

Yamaha Late Successional Reserve Enhancement Project 1

Final Decision and Decision Rationale for Yamaha Late Successional Reserve
Enhancement Project 1

Environmental Assessment Number OR080-06-18

November 2008

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

Township 13 South, Range 7 West, Sections 14 and 23 Willamette Meridian
Benton County, Oregon

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I. Introduction

The Bureau of Land Management (BLM) has conducted an environmental analysis for the Yamaha Late Successional Reserve (LSR) Enhancement Project 1, which is documented in the *Yamaha Late Successional Reserve Enhancement/Aquatic Habitat Restoration Environmental Assessment* (EA# OR080-06-18) and the associated project file. The proposed action is to thin 34-69 year old mixed conifer stands on 159 acres within LSR and Riparian Reserve Land Use Allocations (LUA's). A Finding of No Significant Impact (FONSI) was signed on October 15, 2007 and the EA and FONSI were then made available for public review.

The decision documented in this Decision Rationale (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 timber sale.

II. Decision

I have decided to implement Yamaha LSR Enhancement Project 1 as described in the proposed action (EA pp. 9-14) with modifications described below, hereafter referred to as the "selected action". The selected action is shown on the maps attached to this Decision Rationale. This decision is based on site-specific analysis in the *Yamaha LSR Enhancement/Aquatic Habitat Restoration Environmental Assessment* (EA # OR080-06-18), the supporting project record, management recommendations contained in the *South Fork Alsea River Watershed Analysis* (10/95), as well as the management direction contained in the Salem District Resource Management Plan (May 1995), which are incorporated by reference in the EA.

The following is a summary of this decision.

Changes to the Project Design Features/Mitigation Measures

Since the release of the EA, the IDT has identified the need to correct some information that was included in the EA.

1. To Protect and Enhance Stand Diversity and Wildlife Habitat Components

The EA included the following design features (pg. 12).

- All trees and snags within Project 3 Area and within skyline yarding corridors that are necessary to accomplish the yarding of Unit 23B, would be cut and left on site.

This Decision Record changes the above design standard as follows:

- All trees and snags within Project 3 Area and within skyline yarding corridors that are necessary to accomplish the yarding of Unit 23E, would be cut and left on site.

2. Priorities for tree marking would be based on Marking Guidelines Appendix A – Yamaha LSR Enhancement Marking Guide

- Within Unit 23B, leave a range of 140 to 180 square feet of basal area. Total stand basal area (including conifers greater than 10 inches) should average about 160 over the whole unit.

This Decision Record changes the above design standard as follows:

- Within Unit 23B, leave a range of 100 to 140 square feet of basal area. Total stand basal area (including conifers greater than 10") should average about 120 over the whole unit.

Since the release of the EA, the Oregon Coast coho salmon Evolutionarily Significant Unit (*Oncorhynchus kisutch*) was listed as threatened under the Endangered Species Act (ESA) on May 12, 2008. Oregon Coast coho salmon are documented in the project area.

3. To Protect Threatened and Endangered and Bureau Special Status Plants and Animals

Site level analysis indicated the proposed replacement of two culverts may exceed impacts anticipated under the existing Programmatic Thinning Letter of Concurrence (LOC). To comply with Project Design Criteria established under the Programmatic Thinning LOC replacement of the two culverts, located on the Roads 14-6-34.1 at Mile Post 7.15 and on Road 14-7-23 at Mile Post 0.07, will be deferred. The original text of the proposed action is as follows:

- Within existing roads, rock application may occur and culvert replacement would occur on approximately 28 ditch relief or stream crossings. (pg 9)

This Decision Record changes the above design standard as follows:

- Within existing roads, rock application may occur and culvert replacement would occur on approximately 26 ditch relief or stream crossings.

Since the release of the EA, new information reveals the effects of the enhancement project may affect a listed species in a manner that was not considered in the original analysis:

- During the 2007 northern spotted owl breeding season surveys a single male owl was detected within the proposed action area (SE ¼ of sec. 23). After further survey visits the bird was classified as a resident single in section 23.
- During the 2008 breeding season the 2007 male was still present, and was found to be paired with a female in May of 2008. Further visits determined that the pair was non-breeding for the 2008 season.
- The pair will be surveyed to protocol beginning in March of 2009, and, if the pair is still present a breeding/non-breeding determination will be made by the end of May 2009. If the pair is found to be breeding and the nest tree is within 200 meters of a treatment unit then actions will be taken to comply with the applicable Biological Opinion.

The following is a summary of this decision.

- Approximately 1,700 feet of new road (predominantly near ridge top locations) would be constructed. Following harvest, all of the new construction will be decommissioned and blocked to vehicular traffic.
- Density management treatments would occur on approximately 159 acres of 34 to 69 year old stands within LSR and RR LUAs through a timber sale
- Within existing roads, rock application may occur and culvert replacement would occur on approximately 26 ditch relief or stream crossings.
- The cutting and yarding of trees will be accomplished utilizing wheeled or tracked equipment operating off of the existing roadway and skyline yarding equipment.
- Larger accumulations of debris along existing roads will be either machine piled or hand piled. All machine and hand piles will be burned.
- All design features and mitigation measures described in the EA [except for 2 culvert replacements as described above (pp. 13-17)] will be incorporated into the timber sale contract.

