Highland Fling Thinning Timber Sale

Final Decision, Decision Rationale and Finding of No Significant Impact (DR)

Environmental Assessment Number (EA) # OR080-08-05

August 2010

United States Department of the Interior
Bureau of Land Management, Oregon State Office
Salem District, Cascades Resource Area
Upper Milk Creek and Middle Clear Creek (including Little Cedar Creek) 6th field Watersheds.
Clackamas County Oregon

Willamette Meridian,
T. 3 S., R. 3 E., Section 35;
T. 4 S., R. 3 E., Sections 1, 21, 27, 29.

Responsible Agency:	USDI - Bureau of Land Management
Responsible Official:	Cindy Enstrom, Field Manager Cascades Resource Area 1717 Fabry Road SE Salem, OR 97306 (503) 375-5969
For further information, contact:	Keith Walton Cascades Resource Area 1717 Fabry Road SE Salem, OR 97306 (503) 375-5676

BLM
Salem District

As the Nation's principal conservation agency, the Department of Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering economic use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

BLM/OR/WA/AE-10/059+1792

1.0 Introduction

The Bureau of Land Management (BLM) has conducted an environmental analysis for the Highland Fling Thinning project, which is documented in the *Highland Fling Thinning Environmental Assessment (EA) and Finding of No Significant Impact (FONSI)* approved on March 23, 2010. This EA is incorporated here by reference in this Final Decision, Decision Rationale, and Finding of No Significant Impact (DR). I signed a preliminary Finding of No Significant Impact on March 23, 2010 and made the EA available for public review from March 24, 2010 to April 23, 2010 (DR section 6.0). Substantive comments received during the public review period are addressed in DR section 10.0.

The Highland Fling Thinning project has been divided into two timber sales; the Highland Fling Thinning Timber Sale is the first to be offered. This decision is limited to the Highland Fling Thinning Timber Sale, which is located in: T. 3 S., R. 3 E., Section 35; T. 4 S., R. 3 E., Section 1; T. 4 S., R. 3 E., Section 21; T. 4 S., R. 3 E., Section 27; and T. 4 S., R. 3 E., Section 29, W.M.

Additional units that were analyzed in the Highland Fling Thinning EA will be offered in the Highland Flung Thinning Timber Sale. The BLM plans to offer the Highland Flung Thinning Timber Sale in November 2010 and a separate decision will be prepared for that action

2.0 Decision

I have decided to implement the Highland Fling Thinning Timber Sale as a timber sale consisting of ten of the eighteen units of the proposed action described in the EA (pp. 10-24). The units I will implement in the Highland Fling Thinning timber sale are 35A, B, C and D; 1; 21A and C; 27A and B; and 29B (DR Table 2)[1]. The following is a summary of the decision, hereafter referred to as the "selected action" in this Decision Rationale (DR). The selected action will:

2.1 Timber Harvest

Harvest approximately 446 acres (DR Table 2, DR section 8.0). This harvest includes:

- Thinning 439 acres within the following RMP Land Use Allocations (LUA)
  - 359 acres within the General Forest Management Area (GFMA) portion of the Matrix LUA,
  - 80 acres within the Riparian Reserve LUA.
- Clearing 7 acres of vegetation within the road rights-of-way accessing all sections in the timber sale contract area (DR Table 2).

2.2 Logging Systems

All logging operations will be done using ground based yarding.

2.3 Road Work for Logging and Hauling

- Construct approximately 1.7 miles of new road to access thinning units and accommodate logging equipment and log transport.

[1] DR Table 2 (*DR section 8.0*) shows the selected action by section and the crossover between EA and Timber sale units. The maps (*DR section 9.0*) show the selected action by section.

- Renovate approximately 0.8 miles of unmaintained, currently unusable road to the minimum standard necessary for hauling, including spot rocking, blading, brushing, curve alignment, and tree removal.
- Stabilize and block all natural surface roads (newly constructed or renovated). Stabilizing entails installing water-bars or other shaping of roads for drainage, placing woody debris, and/or seeding with native species. Earth and debris berms or other methods determined to be effective for each site will be used to block these roads.
- Seed approximately 1.5 acres of disturbed soil associated with roads in and adjacent to harvest units.
- Renovate and maintain approximately 2.7 miles of existing, usable road. Renovation and maintenance may include blading and shaping of roadway and ditches, small slide/slump repairs, clearing brush from cut and fill slopes, cleaning or replacing culverts, and applying rock surfacing material to depleted surfaces.
- Replace 1 cross-drain culvert.

2.4 Fuels Treatments

A total of 86 acres in all units will have treatment of the thinning slash following harvest. Treatment includes up to 57 acres of pullback and scatter and up to 29 acres of mechanical slash piling and pile burning. In all units except Unit 3A, slash will be pulled back 100 feet from property lines and scattered so that duff, litter and slash layers do not create a fuel bed deeper than 12 inches above mineral soil. In unit 3A (29 acres) slash will be mechanically piled and covered after thinning operations and burned. After the fuels have cured, piles will be burned in compliance with the Oregon Smoke Management Plan after the fall rains begin, when fire danger is low and soils are moist (EA pp. 19, 23, 100).

Slash which accumulates at logging landings will be placed on skid trails and natural surface roads to stabilize the soil surface, and to prevent use by vehicles after harvest operations.

2.5 Public Access

After the completion of the timber sale:

- Public access to units 7, 8, 9 and 10 in section 35, T. 3 S., R. 3 E. will not be changed as a result of this timber sale. Natural surface roads to be constructed for logging access will be stabilized and blocked.
- Public access to units 6A, 6B and 6C will be reduced by blocking road 4-3E-1 near the west section line/property line. This access was created by private road construction in section 2 that connected the BLM road to the county road without BLM agreement. Closing this road will restore access to previous conditions. No other public access to the area would be changed.
- The existing natural surface road 4-3E-28 that provides vehicle access into the interior of unit 5 in section 29, T. 4 S., R. 3 E., would be stabilized and blocked to prevent vehicle access. Foot and horseback access would not be closed.
- Natural surface roads (both existing and new construction) that access the remaining units will be stabilized and blocked to prevent vehicle access. Foot and horseback access would not be closed.

2.6 Special Forest Products

The BLM will make permits available for collecting Special Forest Products (SFP) (RMP p. 49) from the harvest units if there is a demand for the products, and collection would not interfere with proposed project operations. Special Forest Products are salable natural products that can be found in the forest and may include: edible mushrooms, firewood, posts and poles. Transplants of native plants from road rights-of-way, skid trail locations and landings will be available for permit. Access to the area will be controlled through the Special Forest Products permit requirements.

2.7 Design Features

Project Design Features described in EA section 2.3.4 will be implemented in the timber sale contract.

3.0 Alternatives Considered

1. No Action (EA section 2.4): No commercial timber management actions would occur. Only normal administrative activities and other uses (e.g. road use, programmed road maintenance, harvest of special forest products on public land) would continue on BLM land within the project area.

2. Proposed Action (EA section 2.3): The proposed action analyzed in the EA is a proposal to commercially thin approximately 720 acres including:
   - 91 acres of 28 to 40 year-old Early and Early-Mid Seral Stage[2] timber stands;
   - 564 acres of 41 to 80 year-old Mid and Late-Mid Seral Stage timber stands;
   - 65 acres of 81 to 93 year-old Early Mature Seral Stage timber stands.

   The above acres include rights-of-way acres. Approximately 545 acres are in General Forest Management Area (GFMA) LUA and 175 acres are in the Riparian Reserve LUA. In the proposed action, approximately 98 acres were proposed for skyline yarding and 622 acres for ground-based yarding. Connected Actions include constructing 5.3 miles of new road, maintaining approximately 6 miles of existing road, removing a failing log fill stream crossing, fording one stream at a single crossing point, and reducing forest fuel accumulations on approximately 370 acres.

3. Alternatives considered but not analyzed in detail (EA pp. 25-26): Alternatives were considered for:
   - Treatment of other forest stands within the Riparian Reserve LUA;
   - Installation of a temporary culvert in Randall Creek to provide access to treat unit 29A;
   - No treatment of unit 29A to avoid crossing Randall Creek (not specifically analyzed as a separate alternative because it would be selection of the "no action" alternative for this unit);

[2] Age ranges of stands proposed for treatment are based on 2008 Stand Exam data and are rounded for this presentation. Seral Stage Age Classes are: Early = 0-30; Early Mid = 31-40; Mid = 41-60; Late Mid = 61-80; Early Mature = 81-120; Mature = 121-200; Old Growth = 201+.

- Treatment of unit 21B-4S-3E, dropped from additional analysis when stream mapping updates showed that most of the unit is in Riparian Reserve rather than Matrix and that no treatment was recommended to achieve ACS Objectives;
- Treatment of additional areas in Section 29 of 4S-4E, dropped from additional analysis when trees with old-growth characteristics were found in the stands;
- Addition of a commercial thinning unit in the NW corner of Section 1 - 4S-3E was dropped from further analysis because of a combination of site specific factors;
- Addition of a commercial thinning unit in SW¼SW¼ Section 23 - 4S-3E was dropped from further analysis because field examinations showed that treatment is not needed at this time;
- Management options for an existing network of unauthorized user-created trails in multiple units in the proposed action were dropped from further analysis because this area is not in any designated Special Recreation Management Area (SRMA) and management of recreational facilities is outside of the scope of this project analysis;
- An alternative that would manage stands for carbon storage was not analyzed in detail for reasons described in EA section 2.5 and that this alternative would have the same effects as the No Action alternative.

