

**Bummer Ridge Mid-Seral Enhancement Project 1**

Final Decision and Decision Rationale for Bummer Ridge Mid-Seral  
Enhancement Project 1

Environmental Assessment Number OR080-08-08

May 2010

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

Township 14 South, Range 7 West, Sections 19, 30 and 31, Township 14 South,  
Range 8 West, Section 25 Willamette Meridian  
Benton County, Oregon

Responsible Agency:                   USDI - Bureau of Land Management

Responsible Official:                Patricia Wilson, Field Manager  
Marys Peak Resource Area  
1717 Fabry Road SE  
Salem, OR 97306  
(503) 375-5968

For further information, contact:   Gary Humbard  
Marys Peak Resource Area  
1717 Fabry Road SE  
Salem, OR 97306  
(503) 315-5981



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.

## I. Introduction

The Bureau of Land Management (BLM) conducted an environmental analysis for the Bummer Ridge Mid Seral Enhancement Project 1, which is documented in the *Upper and Lower Alsea River Watershed Restoration Environmental Assessment* (Upper and Lower Alsea River Watershed Restoration EA) (EA# OR080-08-08) and the associated project file. The proposed actions are to perform density management on approximately 265 acres of 43 to 72-year-old stands within LSR (Late Successional Reserve) and RR (Riparian Reserve) LUAs (Land Use Allocations)

Based on public comments, in March 2010, BLM updated the June 2009 EA to address concerns about Carbon Sequestration and Climate Change, which became the *Revised Upper and Lower Alsea River Watershed Restoration Environmental Assessment and Finding of No Additional Significant Impact* (EA). The 2010 EA was made available for additional public review in March, 2010.

The DR constitutes the BLM's final decision with regard to the 2010 EA, responds to comments concerning Carbon Sequestration and Climate Change received during the 2010 EA comment period, and reviews and affirms the Finding of No Additional Significant Impact.

The decision maker made the Finding of No Additional Significant Impact (FONASI) and Revised EA available for public review from April 4, 2010 to April 19, 2010.

The decision maker signed the Finding of No Additional Significant Impact (FONASI) on May 17, 2010. In this Decision Rationale (DR), the original EA will be called the 2009 EA and the Revised EA (March 2010) will be called the EA. The 2009 EA and the EA are incorporated by reference in this DR.

## II. Decision

I have decided to implement Bummer Ridge Mid Seral Enhancement Project 1 as described in the proposed action (EA pp. 11 to 22), 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 Revised Upper and Lower Alsea River Watershed Restoration EA, the supporting project record, management recommendations contained in the *South Fork Alsea Watershed Analysis*, 1995, as well as the management direction contained in the *Salem District Resource Management Plan* (May 1995), which are incorporated by reference in the EA.

### Decision Summary.

The following is a summary of this decision.

- Conduct density management on approximately 265 acres of 43 to 72 year old stands within LSR and RR LUAs.
- Road construction totaling approximately 0.9 miles will occur. Following harvest all of the construction will be decommissioned.
- Road renovation totaling approximately 7.3 miles will occur. Culvert replacement/installation on 16 stream crossing and/or cross drain locations will occur. Within existing roads spot rock application will occur.
- All design features and mitigation measures described in the EA (pp. 17 to 22) will be incorporated into the timber sale contract.

### III. Compliance with Direction:

The Bummer Ridge Mid-Seral Enhancement Project 1 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 Revised Upper and Lower Alsea River Restoration project Density Management Project 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 Revised Upper and Lower Alsea River Watershed Restoration Project 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 Bummer Ridge Mid-Seral Enhancement Project 1 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 (emphasis added);
- 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 Bummer Ridge Mid-Seral Enhancement Project 1 in consideration of both the December 17, 2009 and October 11, 2006 order. Because the Bummer Ridge Mid-Seral Enhancement Project 1 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. The first notice for sale will appear in the *Gazette-Times* newspaper on May 26, 2010.

### **Northern Spotted Owl (NSO) Status Review**

"The following information was considered in the analysis of the Upper and Lower Alsea River Restoration project 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**

On March 30, 2007, the District Court, Western District of Washington, ruled adverse to the U. S. 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. Section 10.0 of the EA shows how the Bummer Ridge Mid Seral Enhancement Project 1 meets the Aquatic Conservation Strategy in the context of PCFFA IV and PCFFA II.

### ***Existing Watershed Condition***

The Bummer Ridge Mid Seral Enhancement Project 1 areas are in the Upper Alsea River 5th-field Watershed which drains into the Alsea River. Fifty-two percent of the Upper Alsea River Watershed is managed by BLM, 47 percent is private and 1 percent is managed by the U. S. Forest Service. Approximately 39 percent of the total BLM managed lands consist of stands greater than 80 years old; and approximately 25 percent of BLM-managed lands are located in riparian areas (within 100 feet of a stream).

### ***Review of Aquatic Conservation Strategy Compliance:***

The following is an update of how this project complies with the four components of the Aquatic Conservation Strategy. The project will comply as follows:

***Component 1 – Riparian Reserves:*** The Bummer Ridge Mid Seral Enhancement Project 1 will comply by maintaining canopy cover along all streams and wetlands which protect stream bank stability and water temperature. Stream protection zones (SPZ) will protect streams from direct disturbance from logging. Riparian Reserve boundaries will be established consistent with direction from the *Salem District Resource Management Plan*. Approximately 750 feet of new road construction (Unit 30A) will occur within RMP Riparian Reserves.

***Component 2 – Key Watershed:*** by establishing that Bummer Ridge Mid Seral Enhancement Project 1 is within the Tobe Creek Key Watershed;

***Component 3 – Watershed Analysis:*** The *South Fork Alsea River Watershed Analysis* (1995) describes the events that contributed to the current condition such as early hunting/gathering by aboriginal inhabitants, road building, agriculture, wildfire, and timber harvest. The following are watershed analysis findings that apply to or are components of this project:

- Density management opportunities in LSRs should focus at improving the corridor of dispersal habitat in the Lower South Fork Alsea River, Upper South Fork Alsea River, and Peak Creek subwatersheds, since existing Late Successional/Old Growth habitat in this area is highly fragmented. The Bummer Ridge Mid Seral Enhancement Project 1 is located within the Lower South Fork Alsea River and Upper South Fork Alsea River subwatersheds.

### ***Component 4 – Watershed Restoration:***

Bummer Ridge Mid-Seral Enhancement Project 1 will restore watershed conditions by providing a gradual transition in structural characteristics of the treated stands that will more closely resemble late-seral forest.