III. Compliance with Direction:

The analysis documented in the Yamaha LSR Enhancement/Aquatic Habitat Restoration EA is site-specific and supplements analyses found in the *Salem District Proposed Resource Management Plan/Final Environmental Impact Statement*, September 1994 (RMP/FEIS). This project has been designed to conform to the *Salem District Record of Decision and Resource Management Plan*, May 1995 (RMP) and related documents which direct and provide the legal framework for management of BLM lands within the Salem District (EA pg. 4). All of these documents may be reviewed at the Marys Peak Resource Area office.

Survey and Manage Review

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

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

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

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

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

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

The decision is consistent with the Northwest Forest Plan, including all plan amendments in effect on the date of the decision. The Yamaha LSR Enhancement Project 1 conforms with the 2007 *Record of Decision To Remove the Survey and Manage Mitigation Measure Standards and Guidelines from Bureau of Land Management Resource Management Plans Within the Range of the Northern Spotted Owl*.

Compliance with the Aquatic Conservation Strategy

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

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

Previously, in *Pacific Coast Fed. Of Fishermen’s Assn. v. Natl. Marine Fisheries Service*, 265 F.3d 1028 (9th Cir. 2001) (*PCFFA II*), the United States Court of Appeals for the Ninth Circuit ruled that because the evaluation of a project’s consistency with the long-term, watershed level ACS objectives could overlook short-term, site-scale effects that could have serious consequences to a listed species, these short-term, site-scale effects must be considered. The following paragraphs show how the Yamaha LSR Enhancement Project 1 meets the Aquatic Conservation Strategy in the context of PCFFA IV and PCFFA II.

Existing Watershed Condition

The Yamaha LSR Enhancement Project 1 area is in the 82,000-acre Upper Alsea River 5th field watershed which drains into the Alsea River. 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.

Fifty-one percent of the Upper Alsea River watershed is managed by BLM, 47% is private and 1% is managed by the Forest Service. Late seral and old-growth (greater than 80 years old) forests comprise 37 percent of federal ownership in the watershed. We can infer then, that commercial harvest, stand replacement fire and development by human has occurred on 63% of the lands in the watershed since post Post-Euro-American settlement. Approximately 27% of BLM managed lands are located in riparian areas (within 100 feet of a stream). The earliest harvests have regenerated and are progressing towards providing mature forest structure. Most of the private industrial lands have been and will continue to be moved from mid condition class to the early condition class.

A dominant hydrological feature in this watershed is the South Fork Alsea River. The South Fork Alsea River is a tributary to the Alsea River, which drains into Waldport, Oregon located on the central Oregon coast. The Oregon Coast (OC) coho salmon (*Oncorhynchus kisutch*) evolutionarily significant unit (ESU) is listed as a threatened species under the Endangered Species Act (ESA). The OC coho ESU inhabit Peak Creek and the South Fork Alsea River downstream of the project units. Due to the proximity of the OC coho ESU to the project area, Yamaha LSR Enhancement Project 1 may affect these fish.

Review of Aquatic Conservation Strategy Compliance:

I have reviewed this analysis and have determined that the project meets the Aquatic Conservation Strategy in the context of PCFFA IV and PCFFA II [complies with the ACS on the project (site) scale]. The following is an update of how this project complies with the four components of the Aquatic Conservation Strategy, originally documented in the EA, Section 10.0 (pp. 92 and 93). The project would comply with:

Component 1 – Riparian Reserves: by maintaining canopy cover along all streams and wetlands would protect stream bank stability and water temperature. Riparian Reserve boundaries would be established consistent with direction from the *Salem District Resource Management Plan*. No new road construction would occur within Riparian Reserves;

Component 2 – Key Watershed: by establishing that the Yamaha LSR Enhancement Project 1 is not within a 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, mining, road building, agriculture, wildfire, and timber harvest. The following are watershed analysis findings that apply to or are components of this project:

- Evaluation of LSRs identified areas where density management treatments, which manipulate stand stocking levels, may be used to provide or enhance late successional forest ecosystem

conditions. Density management of these stands can produce a stand that is more structurally diverse, has larger trees, more down woody material, and additional small openings. This creates more old-growth stand structure faster than when stands are left alone (p. 39).

- Density management opportunities in LSRs should be focused at improving the corridor of dispersal habitat in Middle South Fork, Upper South Fork, and Peak Creek subwatersheds, since existing LS/OG habitat in this area is highly fragmented (p.44). The project is located in Middle South Fork and Peak Creek subwatersheds.
- Evaluate the approximately 2500 acres of dense, single story Douglas-fir stands within Riparian Reserves that are suitable for density management treatments to determine high priority stands for treatment. This will include stand exams and ID Team review of suitability based on field observations. It is expected that about 50% of these acres will be suitable and treatable as high priority stands to help attain old-growth forest conditions within LSR and to meet the Aquatic Conservation Strategy (p. 79).
- LSR lands encompass about 74% of BLM-administered land in the S.F. Alsea watershed. Density management treatments can be used in LSRs to enhance old-growth characteristics in younger, homogenous stands (p. 85).
- The analysis to identify potential density management areas focused on stand stocking and structural uniformity. The stands identified were those that were dominant Douglas-fir stands, 30 - 70 years old, with over 40% stocking and with a single story. One desirable habitat feature of late seral and old-growth stands is the existence of large trees. The mechanism for growing large trees faster is to remove certain trees from the stand, giving the remaining trees more light and room to grow. Therefore, stands with a high level of stocking would grow much larger trees if density management is performed. Another old-growth feature is its lack of uniformity, both in stocking levels and in structural levels. Again, areas with uniformly high stocking levels could be silviculturally manipulated to produce more diverse patterns of stocking levels. Also, single story stands lack structural diversity, and could benefit from density management which reduces overstory stocking, so that a planted understory could grow (p. 86).

