk and hazard would remain high. The alternative serves to set the environmental baseline for comparing effects to the proposed action.

2.3 Alternative 2 (Proposed Action)

This project consists of salvaging blow down timber within approximately 13 acres of a 50 year-old stand that was recently (2006) commercially thinned, and within approximately one acre of an adjacent 100 year-old stand. Approximately 14 acres would be salvaged as a portion of the blow down and/or damaged trees would remain on site following harvest operations. The intent of the proposed action is to remove blow down and damaged trees to reduce the potential for bark beetle infestations while retaining an adequate amount of CWD to meet wildlife and aquatic habitat needs. The proposed action would also decrease overall fire hazard and resistance to control the spread of fire and allow the timber sale purchaser of Canyon Creek Thinning (OR-080-05-301) to complete the site preparation contract requirement. A timber sale would be offered in fiscal year 2007. Trees would be ground based yarded on approximately 14 acres.

2.3.1 Connected Actions

1. **Fuels Treatments**: Fuel treatment strategies would be implemented on portions of the project areas. Strategies would include a reduction of surface fuels in order to reduce both the intensity and severity of potential wildfires in the long term. Fuels reduction may be accomplished by burning of slash piles, by machine processing of slash on-site, or by a combination of these techniques. In order to mitigate fire risk, the area would be monitored for the need of closing or restricting access during periods of high fire danger. During the closed fire season the first year following harvest activities, while fuels are in the "red needle" stage, the entire area would be posted and closed to all off road motor vehicle use.

2.3.2 Project Design Features

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

General

All logging activities would utilize the Best Management Practices (BMPs) required by the Federal Clean Water Act (as amended by the Water Quality Act of 1987) (RMP Appendix C pp. C-1 through C-10).

Table 1: Season of Operation/Operating Conditions

Season of Operation or Operating Conditions	Applies to Operation	Objective
During periods of low soil moisture, generally July 15-October 15	Ground based yarding (Tractor)	Minimize soil erosion/compaction
During periods of low soil moisture, generally June 15-October 31,	Ground based yarding (Harvester/Forwarder)	Minimize soil erosion/compaction
During periods of low precipitation, generally May 1-October 31	Timber Hauling	Minimize soil erosion/stream sedimentation

Project Design Features by RMP Objectives

To minimize soil erosion as a source of sedimentation to streams and to minimize soil productivity loss from soil compaction, loss of slope stability or loss of soil duff layer:

- Ground based yarding with either crawler tractors, hydraulic loaders or harvester/forwarders would take place generally on slopes less than 35%.
- Hydraulic loader use would require utilization of pre-designated skid trails spaced at least 40 feet apart where they intersect boundaries and utilize existing skid trails as much as practical. Use of skid trails should be limited to one pass in and one pass out.
- Harvester/forwarder use would require that logs be transported free of the ground. The equipment would be either rubber tired or track mounted, and have rear tires or tracks greater than 18 inches in width. Skid trails would be spaced approximately 60 feet apart and be less than 15 feet in width. Logging debris would be placed in skid trails in front of equipment to minimize the need for machines to operate on bare soil.
- Crawler tractor use would require utilization of pre-designated skid trails spaced approximately 150 feet apart where they intersect boundaries and utilize existing skid trails as much as practical.
- Skid trails used in 2006 for the thinning would be reused for the salvage so no additional ground would be impacted. There are two exceptions to the reuse of skid trails; 1) there is approximately one acre of salvage outside the thinning unit which would be removed with ground based yarding, 2) there is also a small area that was skyline yarded with the thinning sale but because of the direction the blow down trees fell allows them to be removed with ground based yarding.
- Waterbars would be constructed where they are determined to be necessary by the Authorized Officer.

- All locations where mineral soil is exposed (cat/skid roads and landings) would be sown with Oregon Certified (blue tagged) red fescue (*Festuca rubra*), and/or sown with a wildlife vegetation mix and applied at a rate equal to 40 pounds per acre or sown/planted with other native species as approved by the resource area botanist.
- During periods of rainfall when water is flowing off of road surfaces, the contract administrator may restrict log hauling to minimize water quality impacts, and/or require the Purchaser to install silt fences, barkbags or apply additional road surface rock.

- **To meet the objectives of the "Aquatic Conservation Strategy (ACS)" Riparian Reserves (ACS Component #1):**
- Stream protection zones (SPZs) would be established along all streams and identified wet areas within the harvest area. These zones would be a minimum of approximately 50 feet from the high water mark.
- To protect water quality, no yarding would be permitted in or through all SPZs within the harvest area.
- To protect existing CWD within blow down group areas in the Riparian Reserve, any whole tree which fell into the SPZ would be retained if tree diameter at SPZ location is 6 inches diameter outside bark or greater. Trees which fell into the SPZ and are less than 6 inches diameter outside bark at SPZ location would be bucked at the SPZ location and removed. The top would be retained within the SPZ. Pre-implementation and post-implementation photos at three representative treatment sites wouldbe taken in each riparian area entered as part of the project. Following completion of project, BLM personnel shall document efficacy of design feature implementation in a memo to the NEPA file.

To protect and enhance stand diversity and wildlife habitat components:
- Within blow down group areas containing more than 53 standing green trees/acre, a minimum of 2 trees per acre would be retained on site to function as CWD at the completion of harvest operations.
- Within blow down group areas containing less than 53 standing green trees/acre, a minimum of 6 trees per acre would be retained on site to function as CWD at the completion of harvest operations.
- Canyon Creek Thinning EA and timber sale contract (OR-080-TS05-301) required at least 2 trees per acre to be left on site upon completion of operations to meet CWD needs. If located within the blow down group areas, these trees would be credited toward meeting the above CWD requirements.
- Within existing patch cuts in blow down group areas, 2 trees per acre would be left on site.
- Protect all existing hard (decay class 1) snags in and adjacent to the blow down area.
- Post-harvest wind throw and bark beetle kill in response to new accumulations of slash would result in CWD creation.
- Trees to be left on site for CWD would be approximately the stand average diameter or larger.
- A variety of tree species would be planted within areas where the majority of trees blew down in the project area.

To reduce fire hazard risk and protect air quality:
- Light accumulations of debris along roads that would remain in drivable condition following the completion of the project would be scattered along the length of rights-of-way.
- Large accumulations of debris on landings and along existing roads that would remain in drivable condition would be machine and/or hand piled. At least 90% of the slash in the ¼" to 6" diameter range within 50 feet of the road edge would be piled for burning.

- During the late summer before the onset of fall rains, all machine and hand piles to be burned, would be covered at least 80% with 4 mil polyethylene plastic.
- All burning would occur under favorable smoke dispersal conditions in the fall, in compliance with the state Smoke Management Plan (RMP pp. 22, 65).

To protect Threatened and Endangered and Bureau Special Status Plants and Animals:

- Site management of Survey and Manage Species would be accomplished in accordance with the *Record of Decision and Standards and Guidelines for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M ROD, January 2001) and the *Final Supplemental Environmental Impact Statement For Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M FSEIS, November 2000) and results of the Annual Species Review (ASR) 2001 (BLM IM OR 2002-064), 2002 ASR (BLM IM OR 2003-050) and 2003 ASR (BLM IM OR-2004-034).
- The Resource Area Biologist and/or Botanist would be notified if any Threatened and Endangered and Bureau Special Status Plants and Animal species are found occupying stands proposed for treatment during project activities. All of the known sites would be protected according to bureau policy.

To protect Cultural Resources:

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.

