Fanno Lookout Timber Sale

Final Decision and Decision Rationale

Upper Siletz River Watershed Enhancement Environmental Assessment
DOI-BLM-OR-S050-2009-0002

October 2012

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

Township 8 South, Range 8 West, Sections 15, 23 and 25, Willamette Meridian
Polk County, Oregon

Responsible Agency:	USDI – Bureau of Land Management
Responsible Official:	Rich Hatfield, Field Manager Marys Peak Resource Area 1717 Fabry Road SE Salem, OR 97306 (503) 315-5968
For further information, contact:	Stefanie Larew Marys Peak Resource Area 1717 Fabry Road SE Salem, OR 97306 (503) 375-5601

BLM
Salem District

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/AE-10/092+1792

1.0 Introduction

The Bureau of Land Management (BLM) conducted an environmental analysis for the Fanno Lookout Timber Sale, which is documented in the *Upper Siletz River Watershed Enhancement Environmental Assessment* (Upper Siletz River EA) (EA# DOI-BLM-OR-S050-2009-0002) and the associated project file. The proposed action is to perform density management on approximately 194 acres of 48 to 66-year-old stands within Adaptive Management Area (AMA) and Riparian Reserve (RR) land use allocations (LUAs).

The decision maker made the EA and the draft Finding of No Significant Impact (FONSI) available for public review from August 9, 2010 to September 7, 2010. The decision maker signed the Finding of No Significant Impact (FONSI) on March 8, 2012.

The decision documented in this Decision Record (DR) is based on the analysis documented in the EA. This decision authorizes the implementation of only those activities directly related to and included within the Fanno Lookout Timber Sale.

2.0 Decision

I have decided to implement the Fanno Lookout Timber Sale as described in the proposed action (EA pp. 11 to 12), hereafter referred to as the "selected action". The selected action is shown on the maps attached to this DR. This decision is based on site-specific analysis in the Upper Siletz River Watershed Enhancement EA, the supporting project record, management recommendations contained in the *Upper Siletz River Watershed Analysis* (1996), as well as the management direction contained in the *Salem District Resource Management Plan* (RMP) (May 1995), which are incorporated by reference in the EA.

Changes to the Proposed Action since the EA

Due to a reciprocal right-of-way agreement with an adjacent landowner, approximately four acres originally analyzed for treatment in section 15 of the Fanno Lookout Timber Sale have been dropped. This area was used to provide skyline corridors on an adjacent landowner's property in the summer of 2012. Additionally, the landowner built a portion of road that was proposed and analyzed in the Upper Siletz River Watershed EA. The BLM will perform minor road maintenance on this road for use under the Fanno Lookout Timber Sale.

Decision Summary

The following is a summary of this decision:

- Density management on approximately 194 acres of 48 to 66 year old forest stands within AMA and RR LUAs. Approximately 5,980 MBF of timber will be harvested.
- Timber harvest by ground-based and skyline methods (approximate acreages):
    - Ground-Based yarding – 100 acres
    - Skyline yarding – 94 acres
- Post-harvest treatments to reduce fuel loading
- Road construction of approximately 1.0 mile. Following harvest all of the construction will

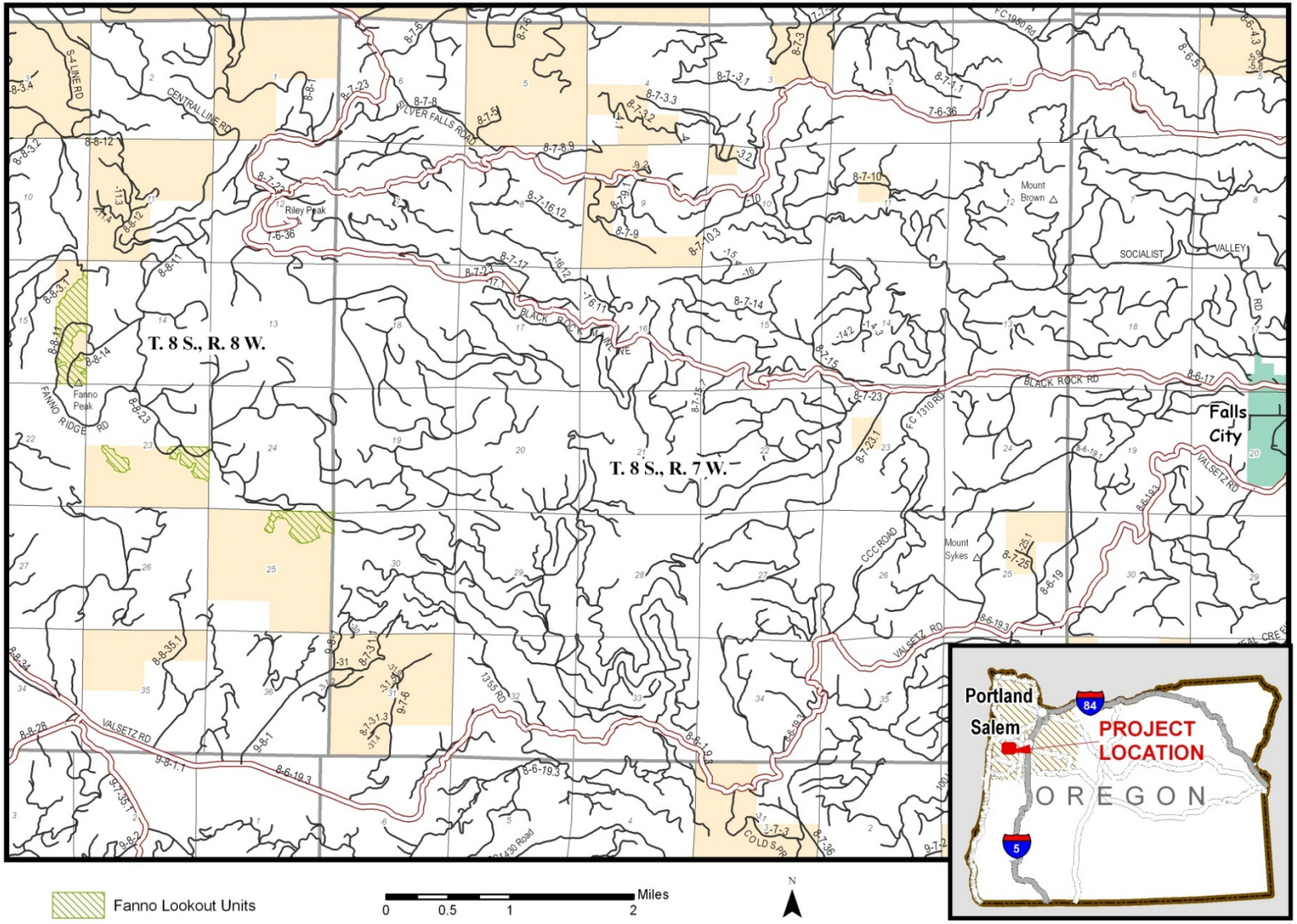
be decommissioned.