Component 4 – Watershed Restoration: by maintaining more than half of the canopy cover, implementing project design features to protect aquatic and riparian resources, and increasing structural diversity, the project would not preclude future restoration projects.

In addition I have reviewed this project against the ACS objectives at the project or site scale. Section 10.0 of the Yamaha LSR Enhancement EA addressed the effects on the nine aquatic conservation strategy objectives at the project level, project/site scale at the time of the original analysis. The project does not retard or prevent the attainment of Aquatic Conservation Objectives (ACSO) 1-9 (Table 14, EA pp. 94-99) because the project would:

- Enhance late-successional forest conditions and speed up attainment of these conditions across the landscape (ACSO 1);
- Maintain and restore both terrestrial and aquatic connectivity over the long-term (ACSO 2);
- Maintain the integrity of shorelines, banks and bottom configurations (ACSO 3);
- Protect stream shade within primary shade zones of streams by maintaining a canopy of greater than 70 percent (ACSO 4);
- Minimize any potential sediment from harvest and road-related activities from reaching water

bodies by implementing stream protection zones and project design features. Restore the sediment regime to streams in the area through road renovation and drainage improvements on existing roads. (ACSO 5);

- Affect less than 0.2 percent of the forest cover in the Upper Alsea River Watershed (ACSO 6);
- Maintain groundwater levels and floodplain inundation rates through the implementation of SPZs, coupled with the relatively small percent of vegetation proposed to be removed (ACSO 7);
- Exclude from treatment areas designated as SPZs, and only the upslope portions of the Riparian Reserves would be included in the density management treatment (ACSO 8);
- Restore habitat to support well distributed riparian-dependent and riparian associated species by reducing overstocked stands, moderating tree species diversity, altering forest structural characteristics and amending CWD conditions (ACSO 9).

Unless otherwise specified, the No Action Alternative for the project would not prevent the attainment of any of the nine ACS objectives. Current conditions and trends would continue and are described in EA Section 3.2.

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. 21-49.

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 Analyses*, 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 2.1), as shown in *Table 1*.
 - Complies with the *Salem District Record of Decision and Resource Management Plan*, May 1995 (RMP) and related documents which direct and provide the legal framework for management of BLM lands within the Salem District (EA pg. 4).
 - The Yamaha LSR Enhancement Project 1 is in full and complete compliance with the 2007 Record of Decision *To Remove the Survey and Manage Mitigation Measure Standards and Guidelines from Bureau of Land Management Resource Management Plans Within the Range of the Northern Spotted Owl*.
 - Will not have significant impact on the affected elements of the environment (EA FONSI pp. ii-iv) beyond those already anticipated and addressed in the RMP EIS.
 - Has been adequately analyzed.

Table 1: Comparison of the Alternatives with Regard to the Purpose of and Need for Action (EA section 2.5)

Purpose and Need (EA Section 2.1)	No Action (Alternative 1)	Proposed Action (Alternative 2)
Development of late-successional forest habitat (clumps, CWD, gaps), snag creation.	Does not meet this purpose and need. Creates high level of small size CWD for the next decade or two in all stands within the project area.	Creates patch openings with adjacent clumps of trees. Increases the quality and value of wildlife habitat.
Offer a marketable timber management sale.	Does not meet this purpose and need. Would not offer timber for sale.	Offers approximately 3800 MBF of timber for sale.
Increase structural diversity in relatively uniform conifer stands.	Does not meet purpose and need. Maintains a highly dense, uniform, small diameter stand of trees with receding crown ratios, loss of limbs and loss of growth. Understory regeneration, shrubs etc. would be lacking.	Reduces tree densities within stands to increase diameter growth and more open stand conditions to preserve limbs and high crown ratios. Increases species diversity and understory regeneration, shrubs, forbs etc.
Provides appropriate access for timber harvest and silvicultural practices used to meet the objectives above, while minimizing increases in road densities.	No change. Maintain existing road densities.	Constructs 1700 feet of new roads. All new road construction will be decommissioned following harvest operations.
	Delay maintenance on feeder roads, main routes would be maintained.	Would implement maintenance on feeder roads, allowing for continued access.
Reduces environmental effects associated with existing roads within the project area	No change. Maintain existing drainage and road surface conditions.	Renovates approximately 4 miles of existing roads (includes drainage structure renovation or replacement on approximately 26 cross drains or stream crossings). These renovations would improve drainage and road surface conditions, resulting in less road surface erosion into the streams.