This project has been reviewed against the ACS objectives at the project or site scale with the following results. The no action alternative does not retard or prevent the attainment of any of the nine ACS

objectives because this alternative will maintain current conditions. The Proposed Actions do not retard or prevent the attainment of any of the nine ACS objectives for the following reasons.

**Table 1: Consistency with the Nine Aquatic Conservation Strategy Objectives**

Aquatic Conservation Strategy Objectives (ACSOs)	Mid Seral Enhancement
<p><i>1. Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted..</i></p>	<p>Does not prevent the attainment of <i>ACSO 1</i>.</p> <p><b>No Action Alternative:</b> The No Action alternative would maintain the development of the existing vegetation and associated stand structure at its present rate. The current distribution, diversity and complexity of watershed and landscape-scale features would be maintained. Faster restoration of distribution, diversity, and complexity of watershed and landscape features would not occur.</p> <p><b>Action Alternative</b> Species diversity will be increased, as thinning will target Douglas-fir, increasing the relative proportion of the other tree species. Furthermore, treatment will promote the establishment of seedlings, which are likely to include hardwood, western hemlock and western red cedar (EA.p. 56).</p> <p>The direct and indirect changes anticipated to occur to forest habitat characteristics from the planned units are: Light to moderate reduction of canopy closure, increased horizontal spatial variability, reduced recruitment rate of small sized CWD will be partially offset by immediate creation of larger CWD of desirable size, and augmentation of decadence processes; retention of hardwood tree and shrub diversity (EA p. 64).</p>
<p><i>2. Maintain and restore spatial and temporal connectivity within and between watersheds.</i></p>	<p>Does not prevent the attainment of <i>ACSO 2</i>.</p> <p><b>No Action Alternative:</b> The No Action alternative would have little effect on connectivity except in the long term within the affected watershed.</p> <p><b>Action Alternative:</b> Long term connectivity of terrestrial watershed features will be improved by enhancing conditions for stand structure development. In time, the Riparian Reserve LUA will improve in functioning as refugia for late successional, aquatic and riparian associated and dependent species. Both terrestrial and aquatic connectivity will be maintained, and over the long-term, as the Riparian Reserve LUA develops late successional characteristics, lateral, longitudinal and drainage connectivity will be restored..</p> <p>No stream crossing culverts will be used that will potentially hinder movement of aquatic species; therefore no aquatic barriers will be created. Both terrestrial and aquatic connectivity will be maintained, and over the long-term, as Riparian Reserves develop late successional characteristics, lateral, longitudinal and drainage connectivity will be restored.</p> <p>Renovation of the transportation system will not affect spatial connectivity.</p>

Aquatic Conservation Strategy Objectives (ACSOs)	Mid Seral Enhancement
<p>3. <i>Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.</i></p>	<p>Does not prevent the attainment of <b>ACSO 3</b>.</p> <p><b>No Action Alternative:</b> It is assumed that the current condition of physical integrity would be maintained.</p> <p><b>Action Alternatives:</b> Bummer Ridge Mid-Seral Enhancement Project 1 is unlikely to affect stream channel stability and function as all field identified streams and wet areas will be protected with a minimum 55-foot SPZ. No yarding will occur across streams. No bank stabilizing vegetation will be removed (EA p. 78).</p>
<p>4. <i>Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.</i></p>	<p>Does not prevent the attainment of <b>ACSO 4</b>.</p> <p><b>No Action Alternative:</b> It is assumed that the current condition of the water quality would be maintained.</p> <p><b>Action Alternative:</b> Based on field observations, aerial photo reviews of streams completed for the analysis of this EA between 2004 and 2006, and modeling runs for 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 (18 degrees Celsius) for these waters (EA p. 76).</p> <p>According to the stream shading sufficiency analysis done for the proposed treatment units, the proposed SPZ of 55 feet was sufficient to protect critical shade in the primary shade zone within unit 19D and 7D, based on topography and average tree height (Snook 2009). The proposed vegetation treatment in the secondary shade zone (approximately one tree height from the stream) will not result in canopy reduction of more than 68 percent. Protection of stream shading thru application of SPZs and silviculture prescriptions retaining adequate canopy cover will be expected to maintain the existing stream temperature (EA p 84).</p> <p>Sedimentation and stream turbidity: see No. 5 below</p>

Aquatic Conservation Strategy Objectives (ACSOs)	Mid Seral Enhancement
<p>5. <i>Maintain and restore the sediment regime under which aquatic ecosystems evolved.</i></p>	<p>Does not prevent the attainment of <i>ACSO 5</i>.</p> <p><b>No Action Alternative:</b> It is assumed that the current levels of sediment into streams would be maintained.</p> <p><b>Action Alternative:</b> The existing condition of areas indicates there are no sign of mass wasting on BLM managed lands. Considering the harvest type (cable), the existing road locations above and below the proposed units, and the small size of the steeper portions of the units, it is not anticipated that the thinning harvest activity will trigger any mass wasting or slumping in the project areas. Therefore, increases in sediment delivery to streams due to mass wasting are unlikely to result from this action (EA p. 76).</p> <p>In the less steep portions of the project areas, the SPZ's in riparian areas have high surface roughness, which will function to trap any overland flow and sediment before it could reach any streams. In order to minimize soil compaction and erosion, ground-based skidding will occur during periods of low soil moisture with little or no rainfall. Skyline yarding is not projected to increase sediment production in the project areas (EA p 76).</p> <p>Road renovation practices are intended to reduce or eliminate the deposition of road fill material into adjacent streams. (EA p. 89).</p>
<p>6. <i>Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing.</i></p>	<p>Does not prevent the attainment of <i>ACSO 6</i>.</p> <p><b>No Action Alternative:</b> No change in in-streams flows would be anticipated.</p> <p><b>Action Alternative:</b> Bummer Ridge Mid-Seral Enhancement Project 1 includes timber harvesting activities and have been analyzed together since increases in mean annual water yield following the removal of watershed vegetation have been documented in numerous studies around the world (Bosch et al., 1982). Measurable increases (greater than 10 percent) in water yield will be expected to last approximately 20 to 30 years based on the above cited studies.</p> <p>Vegetation will intercept and evapotranspire precipitation that will otherwise become runoff. Thus, it can be assumed that the actions considered under this proposal will likely result in some small increase in water yield (including a small increase in summer base flow) which correlates with the removal of a portion of the conifer overstory in the watershed. Based on the amount of harvest in this proposal, the level of water yield increase will be well below 10 percent and will not be able to be detected from the natural range in variability in flow levels on a year to year basis (EA pp. 75 to 76).</p>