4. Selected Action (DR sections 2.0, 8.0, DR Table 2): EA units 35A, B, C and D; 1; 21A and C; 27A and B; and 29B of the Proposed Action, item number 2 above, have been selected to form the Highland Fling Thinning timber sale, treating approximately 446 acres of forest stands. This timber sale is a proposal to thin approximately 439 acres of 28-93 year old mixed conifer stands.

   No skyline yarding is included in the selected action. Field assessments of treatment needs for both Matrix and Riparian Reserve objectives, operational feasibility of each potential skyline logging setting, timber volume recovery and the economic return on acres suitable for skyline logging resulted in dropping all skyline yarding that had been included in the proposed action.

   The selected action includes 1.7 miles of new road construction, resulting in 7 acres of clearing. None of the new road construction would take place within the Riparian Reserve land use allocation. (See maps). Crossing Randall Creek is not part of the selected action. See DR section 4.0, bullet #2.

   Approximately 1 mile of the 1.7 miles of new construction is optional, depending upon the purchaser's logging plan to be approved by the BLM (see DR section 9.0 - Maps). Dropping skyline yarding from the selected action changed the location and reduced the amount of road construction in several locations. The road construction for the selected action is within the scope of the road construction analyzed in the EA. Similar to the EA proposed action; new road construction for the selected action would occur in stable locations, on gentle slopes (<20 percent) with stable, vegetated surfaces.

4.0 Decision Rationale

I used the following factors in selecting the alternative that best meets the purpose and need and decision factors described in EA sections 1.2 and DR Table 1.

This section compares the alternatives with regard to the Decision Factors described in EA section 1.2.3 and the project objectives in EA section 1.2.2.

Table 1: Comparison of the Alternatives by Decision Factors and Project Objectives

Decision Factors and Project Objectives	Comparison of Alternatives
a. Provide timber resources and revenue to the government from the sale of those resources (objectives 1 and 2); b. Reduce the costs both short-term and long-term of managing the lands in the project area objectives 1 and 2); and c. Provides safe, cost-effective access for logging operations, fuels management and fire suppression (objectives 2, 6, and 7)	The No Action Alternative would not meet this factor since no timber sale would take place. The proposed action and selected action would provide timber resources to the market.
d. Reduce competition-related mortality and wildfire risk, and increase tree vigor and growth (objectives 1 and 7)	The No Action Alternative would not meet this decision factor. The proposed action and selected action would meet this decision factor. (EA pp. 24-25, 46-47, 64, 72, 78, 94-95, 103, 111-112, 114, 115).
e. Reduce erosion and subsequent sedimentation from roads (objectives 3 and 6)	The no action alternative, proposed action and selected action meet this decision factor. Under the proposed action and selected action, roads would be maintained, reducing the risk of erosion and sedimentation associated with the existing road system. New road construction and renovation would not cause sedimentation. (EA pp. vi, 3, 17-21, 47-64, 64-72)
f. Provide for the establishment and growth of conifer species while retaining structural and habitat components, such as large trees, snags, and coarse woody debris (objectives 4 and 5); g. Promote the development of healthy late-successional characteristics in the Riparian Reserve LUA (objective 4)	Under the no action alternative, stand health and tree growth rates would decline if stands are not thinned. Competition would result in mortality of smaller trees and some co-dominant trees in the stands. This alternative retains existing elements, but does not enhance conditions to provide these elements for the future stand. Trees would continue to grow slowly until reaching suitable size for coarse woody debris, snags and late successional habitat The proposed action and selected action would meet these decision factors. Stand health and tree growth rates would be maintained as trees are released from competition. These alternatives retain the elements described under "no action" on untreated areas of the stands in the project area and encourage development of larger diameter trees and more open stand conditions in treated areas. These conditions add an element of diversity to the landscape not provided on BLM lands under the No Action alternative. (EA pp. vi, viii, 11-12, 21-22, 26-29, 30-31, 35-47, 78-95, 95-103, 112-114, 117-122).
h. Establish a defensible area for use during extended fire suppression activities and possibly reduce the overall size and intensity of a wildfire (objective 7). i. Reduce potential human sources of wildfire ignition by controlling access (objective 7).	The no action alternative, proposed action and selected action meet this decision factor. However, under the No Action Alternative, dense forest stands with high crown densities are more susceptible to a high intensity, stand replacement wildfire that escapes initial attack and could threaten the public and other resources. Under the proposed action and selected action, managed, thinned forest stands are less prone to catastrophic wildfires. Fires that do start tend to be easier to control in managed stands. (EA pp. vii, 14-16, 23, 95-103, 112-114).

Considering public comment, the content of the Highland Fling Thinning EA, the supporting project record, and the management direction contained in the RMP, I have decided to implement the selected action as described in DR section 2.0. The following is my rationale for this decision.

1. No Action Alternative: This alternative was not selected because it does not meet the project objectives or delays the achievement of the project objectives described in EA section 1.2 (EA pp. 2-4) and DR Table 1 (DR section 4.0).

2. Proposed Action:
   - I have selected EA units 3-3-35A, B, C and D; 4-3-1; 21A and C; 27A and B; and 29B as the Highland Fling Thinning Timber Sale, documented as the Selected Action.
   - Units in T. 4 S., R. 4 E. (EA units 4-4-21; 27A,B,C; and 29A,B,C) were not selected because I plan to implement them in the Highland Flung Thinning Timber Sale, which will be documented in a separate Decision Rationale document at a later time.
   - I have deferred decision on treatment of EA unit 4-3-29A and the associated action of removing the failing log fill crossing on a tributary to Randall Creek because of concerns raised in consultation with National Marine Fisheries Service (NMFS) and in public comments. If I implement treatment of this unit and associated actions at another time, I will prepare a separate decision.
   - I have deferred decision on fuels treatments outside of proposed thinning units. If I implement these treatments at another time, I will prepare a separate decision.

3. Selected Action: The selected action implements the Highland Fling Thinning Timber Sale described in the DR section 2.0. The Selected Action
   - Meets the purpose and need of the project as described in the Highland Fling Thinning EA section 1.2 (EA pp. 1-3), and all decision factors (EA pp. 3-4) as shown in DR Table 1 (DR section 4.0).
   - Is consistent with the Salem District Record of Decision and Resource Management Plan and related documents which direct and provide the legal framework for management of BLM lands within the Salem District (EA pp. 4-7, DR sections 5.0, 7.1).
   - Is responsive to concerns for an economically efficient project (EA p. 9).
   - Is responsive to public input (DR sections 10.3, 10.7).
   - Decreases potential for stand replacement fires by (EA pp. vii, 23, and section 3.3.6):
     - Limiting access to the interior of units by closing roads;
     - Reducing potential ignitions by reducing the amount of small diameter, easily ignited fuels from designated areas;
     - Providing ground level fuel breaks adjacent to property lines;
     - Reducing ladder fuels; and
     - Providing access for fire engines and other firefighting resources.
   - Would not contribute to the expansion of invasive/nonnative weed populations (EA pp. vi, 22, 42, 47).
   - Would not have a significant impact on the affected elements of the environment beyond those already anticipated and addressed in the RMP EIS (EA, pp. v-ix, DR section 7.1).
   - Uses the minimum transportation system to facilitate implementation of the project (DR section 2.3).

- Would have no effects on ESA listed fish or their occupied habitat (DR section 6.3).

5.0 Compliance with Direction

The analysis documented in the Highland Fling Thinning 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 was designed under 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 pp. 4-7). All of these documents may be reviewed at the Cascades Resource Area office.

The project also complies with authorities described in EA sections 1.3.2 and 3.3.10.

Survey and Manage Review (EA section 1.3.1): 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. Nevertheless, I have reviewed the Highland Fling Thinning project in consideration of both the December 17, 2009 and October 11, 2006 order.

I have determined that the Highland Fling Thinning project complies with both the December 17, 2009 and October 11, 2006 orders because:

- The Highland Fling Thinning project entails no regeneration harvest;
- Units 3S-3E 35A,B,C,D; 4S-3E 1; 21A,C; and 29B entail thinning only in stands less than 80 years old, I have made the determination that this portion of this project meets Exemption A of the Pechman Exemptions (October 11, 2006 Order).
- Botany: All botanical surveys conducted on the proposed Highland Fling Thinning Timber Sale as well as all proposed timber sale projects within the Cascades Resource Area are conducted to the same standards as was required under Survey & Manage (2001 ROD). Known sites for any listed botanical species in the proposed project area or close proximity are identified, all habitat, with a focus on suitable habitat, is inventoried and all botanical species (vascular plants, lichens, bryophytes and fungi) encountered are identified. All botanical species encountered during survey efforts of the proposed project area are common species with no concern for persistence. (EA pp. 42).
- Wildlife: The *Supplementary Wildlife Report - Highland Fling/Flung* Projects (USDI BLM, 2010) is incorporated by reference. It states that:
  - Units 1 and 2 of the Highland Fling Thinning Timber Sale (T.4S., R.3E., section 27 units A and B (18 acres) are the only units in this sale that are older than 80 years (stand exam age of 93).
  - *Methodology:*
    - These units were surveyed for mollusk species in order to comply with the *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage Mitigation Measures Standards and Guidelines, Forest Service National Forests and Bureau of Land Management Districts Within the Range of the Northern Spotted Owl* (ROD 2001) without Annual Species Reviews (IM-OR-2010-017, Interim NEPA Direction for Survey and Manage Species).
    - Both of the units which are older than 80 years are located outside of the range of the red tree vole (Huff, Biswell et.al., 2002, rev 2008).