- Road renovation of approximately 3.7 miles. Within existing roads spot rock application will occur.
- All design features and mitigation measures described in the EA (pp. 14 to 18) will be incorporated into the timber sale contract.

Vicinity and project-specific maps appear on the following pages.

3.0 Vicinity and Selected Action Maps

United States Department of the Interior - BUREAU OF LAND MANAGEMENT
FANNO LOOKOUT LOCATION MAP



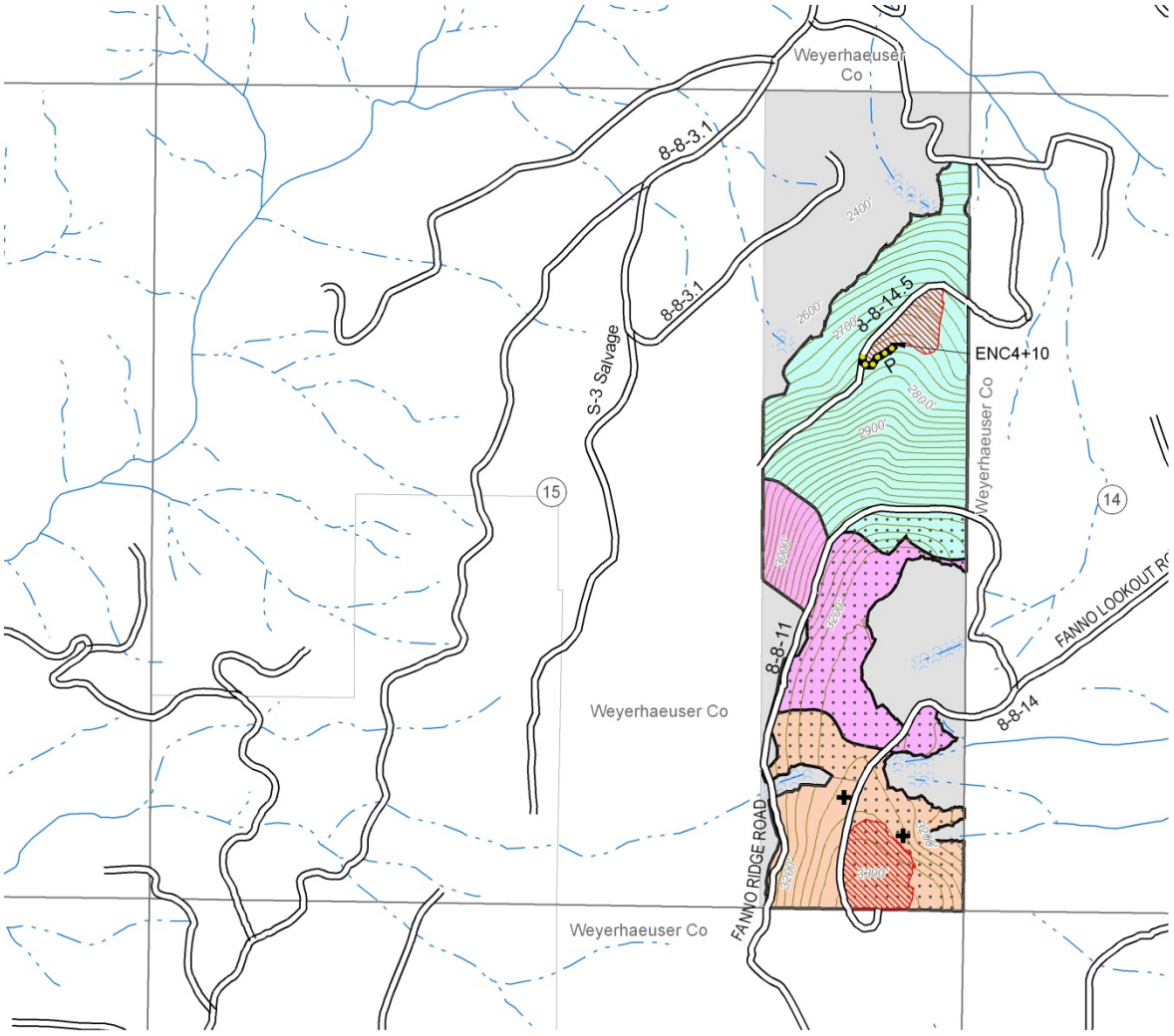
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.

United States Department of the Interior - BUREAU OF LAND MANAGEMENT

SELECTED ACTION MAP FANNO LOOKOUT TIMBER SALE

Sheet 1 of 3

T. 8 S., R. 8 W., Section 15, W.M. - SALEM DISTRICT - OREGON



Contour interval: 20 ft.