2.4 COMPARISON OF ALTERNATIVES WITH REGARD TO PURPOSE AND NEED

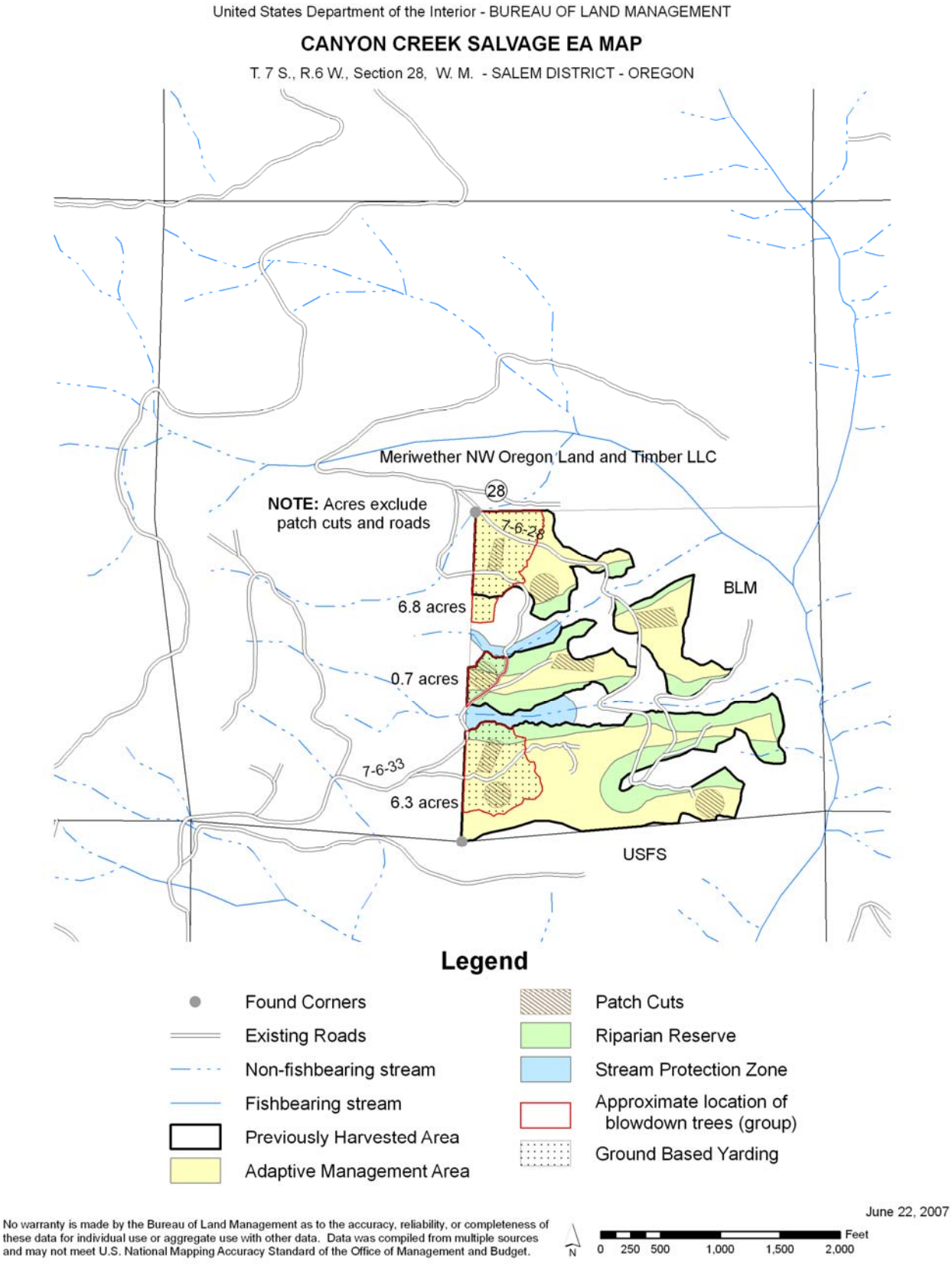
2.5 Comparison of Alternatives With Regard to the Purpose and Need

Table 7: Comparison of Alternative by Purpose and Need

Purpose and Need (EA section 2.1)	No Action	Proposed Action
Remove a portion of the blow down trees to reduce the risk of bark beetle infestations and the fire hazard associated the high loading of surface fuels.	Does not meet. If an infestation and/or wildfire occurred, it could result in the death of numerous adjacent live trees. This could result in the delay of a healthy forest ecosystem by reducing future large trees, down wood and snag development.	Meets. Removal of some of the blow down trees would meet the need to reduce the risk of infestations and wildfire that could result in the death of some green trees within and adjacent to the proposed project areas.

Purpose and Need (EA section 2.1)	No Action	Proposed Action
Allow for the completion of timber sale contract requirements as stated in Canyon Creek Thinning (OR-080-05-301) Sec. 41. ff (site preparation work).	Does not meet. Without the removal of blow down trees located within the patch cut areas, site preparation requirements can not be completed. Consequently, appropriate reforestation of the site would be delayed and in some areas would not be accomplished.	Meets. Allows for the removal of blow down trees currently preventing site preparation requirements as stated in the Canyon Creek Thinning Timber Sale Contract.
Develop and test new management approaches relating to activities that would occur within the Canyon Creek Salvage riparian area.	Does not meet. Would not allow for the development and testing of new management approaches to protect large wood while removing a portion of blow down trees within riparian stands.	Meets. Allows for the protection of large wood both near and further from the SPZ while protecting the remaining riparian stands closely associated with the blow down from bark beetle infestation and fire risk.

Map 2: Map of the Action Alternative



3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL EFFECTS - COMMON TO ALL PROJECT AREAS

3.1 Identification of Affected Elements of the Environment

The interdisciplinary team reviewed the elements of the human environment, required by law, regulation, Executive Order and policy, to determine if they would be affected by the proposed action. Table 3 ("Critical Elements of the Human Environment") and Table 4 (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 2: Review of the "Critical Elements of the Human Environment" (BLM H-1790-1, Appendix 5)

"Critical Elements Of The Human Environment"	Status: (i.e., Not Present , Not Affected, or Affected)	Does this project contribute to cumulative effects? Yes/No	Remarks
Air Quality (Clean Air Act)	**Affected**	**No**	**Addressed in text (EA section 3.2.2 & Canyon Creek 2007 Salvage Sale Proposal Fuels / Soils Report pp. 1-7)**
Areas of Critical Environmental Concern	Not Present	No	
Cultural Resources	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%.
Energy (Executive Order 13212)	Not Affected	No	There is 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	
Flood Plains (Executive Order 11988)	Not Affected	No	
Hazardous or Solid Wastes	Not Present	No	

"Critical Elements Of The Human Environment"		Status: (i.e., Not Present , Not Affected, or Affected)	Does this project contribute to cumulative effects? Yes/No	Remarks
Invasive, Nonnative Species (plants) (Executive Order 13112)		**Affected**	**No**	**Addressed in text (EA section 3.2.1).**
Native American Religious Concerns		Not Affected	No	No Native American religious concerns were identified during the public scoping period.
Threatened or Endangered (T/E) Species or Habitat	**Fish**	**Affected**	**No**	**Upper Willamette River (UWR) steelhead trout are approximately 1 mile downstream in Canyon Creek, tributary to Rickreall Creek. The proposed salvage activities falling, yarding, and hauling would have no additional impacts beyond those previously consulted for UWR steelhead trout (February 17, 2004). Project design features from the BA and the LOC including no harvest activity within SPZs and dry season hauling are intended to prevent impacts to aquatic habitats. UWR Chinook salmon may occur approximately 14 miles downstream in Rickreall Creek. Critical Habitat for UWR Chinook salmon is an additional 10 miles further downstream in the Willamette River. No effects are anticipated to UWR Chinook salmon due to distance to proposed actions to listed fish or critical habitat. Addressed in text (EA section 3.2.6)**
	Plant	Not Present	No	
	Wildlife (including designated Critical Habitat)	**Affected**	**No**	**Addressed in text (EA section 3.2.3 & Biological Evaluation pp. 1-4).**
Water Quality (Surface and Ground)		**Affected**	**No**	**Addressed in text (EA section 3.2.5, Hydrology Report pp. 1-9).**
Wetlands (Executive Order 11990)		Not Affected	No	Wetlands (i.e., near stream areas with actual riparian vegetation or characteristics) would be designated as SPZs and buffered out of the treatment areas.
Wild and Scenic Rivers		Not Present	No	
Wilderness		Not Present	No	

Table 3: Review of 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
Coastal zone		Not Affected	No	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.
Fire Hazard/Risk		**Affected**	**No**	**Addressed in text (EA section 3.2.2 & Canyon Creek 2007 Salvage Sale Proposal Fuels / Soils Report pp. 1-7)**
Other Fish Species with Bureau Status and Essential Fish Habitat		**Affected**	**No**	**MSA EFH species Cohosalmon occupy aquatic habitat approximately 1.25 miles downstream from the proposed salvage areas. With incorporation of project design features and due to distance of all activities associated with the Canyon Creek Salvage project from occupied Essential Fish Habitat (EFH) the proposed actions are not expected to adversely affect EFH. Coastal cutthroat trout and Pacific lamprey are considered a Bureau Tracking species by the BLM. Addressed in text (EA section 3.2.6).**
Land Uses (right-of-ways, permits, etc)		Not Present	No	
Late Successional and Old Growth Habitat		Not Present	No	
Mineral Resources		Not Present	No	
Recreation		Not Affected	No	Dispersed use by recreationist (hunting). The area is isolated and is behind locked gates on all access routes.
Rural Interface Areas		Not Present	No	
Soils		**Affected**	**No**	**Addressed in text (EA section 3.2.4 & Canyon Creek 2007 Salvage Sale Proposal Fuels / Soils Report pp. 1-7)**
Special Areas outside ACECs (Within or Adjacent) (RMP pp. 33-35)		Not Present	No	
Other Special Status Species / Habitat (including Survey and Manage)	Plants	Not Affected	No	There are no known SS botanical of fungal species known from the project area. The project area was surveyed July 5, 2007 and May 5, 6, 2003.
	Wildlife	**Affected**	**No**	**Addressed in text (EA section 3.2.3 & Biological Evaluation pp. 1-4)**
Visual Resources		Not Affected	No	Project is located within VRM Class IV land. Changes to the landscape character are expected to be low and comply with Class IV guidelines.