Aquatic Conservation Strategy Objectives (ACSOs)	Mid Seral Enhancement
<p>7. <i>Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.</i></p>	<p>Does not prevent the attainment of <i>ACSO 7</i>.</p> <p><b>No Action Alternative:</b> No change in in-streams flows would be anticipated.</p> <p><b>Action Alternative:</b> Design features for Bummer Ridge Mid-Seral Enhancement Project 1, such as no-treatment SPZ's, coupled with the relatively small percent of vegetation proposed to be removed will maintain groundwater levels and floodplain inundation rates. Detectable direct or indirect effects to stream flow as a result of this action are unlikely.</p> <p>The proposed actions will not alter existing patterns of floodplain inundation or water table elevation as it will have no effects on existing flow patterns and stream channel conditions.</p> <p>Proper drainage of roads will maintain water tables and flood plain functions.</p>
<p>8. <i>Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands.</i></p>	<p>Does not prevent the attainment of <i>ACSO 8</i>.</p> <p><b>No Action Alternative:</b> The current species composition and structural diversity of plant communities would continue along the current trajectory. Diversification would occur over a longer period of time.</p> <p><b>Action Alternative:</b> From research on the BLM Western Oregon Density Management Study (Chan et al), thinning affects vegetation structure by increasing cover of grasses and forbs and increasing species richness, a measure of diversity. Richness increased because forest floor herb species typically found under forest canopies remained and flourished, and were joined by open-site herbs and grasses not typically found under forest canopies. However, species composition and abundance following thinning is more dependent on composition and abundance prior to treatment than on treatment effects. In the six year period following treatment, plant communities transitioned from an increased cover of species associated with open sites and early seral stages, to a greater proportion of shade-tolerant forest floor species. For example, cover of grasses and early seral forbs was greatest one year following treatment, and were decreased six years after treatment. Since thinning occurred in riparian reserves within 20 to 50 feet from streams in the sampled areas, these results are applicable to riparian areas and will support thinning to maintain species composition and structural diversity of plant communities (EA p. 55).</p>

Aquatic Conservation Strategy Objectives (ACSOs)	Mid Seral Enhancement
<p><i>9. Maintain and restore habitat to support well-distributed populations of native plant, invertebrate and vertebrate riparian-dependent species.</i></p>	<p>Does not prevent the attainment of <i>ACSO 9</i>.</p> <p><b>No Action Alternative:</b> Habitats would be maintained over the short-term and continue to develop over the long-term with no known impacts on species currently present.</p> <p><b>Action Alternatives</b> Research has found that thinning treatments generally maintained habitat for native plant, invertebrate and invertebrate riparian-dependant species. Specifically, thinning was found to increase species richness of arthropods, and forest riparian buffers thirty meters wide serve as refuge for both forest-upland and forest-riparian arthropod species. Thinning was found to have minimal effects on most species of aquatic vertebrates including salamanders.</p> <p>Native plants were found to persist and increase in coverage after density management. Patch openings and wide thinning drastically reduced the diversity of epigeous ectomycorrhizal fungal species, but medium and high retention thinning showed little change in fungal diversity. Buffers of widths defined by the transition from riparian to upland vegetation or topographic slope breaks appear sufficient to mitigate the impacts of upslope thinning on the microclimate above headwater streams. Because the microclimate, as well as the structure and composition of the forest stand and understory vegetation are protected within the untreated buffer, habitat elements seem to be protected (EA p. 55 and 56) .</p>

#### IV. Alternatives Considered

The EA analyzed the effects of the proposed action and the no action alternatives. No unresolved conflicts concerning alternative uses of available resources (section 102(2) (E) of NEPA) were identified. No action alternatives were identified that will meet the purpose and need of the project and have meaningful differences in environmental effects from the proposed action (EA Section 3.2). Complete descriptions of the "action" and "no action" alternatives are contained in the EA, pp. 47 to 112.

## V. Decision Rationale

Considering public comment, the content of the EA and supporting project record, the management recommendations contained in the *South Fork Alsea 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 2*.  
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 (EA FONSI pp. i to iii) 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 2*.

**Table 2: Comparison of the Alternatives with Regard to the Purpose of and Need for Action (EA Section 2.4)**

Purpose and Need (EA Section 1.6)	Alternative 1 (No Action)	Alternative 2 (Proposed Action)
<p>Develop, accelerate, and enhance late-successional forest conditions, which serve as habitat for late-successional forest species (LSRA, p. 2).</p> <p>Plan and implement silvicultural treatments inside Late-Successional Reserves that are beneficial to the creation of late-successional habitat (RMP p. 16).</p> <p>Conduct thinning operations in forest stands if needed to create and maintain late successional forest conditions (RMP p. 16).</p>	<p>Maintains a highly dense, uniform, small diameter stand of trees with receding crown ratios, loss of limbs and loss of growth.</p> <p>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.</p> <p>No timber harvest would occur consequently no spatial and structural diversity would occur.</p>	<p>Treatment includes variable density thinning, creation of small gaps around “open grown” trees, and retention of small clumps. This will increase spatial and structural diversity of the stand.</p> <p>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 will be partially offset by immediate creation of larger CWD of desirable size, and augmentation of decadence processes; retention of hardwood tree and shrub diversity.</p> <p>In the long-term, the gradual transition in structural characteristics of the treated stands will 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.</p> <p>The harvest input will likely result in a gain of 200 cubic feet per acre of CWD in skyline yarding areas and about 100 cubic feet per acre in ground-based yarding areas.</p> <p>Spatial and structural diversity will be increased.</p>