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*.

VI. Public Involvement/Consultation/Coordination

Public Scoping:

- A scoping letter, dated April 12, 2006, was sent to 29 potentially affected or interested individuals, groups, and agencies. One response was received during the scoping period.
- A description of the project was included in the June, September and December 2006 and March 2007 project updates to solicit comments on the proposed projects.

EA and FONSI Comment Period and Comments:

The EA and/or notice of availability of the EA were mailed to approximately 27 agencies, individuals and organizations on October 16, 2007. A legal notice was placed in a local newspaper soliciting public input on the action from October 17 to November 16, 2007. Two

comment letters [Oregon Wild and American Forest Resources Council] were received. Responses to their comments can be found in Appendix A of the Decision Rationale.

Consultation/Coordination:

Wildlife: To address concerns for effects to federally listed wildlife species and potential degradation of critical habitats, the proposed action has been consulted upon with the U.S. Fish and Wildlife Service, as required under Section 7 of the ESA. Consultation for this proposed action was facilitated by its inclusion within a programmatic Biological Assessment (BA) that analyzes all projects that may modify the habitat of listed wildlife species on federal lands within the Northern Oregon Coast Range during fiscal years 2007 and 2008. The resulting Letter of Concurrence (ref# 1-7-06-I-0190, dated August 1, 2006) concurred with the BA, that this action was not likely to adversely affect spotted owl, marbled murrelets or their critical habitats. This proposed action has been designed to incorporate all appropriate design standards set forth in the Biological Assessment which form the basis for compliance with the Letter of Concurrence.

Fish: Consultation with NOAA NMFS is required for all actions which ‘may affect’ ESA listed fish species and critical habitat. The area where the proposed action is located has two major stream systems (South Fork Alsea River and Peak Creek). The OC coho ESU are listed as threatened under the ESA and are known to occupy both streams near the project area. The proposed actions were determinations to ‘may affect, not likely to adversely affect’ the OC coho ESU. The affects determination is primarily due to the proximity of listed fish and critical habitat which is adjacent to proposed treatments areas and graveled haul routes. Informal consultation with NMFS was completed October 15, 2008 (see EA File: Programmatic Thinning Certification Forms).

Protection of Essential Fish Habitat (EFH) as described by the Magnuson/Stevens Fisheries Conservation and Management Act and consultation with NOAA NMFS is required for all projects which may adversely affect EFH of Chinook and coho salmon. The proposed Yamaha LSR Enhancement Project 1 is not expected to adversely affect EFH due to low probability of effect of all activities associated with the project reaching occupied habitat. Consultation with NOAA NMFS on EFH is not required for this project.

VII. Conclusion

I have determined that change to the Finding of No Significant Impact (FONSI – October 2007) for the Yamaha LSR Enhancement Project 1 is not necessary because I’ve considered and concur with information in the EA and FONSI. 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.

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 January 28, 2009. The planned sale date is February 28, 2009.

Contact Person: For additional information concerning this decision, contact Gary Humbard (503) 315-5981, Marys Peak Resource Area, Salem BLM, 1717 Fabry SE, Salem, Oregon 97306.

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

11/17/2008
Date

VIII. Appendix A: Response to Public Comments Received on the Yamaha LSR Enhancement Project 1 (EA#OR080-06-18)

One letter and one e-mail message was received commenting on the Yamaha LSR Enhancement Environmental Assessment. Although the letters communicated a number of issues and opinions on forest management in general, the response to comments below only discusses those specifically directed to the Environmental Analysis which was made available for public review from October 18, 2007 to November 16, 2007. Comments are in *italics*. The BLM response follows each comment.

Oregon Wild, Doug Heiken Received November 15, 2007

1. *When conducting commercial thinning projects take the opportunity to implement other critical aspects of watershed restoration especially pre-commercial thinning, restoring fish passage, reducing the impacts of the road system, and treating invasive weeds.*

Response: The EA includes a project (Project 2) to thin a 20 year old stand to promote late successional forest conditions. The EA also includes a project (Project 5) to restore fish passage and a project (Project 6) to reduce adverse impacts to aquatic resources caused by an existing road system.

2. *Generally retain all the largest trees, then “free thin from below” retaining some smaller trees in all age-size classes. Retain and protect under-represented conifer and non-conifer trees and shrubs.*

Response: Vertical diversity would be achieved over the long-term by planting conifers in the patch openings and openings with lower basal areas. Although we are primarily thinning from below, the marking guide calls for leaving healthy intermediate trees in place of dominant ones, recognizing that there would be few of them.

As stated in the EA (pg. 12) “except in yarding corridors/skid trails and gaps, species diversity would be maintained by reserving all trees (merchantable and non merchantable) other than Douglas-fir” and on pg. 114 “Only Douglas-fir trees would be cut. All other conifer species (WH, GF, etc.) and hardwood species would be reserved”.