Other Elements of the Environment	Status: (i.e., Not Present, Not Affected, or Affected)	Does this project contribute to cumulative effects? Yes/No	Remarks
Water Resources – Other (303d listed streams, ODEQ 319 assessment, Downstream Beneficial Uses; water quantity, Key watershed, Municipal and Domestic)	**Affected**	**No**	**Addressed in text (EA section 3.2.5, Hydrology Report pp. 1-9)**
Wildlife Structural or Habitat Components - Other (Snags/CWD/ Special Habitats, road densities)	**Affected**	**No**	**Addressed in text (EA section 3.2.3 & Biological Evaluation pp. 1-4)**

3.2 Affected Environment and Environmental Effects

Those elements of the human environment that were determined to be affected are *vegetation, fuels/air quality, wildlife, soils, water and fisheries/aquatic habitat.* 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 Vegetation

(IDT Reports incorporated by reference*: Marys Peak 2007 Canyon Creek Salvage EA Vegetation Input)*

Affected Environment

The approximate 14 acre project area occurs in a coniferous forest consisting mainly of Douglas-fir (*Pseudotsuga menziesii*). Approximately 13 acres of the project area are located in a 55 year-old recently thinned stand (2006) and approximately one acre occurs in an approximate 100 year-old stand. Stand density within the group blow-down areas have been reduced well below the full stocking level.

The 55 year old stand received a commercial thinning and density management treatment in 2006 (see Canyon Creek Silviculture Prescription and Botanical Reports). Seventy-seven acres of the 140 acre area were treated including 8 one acre gaps. An average of 150 square feet of basal area (BA) was retained in the AMA LUA and an average of 120 square feet of BA was retained in the Riparian Reserve LUA. The remaining 63 acres of untreated forest consisted of stream protection zones, appropriately stocked stands and logging feasibility problem areas. Salal is the dominant shrub in the project area.

<u>Federal and Oregon State Threatened/Endangered, Bureau Special Status and Bureau SEIS (Survey and Manage) Special Attention Botanical and Fungal Species:</u>

There are no known sites of any federal or Oregon T&E, bureau special status or survey and manage vascular plant, lichen, bryophyte or fungal species within the project area.

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

Invasive Species: (Noxious weeds, Invasive Non-native Species):
The following noxious weeds are known from within or adjacent to 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

3.2.1.1 Alternative 1 (No Action Alternative)

No blow down trees would be removed from the site. The trees would be allowed to remain on site and decay. It is expected that a short lived (3-4 year) Douglas-fir bark beetle infestation within the conifer stand would kill some of the remaining standing Douglas-fir trees.

No new skid roads would be constructed within the stand. Any new invading noxious weed infestations would be limited to the exposed soil around the root wads.

Reforestation in the wind-thrown areas may not be feasible due to the overlapping boles and thick concentrations of limbs and needles. Reforestation would be accomplished through natural seeding.

3.2.1.2 Alternative 2 (Proposed Action)

A portion of the total blow down conifer trees, currently on the ground or leaning and 'root-sprung' would be removed from the stand. Many of the larger diameter trees would provide short-term habitat for the Douglas-fir bark beetle. Removing many of the larger diameter conifer stems would reduce the threat of a large infestation of Douglas-fir bark beetles and reduce the number of green trees killed in the following years. The remaining blow down trees, smaller diameter tops, branches and broken stems would remain on site to decay.

Creating new skid roads could disrupt additional vegetation. There are no new roads to be constructed or renovated in this project.

Removal of the conifer stems would allow for successful reforestation of the site. However, since the area currently receives more sunlight, shrubs such as salal and vine maple would compete with any planted tree species and may need to be managed until the planted species are established.

Federal and Oregon State Threatened/Endangered, Bureau Special Status and Bureau SEIS (Survey and Manage) Special Attention Botanical and Fungal Species:
Since there are no known sites for any federal or Oregon State threatened or endangered or Bureau special status or Bureau SEIS (survey and manage) special attention vascular plants, lichen, bryophyte and fungi species within or adjacent the project area, known sites would not be affected. The implementation of this project would not contribute to the need to list any vascular plant, lichen, bryophyte, or fungi species.

Invasive Species: (Noxious weeds, Invasive Non-native Species):
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 project design feature of revegetating 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. In addition, the area would be monitored for any establishment of noxious weeds and treated if needed. This would comply with the BLM's policy on early detection and rapid response to noxious weeds.

3.2.1.3 Cumulative Effects:

There would be no cumulative effects to the vegetation, as the effects from the project would be local, and there would be no other uses affecting this resource.

3.2.2 Fuels\Air Quality

(IDT Report incorporated by reference: ***Canyon Creek 2007 Salvage Sale Proposal Summary Fuels / Soils Report)***

Affected Environment

The project area is presently occupied by stands of commercially thinned second growth Douglas-fir timber with varying minor components of western hemlock, western red cedar, big leaf maple and red alder trees. Undergrowth is a moderate growth of: salal, Oregon grape, vine maple, ocean spray and red huckleberry. In addition to the blown down trees, there is moderate accumulation of dead woody material and recent logging slash on the ground. There are a few moderate sized old, down logs left from the original 1950's logging. Small snags are scattered through the stand but many were knocked over during the recent thinning operation. Large snags (over 20" diameter) are less than 2 per acre. The estimated total dead fuel loading for these stands varies from 30-110 tons per acre.

Environmental Effects

3.2.2.1 Alternative 1 (No Action Alternative)

With a No Action Alternative there would be no change from the current conditions for the fuels resource. Conditions would remain as they are at present. Without the removal of logs and application of fuels treatment, fire risk and hazard would remain high. The project area is accessible to the public during hunting season when the fire danger is typically high. If a fire did start it would be harder to control due to the higher fuel loadings and more continuous array of fuels than if the proposed action was implemented.

3.2.2.2 Alternative 1 (Proposed Action)

Fuels: Fuel loading, risk of a fire start, fire intensities and the resistance to control a fire, would all be reduced as a result of the proposed action. Removing tree boles and piling and burning some of the slash would reduce the total fuel loading and break up the fuel continuity. For the treated areas, the fuel model would shift from a timber and light to medium logging slash model toward a timber with litter and understory type of fuel model. This shift in fuel models would result in lower fire intensities and less resistance to control as well as a reduction in the overall risk of a fire starting.

Air Quality Burning scattered, cured, piled fuels under favorable atmospheric conditions in the coast range is not expected to result in any long term negative effects to air quality in the air shed. Locally within ¼ - ½ mile of the piles there may be some very short term smoke impacts after piles are ignited resulting from drift smoke. Burning of slash would always be coordinated with ODF in accordance with the Oregon State Smoke Management Plan which serves to coordinate all forest burning activities on a regional scale to prevent negative impacts to local and regional air sheds.

3.2.2.3 Cumulative Effects:

Fuels

Although there would be an increase in fuel loading and resultant fire hazard, when looked at from a watershed scale, the removal of a portion of blow down trees on approximately 14 acres of forest habitat would slightly reduce the long term (5 years or more) potential of the area to carry a ground or crown fire within the treated area. The reduction of fuel loadings would result in a lower intensity and slower rate of spread if a fire did start.

Air Quality

There would be few cumulative effects to this resource, as the effects from the project would be local, and there would be no other uses affecting this resource. Burning of slash wouldalways be coordinated with the Oregon State Smoke Management Plan which serves to coordinate all forest burning activities on a regional scale to prevent negative impacts to local and regional air sheds. Based on this control of smoke production there are no expected cumulative effects from the planned fuels treatment under this proposal.

3.2.3 Wildlife

IDT Report incorporated by reference*: Biological Evaluation for Terrestrial Wildlife (pp. 1-4)*

Affected Environment

The blow down area predominately occurs within a conifer forest that was part of a mid-seral stand of 55 year old Douglas-fir which was thinned to an average of 152 trees per acre in 2006 (Canyon Creek Thinning). The desired future condition for this mid-seral stand at age 80+ years is a density of at least 53 trees per acre. There are patches now within the blow down area that fall well below the 53 trees per acre goal. A one acre stand of 100 year old trees adjacent to the Canyon Creek Thinning area also sustained blow down with at least 53 remaining trees per acre.

Wildlife Structural or Habitat Components: Special Habitats/ Special Habitat components (snags, down logs, remnant old-growth trees):

There are no known special habitats (cliffs, caves, talus, wet/dry meadows, lakes, ponds etc.) in or adjacent to the project area.