Road to be constructed and decommissioned

Existing road

Overgrown or Impassable Road

Unit 15A - 47 acres

Unit 15B - 22 acres

Unit 15C - 25 acres

Unit 23A - 33 acres

Unit 23B - 14 acres

Unit 25B - 53 acres

Patch Cut

Ground-Based Yarding

Skyline Yarding

No treatment will occur

StreamProtectionZone

Plus trees

Gate

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N

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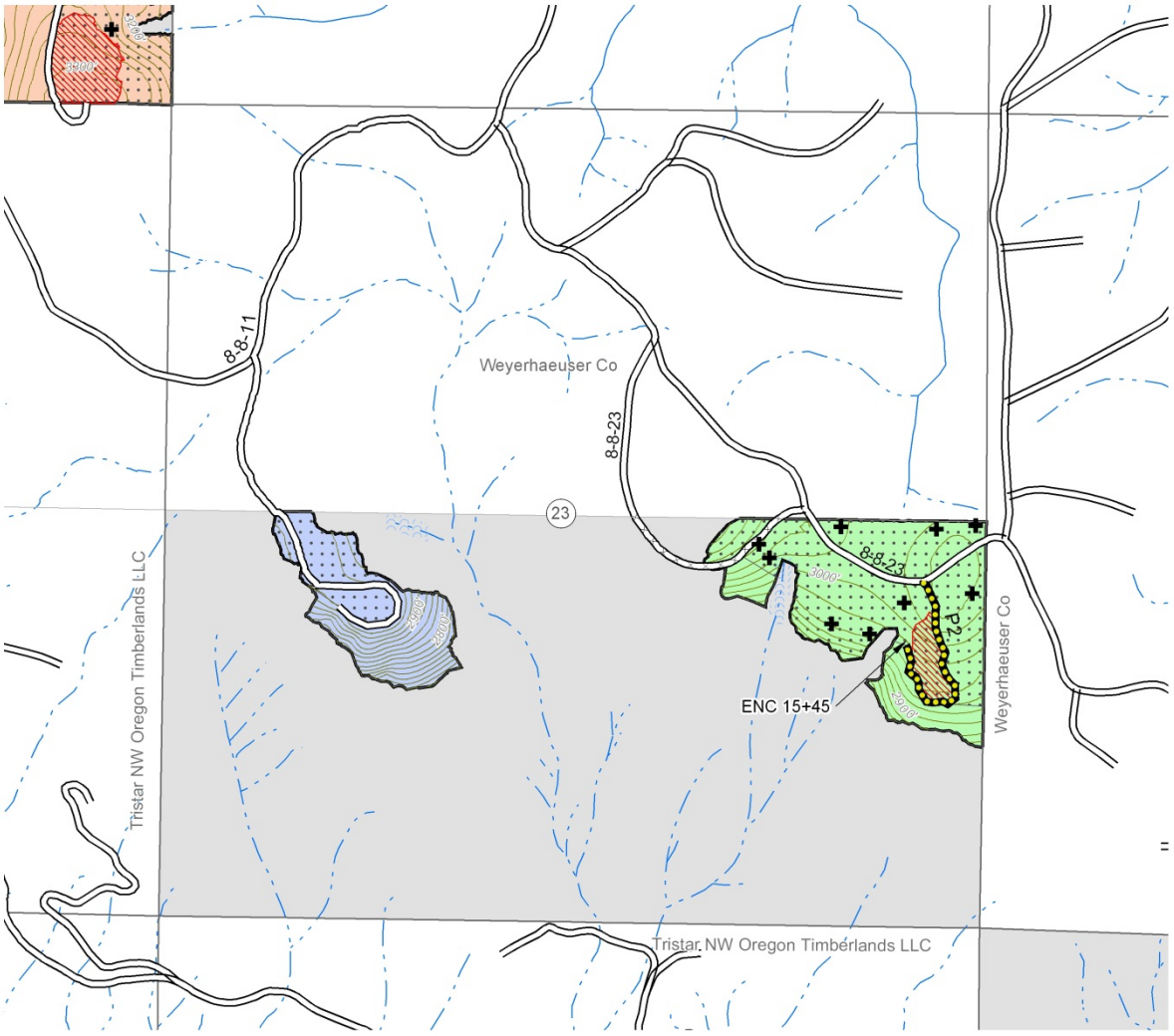
United States Department of the Interior - BUREAU OF LAND MANAGEMENT

SELECTED ACTION MAP FANNO LOOKOUT TIMBER SALE

Sheet 2 of 3

T. 8 S., R. 8 W., Section 23, W.M. - SALEM DISTRICT - OREGON



Contour interval: 20 ft.

- Road to be constructed and decommissioned
- Existing road
- Overgrown or Impassable Road
- Unit 15A - 47 acres
- Unit 15B - 22 acres
- Unit 15C - 25 acres
- Unit 23A - 33 acres
- Unit 23B - 14 acres
- Unit 25B - 53 acres
- Patch Cut
- Ground-Based Yarding
- Skyline Yarding
- No treatment will occur
- StreamProtectionZone
- Plus trees
- Gate

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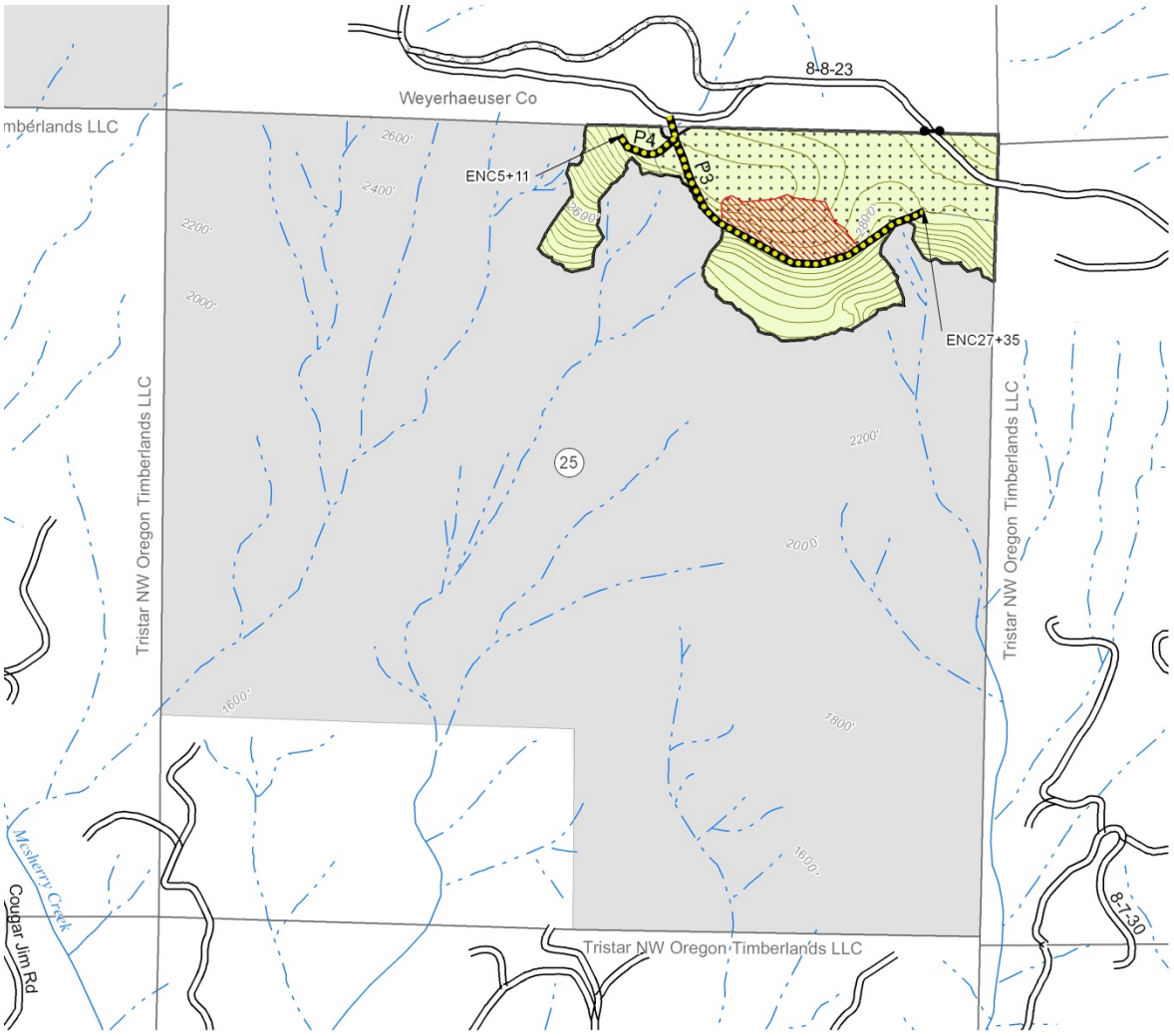
United States Department of the Interior - BUREAU OF LAND MANAGEMENT

SELECTED ACTION MAP FANNO LOOKOUT TIMBER SALE

Sheet 3 of 3

T. 8 S., R. 8 W., Section 25, W.M. - SALEM DISTRICT - OREGON



Contour interval: 20 ft.