- Survey and Manage surveys were conducted according to the latest survey protocol (version 3.0 2003) during the spring (March, May and June) of 2010.

- *Survey Results and Recommendations:*
  - Target species for the surveys were Survey and Manage Species as of ROD 2001.
  - Two mollusk species were found (Oregon megomphix (*Megomphix hemphilli (MEHE)*) and Malone's jumping-slug (*Hemphillia malonei*)).
  - Concurrent with terrestrial mollusk surveys, Oregon slender salamanders were located in the units surveyed. Oregon slender salamanders are addressed in the Highland Fling Environmental Assessment, Section 3.3.5.
  - No buffers are recommended due to the abundance of sites over the geographic range of both species, and the lack of any Bureau status. The scientific rationale provided in the 2001 and 2003 Annual Species Reviews is the currently the best science available.
  - These documents state that these species are more common than previously thought, and the reserve system and other Standards and Guidelines of the NWFP appear to provide for a reasonable assurance of species persistence (ASR 2003, FEIS 2007, App. 8 & 9). In addition, the Oregon megomphix meets the criteria for locally common in all of the units surveyed (MEHE Management Recommendations pp. 17-18). The Management Recommendations for Oregon megomphix allows a higher level of disturbance where this species is locally common, including thinning and other activities.

- *Design Features* (EA sections 2.3.1; 2.3.4 (especially pp. 21-23, 24)):
  Design features that have been incorporated into the selected action that would assure persistence of these species include:
  - Unthinned areas would include the best habitat in Riparian Reserves where most of the hardwood component is located. Large portions of like habitat in the parcels where thinning is proposed would be left unthinned, and thus unimpacted. In T.4S., R.3E., section 27, fifty-five percent of the habitat would be left unthinned.
  - Most of the hardwoods within the thinning unit boundaries would be retained and left standing, including big leaf maple.
  - Due to seasonal restrictions on bark slippage and soil moisture, operations would occur during the dry season when these mollusks are less active.
  - No broadcast burning would occur, and only limited pile and burning would occur in the units.
  - Large coarse woody debris would remain on site, and existing CWD would be left in place whenever feasible.
  - Canopy closures would be maintained above 40 percent, and in some cases over 60 percent.

Therefore the Highland Fling thinning timber sale 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 for units 3-10 (EA Units 3-3-35A,B,C,D; 4-3-1, 21A, 21C, and 29B) would remain valid in such case. Units 1 and 2 (18 acres) of the Highland Fling thinning project (EA Units 4S-3E-27A&B) meet the December 17, 2009 order because these units were surveyed to the standards outlined in the 2001 Survey and Manage Record of Decision (2001 ROD without Annual Species Reviews (ASRs) and the latest survey protocols (DR pp. 9, 10).

6.0 Public Involvement/ Consultation/Coordination

6.1 Scoping

External scoping (seeking input from people outside of the BLM) for this project was conducted by means of a scoping letter sent out to approximately 291 federal, state and municipal government agencies, nearby landowners, tribal authorities, and interested parties on the Cascades Resource Area mailing list on February 20, 2008. In addition, BLM representatives attended the Clarkes-Highland Community Planning Organization meeting on March 05, 2008 to answer questions about the Highland Fling Thinning proposal and solicit comments. Approximately thirty-eight (38) comment letters/emails/postcards were received during the scoping period. The scoping and EA comment letters/emails/postcards are available for review at the Salem District BLM Office, 1717 Fabry Rd SE, Salem, Oregon.

EA section 1.4.2 addresses the topics raised in the comments. Internal scoping was conducted by the Interdisciplinary Team (IDT) through record searches, field reviews and the project planning process.

6.2 EA Comment Periods and Comments

BLM made the Highland Fling Thinning EA and FONSI (Finding Of No Significant Impact) available for public review from March 24, 2010 to April 23, 2010.

BLM representatives (the Decision Maker, a Natural Resource Staff Supervisor and the Highland Fling IDT leader/EA author) attended a field trip at Bark's request during the EA comment period on April 16. One representative of Bark and four local people attended.

Eight comment letters/emails/postcards were received during the EA comment period. These comments are available for review at the Salem District BLM Office, 1717 Fabry Rd. SE, Salem, Oregon.

6.3 ESA Section 7 Consultation

1. U.S. Fish and Wildlife Service (USFWS)

   EA section 5.1.1 describes consultation with USFWS.

   The Highland Fling Thinning selected action "may affect, but is not likely to adversely affect" the northern spotted owl and is "not likely to adversely affect" spotted owl Critical Habitat or to "diminish the effectiveness" of the conservation program due to the modification of dispersal and suitable habitat because (EA pp. 87-88):
   - No dispersal or suitable habitat would be altered or downgraded by the project within the provincial home range of any known spotted owl sites;
   - None of the units are located in LSR or Critical Habitat for spotted owl;
   - Current habitat conditions would be maintained after treatment even though the stands would be altered;

- The presence of nesting spotted owls within 0.5 miles of any of the timber sale units is highly unlikely due to the units' location in rural residential areas in the Willamette Valley.

2. National Marine Fisheries Administration (NMFS)

   Consultation with the National Marine Fisheries Service (NMFS) on effects of the Highland Fling Thinning timber sale on Lower Columbia River (LCR) coho salmon and LCR winter steelhead trout was completed on April 13, 2010 under the programmatic consultation process for timber thinning sales. BLM and NMFS determined that the project effect is a "may affect, not likely to adversely affect" listed fish and/or critical habitat, and also that the effect to essential fish habitat for LCR coho salmon does not exceed the may affect threshold. The project design features for the Highland Fling project are consistent with the design criteria described in the programmatic consultation. Examples include (EA section 2.3.4-2):

   - meeting NW Forest plan standards and guidelines and BMPs for protection of water quality;
   - thinning from below, retaining the dominant/co-dominant trees;
   - meeting or exceeding minimum stream protection buffer widths (e.g. 100 feet on perennial streams and 50 feet on intermittent streams within 1 mile of LFH; and 60 feet on perennial and30 feet on intermittent streams more than 1 mile from LFH);
   - no felling of trees within the primary shade zone on perennial streams;
   - retaining minimum 50% average canopy closure within the secondary shade zone;
   - using existing landings and skid trails to the maximum extent possible;
   - constructing new roads on stable, relatively flat topography;
   - implementing erosion control measures; and
   - no timber transport on natural surface roads during the wet season.

7.0 Conclusion

7.1 Final Finding of No Significant Impact

I have made a final decision on the Highland Fling timber sale. The selected action is described in DR section 2.0. The *Highland Fling Thinning Environmental Assessment* documents the environmental analysis of the proposed commercial thinning activity. The EA is incorporated by reference in this Finding of No Significant Impact determination. The analysis in this EA is site-specific and supplements analyses found in the *Salem District Proposed Resource Management Plan/Final Environmental Impact Statement,* September 1994 (RMP/FEIS). The proposed thinning activities have 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 Section 1.3). The EA and FONSI was made available for public review from March 24, 2010 to April 23, 2010. I received eight comment letters. Response to substantive comments is described in DR section 10.0.

Based upon review of the *Highland Fling Thinning EA* and supporting documents and the public comments I received on this project, I have determined that the selected action is not a major federal action and would not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity as defined in 40 CFR 1508.27.

Therefore, supplemental or additional information to the analysis in the RMP/FEIS in the form of a new environmental impact statement is not needed. This finding is based on the following discussion:

Context:

Potential effects resulting from the implementation of the selected action have been analyzed within the context of the project area boundaries, and the following 6th field watersheds: Middle Clear Creek (including Little Cedar Creek), Upper Clear Creek, Upper Milk Creek and Headwaters of Milk Creek. This project would affect approximately 0.6 percent of the 56,118 acre combined 6th field watersheds listed above. (EA section 1.1, Table 1) [40 CFR 1508.27(a)]

Intensity*:*

1. The resources potentially affected by the proposed thinning activities are: vegetation and forest stand characteristics, hydrology, fisheries and aquatic habitat, soils, wildlife, air quality and fire hazard/risk, carbon storage, carbon emissions and climate change, recreation, visual resources and rural interface areas, and cultural resources. The effects of commercial thinning are unlikely to have significant adverse impacts on these resources [40 CFR 1508.27(b) (1)] for the following reasons:

   - *Project design features* described in EA section 2.3.4 would reduce the risk of effects to affected resources to be within RMP standards and guidelines and to be within the effects described in the RMP/EIS.
   - *Vegetation and Forest Stand Characteristics* (EA section 3.3.1): 1/ No special status vascular plant species or bryophytes would be affected. 2/ Noxious Weeds – Increases in the number of invasive/non-native plants are expected to be short lived because all areas with ground disturbing activities be revegetated with native species (EA section 2.3.4 – 3); and native species would naturally revegetate after thinning activities (EA section 3.3.1.1). 3/ The proposed action would not result in adverse effects to BLM Special Status Species or former Bureau Assessment Species because no suitable habitat for any species known or likely to be present would be lost or altered to a degree that may impact existing populations. Therefore, the project would not contribute to the need to list any BLM Special Status Species.
   - *Hydrology; Fisheries and Aquatic Habitat; and Soils* (EA sections 3.3.2-3.3.4): Road construction would occur on gentle slopes with stable, vegetated surfaces. Gentle to moderate slope gradients in this project area provide little opportunity for surface water to flow. Stream protection zones (60 feet on perennial streams, 30 feet on intermittent streams - increased to 100 feet on perennial and 50 feet on intermittent streams within one mile of listed fish habitat) would maintain current stream temperatures by retaining the current vegetation in the primary shade zone and most of the current levels of shading in the secondary shade zone. Stream protection zones are also expected to prevent sediment as a result of overland flow or surface erosion in logging units from reaching streams during storms of less than a 10 year return interval (EA section 3.3.2). Timber haul and road maintenance project design features would prevent sedimentation delivery to streams in quantities that would exceed Oregon DEQ requirements. In-stream work (standard culvert maintenance) would take place during the dry season/in-water work period to prevent water quality degradation for more than a few hours within a few days time period within ½ mile downstream of the work site. The proposed action will abide by and meet State of Oregon water quality standards.