Before the wind disturbance event in December of 2006 there was an average of two trees per acre of CWD scattered over the 14 acre area. The post-disturbance CWD density averages approximately 66 down trees per acre, but this level varies greatly within the 14 acre area. The wind disturbance event also created several new snags scattered throughout the 14 acres.

Threatened or Endangered Wildlife Species or Habitat:

Northern Spotted Owl
The project area is not within designated critical habitat, Reserve Pair Area habitat, dispersal habitat, or suitable nesting habitat for the owl. The project is not adjacent to unsurveyed suitable owl habitat.

Marbled Murrelet
The project area is not within marbled murrelet designated critical habitat, suitable habitat, or potential habitat and is not adjacent to unsurveyed suitable marbled murrelet habitat.

Other Special Status Species (including Survey and Manage Species):

Mollusks
There are five Bureau Sensitive mollusks (three slugs and two snails), which may occur within the MPRA but have not been found (mollusk surveys began within the MPRA in 1997 and the project area was surveyed for mollusks in 2002). These mollusks are not suspected to occur within the project area.

Bureau SEIS (Survey and Manage) Special Attention Species

Red Tree Vole
There is no suitable habitat for red tree voles within the salvage project area.

Evening Fieldslug
The evening fieldslug is suspected to occur within the resource area but has never been found (mollusk surveys began in 1997 and the project area was surveyed for mollusks in 2002). The slug is closely associated with riparian zones and standing water.

Environmental Effects

3.2.3.1 Alternative 1 (No Action Alternative)

If no action is taken there would be no negative impacts to wildlife species which utilize high levels of CWD for nesting, foraging, dispersal, resting, and escape habitat within mid-seral forest stands.

3.2.3.2 Alternative 2 (Proposed Action)

Wildlife Habitats and Habitat Components
Many wildlife species depend upon dead wood structure, both standing (snags) and down (CWD), for nesting and/or foraging in the conifer forests of the Oregon Coast Range. How differences in CWD quantity, quality (size and hardness or decay class), and spatial distribution affect individual species and their populations is unclear at this time. However, it is known that natural disturbances like wind and fire leave a tremendous amount of dead wood across the landscape and this complex structural component serves many functions in maintaining a healthy forest ecosystem.

The Canyon Creek stand was 55 years old with about 152 trees per acre when the wind event blew down over 600 trees on 14 acres. The desired future condition for this stand at age 80-110 is at

least 53 standing green trees per acre (12 for snags, 16 for CWD, and 25 for green legacy trees). A moderate or typical level of CWD is required to meet the management objectives for the NCRAMA in younger stands that have fallen below desired future condition levels. DecAid, a tool for managing dead wood in the Pacific Northwest, reveals that a moderate range for CWD appropriate for this area would be 6 to 16 trees per acre. Leaving all the snags and at least six trees per acre for CWD should mitigate the effects of salvaging most of the CWD from those areas with less than 53 standing green trees per acre. In areas with more than 53 trees per acre leaving the existing two trees per acre on the ground created during the previous thinning operation in 2006 would mitigate the effects of removing CWD at this stage of stand development.

Removing a portion of the blow down trees within one acre of the 100 year old stand would not adversely affect wildlife species or their habitat since approximately 6 blow down trees would remain on site following harvest operations.

Threatened and Endangered Species and their Habitat:

No effect to northern spotted owl and marbled murrelet and their habitats from the removal of most of the down trees within the blow down area.

Other Special Status Species (Including Survey and Manage):

No substantial impacts to the red tree vole or to several mollusk species would occur from the removal of most of the down trees within the group blow down area.

3.2.3.3 Cumulative Effects

The BLM land that includes the project area is surrounded by private lands on three sides. Under their current management objectives these private timber lands provide early and mid-seral forest habitat with low levels of dead wood. Since these private forest lands are never expected to provide late-seral or old-growth forest habitat any treatments which maintain or enhance the characteristics of older forests would have a positive affect on species, systems, and functions which depend upon these forest types.

3.2.4 Soils

(IDT Reports incorporated by reference: ***Canyon Creek 2007 Salvage Sale Proposal Summary Fuels / Soils Report)***

Affected Environment

The predominant soil series on and around the salvage sites is: Honeygrove silt clay loam. Slopes vary from 5 to 40%. Honeygrove soils are prone to becoming compacted when subjected to pressure from heavy equipment, dragging logs etc. The degree and depth of compaction would generally be higher when the soil moisture levels are high. Compaction of the soil can reduce site productivity and can result in increased rates of surface water accumulation and run off. The hazard of erosion can be high for bare soil areas on slopes exceeding 35%.

Environmental Effects

3.2.4.1 Alternative 1 (No Action Alternative)

This alternative would result in no change to the affected environment. Short-term impacts to soils would be avoided.

3.2.4.2 Alternative 2 (Proposed Action)

Compaction and disturbance/displacement of soil:
Following completion of salvage operations, the majority of vegetation and root systems would remain, along with the surface soil litter and some slash from salvaged trees. Expected additional amounts of surface soil displacement, surface erosion and soil compaction resulting from timber harvest and fuels treatment operations should be minimal and dispersed. Some additional soil compaction can be expected to result from this project, but the aerial extent and degree would remain well below the established district guidelines (10% or less). Much of this disturbance would occur on existing skid road surfaces.

With some slash and most of the existing undergrowth being left on nearly all of the area, no measurable amounts of surface erosion are expected from the forested lands treated under this proposed alternative. No increase in surface erosion is expected from burning piled slash.

Water-barring and blocking skid roads would promote out-slope drainage and prevent water from accumulating in large quantities, running down the skid road surfaces and causing erosion severe enough that it could reach streams. A small amount of localized erosion can be expected on some of the tractor skid roads the first year of two following yarding. Eroded soil is not expected to move very far from its source and would be diverted by the water bars or out sloping to would spread out in the vegetated areas adjacent to the trails and infiltrate into the ground. After several seasons, the accumulated liter fall on the skid roads would reduce the impact of rain fall droplets on the soil surface further reducing the potential for erosion of the skid roads.

Site Productivity:
Fuels Treatments:
No reduction in site productivity is expected from burning piled slash.

Logging:
For crawler tractor systems, if the suggested design measures are followed, (soils are dry and equipment operates on some slash), soil impacts would be expected to result in moderate to heavy, fairly continuous compaction within the landing areas and the main yarding roads. Impacts would be light to moderate and less continuous on less traveled portions of yarding roads. Worst case expected reduction in productivity for the landings and yarding roads is a 10%-20% reduction in yield on those limited areas (most of the landing areas would be on existing roads). When impacts are averaged out over the 14 acre project area, the effect is expected to be well under a 1% reduction in productivity over the next rotation.

Mitigation would only be in the form of limiting soil disturbance and compaction by yarding on top of slash as much as possible and doing ground based yarding during periods of low soil moisture with a minimum of yarding roads.

3.2.4.3 Cumulative Effects:

The Original Canyon Creek thinning timber sale was completed in 2006. That sale resulted in a cumulative impact to soils in the unit of 5% detrimental disturbance. The effects of the proposed action on soils are expected to be short-term and localized, and new cumulative effects are expected to add less than another 1% of detrimental disturbance for a total of 6%. The greatest cumulative effect on the site would likely be a reduction in overall site productivity from top soil displacement and compaction. The total extent of disturbance would be "moderate" over the longer term (with some soil recovery) and local to the project site. There are no other known actions, aside from those described above, which would be enhanced or diminished by the proposed action.

3.2.5 Water

(IDT Reports incorporated by reference: Hydrology Report Canyon Creek Salvage Timber Sale pp 1-9

Affected Environment

The project area contains two intermittent headwater tributaries to Canyon Creek. Neither Canyon Creek nor the project area streams are on the Oregon 303d list of impaired streams. However, Canyon Creek flows into Rickreall Creek which is listed for exceeding summer temperature standards.

Project area water quality and beneficial uses

Fine sediment and turbidity
During field review of stream channels in the project area, channels were observed to be mostly stable and functional with sediment supplies in the range expected for these stream types. No quantitative turbidity data was located for this analysis.

Stream Temperature
The two streams draining the project area are primarily intermittent with ephemeral headwaters which dry up during the summer months. The perennial extent of the southern tributary is below the area proposed for salvage. No long-term stream temperature data for Canyon Creek or Rickreall Creek was found for this analysis. Streams in the project area are classified by the watershed analysis as having a "low" risk of detrimental changes in water temperature (USDI 1998).