- Road to be constructed and decommissioned
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- Patch Cut
- Ground-Based Yarding
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- No treatment will occur
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4.0 Alternatives Considered

The EA analyzed the effects of the proposed action, no action, and limited road alternatives. No unresolved conflicts concerning alternative uses of available resources (section 102(2) (E) of NEPA) were identified. Complete descriptions of the proposed action, limited road construction and the "no action" alternatives are contained in the EA, pp. 35 to 87.

5.0 Decision Rationale

Considering public comment, the content of the EA and supporting project record, the management recommendations contained in the *Upper Siletz River Watershed Analysis* and the management direction contained in the RMP, I have decided to implement Alternative 2, hereafter referred to as the selected action as described above. The following is my rationale for this decision.

1. The Selected Action:
   - Meets the purpose and need of the project (EA section 1.6), as shown in *Table 1*.
   - Complies with the Salem District's Record of Decision and Resource Management Plan (1995 ROD/RMP)
   - Will not have significant impact on the affected elements of the environment (2012 FONSI) beyond those already anticipated and addressed in the RMP FEIS.
   - Has been adequately analyzed.

2. The No Action alternative was not selected because it does not meet the Purpose and Need directly, or delays the achievement of the Purpose and Need as shown in *Table 1* on the following page.

Table 1. Comparison of the Alternatives with Regard to the Purpose of and Need for Action

Purpose and Need (EA Section 1.6)	Alternative 1 No Action	Alternative 2 Proposed Action	Alternative 3 Limited Road Construction
Restore and maintain late-successional forest conditions which serve as habitat for late-successional forest species, which can be consistent with marbled murrelet guidelines (RMP p. 19).	Understory regeneration, shrubs etc. would be lacking. The current pattern of habitat use by wildlife species within these project areas would be expected to continue unchanged. Dispersal habitat conditions for spotted owls would remain unchanged. No timber harvest would occur consequently no spatial and structural diversity would occur.	In the short-term, increases horizontal spatial variability within treated stands (gaps and clumps); minor reduction and disturbance to existing CWD material (snags and down logs) resulting from felling, yarding, and road construction. Reduced recruitment rate of small sized CWD would be partially offset by immediate creation of larger CWD of desirable size, and augmentation of decadence processes; retention of hardwood tree and shrub diversity. In the long-term, the gradual transition in structural characteristics of the treated stands would more closely resemble late-seral forest (larger diameter trees and limbs, sub-canopy development, greater tree species diversity, greater volume and size of hard CWD, canopy gaps); and extends persistence of hardwood tree and shrub cover diversity.	Same as in Alternative 2 except approximately 49 less acres would receive treatment through mid-seral enhancement
Provide a stable timber supply (RMP p. 9).	Would not offer timber for sale.	Offers approximately 194 acres of timber for sale. Timber would be harvested by ground-based, skyline, and methods: Approximately 100 acres (52%) would	Offers approximately 145 acres of timber for sale. Timber would be harvested by ground-based and skyline methods: Approximately 102 acres (70%)

		be ground-based harvested, and 94 acres (48%) would be skyline harvested.	would be ground-based harvested, and 43 acres (30%) would be skyline harvested.
Accelerate growth of trees to restore large conifers to RR (RMP p. 7).	Without treatment, stand structure would remain relatively uniform, except for gaps created by disturbance.	The proposed action would retain trees which would reach larger diameters earlier compared to the no treatment option, creating natural opportunities for higher quality LWD recruitment in the long-term.	Same as in Alternative 2.
Enhance or restore habitat (e.g. CWD, snag habitat, instream large wood) for populations of native riparian-dependent plants, invertebrates, and vertebrate species can be (RMP p. 7).	Does not meet purpose and need. Maintains existing forest conditions which are lacking CWD and snags, particularly in decay class 1 and 2.	Increases snags and CWD; providing habitat for amphibians, small mammals, invertebrates, bryophytes and fungi.	Same as in Alternative 2 except approximately 49 fewer acres would acquire desired vegetation characteristics.
Provide appropriate access for timber harvest and silvicultural practices used to meet the objectives above.	No change. Maintain existing road densities.	Constructs 1.0 mile of new roads and renovates 3.7 miles of existing roads. Following harvest, the new construction would be decommissioned. Renovations would improve drainage and road surface conditions, resulting in less road surface erosion into streams.	Constructs no new road. Renovations would be comparable to alternative 2. Renovations improve drainage and road surface conditions, resulting in less road surface erosion into streams

6.0 Compliance with Direction

The Fanno Lookout Timber Sale has been designed to conform to the following documents, which direct and provide the legal framework for management of BLM-managed lands within the Salem District:

- *Salem District Record of Decision and Resource Management Plan* (RMP), May 1995: The RMP has been reviewed and it has been determined that the Fanno Lookout Timber Sale conforms to the land use plan terms and conditions (i.e.: 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 p.1-3);
- *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* (the Northwest Forest Plan, or NWFP), April 1994;
- *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).

The analysis in the Upper Siletz River EA is site-specific and supplements analyses found in the *Salem District Proposed Resource Management Plan/Final Environmental Impact Statement* (RMP/FEIS), September 1994. 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* (NWFP/FSEIS), February 1994. In addition, the EA is tiered to 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).

Survey and Manage Review

The Fanno Lookout Timber Sale is consistent with court orders relating to the Survey and Manage mitigation measure of the Northwest Forest Plan, as incorporated into the Salem District Resource Management Plan.