Purpose and Need (EA Section 1.6)	Alternative 1 (No Action)	Alternative 2 (Proposed Action)
<p>Accelerate the growth of trees to restore large conifers to Riparian Reserves (RMP p.7)</p> <p>Enhance or restore habitat (e.g. CWD, snag habitat, in-stream large wood) for populations of native riparian-dependent plants, invertebrates, and vertebrate species (RMP p.7).</p> <p>Improve structural and spatial stand diversity on a site-specific and landscape level in the long-term (RMP p. 11, 26, D-6).</p>	<p>Without treatment, stand structure would remain relatively uniform, except for gaps created by disturbance. The main input of CWD would come from density mortality, disturbance events and endemic levels of insects and disease and would result in more snags and downed logs than with treatment. In general, the quantity of mortality would be much greater than if the stands were thinned, but dead trees would be smaller in size.</p> <p>Relatively large, open-grown trees would continue to lose lower crown due to competition from surrounding trees that established subsequent to them.</p> <p>This alternative does not meet the objectives for speeding development of late-successional forest habitat.</p>	<p>The proposed action will retain trees which will reach larger diameters earlier compared to the no treatment option, creating natural opportunities for higher quality LWD recruitment in the long-term.</p> <p>Inputs resulting from harvest consist of limbs and tops, breakage and cull and incidentally felled or topped trees that will be left on site. The harvest input will likely result in a gain of 200 cubic feet per acre of CWD in skyline yarding areas and about 100 cubic feet per acre in ground-based yarding areas.</p> <p>In the long term, due to increased diameter growth resulting from density management, larger trees will be available for recruitment for CWD.</p> <p>Treatment includes variable density thinning, creation of small gaps around “open grown” trees, and retention of small clumps. This will increase spatial and structural diversity of the stand.</p>
<p>Provide appropriate access for timber harvest and silvicultural practices used to meet the objectives above.</p> <p>Provide for fire vehicle and other management access.</p> <p>Reduce environmental effects associated with identified existing roads within the project area.</p>	<p>Maintain existing road densities. Maintain existing drainage and road surface conditions. Delay maintenance on feeder roads, main routes would be maintained.</p>	<p>Constructs 0.9 miles of new roads. Following harvest, the new construction will be decommissioned. Renovates 7.3 miles of existing roads (includes drainage structure installation/replacement/removal on cross drains and stream crossing). These renovations will improve drainage and road surface conditions, resulting in less road surface erosion into streams.</p>

## VI. Public Involvement/Consultation/Coordination

### Public Scoping:

- A scoping letter, dated August 28, 2008, was sent to 22 potentially affected and/or interested individuals, groups, and agencies. Two responses were received during the scoping period.
- A description of the project was included in the June, September and December 2008, and March, June and November 2009, and March 2010 project updates to solicit comments on the proposed project.

### EA and FONSI Comment Period and Comments:

BLM made the 2008 EA and FONSI available for public review from July 16, 2009 to August 16, 2009. Two (2) comment letters/emails were received during the original EA comment period.

Based on the comments, the BLM revised the Upper and Lower Alsea River Restoration EA to address the topics raised in the original comments. The BLM made the revised EA and FONASI available for additional public comment from April 4, 2010 to April 19, 2010. Six comment letters were received during this comment period. Responses to the substantive public comments can be found in section VIII of this Decision Rationale. The scoping and EA comment letters/emails are available for review at the Salem District BLM Office, 1717 Fabry Rd SE, Salem, Oregon.

### Consultation/Coordination:

#### **Wildlife: United States Fish and Wildlife Service (USFWS)**

To address concerns for potential effects to listed wildlife species and potential modification of critical habitats, the proposed action was consulted upon with the USFWS, as required under Section 7 of the Endangered Species Act. Consultation was addressed by inclusion of the proposed action units within either of two batched Biological Assessments (BAs) that analyze all projects that may modify the habitat of listed wildlife species on federal lands within the Northern Oregon Coast Range during fiscal years 2009 and 2010. Bummer Ridge Mid-Seral Enhancement Project 1 treatments have been designed to incorporate all appropriate design standards included in these BAs. A Letter of Concurrence (#13420-2008-I-0125) and a Biological Opinion (#13420-2009-F-0012) have been received from the Service and they do not require any changes or additions to the incorporated project design standards. The Biological Opinion also concludes that the proposed action would not result in jeopardy to listed species and would not adversely modify critical habitat for either the spotted owl or marbled murrelet.

#### **Fish: National Marine Fisheries Service (NMFS)**

The Density Management portions of the project activities were designed in conformance with guidance described in the extension of the *Endangered Species Act Section 7 Informal Consultation for the 2008-2009 North Coast Province Thinning Timber Sales Programmatic on Portions of the Siuslaw National Forest and Eugene and Salem Districts of the Bureau of Land Management, Seven Watersheds within the Oregon Coast Recovery Domain*. Approval of consistency documentation under the North Coast Thinning Programmatic, was received on 3/24/2010 for the May Affect thinning actions.

Protection of 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 treatment project areas vary between 55 feet and over 5 miles from nearest habitat utilized by coho salmon (Streamnet 2007). Portions of the unpaved haul routes, and stream crossings on the haul route, are adjacent to EFH. All proposed haul routes adjacent to EFH will be seasonally restricted to dry conditions. The proposed Bummer Ridge Mid-Seral Enhancement Project 1 is not expected to adversely affect EFH. The determination is based on distance of vegetation treatment activities from occupied habitat

and the dry season of use for hauling on unpaved roads in the Upper Alsea River Watershed. Consultation with NMFS on EFH is not required for this project.

## VII. Conclusion

### Review of Finding of No Additional Significant Impact

I have determined that change to the Finding of No Additional Significant Impact (FONASI – May 2010) for the Bummer Ridge Mid Seral Enhancement Project 1 is not necessary because I've considered and concur with information in the EA and FONASI. The comments on the EA were reviewed 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

Protests: In accordance with Forest Management Regulations at 43 CFR 5003.2, the decision for this timber sale will not become effective or be open to formal protest until the Notice of Sale is published "in a newspaper of general circulation in the area where the lands affected by the decision are located". Protests of this sale must be filed within 15 days of the first publication of the notice. For this project, the Notice of Sale will be published in the *Gazette Times* newspaper on or around May 26, 2010. The planned sale date is June 23, 2010.

### Implementation Date

If no protest is received within 15 days after publication of this Decision Record (Bummer Ridge Mid Seral Enhancement Project 1) this decision will become final. For additional information, contact Gary Humbard (503) 315-5981, Marys Peak Resource Area, Salem BLM, 1717 Fabry Road SE, Salem, Oregon 97306

Approved by: Patricia Wilson  
Patricia Wilson  
Marys Peak Resource Area Field Manager

5-24-2010  
Date

## VIII. Appendix A: Response to Public Comments Received on the Upper and Lower Alsea River Watershed Restoration (EA#OR080-08-14)

Six letters were received commenting on the Revised Upper and Lower Alsea River Watershed Restoration Environmental Assessment. The following is the response to the site specific Carbon Storage/Climate Change analysis found in the March 2010 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 April 19, 2010 and Coast Range Association, Chuck Willer Received April 19, 2009

1. **Comment:** *The EA relies on the carbon analysis in the WOPR EIS – an EIS that has been withdrawn and declared legally indefensible. This is not proper. BLM still lacks a program-level NEPA analysis of its logging program and how all that logging affects carbon and climate.*

**Response:** The BLM did not tier to the 2008 FEIS (aka WOPR EIS) nor has this EIS been deemed legally indefensible. There were lawsuits associated with the Record of Decision/Resource Management Plan and associated EIS, however, there was never an opinion declaring the EIS “legally indefensible” or otherwise invalid. The new Secretary of the Interior chose to withdraw the 2008 Record of Decision, due to BLM’s failure to complete section 7 consultation under the Endangered Species Act. The 2008 Final EIS was not withdrawn and remains available for use.