Single sample temperature measurements were made on Canyon Creek on August 6, 2003 between 1:30 pm and 3: l5 pm (U.S.D.I. 2003). Temperatures ranged from 12.2 ° C to 12.8 ° C, well below the state standard (17.8°C). Based on field observations and aerial photo reviews of the perennial extent of streams in the project area, current streamside vegetation and valley topography appears adequate to shade surface waters during summer base flow and it is likely that stream temperatures consistently meet the Oregon state standard.

Other Water Quality Parameters
Additional water quality parameters (e.g. nutrients, dissolved oxygen, pesticide and herbicide residues, etc.) are unlikely to be affected by this proposal and were not reviewed for this analysis.

Oregon Department of Environmental Quality (DEQ)
The Oregon Department of Environmental Quality's (DEQ) 2003 303d List of Water Quality Limited Streams (http://waterquality.deq.state.or/wq/3o3dpage.htm) is a compilation of streams which do not meet the state's water quality standards. A review of the listed streams for the Upper Rickreall Creek watershed was completed for this report. Neither Canyon Creek nor tributaries are listed on the 2003 303d report. However, these project area streams flow directly into Rickreall Creek which is listed from its mouth to Rock Creek (downstream of the project area) for exceeding summer temperature standards (ibid).

Beneficial Uses
There are no known municipal or domestic water users in the project area. There are no water rights listed for Canyon Creek. Water rights are listed for Rickreall Creek approximately 3 miles downstream from the project area for domestic use, fish, irrigation and a registered groundwater point of diversion (WRIS 03). Additional recognized beneficial uses of the stream-flow in the analysis area include anadromous fish, resident fish, recreation, and esthetic value. Best management practices and project design features would be implemented to help eliminate and/or minimize any potential impacts to beneficial uses of the project watershed.

Environmental Effects

3.2.5.1 Alternative 1 (No Action Alternative)

The No Action Alternative would leave trees where they fell except where they are blocking roads or could potentially block culverts. These trees if moved would be left on site but away from roads and culverts. The No Action Alternative would result in a continuation of the condition and trends described in the Affected Environment section of this report and in the Mega Watershed Analysis document. However, retention of trees nearest the road does increase fire hazard for this area. A fire could lead to additional sediment in the stream, as well as negatively affecting standing and CWD.

3.2.5.2 Alternative 2 (Proposed Action)

Stream Flow
The proposed action is to salvage small areas of downed trees with a combined area of approximately 14 acres. As these trees are not contributing to evapotranspiration, they are not affecting stream flow except indirectly and minimally by contributing to soil cover, which can slow movement of water when overland flow occurs. These effects are very small and are not measurable at this scale.

Temperature
No salvage would occur in the SPZ except where downed trees block roads and could potentially block culverts. The area where this would occur is in the northern part of the project area where trees have fallen across the road and just above a culvert. These trees would also be moved under the No Action Alternative to clear the road and protect the culvert from being blocked. Removing downed trees outside the SPZ would not affect shading of the stream and would not increase temperatures in the streams. These streams are intermittent and would probably be dry during the period the trees would be salvaged.

Sediment Delivery to Streams and Turbidity

Logging:
Logging (thinning) occurred in this area in 2006. No areas of erosion or sediment delivery were seen from the thinned area, to the streams, during field review in June 2007. Given the lack of effect from this thinning and the small additional amount of activity from the proposed salvage, no measurable changes in turbidity or sediment delivery to streams is expected from the salvage operation. As stated above, these streams are intermittent and would probably be dry during the time the downed trees would be salvaged. Habitat and channel conditions are expected to be maintained with implementation of proposed salvage design features, in particular the SPZ buffer.

All ground based equipment would be restricted to the dry season (typically from July 15 to October 31).

Hauling
Timber hauling would be permitted only during periods of dry weather and low soil moisture, generally between May 1 and October 31. Timber hauling during periods when water is flowing on roads and into ditches could potential increase stream turbidity if flows from ditches were large enough to enter streams. All hauling would be restricted at any time of year if necessary to avoid excessive increases in sedimentation.

Fuels Treatments:
The blow down has added an over abundance of CWD (coarse woody debris), making it impossible to pile and burn the fuels created by the thinning sale in 2006. This project is necessary to allow the fuels reduction work to be completed as required by the timber sale contract. Burning piles could lead to patches of soil with altered surface properties that restrict infiltration. However, these areas are surrounded by unburned soils with more normal infiltration properties and with ground cover capable of slowing movement of water and sediment. No piling or burning would occur within the SPZ, leaving a well vegetated buffer to catch any sediment movement.

Stream Protection Zones
For the protection of stream channels and aquatic resources, SPZs would be applied to all stream channels and a wet area in the project area. Stream protection zones would extend at least 50' from stream channels. This zone is sometimes extended upslope during field surveys as far as deemed necessary to protect aquatic resources. There was no change in vegetation type in this area between the area to be salvaged and the SPZ buffer. There is a continuous layer of vegetation and duff that would protect the soil, and buffer the stream from any sediment movement associated with piling and burning slash.

3.2.5.3 Cumulative Effects:

As the proposed project is unlikely to substantially contribute to direct and indirect effects to stream flow or water quality, it would not contribute to cumulative effects. The scale of the project is very small with less than 0.1% of the 7th field watershed (Rickreall Creek Watershed), affected. No living vegetation would be removed except for heavily leaning trees (safety of the loggers and tree planters). No new roads would be built, the majority of the skid trails from the thinning project in 2006 would be used and any burning would be a minor addition to, and occur concurrently, with burning of the slash created in 2006 in the Canyon Creek Thinning Project.

3.2.6 Fisheries/ Aquatic Habitat

Affected Environment

The Canyon Creek Salvage Project area is dissected by two small tributaries that flow into Canyon Creek. These are typical steep headwater streams with steep V-shaped canyons close to Canyon Creek and smaller canyons further upstream. The top half of these tributaries have little or no flow during the summer months. No fish are present within these small headwater streams due to steep channels, limited flow and large amounts of debris. The main stem of Canyon Creek contains cutthroat trout (Oncorhynchus clarkii) and Sculpin (Cottus sp.).

Streams within the project area have moderate amounts of wood and debris from previous logging activities. The project area is approximately one mile above an anadromous fish barrier. Upper Willamette River Steelhead use the lower portions of Canyon Creek for rearing and spawning.

Threatened and Endangered and Special Status Species or Habitat:
Upper Willamette River Steelhead Trout (*Oncorhynchus mykiss*) and UWR Chinook Salmon (*Oncorhynchus tshawytscha)* are listed as threatened under the Endangered Species Act. Steelhead Trout are down stream from the proposed units approximately one mile. Informal Consultation with the NOAA NMFS was previously completed for project elements addressed in Canyon Creek Commercial Thinning Timber Sale Project. This project would be conducted in accordance with the design features outlined in the BLMs Biological Assessment and NMFS LOC (Letter of Concurrence) for the above timber sale. The proposed salvage action would have no impacts beyond those previously analyzed under the February 2004 LOC, therefore no further consultation with NMFS is required.

Upper Willamette River Chinook Salmon are downstream in Rickreall Creek approximately 14 miles from the project area. Due to the distance to proposed action, no effects are anticipated to listed UWR Spring Chinook and Chinook critical habitat.

Environmental Effects

3.2.6.1 Alternative 1 (No Action Alternative)

Blow down trees in the uplands and riparian areas consist of smaller diameter (~ 12” DBHOB) trees. These smaller diameter trees do not function on the ground and in streams as long or as well as larger diameter trees. Retention of trees nearest the road increases fire hazard, which could negatively affect standing and downed woody debris.

3.2.6.2 Alternative 2 (Proposed Action)

Logging:
The proposed action would have no measurable impacts to local or anadromous fish and fish habitat. Habitat and channel conditions are expected to be maintained with implementation of proposed salvage design features.

All ground based equipment would be restricted to the dry season (typically from July 15 to October 31). All ground based equipment would use existing skid roads where possible. Larger trees in the riparian zone, and smaller trees closest to the SPZ, which fell into the SPZ would be

retained and protect CWD values. The small amount and size of timber being hauled out in conjunction with SPZs and seasonal restrictions would keep sediment delivery to a minimal level. The retention trees and limbs, vegetation, duff, and SPZs would keep the chances of mass wasting into streams to a minimal level.

Due to the limited flow in project area streams, SPZs (50 foot minimum), remaining trees, and topographic relief (V-shaped canyons), there is very little chance that these streams would increase in temperature.

Timber Hauling:
Hauling would be seasonally restricted to periods of low precipitation and closely monitored to avoid water quality degradation. With implementation of dry season hauling, impacts to fish species is considered highly unlikely.

Pile Burning:
Proposed pile burning may result in localized impacts to soil and water infiltration. To prevent any potential for sediment transport to stream channels, no piling would occur within SPZs. Implementation of fuel reduction design features outside of the SPZ is not expected to impact the standing riparian timber and stream channels, thus no effects to fish or aquatic habitat is anticipated.