- *Soils*: Soil compaction is limited to no more than 10 percent of each unit's acreage, with less than 2 percent potential loss of productivity.

- *Wildlife* (EA section 3.3.5): 1/ Stands proposed for thinning are not presently functioning as late-successional old growth habitat, except units 27A and B, which would be maintained as late successional habitat. 2/ Existing snags, remnant old growth trees and coarse woody debris (CWD) would be retained. The few (fewer than 10 percent of existing) large (≥ 15 inches diameter and ≥ 15 feet tall) snags that would be felled for safety or knocked over by falling and yarding operations would be retained as CWD. 3/ No suitable habitat for BLM Special Status species known or likely to be present would be lost. Therefore, the project would not contribute to the need to list any BLM Special Status species. 4/ Thinning would not significantly change species richness (a combination of species diversity and abundance) of the Migratory and Resident Bird community. No species would be extirpated in stands as a result of thinning. 5/ See # 2, for effects to northern spotted owl.

- *Air Quality and Fire Hazard/Risk* (EA section 3.3.6): After 2 to 4 years the fine fuels generated by thinning would be decayed in the units and within 15 years all slash would be decomposed so that the risk of surface fire would decrease to near current levels. The thinning itself would decrease the risk of a canopy fire by reducing ladder fuels and increasing stand vigor. The selected action would comply with State of Oregon Air Quality Standards by strict adherence to smoke management regulations. For example, slash burning would take place when wind and air movement patterns would dissipate smoke within 12 hours, reducing the effect on air quality.

- *Carbon Storage, Carbon Emissions and Climate Change* (EA section 3.3.7):
    - The incremental increase in carbon emissions as greenhouse gasses that could be attributable to the selected action is of such small magnitude that it is unlikely to be detectable at global, continental or regional scales or to affect the results of any models now being used to predict climate change.
    - The retained trees would sequester carbon equal to the amount of carbon from the live trees pool emitted during the first decade of the project within three years after thinning, so the direct impacts are of short duration as well as small magnitude.
    - An equal amount of wood would be harvested and processed from other lands within the region to meet market demand, resulting in zero net difference between the action and no action alternatives on regional carbon storage and global climate change scales.

- *Recreation, Visual Resources, and Rural Interface* (EA section 3.3.7): Changes to the landscape character would be low and would comply with Visual Resource Management guidelines because the project would maintain a forested setting. Some disturbance to vegetation would be observable after thinning activities and would be expected to develop an undisturbed appearance within five years. Within harvest units, existing unauthorized trails would only be inaccessible to recreational users for a short time during harvest operations (a few weeks or months on each unit while active operations would pose safety hazards to recreational users). Although the unauthorized trails would not be protected or maintained by the BLM, recreational access to the project area after timber harvest operations are complete will not be restricted because of the selected action.

2. The proposed thinning activities:

- Would not affect:
  - Unique characteristics of the geographic area [40 CFR 1508.27(b)(3)] - There are no parklands, prime farmlands, wild and scenic rivers, wilderness, or ecologically critical areas located within the project area (EA Section 3.3.10);
  - Districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places, nor would the selected action cause loss or destruction of significant scientific, cultural, or historical resources [40 CFR 1508.27(b)(8)] (EA Section 3.3.10).

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

- Do not set a precedent for future actions that may have significant effects, nor does it represent a decision in principle about a future consideration [40 CFR 1508.27(b) (6)].

- Are not expected to adversely affect Endangered or Threatened Species listed under the Endangered Species Act (ESA) of 1973 [40 CFR 1508.27(b) (9)].
  - ESA Wildlife - Northern spotted owl (EA Section 3.3.5). Effects to the species are not significant because:
    - The project maintains dispersal and suitable habitat, and does not affect suitable owl habitat within and between known owl sites.
    - Habitat conditions are expected to improve as thinned stands mature (>20 years); residual trees would increase in size and be available for recruitment or creation of snags, culls and CWD for prey species and nesting opportunities, particularly in Riparian Reserves. ESA Consultation is described in EA section 5.1.1 and in DR section 6.3.
  - ESA Fish – UWR Chinook salmon, UWR steelhead trout, LCR coho salmon, and LCR steelhead trout (EA Sections 3.3.2, 3.3.3). Final ESA Consultation is described in DR section 6.3. Effects to ESA fish are not significant because:
    - Thinning is not expected to affect these species for the reasons stated in the Hydrology section, above (FONSI #1).
    - The temporary ford on Randall Creek has been dropped from the selected action.
    - The log haul route from unit 3-3-35B crosses ESA fish habitat in Little Clear and Mosier Creeks. Effects of the log hauling are not significant because hauling would be conducted in summer when road surfaces are dry, and because approaches to the stream crossings drain water away from the streams, and ditches are densely vegetated with no sign of sediment movement from road surfaces.
    - New road construction would be located in stable locations and would not contribute to degradation of aquatic habitat.
- Do not violate any known Federal, State, or local law or requirement imposed for the protection of the environment [40 CFR 1508.27(b) (10)] (EA Section 1.3).

3. The Interdisciplinary Team (IDT) evaluated the project area in context of past, present and reasonably foreseeable actions [40 CFR 1508.27(b) (7)] and determined that there is a potential for cumulative effects on water quality and fisheries, and on carbon storage. These effects are not expected to be significant for the following reasons:

- Water Quality/Fisheries: The selected action would be expected to temporarily increase stream sediment and turbidity as a result of culvert replacement, road renovation, and road maintenance. There is a theoretical potential for increases in stream sediment and turbidity as a result of thinning and logging operations (EA Sections 3.3.2 -3.3.4). These effects are not expected to be significant for the following reasons:
  - Any sediment increase resulting from thinning would be too small to be discernable relative to background sediment yields, would not be expected to exceed ODEQ water quality standards and would decrease quickly over time, returning to current levels within three to five years as vegetation increases (Dissmeyer, 2000).
  - The limited magnitude (less than 0.3 percent of the total 6th field watershed sediment supply, an undetectable change) and duration (primarily major storm events during the first year following disturbance) of this effect would likely be insignificant for water quality on the watershed scale.
    Cumulatively, the selected action and connected actions would be unlikely to result in any detectable change for water quality on a sixth or seventh field watershed scale and would be unlikely to have any effect on any designated beneficial uses, including fisheries. (EA Section 3.3.3.2)

- Carbon storage and carbon emissions (EA section 3.3.7): The proposed thinning would contribute to cumulative effects to carbon storage and carbon emissions. The effects are not significant for the following reasons:
  - The incremental increase in carbon emissions as greenhouse gasses that could be attributable to the selected action is of such small magnitude that it is unlikely to be detectable at global, continental or regional scales or to affect the results of any models now being used to predict climate change. The proposed thinning would contribute to cumulative effects to carbon storage and carbon emissions by emitting 5,052 tonnes of Carbon over the next 10 years (Table 17, Item 11) which is approximately 0.000007 percent of average global emissions (Table 18, Items E, E-1).
  - Tables 17and 18 of the EA show that carbon emissions resulting from the proposed thinning over the next 10 years would total 5,052 tonnes of (0.000005 Gt) of carbon or 18,541 tonnes (0.000019 Gt) of carbon dioxide (tonnes C*3.67). Current annual global emissions of carbon dioxide total 25 Gt of carbon dioxide, (IPCC 2007, p. 513), and current annual U.S. emissions of carbon dioxide total 6 Gt (EPA 2007, p 2-3. Therefore, the short-term (1-10 years) emissions of carbon from the proposed thinning would constitute 0.000007 percent of current global emissions and 0.00003 percent of current U.S. emissions. The incremental increase in carbon emissions as greenhouse gasses that could be attributable to the selected action is of such small magnitude that it is unlikely to be detectable at global, continental or regional scales or to affect the results of any models now being used to predict climate change.
  - In addition, the net carbon emissions would be of short duration. The remaining trees in the project area would sequester approximately 2,255 tonnes of carbon per year, restoring the carbon loss from fuel burning, harvested wood, and harvest operations emissions within three years after thinning (Tables 17 and 18, EA section 3.3.7).