The BLM used the carbon methodology described in the 2008 FEIS because that is the best analysis and methodology available to BLM at this time. The EA used numbers associated with the No Action Alternative in the 2008 FEIS, which by definition is management under the 1995 ROD and the Northwest Forest Plan, including the cumulative effects analysis. Therefore the commenter has not demonstrated why using the carbon analysis as it pertains to the parcels managed under the 1995 RMP and the Northwest Forest Plan is improper.

2. **Comment:** *BLM cannot ignore the local incremental causes of climate change because all of the causes are both spatially dispersed and incremental in nature, and the cumulative effect of all these individual local decisions results in a problem of global proportions. This indicates the need for an EIS because the problem is significant and BLM is contributing to it and has no other NEPA analysis that it can tier to.*

**Response:** BLM has addressed the potential local impact of the project on greenhouse gas levels by making changes in vegetation that may result in net emissions or net storage of greenhouse gases (EA p. 104). The EA also addresses the cumulative impact of the projects carbon release and sequestration and presents the incremental effect of the proposed action on greenhouse gas levels within the context of effects of past, present, and reasonably foreseeable future actions at multiple spatial scales on page 106. While anthropogenic-caused greenhouse gases contribute to climate change, it is beyond the scope of existing science to identify this project’s greenhouse gas emissions as a measurable cause of specific climate impacts as outlined by the U.S. Geological Survey in its report described on page 100 of this EA.

3. **Comment:** *The logged forest will not have caught up to the amount of carbon stored in the forest in 2060 if it is left unlogged.*

**Response:** We agree with this comment. EA Table 17 shows that the no action alternative stores more carbon than the action alternatives at year 2060. Table 17 also shows that for the action alternative, there is a net increase in carbon storage at year 2060. Although carbon has been removed, carbon

storage still continues in the stands thinned by the selected action.

4. **Comment:** *BLM cannot limit the temporal scope of the analysis by saying that the carbon losses and climate impacts of logging will be erased in 50 years because the extra carbon in the atmosphere will be contributing to adverse climate impacts over the 50 years and the unlogged forest will store far more carbon at the end of 50 years. For every year that logging results in extra carbon in the atmosphere, there needs to be mitigation.*

**Response:** As described in the EA (P. 104), the analysis quantifies the project's carbon net emissions as temporary and small. Moreover the commenter cites no scientific opinion, report or otherwise to support the viewpoint that could connect carbon emissions from this project to a measurable adverse impact to climate. Instead, the EA articulated how the U.S. Geological Survey described how, although scientific information on greenhouse gases are extremely likely to have exerted a substantial effect on global climate, it is beyond the scope of existing science to identify how a project's greenhouse gas emissions as a measurable cause of specific climate impacts (EA, page 100). Therefore, as described in the EA (p.106), the BLM identified the greenhouse gas emissions and storage associated with this project, but this project in and of itself or cumulatively could not measurably affect climate change.

There is no legal, regulatory or policy basis to provide for carbon above other ecosystem services including timber. Commenter offers no specifics regarding potential mitigation to which the agency can respond. Mitigation measures are not required where impacts are not significant. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 359 (1989).

5. **Comment:** *Logging causes very long-term climate impacts that should be considered significant in a NEPA context and trigger an EIS.*

**Response:** As described in the EA (p. 106), the incremental effect of the proposed action on greenhouse gas levels within the context of effects of past, present, and reasonably foreseeable future actions at multiple spatial scales, the analysis has evidenced that the project's carbon release contribution is very small (emissions from the proposed action will constitute .00000004% of current global emissions and .0000016% of current U.S. emissions). The incremental effect of the proposed action and similar actions, over time, will be net storage of carbon. At this time, there is no science available to analyze how the carbon release associated with this project will have a measurable effect on climate change (EA, p 100).

6. **Comment:** *The proper scale of comparison is 350ppm. The EA compares carbon emission from logging Upper and Lower Alsea River Restoration project to the current annual global emissions of CO2 from all sources. These are a misleading comparisons which serve to minimize the significance of the amount of carbon in the stands in this project and the amount of GHG emissions caused by logging.*

**Response:** Commenter asserts that experts (with none cited) contend that the atmosphere has a threshold 350 ppm and that the current level is 390 ppm. These numbers are global numbers. There is no difference between the comparison BLM has used or making a comparison against the asserted global parts per million. The fact remains that the emissions from the Upper and Lower Alsea River Restoration projects are very small to the point of being undetectable. Implementing the Upper and Lower Alsea River Restoration projects will not raise the assumed 390 ppm any detectable amount. The BLM agrees that emissions under the proposed action, though they are offset by tree growth on the project area within five years, are greater than the no action alternative.

7. **Comment:** *BLM must do all it can to mitigate and reverse climate change in order to meet its legal obligations.*

**Response:** There is no legal mandate for BLM to avoid or minimize emissions, store more carbon, or “mitigate and reverse climate change.”

8. **Comment:** *The EA should at least disclose that there is strong physical science basis for thinking that thinning would be likely to increase the decay rate of dead wood.*

**Response:** There are a suite of indirect effects that result from thinning that could effect carbon sequestration. However, relative to the elements included in the analysis, they have much less quantitative effect on results. The accumulation and decay of dead wood, as well as the development of understory trees are specifically excluded from the analysis.

9. **Comment:** *Certain stands in the matrix should be removed from the timber base to offset the loss of carbon storage in the current proposal.*

**Response:** Changes in land use allocations are part of the Resource Management Planning process. Considering changes in land use allocations is outside the scope of this project.

10. **Comment:** *BLM must use the best available science.*

**Response:** BLM has fully considered the best available science (EA pg 99). BLM has considered the sources utilized in the carbon/climate analysis for the WOPR analysis, sources presented by commenter, and others. Commenter does not point to any “available science” that BLM did not consider.

11. **Comment:** *Climate change is expected to increase winter/spring flooding and summer drought and in conjunction with nearby clear cutting in the next 5-10 years, stream temperatures and sediment can be expected to change even if BLM takes the "no action" alternative.*

**Response:** Future changes in flooding and drought patterns and private land harvesting patterns from global warming are speculative and commenter offers no basis upon which to conclude otherwise, but their own personal conjecture. BLM has applied best management practices to mitigate impacts from the project.