3.2.6.3 Cumulative Effects:

The proposed action would not have any measurable impacts on fish or fish habitat cumulatively due to the small size of the project (14 acres). In addition, cumulative effects to fishery resources would be similar to those previously analyzed in the Canyon Creek Commercial Thinning Timber Sale Project.

4.0 COMPLIANCE WITH THE COMPONENTS OF THE AQUATIC CONSERVATION STRATEGY

Table 4 and Appendix 1 describe the project's compliance with the four components of the Aquatic Conservation Strategy.

Table 4: Projects' Compliance with Components of the Aquatic Conservation Strategy

ACS Component	Project Consistency
Component 1 - Riparian Reserves	The Riparian Reserve boundaries would be established with direction from the Salem District Resource Management Plan (p. 10). Additionally, maintaining canopy cover along all streams would protect stream bank stability and water temperature.
Component 2 - Key Watershed	The project is located within the Rickreall Creek Watershed, which is not designated as key watershed.
Component 3 - Watershed Analysis	Rickreall Creek was analyzed as part of the Rowell, Mill, Rickreall Creek and Luckiamute River Watershed Analysis (USDI, Sept. 1998).
Component 4 - Watershed Restoration	Maintaining appropriate amounts of CWD increases stand diversity in Riparian Reserves and addresses this component.

Canyon Creek Salvage Project - Over the long term, removing a portion of blow down trees (reductions of fire hazard and potential bark beetle infestations), treating the residual fuels and planting seedlings would be expected to result in long-term restoration of a coniferous forest.

5.0 LIST OF PREPARERS

Table 5: List of Preparers

Resource	Name	Initial	Date
Cultural Resources	Dave Calver	DHC	7/9/07
Hydrology/Water Quality	Carol Thornton	CT	7/9/07
Silviculture/Riparian Ecology	Bill Caldwell	WBC	7/9/07
Botany TES and Special Status Plant Species	Ron Exeter	RE	7/9/07
Wildlife TES and Special Status Animal Species	Gary Licata	GAL	7/9/07
Fuels/Air Quality/Soils	Tom Tomczyk	TTT	7/9/07
Fisheries	Scott Snedaker	SS	7/9/07
Logging	Andy Frazier	AF	7/9/07
NEPA	Gary Humbard	GLH	7/9/07

6.0 CONTACTS AND CONSULTATION

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

U.S. Fish and Wildlife Service

To address concerns for effects to listed wildlife species and potential modification of critical habitats, the proposed action was consulted upon with the U.S. Fish and Wildlife Service, as required under Section 7 of the Endangered Species Act. The proposed action would follow all applicable terms and conditions from the following document: Letter of Concurrence for Effects to Northern Bald Eagles, Northern Spotted Owls, and Marbled Murrelets from the North Coast Province Fiscal Year 2007-2008 activities that may affect, but are not likely to adversely affect, due to activities that modify habitat and create disturbance, U.S. Department of the Interior; Bureau of Land Management, Eugene District and Salem District, and the U.S. Department of Agriculture; Siuslaw National Forest, Tracking Number: 1-7-2006-I-0190 (dated 10/4/2006). The proposed action would have no effect to northern spotted owl and marbled murrelet because there is no spotted owl or marbled murrelet habitat in or near the project area.

National Marine Fisheries Service

Proposed treatments (timber felling, timber yarding, and hauling) were addressed under the Canyon Creek Commercial Thinning Timber Sale Project Biological Assessment (BA) submitted to NMFS on January 16, 2004. The NMFS Letter of Concurrence, dated February 17, 2004, agreed with the BLM determination that these proposed actions were 'may affect, not likely to adversely affect'. Project design features described in the BA, no harvest activity within SPZs and dry season hauling, are incorporated into the proposed action and would prevent impacts to aquatic habitats. The proposed

salvage action would have no impacts beyond those previously analyzed under the February 2004 LOC, therefore no further consultation with NMFS is required.

The Magnuson-Stevens Fisheries Management and Conservation Act (MSA) required consultation with NMFS for actions which adversely affect EFH. With the incorporation of project design features, combined with the distance of all activities associated with the Canyon Creek Salvage project from occupied EFH, the proposed action is not expected to adversely affect EFH. Therefore no consultation with NMFS for MSA-EFH is necessary for this project.

6.2 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.

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

- A scoping letter, dated June 7, 2007, was sent to 16 potentially affected and/or interested individuals, groups, and agencies. Two responses were received during the scoping period.

6.3.1 30-day public comment period

- The EA and FONSI will be made available for public review July 11, 2007 to July 25, 2007. The notice for public comment will be published in a legal notice by the *Polk County Itemizer Observer* newspaper. Comments received by the Marys Peak Resource Area of the Salem District Office, 1717 Fabry Road SE, Salem, Oregon 97306, on or before July 25, 2007 will be considered in making the final decisions for this project.

7.0 MAJOR SOURCES AND COMMON ACRONYMS

7.1 Major Sources

7.1.1 Interdisciplinary Team Reports:

Caldwell, W. 2007. Silviculture/Riparian Reserves Report. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR.

Licata, G. 2007. Biological Evaluation. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR.

Thornton, C. 2007. Hydrology for Canyon Creek Salvage 2007. USFS Teams, Enterprise Teams

Tomczyk, T. 2007. Canyon Creek 2007 Salvage Sale Proposal Summary Fuels / Soils Report. Marys Peak Resource Area, Salem District, Bureau of Land Management. Salem, OR.

7.1.2 Additional References:

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. 2004b. Final Draft, Biological Assessment of habitat-modification projects proposed during fiscal years 2005 and 2006 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. 1998. Late Successional Reserve Assessment for Oregon's Northern Coast Range Adaptive Management Area (Late-Successional Reserve RO269, RO270 & RO807). Salem, Oregon.

USDA. Forest Service, USDI. Bureau of Land Management. 1994. Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl. Portland, OR.

USDA. Forest Service, USDI. Bureau of Land Management. 1994. Final Supplemental Environmental Impact Statement Management of Habitat for Late Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl. Portland, OR.

USDI. Bureau of Land Management. 1998. Rowell Creek, Mill Creek, Rickreall Creek, and Luckiamute River Watershed Analysis. Salem, Oregon

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.

USDI Fish and Wildlife Service. 2006. Letter of Concurrence for Effects to Northern Bald Eagles, Northern Spotted Owls, and Marbled Murrelets from the North Coast Province Fiscal Year 2007-2008 activities that may affect, but are not likely to adversely affect, due to activities that modify habitat and create disturbance, U.S. Department of the Interior; Bureau of Land Management, Eugene District and Salem District, and the U.S. Department of Agriculture; Siuslaw National Forest. Oregon Fish and Wildlife Office, Portland, Oregon. Tracking Number: 1-7-2006-I-0190 (dated 10/4/2006), Unpublished Document.

8.0 APPENDICES

8.1 Appendix 1 - Aquatic Conservation Strategy Objectives

8.1.1 Documentation of the Projects' 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 Section 3.2. EA section 4.0 describes the project's consistency with the Aquatic Conservation Strategy Objectives.

Table 6: Projects' Consistency with the Nine Aquatic Conservation Strategy Objectives

Aquatic Conservation Strategy Objectives (ACSOs)	Project 1 - Alternative 1 (EA section 2.4)
1. Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features.	Does not prevent the attainment of ACSO 1. Treatments would likely reduce the potential for bark beetles to kill live green trees, thus protecting the remaining stands diversity and complexity locally. The small scale of the proposed project would have no effects on distribution, diversity, and complexity at a watershed scale. Treatments adjoining roads would protect remaining stands from fire risk and protection to surrounding stands from catastrophic impacts thus protecting the distribution, diversity, and complexity.
2. Maintain and restore spatial and temporal connectivity within and between watersheds.	Does not prevent the attainment of ACSO 2. Long term connectivity of terrestrial watershed features would be improved by increasing the availability and proximity of functioning riparian habitat.
3. Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.	Does not prevent the attainment of ACSO 3. No-treatment buffers adjacent to all surface water would maintain the physical integrity of the aquatic system.
4. Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.	Does not prevent the attainment of ACSO 4. No measurable effects to water quality would be anticipated from the proposed action. Stream buffers of at least 50 feet would eliminate disturbance of streamside vegetation; no trees would be cut from the stream bank or where roots are stabilizing the stream bank. Activities that would take place directly in or adjacent to stream channels is intended to protect the stream function, to reduce impacts to downstream channels due to culvert blockage.
5. Maintain and restore the sediment regime under which aquatic ecosystems evolved.	Does not prevent the attainment of ACSO 5. The proposed project is designed to minimize the risk of a mass soil movement event (slump/landslide). No-treatment buffers and project design features would minimize any potential sediment from harvest, burning, and road-related activities from