Over the thirty years following the proposed thinning, the increase of 28,056 tonnes of live tree carbon would contribute to an annual average of 0.0012 percent of the U.S. annual accumulation of carbon from forest management of 0.191 Gt - or 0.13 percent of the annual accumulation of 0.00169 Gt of carbon as a result of current implementation on BLM-managed lands in western Oregon. (2008 FEIS, p. 4-537).

7.2 Administrative Review Opportunities

The decision described in this document is a forest management decision and is subject to protest by the public. In accordance with Forest Management Regulations at 43 CFR 5003, protests of this decision may be made within 15 days of the publication of a notice of decision in a newspaper of general circulation. The notice for this decision will appear in the *Molalla Pioneer* newspaper on August 18, 2010. The planned sale date is September 15, 2010.

To protest this decision a person must submit a written protest to Cindy Enstrom, Cascades Field Manager, 1717 Fabry Rd SE, Salem, Oregon 97306 by the close of business (4:30 p.m.) on September 2, 2010.

The regulations do not authorize the acceptance of protests in any form other than a signed, written and printed original that is delivered to the physical address of the advertising BLM office. The protest must clearly and concisely state the reasons why the decision is believed to be in error. Any objection to the project design or my decision to go forward with this project must be filed at this time in accordance with the protest process outlined above. If a timely protest is received, this decision will be reconsidered in light of the statements of reasons for the protest and other pertinent information available and shall serve a decision in writing on the protesting party (43 CFR 5003.3).

7.3 Implementation Date

If no protest is received within 15 days after publication of the notice of decision, this decision will become final. For additional information, contact Keith Walton (503) 375-5676 or Rudy Hefter (503) 315-5671, Cascades Resource Area, Salem BLM, 1717 Fabry Road SE, Salem, Oregon 97306.

Approved by: Cindy Enstrom — 8/17/2010

Cindy Enstrom
Cascades Resource Area Field Manager

Date

8.0 Selected Action by Section

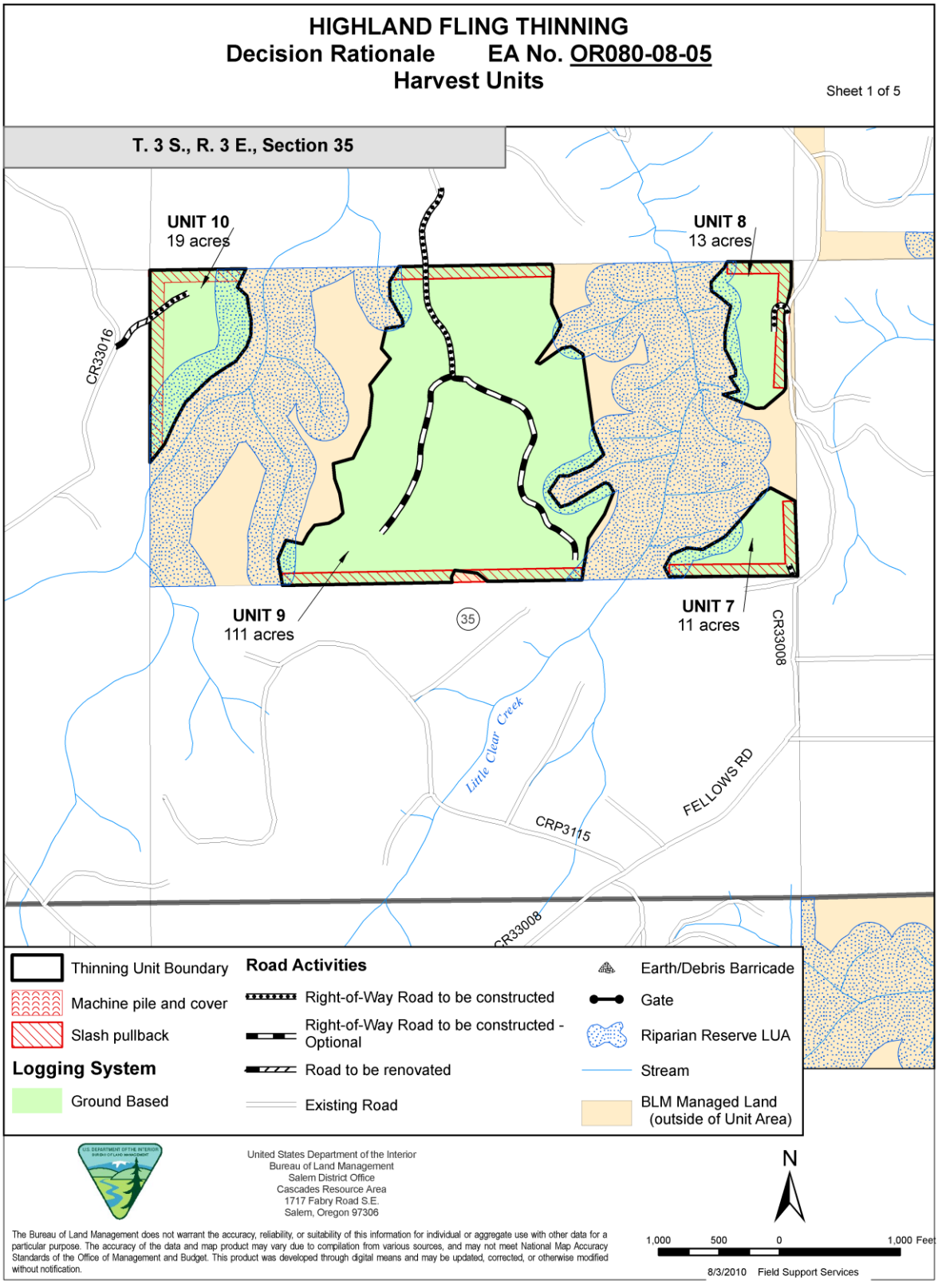
Table 2: Selected Action by section, unit, LUA and yarding method.

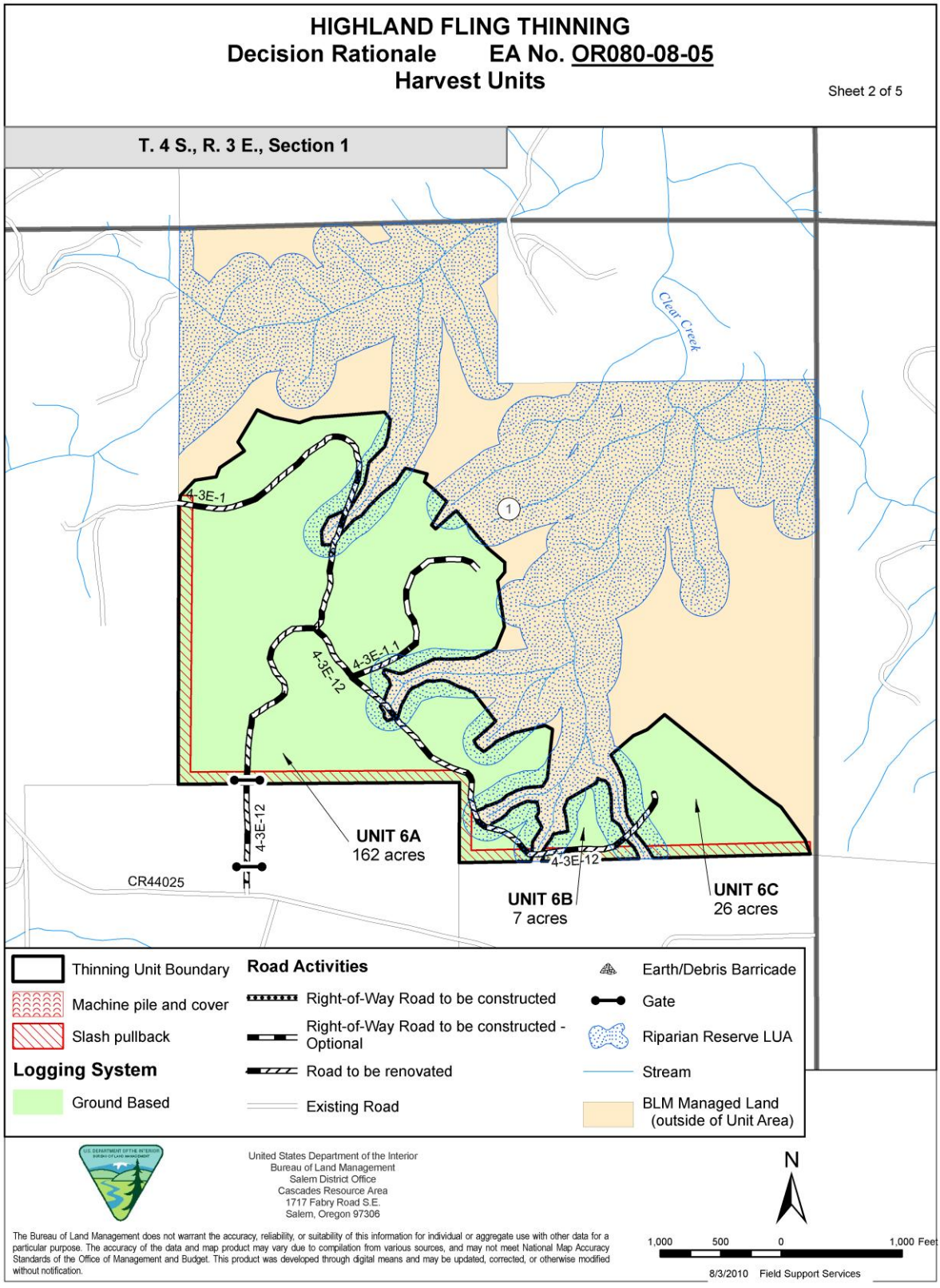
EA Unit No.	Stand Age	EA Unit Acres	Timber Sale Unit No.	Timber Sale Unit Acres	Acres by Harvest Method and Land Use Allocation (LUA)							Timber Sale Acres by Section	Remarks
					Thinning by LUA		Road Const. & Renovation						
					Ground Based Yarding		Road Miles			Clearing Road R-o-W			
					Riparian Reserve	Matrix	New on BLM	Reno-vation	New on Private	Riparian Reserve	Matrix		
3-3-35A	60	19	10	19	9	10	0.1	---	---	0	0+	154	
35B	48-60	111	9	111	5	102	0.9	---	0.1	0	4		Incl. 0.7 mile optional road, some on old RR grade.
35C	43	11	8	13	3	10	0.1	---	---	0	0+		
35D	43-48	10	7	11	2	9	0+	---	---	0	0+		
4-3-1	51-61	256	6 A,B,C	195	28	166	0.3	---	---	0	1	195	New const. is optional.
4-3-21A	59	10	4	7	5	2	0+	---	0.1	0	0+	59	
21C	61,64	54	3 A,B	52	11	40	---	0.3 BLM	---	0+	1		
4-3-27A	93	25	2	16	4	11	0.1	0.3 Pvt.	0+	0	1	18	
27B	93	3	1	2	2	0	0+	---	---	0	0+		
4-3-29B	28	20	5	20	11	9	---	0.2 BLM	---	0+	0+	20	
Total Acres		519		446	80	359	1.5	0.8	0.2	0+	7	446	
	Total Acres by Yarding Type				439					446			R-o-W clearing uses ground based yarding.
	Total Acres by Land Use Allocation				Riparian Reserve = 80					Matrix = 366			