On December 17, 2009, the U.S. District Court for the Western District of Washington issued an order in *Conservation Northwest, et al. v. Rey, et al.*, No. 08-1067 (W.D. Wash.) (Coughenour, J.), granting Plaintiffs' motion for partial summary judgment and finding a variety of NEPA violations in the BLM and USFS 2007 Record of Decision eliminating the Survey and Manage mitigation measure. Previously, in 2006, the District Court (Judge Pechman) had invalidated the agencies' 2004 RODs eliminating Survey and Manage due to NEPA violations. Following the District Court's 2006 ruling, parties to the litigation had entered into a stipulation exempting certain categories of activities from the Survey and Manage standard (hereinafter "Pechman exemptions").

Judge Pechman's Order from October 11, 2006 directs: "Defendants shall not authorize, allow, or permit to continue any logging or other ground-disturbing activities on projects to which the 2004 ROD applied unless such activities are in compliance with the 2001 ROD (as the 2001 ROD was

amended or modified as of March 21, 2004), except that this order will not apply to:

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

Following the Court's December 17, 2009 ruling, the Pechman exemptions are still in place. Judge Coughenour deferred issuing a remedy in his December 17, 2009 order until further proceedings, and did not enjoin the BLM from proceeding with projects (including timber sales). Nevertheless, I have reviewed the Fanno Lookout Timber Sale in consideration of both the December 17, 2009 and October 11, 2006 order. Because the Fanno Lookout Timber Sale entails no regeneration harvest and entails thinning only in stands less than 80 years old, I have made the determination that this project meets Exemption A of the Pechman Exemptions (October 11, 2006 Order), and therefore may still proceed to be offered for sale even if the District Court sets aside or otherwise enjoins use of the 2007 Survey and Manage Record of Decision since the Pechman exemptions would remain valid in such case.

Northern Spotted Owl (NSO) Status Review

The following information was considered in the analysis of the Fanno Lookout Timber Sale proposed activities: a/ *Scientific Evaluation of the Status of the Northern Spotted Owl* (Sustainable Ecosystems Institute, Courtney et al. 2004); b/*Status and Trends in Demography of Northern Spotted Owls,* 1985-2003 (Anthony et al. 2004); c/ *Northern Spotted Owl Five Year Review: Summary and Evaluation* (USFWS, November 2004); and *Northwest Forest Plan – The First Ten Years* (1994-2003): d/ *Status and trend of northern spotted owl populations and habitat, PNW Station Edit Draft* (Lint, Technical Coordinator, 2005).

The Salem District analyzed reports regarding the status of the northern spotted owl and although the agencies anticipated a decline of NSO populations under land and resource management plans during the past decade, the reports identified greater than expected NSO population declines in Washington and northern portions of Oregon, and more stationary populations in southern Oregon and northern California.

The reports did not find a direct correlation between habitat conditions and changes in NSO populations, and they were inconclusive as to the cause of the declines. Lag effects from prior harvest of suitable habitat, competition with barred owls, and habitat loss due to wildfire were identified as current threats. West Nile Virus and Sudden Oak Death were identified as potential new threats. Complex interactions are likely among the various factors. This information has not been found to be in conflict with the NWFP or the RMP (Evaluation of the Salem District Resource Management Plan Relative to Four Northern Spotted Owl Reports, September 6, 2005).

Compliance with the Aquatic Conservation Strategy

This BLM reviewed the proposed action and no action alternatives against the ACS objectives at the project scale. The no action alternative does not retard or prevent the attainment of any of the nine ACS objectives because this alternative would maintain current conditions (EA, pp. 88-91). The Proposed Actions do not retard or prevent the attainment of any of the nine ACS objectives.

Over the long-term, this project would aid in meeting ACS objectives by speeding the development of older forest characteristics in the Riparian Reserves, including increased large wood recruitment for stream channels. In addition, more open stands would allow for the growth of important riparian species in the understory. The Fanno Lookout timber sale promotes stand diversity, provides more light to accelerate growth of conifers, and promotes species diversity. The creation of snags and CWD will restore watershed conditions by providing a gradual transition in structural characteristics of the treated stands that more closely resembles a late-seral forest (EA, pp. 88-91).

7.0 Public Involvement, Consultation, and Coordination

Public Scoping

A scoping letter, dated September 23, 2009, was sent to 22 potentially affected or interested individuals, groups, and agencies. Three responses were received during the scoping period. The BLM responded to scoping comments in section 8.2 of the EA

EA and FONSI Comment Period and Comments

The BLM made the EA and FONSI available for public review from August 9, 2010 to September 7, 2010. One (1) comment letter/email was received during the EA comment period. Responses to the substantive public comments can be found in Appendix A of this Decision Record. The scoping and EA comment letters/emails are available for review at the Salem District BLM Office, 1717 Fabry Rd SE, Salem, Oregon.

Consultation and Coordination

Wildlife: United States Fish and Wildlife Service (USFWS)

To address concerns for potential effects to listed wildlife species, the proposed action was consulted upon with the USFWS, as required under Section 7 of the Endangered Species Act. Consultation for this proposed action was facilitated by its inclusion within a programmatic Biological Assessment (BA) that analyzed all projects that may modify the habitat of listed wildlife species on federal lands within the Northern Oregon Coast Range during fiscal years 2011 and 2012. The proposed action has been designed to incorporate all appropriate design standards set forth in the BA. This action would be considered a “may affect, not likely to adversely affect” northern spotted owl dispersal habitat and northern spotted owl and marbled murrelet critical habitats. In the resulting Letter of Concurrence (FWS Reference Number 13420-2010-I-0105), after reviewing the effects of the proposed action on the spotted owl and marbled murrelet, the USFWS concurred with BLM that the activities, as proposed, are not likely to adversely affect spotted owls or marbled murrelets.

Fish: National Marine Fisheries Service (NMFS)

Consultation with USFWS or NMFS is required for all actions which "may affect" ESA listed fish species and critical habitat.

Oregon Coast (OC) Coho Salmon are listed as threatened under the ESA, as amended, and are known to occur in the Siletz River system. Upper Willamette River (UWR) Winter Steelhead and UWR Spring Chinook are listed as threatened under the ESA, as amended, and are known to occur within the Luckiamute River and South Yamhill River systems. Oregon Chub are listed as threatened under the ESA, as amended, and were known to occur in the Luckiamute River system.

Based on project location and project activities, the Fanno Lookout Timber Sale is considered "no effect" to OC coho salmon. This determination is primarily due to distance of project activities (more than 8 miles) from listed fish habitat. Consultation with NMFS is not required for OC coho salmon for this project.

The proposed actions would have "no effect" to UWR Spring Chinook salmon and Oregon chub. Generally, the "no effect" determination is based on the distance upstream of project activities (approximately 25 miles) from ESA listed Chinook salmon critical habitat and historic habitat for Oregon chub. Consultation with NMFS is not required for UWR Spring Chinook salmon or with USFWS for Oregon chub for this project.