12. **Comment:** *The FONSI is in error. The FONSI (p iii) says that forest growth following logging would offset greenhouse gas emissions and would, over time, result in net storage of carbon. In fact, the logging alternative never offsets all the climate consequences caused by emissions from logging.*

**Response:** The EA articulated how the U.S. Geological Survey described how, although scientific information on greenhouse gases are extremely likely to have exerted a substantial effect on global climate, it is beyond the scope of existing science to identify how a project’s greenhouse gas emissions as a measurable cause of specific climate impacts (EA, page 100). Emissions resulting from logging and from emissions from the harvested wood within 50 years of harvest are offset by tree growth within five years. The climate consequences of any project, especially an emission as small and temporary as this are not measurable.

13. **Comment:** *The EA fails to disclose the true cost of logging in terms of the warming caused by the extra CO<sub>2</sub> in the atmosphere caused by logging. EA Table 17 on page 104 does not show the cumulative effects of the extra carbon in the atmosphere. The EA must disclose the unmitigated warming effects caused by the extra carbon in the atmosphere over time, and must show the “time-value of carbon” whereby future forest growth is unable to make up for the extra carbon in the atmosphere in earlier time periods.*

**Response:** See Response to #12. The commenter identifies no established analysis process to evaluate

the concept of the “time value” of the carbon. Emissions from logging itself are offset by live tree carbon within one growing season. Emissions from 2010 to 2060 from the wood harvested at Upper and Lower Alsea River Restoration project are offset by tree growth there by 2015, so net positive emissions are limited to the first year or two.

14. **Comment:** *The fossil fuel component of wood products is not fully disclosed. Wood products require fossil fuel use for harvesting and transportation to the mill, milling operations, transportation of the milled lumber, manufacturing operations, marketing and transportation of the final products, transportation of the waste products, plus the mining, smelting, milling, and manufacturing processes required to manufacture all the equipment used to harvest trees and make wood products. All these emissions serve to reduce any alleged contribution toward carbon storage in wood products, so to get an accurate picture of the real carbon storage in wood products, these emissions must be accounted for.*

**Response:** The emissions resulting from harvest and transportation of harvested wood at Upper and Lower Alsea River Restoration project are analyzed. Emissions resulting from all further industrial and commercial activity associated with the wood products and by-products obtained will not be properly ascribed to this project. This project will neither cause nor prevent the ongoing industrial and commercial activity associated with the wood products industry.

15. **Comment:** *We question the assertion on EA page 103 that 69% of forest carbon would remain stored in wood products after 50 years. That does not seem to be consistent with the decay rates found in the literature.*

**Response:** The reference for this portion of the analysis is Smith, et al, 2006. The total stored carbon from harvested wood is from products still in use, stored in landfills (not fully decayed) or emitted with energy capture (thereby offsetting fossil fuels). Since the commenter does not cite specific literature, no comparison with it is possible.

### **Reed Wilson Received April 19, 2010**

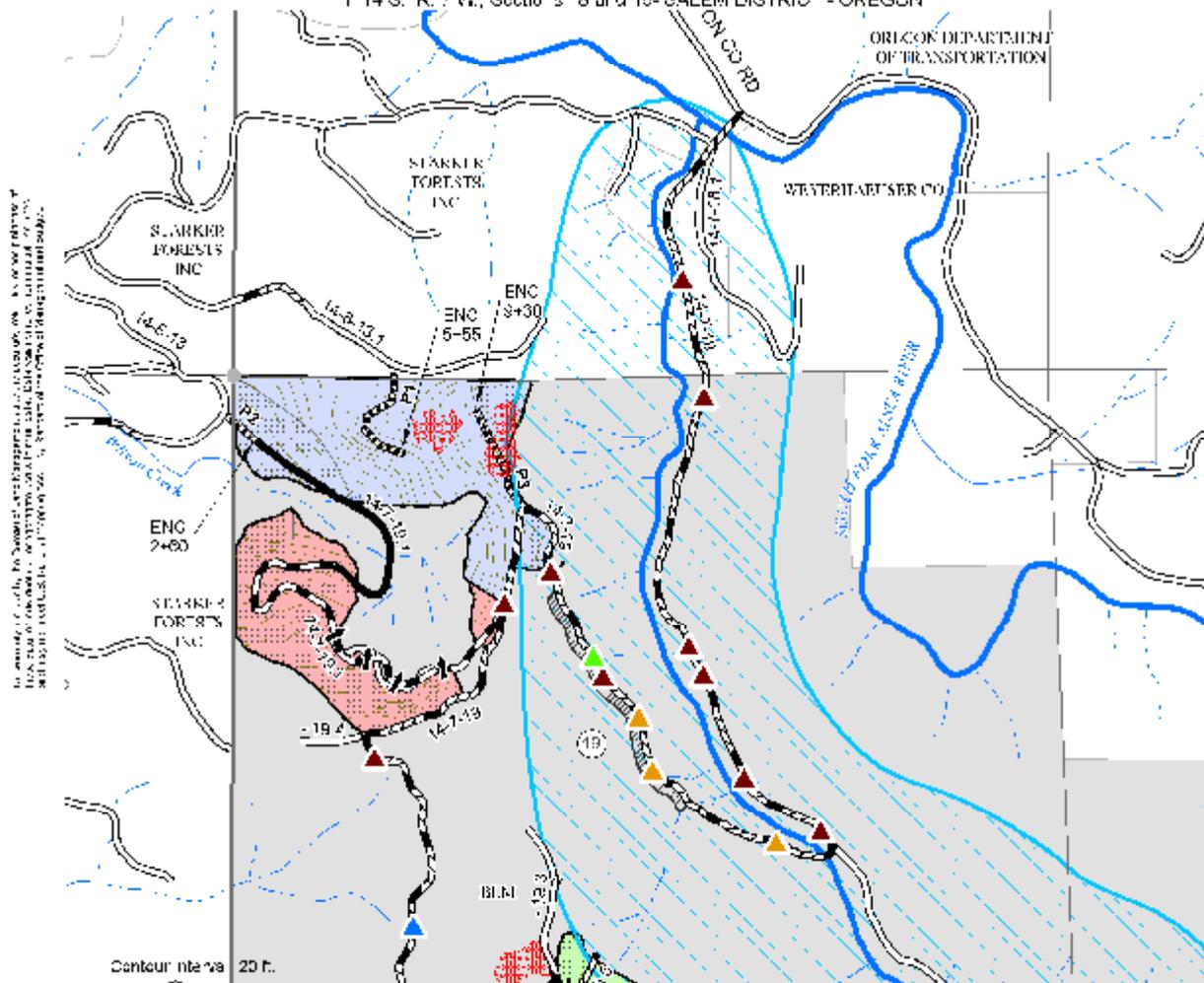
1. **Comment:** *It appears the EA includes climate change and carbon sequestration discussion on a global scale. Local decisions can set framework and create precedent for national policies on climate change. On that note, this proposal reduces net carbon storage by 92,000 tonnes, pollutes air by burning an estimated 140,000 gallons of fuel and releases 550 tonnes of carbon through fuel consumption and slash burning.*