3. *Strive for a variable density outcome. Use skips and gaps within units to help achieve diversity. Gaps should not be clearcut but rather should retain some residual structure in the form of live or dead trees. Variability should be implemented at numerous scales ranging from small to large.*

Response: We plan (within our operational constraints) to achieve variable density in our LSR treatments, and believe that the prescription would accomplish that. We plan to create canopy gaps over the project area which would equal approximately 5 percent of the overall stand, and also plan to leave small unthinned areas (clumps). The clumps and patch cuts would range from approximately 0.25 to 1 acre, as recommended by Andrew Carey and Jerry Franklin in the following reference (<http://www.reo.gov/ama/franklin2001.htm>).

We believe the smaller gaps would promote increased growth of shrub species (salal and vine

maple), and the larger gaps would promote conifer understory species such as western red cedar and western hemlock, which we plan to plant. Within the larger gaps we would leave large “wolfy” trees or trees with other wildlife values, releasing them completely so as to promote epicormic branching and deep crowns. Between the gaps, we plan to mark the project in a range of basal areas. We would also reserve all species other than Douglas-fir, to give the stands additional spacing variability.

4. *Retain abundant snags and coarse wood both distributed and in clumps so that thinning mimics natural disturbance. Retention of dead wood should generally be proportional to the intensity of the thinning, e.g., heavy thinning should leave behind more snags not less. Retain wildlife trees such as hollows, forked tops, broken tops, leaning trees, etc.*

Response: As stated in the EA (pg. 12) “Approximately 150 gaps would be created within the density management areas by cutting most trees within 60 feet of one large live tree. Within these gaps one larger tree (approx. 24 inches DBHOB) would be topped for snag creation, and a second large tree would be left on the ground as CWD”. In addition, all existing snags and CWD would be reserved, except where they pose a safety risk or affect access and operability. Any snags or logs felled or moved for these purposes would remain on site within the project area.

In addition, within the density management areas any green trees intended to be part of the residual stand that are incidentally felled to facilitate access and operability (yarding corridors, hang-ups, tailholds) would be treated as follows:

- ✓ Trees that are 36 inches Diameter Breast Height Outside Bark (DBHOB) or greater would be retained on site.

As stated in the EA on pg. 114 “Trees with complex structures (forked, topless, and deformities) would be reserved individually or left in clumps where possible”.

5. *Thin heavy enough to stimulate development of understory vegetation, but don’t thin too heavy. Recognize that thinning captures mortality and that plantation stands are already lacking critical values from dead wood due to the unnatural stand history of all clearcut and planted stands.*

Response: A silviculture prescription is a compromise between heavy enough treatment and too much to reach future objectives. The proposed thinning levels and gaps would provide for light to stimulate understory development. As mentioned in your letter, the designated trees in the 150 gaps would provide for snags and down wood in the stand. In addition, the logging operation and future wind events would provide additional snags and down and wood in the future..

6. *If using whole tree yarding or yarding with tops attached to control fuels, the agency should top a portion of the trees and leave the greens in the forest in order to retain nutrients on site.*

Response: There is no requirement to utilize whole tree yarding or yarding with tops attached within the EA. Historically, the majority of BLM timber sale purchasers have chosen not to utilize whole tree yarding when using skyline and ground based yarding systems within density management treatments (which Yamaha LSR Project 1 entails).

On a typical Marys Peak thinning timber sale, tail and lift trees are needed to obtain one-end

suspension during skyline yarding. These trees are topped with the top of the tree left in the forest that provides terrestrial habitat along with a variety of other uses with the remaining standing stem providing future snag habitat.

7. Avoid impacts to raptor nests and enhance habitat for diverse prey species.

Response: As stated in the EA (pg. 13) “Any tree found to have a stick or ball nest, regardless of size (tree or nest) would be protected”. The long-term impact of density management on spotted owl habitat would be positive as it would develop into suitable nesting/foraging/roosting habitat sooner than if left untreated and the project would have long-term positive effects by accelerating the time it would take for these stands to develop into suitable nesting habitat for marbled murrelets.

8. Take proactive steps to avoid the spread of noxious weeds. Use canopy cover to suppress weeds.

Response: Any adverse effects from non-native plants infestations within or near the project area are not anticipated and the risk rating for the long-term establishment of noxious weed species and consequences of adverse effects on this project area is low because; 1) the implementation of the Marys Peak integrated non-native plant management plan allows for early detection and rapid response of non-native plant species, 2) the known noxious weeds in the project area are regionally abundant, and 3) in western Oregon, many common and widespread non-native species often persist for several years after timber harvest but soon decline as native vegetation increases within the project areas. In addition, all road construction and road maintenance areas would be monitored for non-native species. Monitoring newly constructed roads would provide for early detection and allow for a rapid response to remove any non-native species of concern.

One of the goals of implementing this project is to allow for the creation of multi-layered stands, increase secondary growth in reserved trees and promote diversity to shrub and forb species. If we maintain a high percentage canopy cover we may be able to suppress some non-native weeds, but would also reduce seed germination and seedling growth of native vegetation and would not be able to accomplish biodiversity goals that would be accomplished through the implementation of this project. The implementation of the Mary Peak integrated non-native management plan is our best defense against any infestation of non-native plants within and adjacent to the project areas.

9. Buffer streams from the effects of heavy equipment and loss of bank trees and trees that shade streams. Mitigate for the loss of LWD input by retaining extra snags and wood in riparian areas. Recognize that thinning captures mortality that is not necessarily compensated by future growth.