Based on project location and project activities, the proposed Fanno Lookout Timber Sale is considered "no effect" to UWR winter steelhead. The proposed activities (except hauling) occur within the Siletz River watershed and are unconnected to UWR winter steelhead habitat. Hauling occurs within the Luckiamute River watershed where listed steelhead reside. The no effect determination is primarily due to distance of project activities from listed fish habitat (at least 1/3 mile overland and 1½ miles from the nearest stream crossing) and design features which would prevent impacts to listed fish from occurring. Consultation with NMFS is not required for UWR winter steelhead for this timber sale.

Actions which "may affect" listed species and are not addressed under existing consultations, including *Aquatic Restoration Biological Opinion (ESA Section 7 Formal Programmatic Consultation and Magnuson-Stevens Fishery Conservation and Management Act-Essential Fish Habitat Consultation for Fish Habitat Restoration Activities in Oregon and Washington, CY2007-2012*) would require additional ESA consultation coverage.

Protection of Essential Fish Habitat (EFH) as described by the Magnuson/Stevens Fisheries Conservation and Management Act and consultation with NMFS is required for all projects which may adversely affect EFH of Chinook and coho salmon. The Fanno Lookout Timber Sale is not expected to adversely affect EFH due to distance of all activities associated with the project from occupied habitat. Consultation with NMFS on EFH is not required for this project.

8.0 Conclusion

Review of Finding of No Significant Impact

I have determined that change to the Finding of No Significant Impact (FONSI, March 2012) for the Fanno Lookout Timber Sale is not necessary because I have considered and concur with information in the EA and FONSI. I reviewed the comments on the EA and no information was provided in the comments that lead me to believe the analysis, data, or conclusions are in error or that the selected action needs to be altered. There are no significant new circumstances or facts relevant to the selected action or associated environmental effects that were not addressed in the EA.

Administrative Review Opportunities

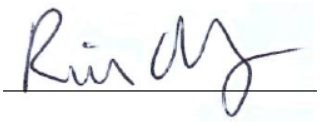
The decision described in this document is a forest management decision and is subject to protest by the public. In accordance with Forest Management Regulations at 43 CFR 5003, protests of this decision may be made within 15 days of the publication of a notice of decision in a newspaper of general circulation. The notice of decision will be published in the Polk County Itemizer-Observer newspaper on October 31, 2012.

To protest this decision a person must submit a written protest to Rich Hatfield, Marys Peak Field Manager, 1717 Fabry Rd SE, Salem, Oregon 97306 by the close of business (4:30 p.m.) on November 15, 2012. The regulations do not authorize the acceptance of protests in any form other than a signed, written, and printed original that is delivered to the physical address of the advertising BLM office.

The protest must clearly and concisely state the reasons why the decision is believed to be in error. Any objection to the project design or my decision to go forward with this project must be filed at this time in accordance with the protest process outlined above. If a timely protest is received, this decision will be reconsidered in light of the statements of reasons for the protest and other pertinent information available and the BLM shall serve a decision in writing on the protesting party (43 CFR 5003.3).

Implementation

If no protest is received within 15 days after publication of this Decision Record (Fanno Lookout Timber Sale) this decision will become final. For additional information, contact Stefanie Larew (503) 375-5601, Marys Peak Resource Area, Salem BLM, 1717 Fabry Road SE, Salem, Oregon 97306.

Approved by: 

10/26/2012

Rich Hatfield
Marys Peak Field Manager

Date

Appendix A: Response to Public Comments Received on the Upper Siletz River Watershed Enhancement (EA# DOI-BLM-OR-S050-2009-0002)

The BLM received one comment letter during the comment period for the Upper Siletz River EA. In some cases the comments have been quoted directly from commenter's responses and in some cases they have been paraphrased. Comments are in *italics*. The BLM response follows each comment.

Oregon Wild, Doug Heiken
Received September 3, 2010

1. **Comment:** *Avoid road construction because it detracts from habitat restoration objectives and can cause adverse effects on soil, water, weeds, wildlife habitat, and carbon. We prefer Alt 3 that includes less road construction and more untreated skips where many aspects of late successional forests can develop such as snags and dead wood.*

   Response: The IDT analyzed the potential impacts of road construction in the EA. The RMP (p. 62) provides direction to "develop and maintain a transportation system that serves the needs of users in an environmentally sound manner." The IDT analyzed the potential impacts of road construction on resources in the EA to ensure the proposed road construction was consistent with RMP guidance. Roads to be constructed would be located primarily on ridge tops, with no stream crossings, and would be decommissioned after use (EA section 2.3). The EA concluded that the construction and use of roads would be unlikely to negatively impact the aforementioned resources (EA, Chapter 3). The road construction, when completed according to Project Design Features and applicable BMPs, would allow more acres to be treated to meet project objectives under the Proposed Action alternative than under the Limited Road Construction alternative.

   Further, economic feasibility is one of the many factors taken into account when offering a timber sale. Road work costs, yarding costs and other incidental costs versus the acreage and volume taken are calculated and an IDT of specialists come to a consensus on what alternative to pursue for analysis.

   The Marys Peak Resource Area interdisciplinary team considered many variables, including the comparison of road work between alternatives, and determined that Alternative 2 (proposed action) would best meet the purpose and need for the project.

2. **Comment:** *In regards to dead wood recruitment, BLM must consider more ways of mitigating the adverse effects of logging on dead wood recruitment planning more untreated skips within stands*

   Response: Thinning dense stands would capture some density-dependent suppression mortality; however, the recruitment of dead wood within treated stands and adjacent untreated habitat (over 400 acres of BLM in section 25) is an ongoing and age-independent natural process involving biotic and abiotic forces. Biotic mechanisms, in addition to density-dependent suppression mortality, include disease, insects, and animal damage. Abiotic processes include fire, wind, ice glazing, snow loading, flooding, landslides, debris torrents, and crushing (trees falling on trees). Abiotic processes, unrestricted by tree densities, provide a

constant supply of dead wood by damaging or destroying individual trees, patches of trees within stands, stands within watersheds, and entire watersheds themselves (Bauhus et al., 2009).

Damage, the presence of dead wood in live trees, is not uncommon; damage to the bole and/or branches can be found throughout all vertical layers within any stand. Tree mortality, like damage, can be a slow process taking years, or it can happen very quickly. In a study of early-seral conifer stands (14-38 years) in western Oregon, Lutz and Halpern (2006) examined 22 years of tree growth and mortality data and found that density-dependent suppression mortality in Douglas-fir killed more than three times as many trees as abiotic mortality, however, the total mass of dead wood created by abiotic agents was more than four times greater than the total mass of dead fir wood created by density-dependent suppression mortality regardless of stand age. The abiotic process plays a far greater role in dead wood recruitment (both quantity and quality of dead wood) and mitigates the loss of density-dependent dead wood at all landscape levels.