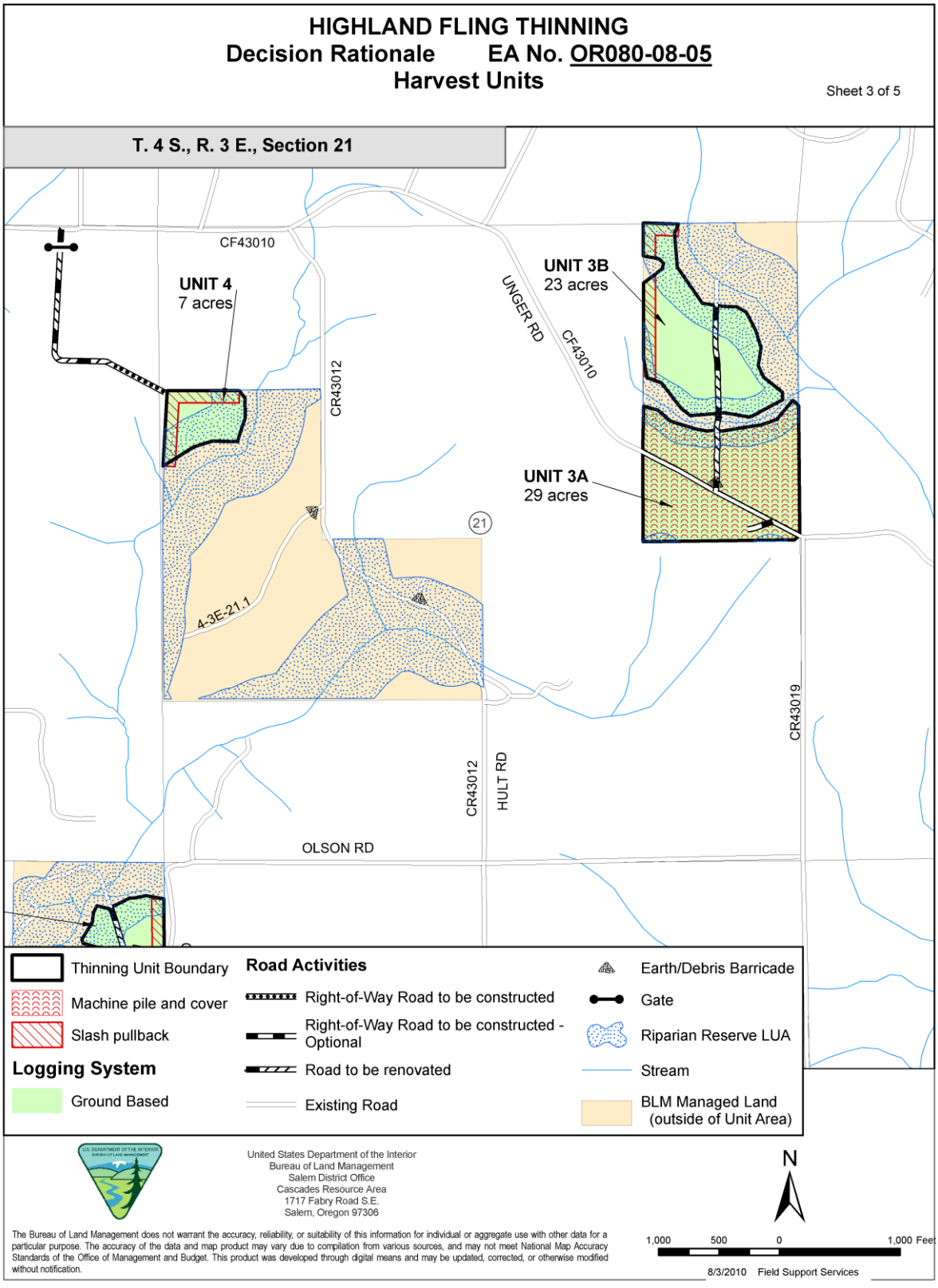
Notes: 0+ indicates less than 0.5 acre or 0.05 mile. 0.5 acre is rounded to 1. Acres rounded to nearest full acre. New construction Right-of-Way clearing averages 30 feet wide, or approximately1/4 mile of R-o-W clearing per acre. Clearing for renovated roads calculated using half of new construction acreage. Miles rounded to 0.1. "Renovation" refers to unmaintained, currently unusable road to be renovated to useable condition under original design standards. All new and renovated roads are natural surface (dirt).