**Response:** The U.S. Geological Survey, in a May 14, 2008 memorandum to the U.S. Fish and Wildlife Service, summarized the latest science on greenhouse gases and concluded that it is currently beyond the scope of existing science to identify a specific source of greenhouse gas emissions or sequestration and designate it as the cause of specific climate impacts at a specific location. This defines the spatial scale for analysis as global, not local, regional or continental. That memorandum is incorporated here by reference. Based on the BLM’s review of statutes, regulations, policy, plans and literature, the BLM accepts the conclusions above as appropriate context for a reasoned choice among alternatives (EA p. 100).

EA Table 17 shows that the no action alternative stores more carbon than the action alternative at year 2060. Table 17 also shows that for the action alternative, there is a net increase in carbon storage at year 2060. Although carbon has been removed, carbon storage still continues in the stands thinned by the selected action.

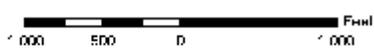
**BUMMER RIDGE TIMBER SALE**

T. 14 S., R. 7 W., Sections 18 and 15 - SALEM DISTRICT - OREGON



In accordance with the Department's Environmental Assessment Act, this map is being prepared for the public. The map is not a legal document and should not be used for legal purposes. The map is for informational purposes only.

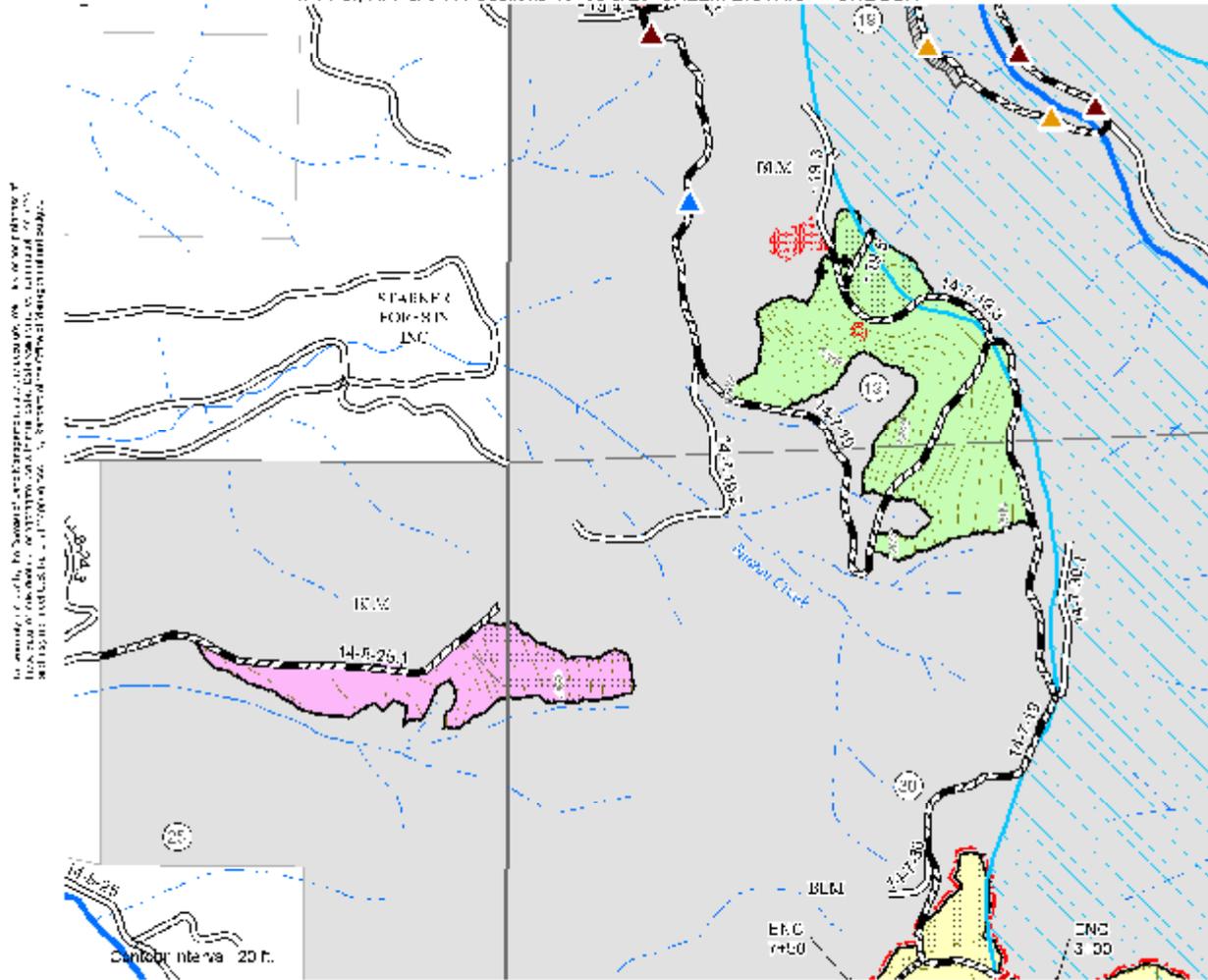
- Road to be Constructed and Decommissioned
- Road to be Renovated and Decommissioned
- Road to be Renovated
- Road to be Decommissioned (natural processes)
- Culvert to be Installed Stream
- Culvert to be Replaced Stream
- Culvert to be Installed X-drain
- Culvert to be Replaced X-drain
- Culvert to be Replaced with Drainpipe
- Drainpipe to be Constructed
- Unit 19A - 36 acres
- Unit 19B - 43 acres
- Unit 19C - 21 acres
- Unit 25A - 19 acres
- Unit 30A - 62 acres
- Unit 31A - 66 acres
- Ground-Based Yarding
- Skyline Yarding
- No logging/yarding operations from March 1 to July 7
- No Treatment Would Occur
- Plus Trees
- Phellinus weilli infected area
- Found Corner
- Existing Road
- EFH/ESA
- Fishbearing Stream
- Non-Fishbearing Stream
- Lake Creek Key Watershed
- Hazard Tree Removal Adjacent to the Road
- Existing Meadow



March 8<sup>th</sup>, 2010

**BUMMER RIDGE TIMBER SALE**

T. 14 S., R. 7 & 0 W., Sections 10, 30 & 25 - SALEM DISTRICT - OREGON



In accordance with the Department's policy regarding the use of maps, the Department does not warrant the accuracy of the information shown on this map. The Department is not responsible for any errors or omissions on this map. The Department is not responsible for any damages or injuries resulting from the use of this map.