Aquatic Conservation Strategy Objectives (ACSOs)	Project 1 - Alternative 1 (EA section 2.4)
	reaching water bodies.
6. Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing.	Does not prevent the attainment of ACSO 6. The proposed alternative would not measurably alter instream flows. The proposed timber harvest would affect only 0.01% of the forest cover in the Rickreall Creek watershed – well below the 20% threshold for measurable effects. Only salvage of blow down trees, not live trees is proposed. Removal of downed trees would not affect flows.
7. Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.	Does not prevent the attainment of ACSO 7. Project design features, such as no-treatment buffers, coupled with the small % of vegetation proposed to be removed, would maintain groundwater levels and floodplain inundation rates.
8. Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands.	Does not prevent the attainment of ACSO 8. Vegetation management within the Riparian Reserve would help restore structural diversity. Treatments would also reduce beetle kill and fire hazard thus protecting species composition and diversity from radical changes.
9. Maintain and restore habitat to support well-distributed populations of native plant, invertebrate and vertebrate riparian-dependent species.	Does not prevent the attainment of ACSO 9. The SPZ maintains populations of riparian dependent species. Retaining diverse CWD features in the RR, consistent with design features, should maintain habitats disturbed from blow down events while at the same time reducing beetle mortality and fire hazards in the remaining stands thus protecting the habitat of native plants, invertebrates, and vertebrate riparian dependent species.

8.2 Appendix 2 - Response to Scoping Comments

A scoping letter, dated June 7, 2007, was sent to 16 potentially affected and/or interested individuals, groups, and agencies. Two responses were received during the scoping period.

8.2.1 Summary of comments and BLM responses

The following addresses comments raised in two letters 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.

8.2.1.1 Oregon Wild (June 8, 2007)

1. **Comment:** *"Concern that there may be cumulative impacts associated with the proposed project and the recently implemented Canyon Creek Thinning". Need to analyze and disclose these impacts in the EA/FONSI.*

   Response: Cumulative effects impacts was completed on all affected resources and disclosed within the EA/FONSI.

8.2.1.2 American Forest Resource Council (June 19, 2007)

1. **Comment:** *The most important aspect of a salvage harvest is to harvest the timber in a timely manner.*

   Response: We agree that salvaging of timber should be done in a timely manner and we are attempting to accomplish this goal. The current plan is to allow the harvesting of blow down timber to commence during the summer of 2007.

2. **Comment:** *Appropriate harvesting systems should be used and the BLM should remove all dead trees and trees likely to die utilizing patch cuts or regeneration harvest methods. This will provide early successional habitat typically not provided by thinning treatments*

   Response: Ground based yarding was determined to be the appropriate harvesting system to be utilized for the project area. This was determined after considering the project area topography consisted of 0 to 30% slopes and no identified soil concerns. The objective of the NCRAMA is to manage for the restoration and maintenance of late-successional forest habitat. Snags and CWD are important components of late successional forests and wouldbe managed. Regeneration harvest is only appropriate in the NCRAMA when a disturbance, caused by such agents as disease or insects, creates a risk high enough that action must be taken to prevent negative effects on existing and/or potential late-successional habitat. The proposed action would reduce the potential negative effects caused by bark beetles and/or wildfire, subsequently, regeneration harvest would not be appropriate.

3. **Comment:** Due to fire and wildlife restrictions which make it difficult to complete timber sales, AFRC would like to see a option to complete this salvage sale during the winter season.

   Response: Design features would include using ground based equipment and the need to haul the timber (adjacent to listed anadromous fish) during the dry season. The proposed project would include the harvest of approximately 10 acres of blow down timber, (a relatively small amount of timber) which should require a minimal amount of time to harvest and haul the timber from the site.

8.3 Appendix 3 – Compliance with Current Survey and Manage Direction

2001 ROD Compliance Review: Survey & Manage Wildlife Species

Environmental Analysis File **Prepared By:**

Salem District BLM – Marys Peak Resource Area Gary A. Licata, Wildlife Biologist

Project Name: Canyon Creek Salvage Project **Date: 06/26/07**

Survey & Manage List Date: Dec. 19, 2003

Table A. Survey & Manage Wildlife Species. The species listed are known to occur in the Salem District or are suspected to occur according to the following protocols; *Survey Protocols for Amphibians under the Survey & Manage Provision of the Northwest Forest Plan v3.0* (1999), *Survey protocol for the Great Gray Owl within the Range of the Northwest Forest Plan v3.0* (Jan. 2004), *Survey Protocol for the Red Tree Vole v2.1* (Oct. 2002) and *Survey Protocol for S&M Terrestrial Mollusk Species v3.0* (Feb. 2003) or to the *Survey Protocol For Aquatic Mollusk Species From The Northwest Forest Plan Version 2.0* (Oct. 1997).

SPECIES	S&M CATEGORY	SURVEY TRIGGERS			SURVEY RESULTS			SITE MANAGEMENT?
		Within range of the species?	Project contains suitable habitat?	Project may negatively affect species/ habitat?	Surveys Required?	Survey Date (month/year)	Sites Known or Found?	
Vertebrates								
Larch Mountain Salamander [1] (*Plethodon larselli*)	A	No	NA	NA	NA	NA	NA	NA
Great Gray Owl [2] (*Strix nebulosa*)	A	No	NA	NA	NA	NA	NA	NA
Oregon Red Tree Vole [3] (*Arborimus longicaudus*)	C	Yes	No	No	No	NA	NA	NA
Mollusks								

Puget Oregonian [4] (*Cryptomasix devia*)	A	No	NA	NA	NA	NA	NA	NA
Crater Lake Tightcoil [5] (*Pristiloma arcticum crateris*)	A	No	NA	NA	NA	NA	NA	NA
Evening Fieldslug [6] (*Deroceras hesperium*)	B	Yes	No	No	No	NA	NA	NA
Columbia Duskysnail [7] (*Lyogyrus* n. sp. 1)	A	No	NA	NA	NA	NA	NA	NA
Basalt Juga [8] (*Juga* [*Oreobasis*] n. sp. 2)	A	No	NA	NA	NA	NA	NA	NA

NA = Not Applicable

[1] In the Salem District, the range of the Larch Mountain salamander is only in the very northern portion of the Cascades Resource Area, within 14 miles of the Columbia River, east of the confluence with the Sandy River according to *Survey Protocols for Amphibians under the Survey & Manage Provision of the Northwest Forest Plan v3.0* (1999) pages 262 and 269.

[2] In the Salem District, the range of the great gray owl is only within the Cascades Resource Area. Pre-disturbance surveys for great gray owls are required if the project area has meets the conditions outlined in the *Survey Protocol for the Great Gray Owl within the range of the Northwest Forest Plan v3.0*, January 12, 2004) which gives the following guidance: The required habitat characteristics of suitable habitat in Oregon Western Cascades Physiographic Province include: (1) large diameter nest trees (38-42 inch dbh in mixed conifer/fir/oak/madrone), (2) forest for roosting cover, and (3) proximity [within 200m] to openings that could be used as foraging areas (page 13). Suitable nesting habitat adjacent to natural openings smaller than 10 acres is not necessary to be surveyed (page 5). The stands should be in proximity to natural-openings and pre-disturbance surveys are <u>not</u> suggested in suitable nesting habitat adjacent to man-made openings at this time (pg. 14).

[3] In the Salem District, surveys for red tree voles are required to be conducted only in suitable habitat of the North Mesic Zone of their range. The southern portion of the Marys Peak Resource Area (Alsea River Watershed) and the Willamette Valley are not within the North Mesic Zone.

[4] In the Salem District, the range of *Cryptomastix devia* is limited to the Tillamook Resource Area and Clackamas County and Multnomah County in the Cascades Resource Area.

[5] In the Salem District, *Pristiloma articum crateris* is suspected to occur above 2,000 feet elevation in the Cascades Resource Area only. This species is "limited to perennially wet situations in mature conifer forests, among rushes, mosses and other surface vegetation or under rocks and woody debris within 10 m of open water in wetlands, springs, seeps and riparian areas, generally in areas which remain under snow for long periods in the winter." Unless these specific habitats will be disturbed, no surveys are necessary.

[6] In the Salem District, *Derocerus hesperium* has the potential to occur in all three resource areas however it is "limited to moist surface vegetation and cover objects within 30 m (98 ft.) of perennial wetlands, springs seeps and riparian areas." Unless these specific habitats will be disturbed, no surveys are necessary. Where habitat is present, equivalent-effort pre-disturbance surveys are required for this species.

Statement of Compliance. There are no known sites and pre-disturbance surveys are not required to comply with the *2001 Record of Decision and Standard and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measure Standards and Guidelines* (as the 2001 ROD was amended or modified as of March 21, 2004); also complies with any site management for any Category B, D, and E species as identified in the 2001 ROD (as modified).