Response: The EA (pg. 12) includes design features that will protect streams from the effects of equipment or loss of bank trees by implementing stream protection zones (SPZs) where no cutting would be permitted along all streams and identified wet areas within the harvest area. These zones would be a minimum of approximately 50 feet from the high water mark. To protect water quality, all trees within one tree height of SPZs would be felled away from streams. Where a cut tree does fall within a SPZ, the portion of the tree within the SPZ would remain in place. No yarding would be permitted in or through any SPZs within the harvest area.

The EA (pg. 34) states “Most channels in the project area have an intermittent flow regime and do not flow on the surface during most summers. Water temperature in these channels is influenced

directly by soil temperature which is a function of elevation, aspect and soil type. Therefore, these channels have little potential to be heated by exposure to direct solar radiation. A reduction in stand density in the riparian forest near these streams is unlikely to result in any measurable alteration of temperature regime. Nevertheless, most primary shade zone vegetation would be retained along intermittent and ephemeral streams”.

As noted in response # 4, all existing snags and CWD would be reserved, except where they pose a safety risk or affect access and operability. Any snags or logs felled or moved for these purposes would remain on site within the project area. We believe the design features for the protection of existing down logs and snags as stated in the EA provides the necessary protection for these resources and removes any incentive for needlessly felling or removing them.

The Marys Peak RA will be enhancing recently harvested density management projects by creating snags and CWD (girdling/falling/leaving average stand diameter reserve trees); falling and leaving on site trees that are encroaching on and ultimately impeding the survival of the live crowns of old growth trees and by falling trees into live streams for LWD enhancement purposes. Approximately \$40,000/year will be spent on these types of habitat enhancement projects from Fiscal Years 2008 through 2010.

The Marys Peak RA collected pre harvest (2000) and post harvest (2003) snag and CWD data within a LSR enhancement project (Crooked Alder) to determine the effectiveness of CWD enhancement in conjunction with the timber sale contract requirements. The data indicates that overall, the volume of CWD increased from 244 cu/ft/ac to 3,164 cu/ft/ac and the number of pieces of CWD increased from 7.5 pieces/ac to 120 pieces/ac.

10. Avoid road construction. *Where road building is necessary, ensure that the realized restoration benefits far outweigh the adverse impacts of the road. Rank new road segments according to their relative costs (e.g. length, slope position, soil type, ease of rehabilitation, weed risk, native vegetation impacts, etc.) and benefits (e.g. acres of restoration facilitated), then use that ranking to consider dropping the roads with the lowest ratio of benefits to costs. Do not allow log hauling during the wet season.*

Response: The majority of the new construction consists of relatively short spur roads and they would provide the ability to treat an appropriate amount of area. The following table includes the length of each new road to be constructed and the number of acres accessed by each road and then computed the cost:benefit ratio of the number of acres treated per mile of road construction.

Road #	Primary Road Work	Miles	Associated Unit Acres	Acres of Unit/Mile of Road
P1	New	0.07	7	100
P2	New	0.19	29	153

11. Make the NEPA analysis transparent and explicit on all these issues.

Response: This Decision Rationale and Final Decision document includes the entire list of comments received from Oregon Wild concerning the Environmental Assessment for Yamaha LSR Enhancement Project 1. We believe we have provided responses to the comments in a clear

and concise manner.

American Forest Resource Council, Jacob Groves
November 7, 2007

1. **Comment:** *“The AFRC would like to see all timber sales be economically viable.”*

Response: 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 Interdisciplinary Team of specialists including those in EA section 8.0, Table 14, come to a consensus on what alternative to pursue for analysis. Alternatives

2. **Comment:** *“The AFRC would prefer to have units not tied to a specific harvesting system, instead specify what the end result of the unit should be...and allow the purchaser to select the most appropriate harvesting system to achieve the goals of the BLM.”*

Response: Harvesting systems are based Best Management Practices (RMP Appendix C-1) design features. These design features are intended to maintain or improve water quality and soil productivity, and prevent or mitigate adverse impacts while meeting other resource objectives. The purchaser has the discretion to choose the type of equipment for various harvesting systems.

3. **Comment:** *The AFRC supports the proposed action since it utilizes appropriate harvesting systems, road construction, reconstruction and renovation that will help offer the project as a viable timber sale. The new road construction can be removed after logging operations.*

Response: The BLM chose the proposed action after considering an array of harvesting systems in conjunction with road construction, reconstruction and renovation and then assessed the environmental effects versus the benefit of the road work.

4. **Comment:** *The AFRC would like to see BLM offer sales that allow winter harvesting on improved roads as loggers need winter work and the mills need winter wood making this a big bidding issue for potential purchasers.*

Response: The Yamaha LSR Enhancement Project 1 will provide for year round hauling since the effects of hauling will result in no adverse effects to ESA fish or EFH.