3. **Comment:** *Conduct a stand simulation model to show whether the untreated areas are sufficient to recruit snags that will mitigate for the loss of large tree recruitment in the thinned areas and the landscape as a whole will meet DecAID 50-80% tolerance targets. The EA over-emphasizes on the "quality" of future snags and LWD while virtually ignoring the "quantity" of future recruitment.*

   Response: There would not be a significant loss of large tree recruitment in the thinned stands because the great majority of large trees become snags through abiotic processes (see response to Comment 2) and few large snags are the result of density-dependent suppression mortality. All of the 12,215 acres of BLM-managed lands in the Upper Siletz River watershed are being managed for LSOG (late-seral/old-growth) habitat. Once these stands reach 80 (for LSR) or 110 (for AMR) years old they are left to develop naturally, where ongoing biotic and abiotic processes create an abundance of dead wood. There are 2,325 acres of LSOG and an additional 1,886 acres (or 34% of all BLM acres in the watershed) of no-entry riparian buffers (SPZs) that are currently producing large snags through natural processes which would meet the DecAID targets and mitigate for the loss of any future density-dependent suppression mortality snags captured through thinning 194 acres (or less than 2% of all BLM acres in the watershed).

4. **Comment:** *The EA says that "several areas would remain untreated" but the EA never discloses the vegetation condition in those untreated areas or what their future management might be. Thinning to restore late successional habitat characteristics must include a mixed mosaic of treated and untreated areas that provide: in thinned areas (larger trees, vegetation diversity) and in unthinned areas (dense cover and dead wood). By focusing almost exclusively on the thinned part of the equation it is impossible to know if this is a sound restoration effort because it looks like too much of the area is being thinned and not enough left unthinned for dead wood habitat development.*

   Response: Of the 1,040 acres of BLM-managed lands in sections 15, 23, and 25, fewer than 400 acres will be actively managed under the Upper Siletz River Watershed EA (split between the Fanno Lookout and Potter Elk timber sales). The sections are largely dominated by Douglas-fir stands between 50 and 75 years of age, but there is variability in stocking levels,

species mix (some areas had a substantial hardwood component), and site conditions. Areas were removed from consideration for inclusion within conventional timber sales for various reasons. Areas were removed due to logging infeasibility or other resource concerns. No other stand management activities are currently planned for the project area.

The Fanno Lookout Timber Sale will treat approximately 194 acres of mid-seral habitat in Sections 15, 23, and 25 is part of a much larger watershed enhancement action in the Upper Siletz River basin. All three projects within the proposed action are designed to accelerate the development of late-seral forest conditions within existing managed mid-seral forests. The action area consists of the 12,215 acres of BLM-managed lands in the watershed. The current vegetation conditions are described in the table below.

Table. Current acres of terrestrial wildlife habitat type at the landscape level (Upper Siletz River Watershed)

Ownership	Early-seral Habitat (0-39 yrs)	Mid-seral Habitat (40-79 yrs)	Late-seral Habitat (80-199 yrs)	Old-growth Habitat (200+ yrs)	Hardwoods & Nonforest Habitats	Stream Protection Zone[1]	Total
BLM	**767**	**7,049**	**1,245**	**1,080**	**188**	**1,886**	**12,215**

[1]Represents the acres within a no-entry buffer on both sides of perennial streams; includes all seral/habitat types

The public lands in the Upper Siletz River watershed fall within Late-Successional Reserve (LSR), Adaptive Management Area (AMA), and Riparian Reserve (RR) land use allocations. The Fanno Lookout Timber Sale consists of mid-seral forest stands in the AMA and RR. The primary management goal within these LUAs is to create, restore, and maintain late-seral/old-growth habitat characteristics for all species dependent upon, or associated with, these types of forest conditions. Therefore, any early and mid-seral habitats (7,816 acres) would be treated to enhance future late-seral/old-growth conditions on those lands.

5. **Comment:** *Don't do 5 acre patch-cuts or mini-clearcuts, instead do heavy thinning in 3 acre patches. Be sure to retain structure in big game forage areas. Don't manage for single-resources like big game. Don't "permanently maintain" these early seral patches. Extend the life of the heavily thinned foraging areas by not replanting them with trees. The 5 acres "gaps" should retain far more snags both in the central clearcut and in the surrounding heavily thinned area.*

Response: The term "patch" used in the wildlife sections of the EA refers to a Landscape Ecology 'spatial element' parameter (Forman, 1995). Forman describes "matrix" habitat as the dominant cover type at a defined spatial scale, it is relatively homogeneous, has high connectivity, and plays a major role in ecosystem dynamics. Patch habitat differs from the matrix cover type, is relatively homogeneous, and is nonlinear in shape.

The wildlife patches are not just for big game, but will improve forage and nesting habitat for migratory birds and other species that use early-seral openings within mature forest habitat. An effort would be made to maintain the one-acre treeless opening because the size and duration of grass-forb-shrub patches in managed conifer forest landscapes in the Oregon Coast Range have decreased significantly when compared to unmanaged conifer forests (Swanson et al. 2010). All existing snags and CWD would be retained and four snags (which would also provide

future CWD) at least 15+ inches in diameter and clumped along the northern edge of the 1-acre patch-center would be created.

The South Fork Siletz River watershed provides critical elk wintering habitat for several local herds and falls within the LCTMA (Luckiamute Cooperative Travel Management Area; administered by Oregon Dept. of Fish and Wildlife, with BLM and private landowners as partners). The quality and quantity of elk forage is limiting herd productivity within the LCTMA. Management of the public lands in the resource area is directed by the Salem District RMP, which includes the habitat management of important elk areas in the District.

6. **Comment:** *Don't "capture mortality" by logging in riparian reserves which need more wood to meet ACS objectives, not less. BLM needs to carefully explain the rationale for logging in riparian reserves and show that there are aquatic benefits that outweigh these adverse effects of recruitment of dead wood. The adverse effects of logging in riparian reserves can be mitigated by retaining more trees in riparian reserves with wider no-treat buffers and/or prescribing thinning that retains more trees per acre.*

   Response: The no-harvest buffers will provide places where competition related mortality would continue and natural LWD recruitment processes would be maintained. The effects on wood recruitment of thinning adjacent to no-treatment zones and compliance with ACS objectives were discussed in the Upper Siletz River EA (sections 3.1.1, 3.1.5, 5.0). The project area streams are primarily small first and second order streams. Channels widths are typically small for these stream types. The project area channels would be buffered with at least 55 to 60 feet no-treatment zones where the existing stand would remain untreated. Wood recruitment studies conducted in the Pacific Northwest have shown the majority of woody debris recruitment occurs within 18 to 20 meters (59 to 65 feet) of the stream edge (McDade et al. 1990, Van Sickle and Gregory 1990, Meleason et al. 2002). The SPZ width, which accounts for 85 percent of this woody debris recruitment zone, is anticipated to maintain wood recruitment rates (Upper Siletz River EA, section 3.1.5.2).