The salvage project area is not within suitable habitat for the red tree vole or the evening fieldslug.

Therefore, based on the preceding information (refer to Table A above) regarding the status of surveys and site management for Survey & Manage wildlife species, it is my determination that Canyon Creek Salvage Project complies with the provisions of the *2001 Record of Decision and Standard and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measure Standards and Guidelines* (as the 2001 ROD was amended or modified as of March 21, 2004). For the foregoing reasons, this project is in compliance with the 2001 ROD as stated in Point (3) on page 14 of the January 9, 2006, Court order in Northwest Ecosystem Alliance et al. v. Rey et al.

Signature: **Date:** 7/9/07

PRINTED NAME, Josh Wilson Resource Area Manager

2001 ROD Compliance Review: Survey & Manage Botany Species

Environmental Analysis File
Salem District Bureau of Land Management

Project Name: **Canyon Creek Salvage** Prepared By: **Ron Exeter**
Project Type: Blowdown Timber Salvage Date: July 6, 2007
Location: **(Coast Range physiographic province)** T. 7S., R. 6W., Section 28 SW1/4
S&M List Date: **December 2003.**

Table A. Survey & Manage Species Known and Suspected in the Salem District. Species listed below were compiled from the 2003 Annual Species Review (IM-OR-2004-034) and includes all species in which pre-disturbance surveys may be needed (Category A, C and non-fungi Category B species if the project occurs in old-growth as defined on page 79-80 of the 2001 ROD) and lists known sites of other survey and manage species that are known to occur within the project area. In addition, the table indicates whether or not a survey was required, survey results and site management.

The following survey protocols and literature were used in determining species known range, habitat and survey methodology. All field surveys were completed by intuitive controlled methods.

Fungi:
Survey Protocols for *Bridgeoporus* (=*Oxyporus*) *nobilissimus* (Version 2.0, May 1998)
Handbook to Strategy 1 Fungal Species in the Northwest Forest Plan (October 1999)
Handbook to Additional Fungal Species of Special Concern in the Northwest Forest Plan.(2003).

Lichens:
Survey Protocols For Component 2 Lichens (Version 2.0, March 1998)
Management Recommendations for Survey and Manage Lichens (Version 2.0, March 2, 2000)
Survey Protocols for Survey and Manage Category A & C Lichens in the Northwest Forest Plan Area [Version 2.1 (2003)]
2003 Amendment to the Survey Protocol for Survey and Manage Category A & C Lichens. (Version 2.1 Amendment, September 2003)

Bryophytes:
Survey Protocols For Protection Buffer Bryophytes (Version 2.0)

Vascular Plants:
Survey Protocols for Survey and Manage Strategy 2 Vascular Plants (Version 2.0, December 1998).

All species:
Rare, Threatened and Endangered Species of Oregon; Oregon Natural Heritage Information Center (May 2004).

Species	S&M Category	Survey Triggers			Survey Results			Site Management
		Within Range of the Species?	Project Contains Suitable habitat?	Project may negatively affect species/habitat?	Surveys Required?	Survey Date (month/year)	Sites Known or Found?	
Fungi								
Bridgeoporus nobilissimus[1a]	A	NO	NO	NO	NO[2]	N/A	None	N/A
Lichens								
Bryoria pseudocapillaris[1a]	A	NO	NO	NO	NO[3]	N/A	None	N/A

Bryoria spiralifera[1a]	A	NO	NO	NO	NO[3]	N/A	None	N/A
Dendriscocaulon intricatatulum[1c]	A	YES	NO	NO	NO[4]	N/A	None	N/A
Hypogymnia duplicata[1c]	C	YES	NO	NO	NO[4]	N/A	None	N/A
Leptogium cyanescens[1c]	A	YES	YES	NO	YES	7/2007	None	N/A
Lobaria linita var.tenuoir[1b]	A	YES	NO	NO	NO[4]	N/A	None	N/A
Nephroma occultum[1c]	C	YES	NO	NO	NO[4]	N/A	None	N/A
Niebla cephalota[1b]	A	NO	NO	NO	NO[3]	N/A	None	N/A
Pseudocyphellaria perpetua[1c]	A	YES	YES	NO	YES	7/2007	None	N/A
Pseudocyphellaria rainierensis[1c]	A	YES	NO	NO	NO[4]	N/A	None	N/A
Teloschistes flavicans[1a]	A	NO	NO	NO	NO[3]	N/A	None	N/A
Bryophytes								
Schistostega pennata[1b]	A	YES	NO	NO	NO[4]	N/A	None	N/A
Tetraphis geniculata[1b]	A	YES	YES	NO	YES	7/2007	None	N/A
Vascular Plants								
Botrychium minganense[1c]	A	NO	NO	NO	NO[5]	N/A	None	N/A
Botrychium montanum[1b]	A	NO	NO	NO	NO[5]	N/A	None	N/A
Coptis asplenifolia	A	NO	NO	NO	NO[7]	N/A	None	N/A
Coptis trifolia[1b]	A	NO	NO	NO	NO[5]	N/A	None	N/A
Corydalis aquae-gelidae[1a]	A	NO	NO	NO	NO[6]	N/A	None	N/A
Cypripedium fasciculatum[1a]	C	NO	NO	NO	NO[5]	N/A	None	N/A
Cypripediium montanum[1c]	C	NO	NO	NO	NO[5]	N/A	None	N/A
Eucephalis vialis[1a]	A	NO	NO	NO	NO[5]	N/A	None	N/A
Galium kamtschaticum	A	NO	NO	NO	NO[7]	N/A	None	N/A
Plantanthera orbiculata var. orbiculata	C	NO	NO	NO	NO[7]	N/A	None	N/A
Category B Species (equivalent effort surveys needed if project area includes old-growth as defined in 2001 ROD glossary, p. 79-80)								
None.[8]	B	-	NO	NO	NO[8]	N/A	None	N/A
Additional Category B, D, E & F known sites located within the proposed project Area								
No known sites.								

1 These species are former species of concern; (a) Bureau sensitive, (b) bureau assessment or (c) bureau tracking species.

2 This species is known from high elevations containing true fir and the only site in the Oregon Coast Range is at approximately 4000 feet on the top of Marys Peak. There are no true firs within the proposed project area.

3 This species known range within the NW Forest Plan is along the immediate coast or within the coastal fog zone within sight or sound of the Pacific Ocean but often extending up to 15 miles inland.

4 These species are known primarily from mature and old-growth, Doug-fir, Western Hemlock and Pacific silver-fir. Field surveys are not required if the species is not known to exist in the proposed project area or in the vicinity, and if it is determined that probable suitable habitat is unlikely to exist in the proposed project area.

[5] These species are not known to occur on Bureau of Land Management lands within the Salem District. These species have no known sites in the Oregon Coast Range physiographic province.

[6] This species is known to occur on Bureau of Land Management lands within the Salem District in the Cascades Resource Area. This species has known sites in the Western Cascades physiographic province but none in the Oregon Coast Range physiographic province.

[7] This species is only known from western Washington. There are no known sites in Oregon.

[8] Surveys are not required. The project area is less than 100 years of age and the project does not meet the definition on page 79-80 of the 2001 ROD.

STATEMENT OF COMPLIANCE: Pre-disturbance surveys and management of known sites required by protocol standards to comply with the 2001 Record of Decision and Standard and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measure Standards and Guidelines (as the 2001 ROD was amended or modified as of March 21, 2004) were completed for Canyon Creek Salvage Project. There are no known Category A, B, C, D, E, and F species within the Canyon Creek Salvage Project.

SUMMARY OF SURVEY RESULTS :

The original Canyon Creek Timbersale was surveyed for Threatened and Endangered (T&E) and Bureau Special Status (SS) and Special Attention vascular plants, lichens, bryophytes and spring fungi on May 5th and 6th, 2003. The surveys were completed by intuitive controlled surveys. There were no previous known sites of any of these species, nor were any found during surveys. The timber salvage areas associated with the Canyon Creek Salvage sale were surveyed on July 5th, 2007 utilizing intuitive controlled surveys. No T&E or bureau special status or survey and manage species were found.

Therefore, based on the preceding information (refer to Table A above) regarding the status of surveys and site management for Survey & Manage botanical species, it is my determination that Canyon Creek Salvage Project complies with the provisions of the 2001 Record of Decision and Standard and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measure Standards and Guidelines (as the 2001 ROD was amended or modified as of March 21, 2004). For the foregoing reasons, this contract is in compliance with the 2001 ROD as stated in Point (3) on page 14 of the January 9, 2006, Court order in Northwest Ecosystem Alliance et al. v. Rey et al.

Trish Wilson

Trish Wilson, Field Manager
Marys Peak Resource Area, Salem District BLM

7/9/07
Date