5. **Comment:** *The AFRC would like to see flexibility for fuels treatments. Rather than specifying a specific method, the BLM should identify some specific objectives and limitations to resource disturbance. The purchaser could identify the method to accomplish the objectives utilizing their particular equipment and employees.*

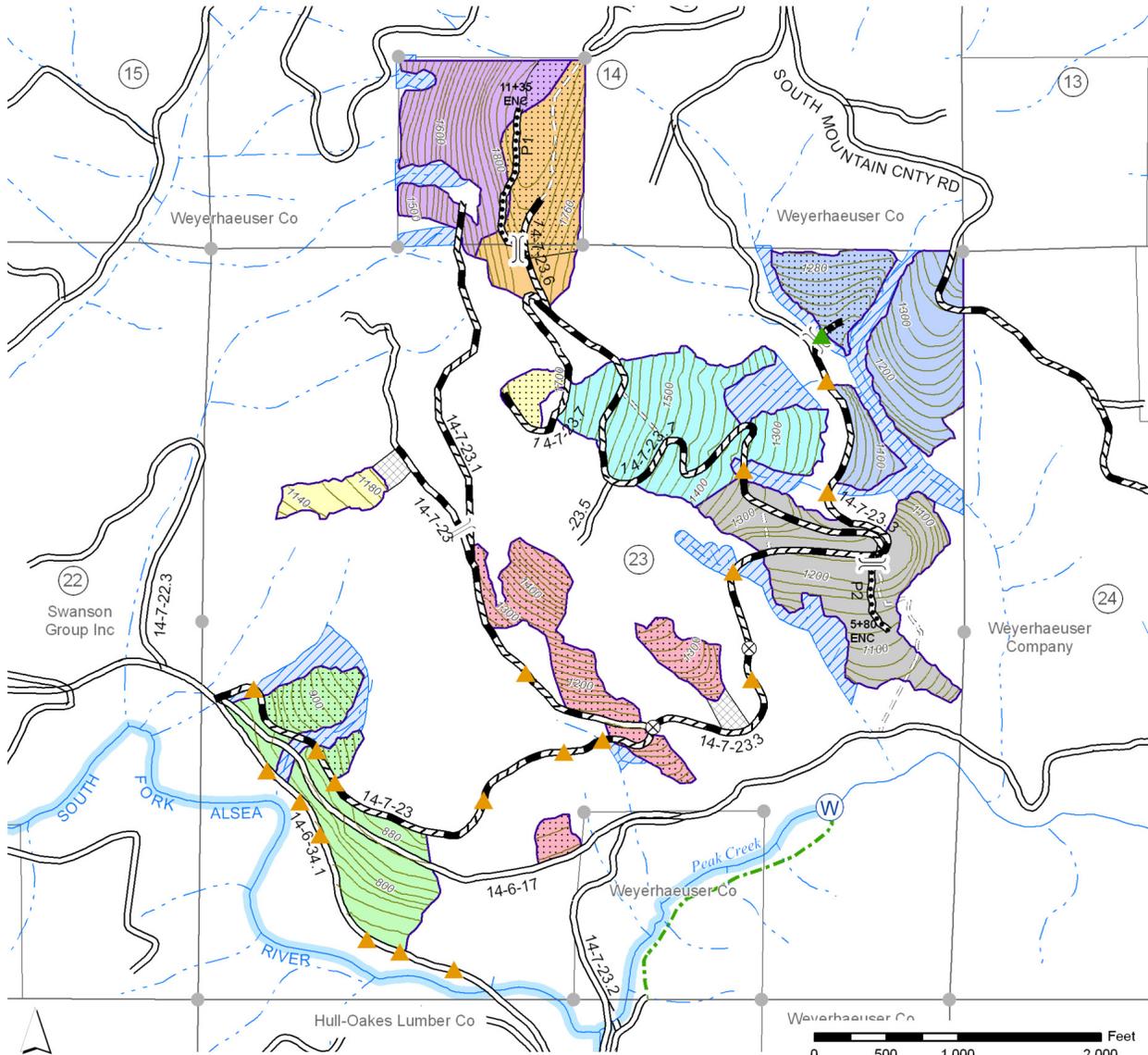
Response: The Project will allow for and the Purchaser is encouraged to find off site alternative uses for slash located on or within 30 feet of the landings and roads in the project area. For example: chipping and hauling the chips to the co-generation plant in Lions a viable alternative to piling. Leaving fuel concentrations untreated along the roads is not an alternative.

6. **Comment:** *The AFRC would like to voice support for thinning treatments in the riparian areas. By utilizing small buffers (25-60 feet) to maintain stream temperatures the BLM can achieve moving the stands toward LSF habitat while harvesting more volume thus reducing unit cost.*

Response: The width of the no cut buffers for this project is 50 feet which falls into the desired range that you indicated you would like to see thinning occur. The primary shade zone (USDI 2005b) width is determined by the existing height of the riparian trees and the slope of the ground in the unit. This distance ranges from 50 to 60 feet slope distance. As mentioned above the minimum no cut width for this project is 50 feet which falls into your desired widths.