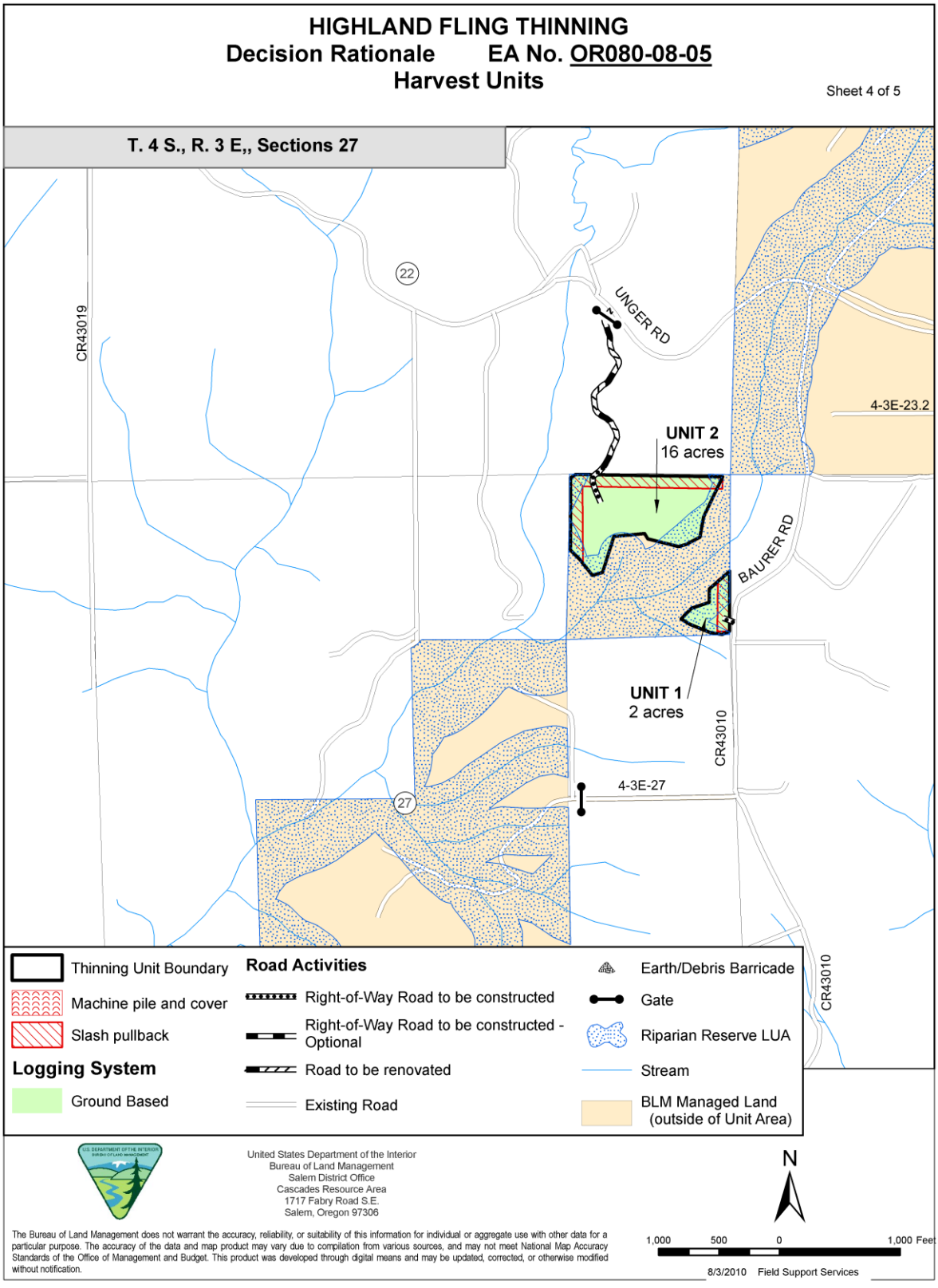
9.0 Maps

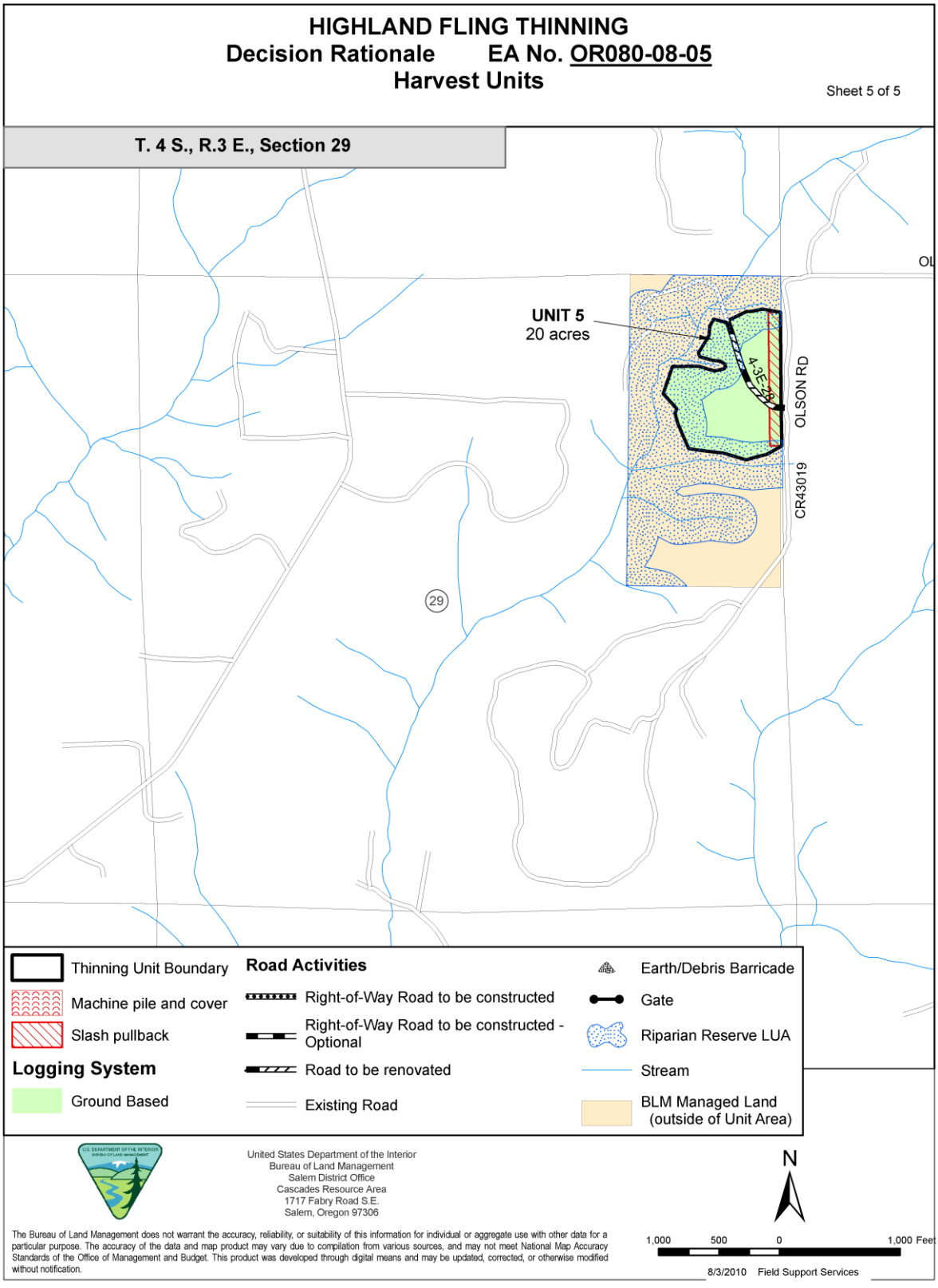
The next five pages show maps of T3S, R3E section 35; and T4S, R3E sections 1, 21, 27, and 29.


HIGHLAND FLING THINNING
Decision Rationale EA No. OR080-08-05
Harvest Units
Sheet 1 of 5
T. 3 S., R. 3 E., Section 35
UNIT 10
19 acres
UNIT 8
13 acres
UNIT 9
111 acres
UNIT 7
11 acres
CR33016
CR33008
CRP3115
FELLOWS RD
Little Clear Creek
35
Thinning Unit Boundary
Machine pile and cover
Slash pullback
Logging System
Ground Based
Road Activities
Right-of-Way Road to be constructed
Right-of-Way Road to be constructed - Optional
Road to be renovated
Existing Road
Earth/Debris Barricade
Gate
Riparian Reserve LUA
Stream
BLM Managed Land (outside of Unit Area)
United States Department of the Interior
Bureau of Land Management
Salem District Office
Cascades Resource Area
1717 Fabry Road S.E.
Salem, Oregon 97306
The Bureau of Land Management does not warrant the accuracy, reliability, or suitability of this information for individual or aggregate use with other data for a particular purpose. The accuracy of the data and map product may vary due to compilation from various sources, and may not meet National Map Accuracy Standards of the Office of Management and Budget. This product was developed through digital means and may be updated, corrected, or otherwise modified without notification.
N
1,000 500 0 1,000 Feet
8/3/2010 Field Support Services


HIGHLAND FLING THINNING
Decision Rationale EA No. OR080-08-05
Harvest Units
Sheet 2 of 5
T. 4 S., R. 3 E., Section 1
Clear Creek
4-3E-1
4-3E-1.1
4-3E-12
4-3E-12
4-3E-12
UNIT 6A
162 acres
UNIT 6B
7 acres
UNIT 6C
26 acres
CR44025
Thinning Unit Boundary
Machine pile and cover
Slash pullback
Logging System
Ground Based
Road Activities
Right-of-Way Road to be constructed
Right-of-Way Road to be constructed - Optional
Road to be renovated
Existing Road
Earth/Debris Barricade
Gate
Riparian Reserve LUA
Stream
BLM Managed Land (outside of Unit Area)
United States Department of the Interior
Bureau of Land Management
Salem District Office
Cascades Resource Area
1717 Fabry Road S.E.
Salem, Oregon 97306
N
1,000 500 0 1,000 Feet
8/3/2010 Field Support Services
The Bureau of Land Management does not warrant the accuracy, reliability, or suitability of this information for individual or aggregate use with other data for a particular purpose. The accuracy of the data and map product may vary due to compilation from various sources, and may not meet National Map Accuracy Standards of the Office of Management and Budget. This product was developed through digital means and may be updated, corrected, or otherwise modified without notification.


HIGHLAND FLING THINNING
Decision Rationale EA No. OR080-08-05
Harvest Units
Sheet 3 of 5
T. 4 S., R. 3 E., Section 21
CF43010
UNIT 4
7 acres
CR43012
UNGER RD
CF43010
UNIT 3B
23 acres
UNIT 3A
29 acres
21
4-3E-21.1
CR43019
CR43012
HULT RD
OLSON RD
Thinning Unit Boundary
Machine pile and cover
Slash pullback
Logging System
Ground Based
Road Activities
Right-of-Way Road to be constructed
Right-of-Way Road to be constructed - Optional
Road to be renovated
Existing Road
Earth/Debris Barricade
Gate
Riparian Reserve LUA
Stream
BLM Managed Land (outside of Unit Area)
United States Department of the Interior
Bureau of Land Management
Salem District Office
Cascades Resource Area
1717 Fabry Road S.E.
Salem, Oregon 97306
The Bureau of Land Management does not warrant the accuracy, reliability, or suitability of this information for individual or aggregate use with other data for a particular purpose. The accuracy of the data and map product may vary due to compilation from various sources, and may not meet National Map Accuracy Standards of the Office of Management and Budget. This product was developed through digital means and may be updated, corrected, or otherwise modified without notification.
N
1,000 500 0 1,000 Feet
8/3/2010 Field Support Services