- Road to be Constructed and Decommissioned
- Road to be Renovated and Decommissioned
- Road to be Renovated
- Road to be Decommissioned (natural processes)
- Culvert to be Installed Stream
- Culvert to be Replaced Stream
- Culvert to be Installed X-drain
- Culvert to be Replaced X-drain
- Culvert to be Replaced with Drainpipe
- Drainpipe to be Constructed

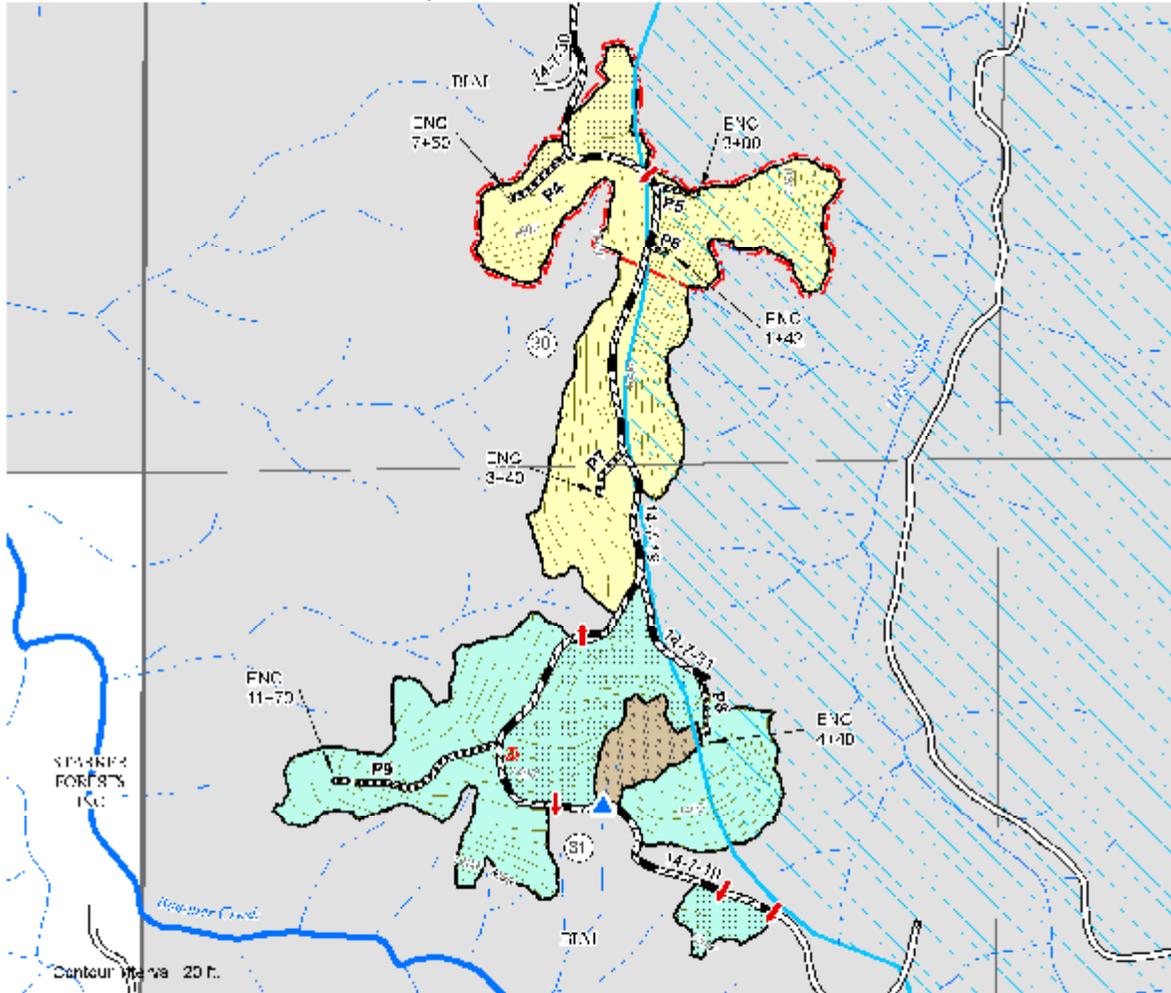
- Unit 19A - 36 acres
- Unit 19B - 43 acres
- Unit 19C - 21 acres
- Unit 25A - 19 acres
- Unit 30A - 62 acres
- Unit 31A - 66 acres
- Ground-Based Yarding
- Skyline Yarding
- No logging/yarding operations from March 1 to July 7
- No Treatment Would Occur

- Plus Trees
- Phellinus weevil infected area
- Found Corner
- Existing Road
- EFH/ESA
- Fishbearing Stream
- Non-Fishbearing Stream
- Iabo Creek Key Watershed
- Hazard Tree Removal Adjacent to the Road
- Existing Meadow



March 8, 2010

In accordance with the National Forest Management Act, the BLM is providing this information to the public to assist in the decision-making process. This information is not intended to constitute an offer of any product or service, nor is it intended to be used for any purpose other than that for which it was prepared.



Road to be Constructed and Decommissioned	Unit 9A - 36 acres	Plus Trees
Road to be Renovated and Decommissioned	Unit 9B - 43 acres	Phellinus weilli infected area
Road to be Renovated	Unit 9C - 21 acres	Found Corner
Road to be Decommissioned (natural processes)	Unit 25A - 19 acres	Existing Road
Culvert to be Installed Stream	Unit 30A - 62 acres	EFH/ESA
Culvert to be Replaced Stream	Unit 31A - 68 acres	Fishbearing Stream
Culvert to be Installed X-drain	Ground-Based Yarding	Non-Fishbearing Stream
Culvert to be Replaced X-drain	Skyline Yarding	Lake Creek Key Watershed
Culvert to be Replaced with Drainpipe	No Yarding, Yarding operations from March 1 to July 7	Hazard Tree Removal Adjacent to the Road
Drainpipe to be Constructed	No Treatment Would Occur	Existing Meadow

March 8<sup>th</sup>, 2010