   For the Upper Siletz project the small pool forming size pieces of wood of concern would largely be unaffected by proposed actions as the trees of sufficient height to span the stream would necessarily be small trees adjacent to the small streams. Wood recruitment studies conducted in the Pacific Northwest have shown the majority of woody debris recruitment occurs within 18 to 20 meters (59 to 65 feet) of the stream edge (McDade et al. 1990, Van Sickle and Gregory 1990, Meleason et al. 2002). With the incorporation of no-entry buffers these small pool forming trees would largely be protected. The SPZ width, which accounts for 85 percent of this woody debris recruitment zone, is anticipated to maintain wood recruitment rates. Therefore, the proposed actions are not expected to cause any short-term effects to aquatic habitat at the site or downstream. Larger pieces of coarse wood located further away from the stream (greater than 55 to 60 feet) that may be impacted due to harvest were addressed in the EA and are further discussed below.

   Thinning in the riparian treatment areas is anticipated to increase the average growth of the remaining trees between 52 to 85 percent over 30 years compared to not treating the stands (Snook 2010, Roux 2010). Larger diameter wood would begin to be recruited from farther up the slopes as the treated stands reach greater heights. Thus, wood with a larger range of sizes would potentially be recruited into streams over the long-term in treated stands. As short-term

recruitment of the existing CWD is expected to be maintained by SPZs, the proposed actions are not expected to cause short-term changes to fish habitat at the site or downstream. In the long-term, the increase in the size of trees in the RR LUA could benefit LWD recruitment to the stream channel, thus potentially improving the quality/complexity of aquatic habitat adjacent to the treatment areas in the future.

7. **Comment:** *Think not only about existing snags but more importantly about the processes that recruit snags, including: a large pool of green trees from which to recruit snags and the existence of competition and other mortality processes. This is especially critical in previously logged uplands that are already short of snags and in riparian areas where recruitment of large wood is important to stream structure. It is often asserted that thinning grows big trees faster and therefore results in more rapid recruitment of large snags, but FVS and other tools show this NOT to be true.*

   Response: Thinning dense stands would capture and remove some density-dependent suppression mortality that could be recruited to streams. However, as described in the BLM response above, this impact can largely be mitigated by implementing no-harvest buffers. The effects to recruitment of pool forming wood described by Beechie et al. (2000) should be considered carefully because they did not include a provision for no-harvest buffers in their modeling. Recruitment of wood from the untreated buffers as a result of both biotic and abiotic forces will continue to be an ongoing process.

   Density-dependent suppression mortality is just one of the biotic mechanisms that can kill trees. Other biotic mechanisms include disease, insects and animal damage. Abiotic processes such as fire, wind, ice and snow loading, breakage as a result of falling trees, landslides, and tree fall as a result of channel migration and flooding are density-independent process that provide a constant supply of wood to streams. While density-dependent mortality is a dominant factor in young stands, abiotic factors become more important agents of mortality as stands mature (Franklin et al. 2002) and fewer large snags are the result of density-dependent suppression mortality. Most wood recruitment models, including Beechie et al. (2000), include only one process, density-dependent suppression mortality, because of the difficulties in modeling stochastic events such as disease, fire, and blowdown. The wood delivery model developed by BLM for its WOPR analysis modeled suppression mortality along with channel migration and landslide processes and incorporated 30 to 60-foot no-harvest buffers along streams. This modeling exercise found little or no difference in the recruitment of either functional wood (as described by Beechie et al., 2000) or large key pieces of wood as a result of thinning in riparian areas adjacent to the no-harvest buffers.

8. **Comment:** *Use projects as an opportunity to learn by conducting monitoring and research on the effects of thinning. There are many information gaps that need filling. Every project should generate useful information to inform future projects.*

   Response: It is beyond the workload capacity of the Marys Peak Resource Area to conduct extensive monitoring and research on each completed project. However, the Marys Peak Resource Area utilizes information from the Density Management Study conducted by Oregon State University College of Forestry, Pacific Northwest Research Station, and other relevant research publications to inform and develop future projects.

9. Comment: *Consider NOAA/NMFS July 23, 2010 Position Paper to Support the February 23, 2010 Elevation of Two Northwest Forest Plan Issues to the Regional Executives.*

Response: We are aware of the referenced document and agree that wood of all sizes is ecologically important for the continued proper functioning of aquatic systems. The BLM, FS and NMFS currently disagree on the identification and interpretation of the best available science to guide riparian management and for determining the potential effects of riparian thinning on ESA-listed salmonids. The document was developed at the request of the regional executive leadership consistent with the Streamlined Consultation Procedures for Section 7 of the Endangered Species Act (1999) guidance on dispute resolution. The USFWS, NMFS, FS, and BLM regional leadership is currently working together to develop a process for reviewing the pertinent science in an effort to reach consensus on the identification and interpretation of the best available science to guide riparian management.

Treatments in Riparian Reserves are designed to improve or maintain aquatic conditions, including those functions provided by wood recruited to the stream channel. As described in the BLM response above (Response to Comment 6, see also EA pp. 64-65), impacts to large wood recruitment have been effectively mitigated by implementing no-harvest buffers. In the short-term, little change is expected in the recruitment of all sizes of LWD to streams in the project area because the majority of the wood recruitment is expected to come from the no-harvest buffers and nearby untreated Riparian Reserves where natural processes will continue to provide wood in a range of sizes. In the long-term, smaller sized wood will continue to be recruited from stands adjacent to the streams and trees within the untreated buffers will continue to grow and provide a source for larger sized pieces of wood. The light to moderate riparian thinning outside of the buffers is designed to promote habitat for a variety of riparian-dependent species, as well as for aquatic species. While thinning will remove some of the density-dependent suppression mortality it will also accelerate the development of larger diameter trees over the following 20-30 years, which will then be available for recruitment to nearby streams when stochastic events occur. The accelerated recruitment of large wood, which is more stable and long lasting than small wood pieces (Spence et al., 1996; Harmon et al., 1986; McHenry et al., 1998; Rosenfeld and Huato, 2003), as a critical need for aquatic ecosystems in the Northwest (FEMAT, 1993).