Yamaha LSR Enhancement Project 1

T. 14 S., R. 7 W., Sections 14 & 23, W.M. - SALEM DISTRICT - OREGON



- Unit 14A - 16 acres
- Unit 14B - 19 acres
- Unit 23A - 26 acres
- Unit 23B - 22 acres
- Unit 23C - 19 acres
- Unit 23D - 27 acres
- Unit 23E - 6 acres
- Unit 23G - 24 acres
- Selected Stream Protection Zone

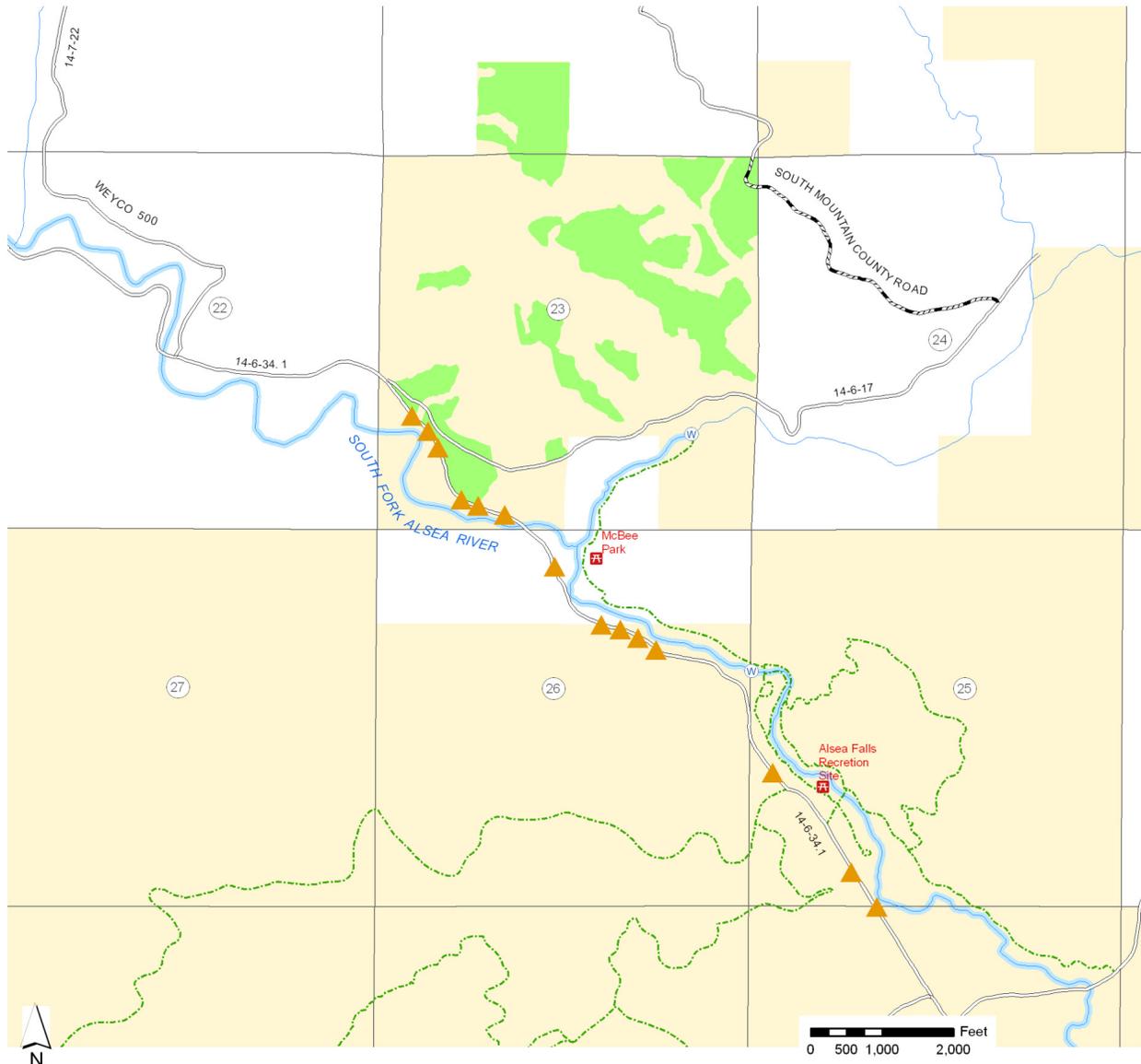
- Ground-Based Yarding
- Skyline Yarding
- Yarding allowed outside unit boundary
- Culvert to be Replaced
- Temporary Culvert to be Installed
- Non-fishbearing stream
- Fishbearing stream
- Essential Fish Habitat/ Endangered Species Act Habitat
- Waterfall

- Road to be Constructed and Decommissioned
- Road to be Renovated and Decommissioned
- Road to be Renovated
- Non-Motorized Trail
- Existing Skid Road
- Existing Road
- OHV Trail
- Barrier to be constructed following harvest operations
- Found Corners

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Yamaha LSR Enhancement Project 1

T. 14 S., R. 7 W., and T. 14 S., R. 6 W., W.M. - SALEM DISTRICT - OREGON



- | | | | |
|---|------------------------|---|---|
|  | Culvert to be Replaced |  | Non-Motorized Trail |
|  | LSR Enhancement |  | Existing road |
|  | Waterfall |  | Road to be Renovated |
|  | Recreation Site |  | Essential Fish Habitat/
Endangered Species Act Habitat |
| | |  | Stream |
| | |  | BLM Managed Land |

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