HIGHLAND FLING THINNING
Decision Rationale EA No. OR080-08-05
Harvest Units
Sheet 4 of 5
T. 4 S., R. 3 E,, Sections 27
CR43019
22
UNGER RD
4-3E-23.2
UNIT 2
16 acres
BAURER RD
UNIT 1
2 acres
CR43010
4-3E-27
27
CR43010
Thinning Unit Boundary
Machine pile and cover
Slash pullback
Logging System
Ground Based
Road Activities
Right-of-Way Road to be constructed
Right-of-Way Road to be constructed - Optional
Road to be renovated
Existing Road
Earth/Debris Barricade
Gate
Riparian Reserve LUA
Stream
BLM Managed Land (outside of Unit Area)
United States Department of the Interior
Bureau of Land Management
Salem District Office
Cascades Resource Area
1717 Fabry Road S.E.
Salem, Oregon 97306
The Bureau of Land Management does not warrant the accuracy, reliability, or suitability of this information for individual or aggregate use with other data for a particular purpose. The accuracy of the data and map product may vary due to compilation from various sources, and may not meet National Map Accuracy Standards of the Office of Management and Budget. This product was developed through digital means and may be updated, corrected, or otherwise modified without notification.
N
1,000 500 0 1,000 Feet
8/3/2010 Field Support Services


HIGHLAND FLING THINNING
Decision Rationale EA No. OR080-08-05
Harvest Units
Sheet 5 of 5
T. 4 S., R.3 E., Section 29
UNIT 5
20 acres
4-3E-29
OLSON RD
CR43019
29
Thinning Unit Boundary
Machine pile and cover
Slash pullback
Logging System
Ground Based
Road Activities
Right-of-Way Road to be constructed
Right-of-Way Road to be constructed - Optional
Road to be renovated
Existing Road
Earth/Debris Barricade
Gate
Riparian Reserve LUA
Stream
BLM Managed Land (outside of Unit Area)
United States Department of the Interior
Bureau of Land Management
Salem District Office
Cascades Resource Area
1717 Fabry Road S.E.
Salem, Oregon 97306
The Bureau of Land Management does not warrant the accuracy, reliability, or suitability of this information for individual or aggregate use with other data for a particular purpose. The accuracy of the data and map product may vary due to compilation from various sources, and may not meet National Map Accuracy Standards of the Office of Management and Budget. This product was developed through digital means and may be updated, corrected, or otherwise modified without notification.
N
1,000 500 0 1,000 Feet
8/3/2010 Field Support Services

10.0 Response to Comments Received during the EA Comment Period:

Having reviewed all of the comments I received following the EA comment period (March 24-April 23, 2010), I have summarized them into the following categories: Authorities, Land Use Allocations, Public Involvement, Alternatives, Thinning, Road Construction, Aquatic, Riparian Reserve and Riparian Habitat, Soils, Special Status Species, Snags, Spotted Owl Habitat and Threatened/Endangered Species, Carbon and Climate Change, and Cultural Resources.

10.1 Authorities

1. *By allowing more than 15 years to pass without a revision, the district is out of compliance with the Federal Land and Policy Management Act… the district should begin the process of evaluating the revision of their management plan beginning with this sale.*

   Response to 1: On July 16, 2009, Secretary of the Interior Ken Salazar withdrew the December 2008 Western Oregon Plan Revision Records of Decision. With the withdrawal of these decisions, BLM forests in western Oregon are again managed under the Northwest Forest Plan, which guided BLM timber sales from 1994 until December 2008. Evaluating a revision of the Salem District Management plan is outside the scope of this project.

10.2 Land Use Allocations

2. *I received comments expressing disagreement with BLM management objectives for Matrix and Riparian Reserve Land Use Allocations. Many asked that the BLM manage for recreational use, and forgo logging.*

   Response to 2: Changing BLM management objectives is outside the scope of this project and is a RMP level decision process. The project is in compliance with the 1995 RMP. 1995 RMP objectives applicable to this project are described in EA section 1.2.2 and 1.3 (EA pp. 2-5).

   The IDT considered management options for a network of unauthorized user-created trails in section 35, T3S, R3E and section 1, T4S, R3E. In response to scoping comments the IDT considered the following options for managing these trails: restoration of the trails after logging operations; developing the trails to meet BLM standards, including access; and obliteration and restoration of trails that are eroding. The IDT determined that no special management action would be taken to either preserve or eliminate these trails under the proposed Highland Fling Thinning project because management of recreational facilities is outside of the scope of this timber sale project. EA section 3.3.8 describes the effects of the project on Recreation (EA p. 26).

   Forgoing logging within the project area is described in the No Action Alternative of the EA. The effects of the no action alternative are described for each resource in EA section 3.0. The no action alternative does not meet the purpose and need for the project (EA pp. 121-122).

Within the Matrix land use allocation (LUA), the purpose of the project is to implement both long and short term timber management objectives while providing for water quality and habitat. Within the Riparian LUA, the purpose of the project is to enhance wildlife habitat characteristics while protecting water quality. (EA pp. 2-3)

3. *Will the forests in Sections 1 and 35 still be there in 30 years?*

   Response to 3: This comment is outside of the scope of this project. The Salem Resource Management Plan currently directs the management of BLM lands. Resource Management Plans are typically revised on a 10-15 year cycle.

4. *Is the average age for trees in Sections 1 and 35 only 60 years?*
   Does the BLM have records for past logging activities in Section 35?

   Response to 4: Stand characteristics and ring counts collected during stand exams show that the stand ages in those 2 sections ranges from 43 years to 61 years for an average of almost 52 years (Silvicultural Rx pp. 12, 44, 45; DR section 8.0).

   BLM has records of past logging activities that go back prior to the establishment of the Bureau of Land Management as a Federal Agency. For example, a review of these records was shows that when this land was still managed by the General Land Office (GLO), there was timber patent for the N1/2 of section 35, which was terminated in late 1940.

   After that several firewood permits were issued throughout the 1940's. In 1950 a grazing permit was issued for the entire 320 acre parcel, and later renewed until early 1957. Grazing sheep and cattle would certainly inhibit the regeneration of a timber stand, delaying when some of the trees became established, resulting in younger trees.

10.3 Alternatives

5. *Why was there not an alternative that would remove units that are currently experiencing high recreational use by the public?*

   Response to 5: The EA addresses this possible alternative as an alternative considered but not analyzed (EA 2.5, p. 26). As identified in the EA (p. 56) those units experiencing recreational use have a large number of unauthorized trails using surfaces originally used for forestry operations. The general public cannot access these non-system trails because the only access to these trails is through private property. To remove these units would not meet the purpose and need as stated in the EA (1.2.2, p. 2-3). See response to comment #2.

6. *We request that the units in Section 29 that would require use of the road crossing Randall Creek be dropped from the thinning.*

   Response to 6: The Highland Fling Thinning Timber Sale no longer includes the unit referred to by the commenter (DR sections 2.1, 8.0).

7. *The EA should have had an alternative that considered deferring harvest of the older stands.*

Response to 7: Commenter does not define older stands. With regard to an alternative deferring older stands, the No Action alternative is an analysis of no (or deferred) harvest and the effects of the No Action alternative are described in Section 3.0 of the EA by resource.

Age is not necessarily an indication of forest structure. With regard to stands to be thinned, the EA states: "Data analysis and field examinations by BLM staff have identified specific stands in which growth rates will soon decline or have already started to decline, and/or in which structural diversity is limited due to overstocking – that is, the stands contain more trees than the sites have water, nutrients, and growing space to sustain. These overstocked stands in the project area need immediate forest management activities to reduce the number of trees per site to allow remaining trees to have sufficient water, nutrients and space for additional growth to meet RMP objectives" (EA p. 1). The EA (pp. 35-41) shows that these stand characteristics exist in the Highland Fling timber sale, regardless of stand age.

10.4 Thinning

8. *Focus on thinning younger stands and defer older stands. Determining stand age, and the intent of the Pechman exemption.*

Response to 8: See response to comment #7. With regard to determining stand age, BLM uses the most recent scientifically accepted methods for estimating stand density and age. If there is a more technologically advanced and economically feasible way to precisely measure stand density, and overall stand age, the commenter has not given the BLM that information.

With regard to the Pechman exemption, Highland Fling timber sale units 3-10 (Sec. 35, sec. 1, and 4S-3E sections 21 and 29), approximately 428 acres, are in forest stands younger than 80 years old. Using our available best information, as described above, BLM has determined that these timber sale units meet the Pechman exemption for Survey and Manage species (EA p. 6-7, 37; *DR section 5.0*).

Units 1 and 2 (4S-3E section 27), approximately 18 acres, are in forest stands greater than 80 years old. The BLM biologists surveyed the stands to current protocols for "Survey and Manage" Species (DR section 5.0) to comply with Judge Coughenour's December 17, 2009 ruling.

10.5 Road construction

9. *Avoid unnecessary road construction.*

Response to 9: Construction of roads is a capital investment and can have a variety of impacts on the environment.

For these reasons BLM does not construct any more road than is necessary to meet the purpose and need identified in the EA and to implement the proposed action (EA pp. 13-14). The decision to build any new roads has been fully analyzed on pages 75-76 in the EA.

10. *Avoid construction and use inaccessible areas as places to recruit snags and mitigate for the mortality captured by thinning.*

    Response to 10: BLM has not identified any inaccessible areas in the project area. BLM is not thinning 914 acres in the project area (EA pg. 32-33) which will continue to develop snags in a variety of age and size classes.

11. *The project violates Aquatic Conservation Strategy Objective #8, "amounts and distribution of coarse woody debris sufficient to sustain physical complexity and stability."*

    Response to 11: The proposed stream protection zones (no cut buffers) of 30-50 feet (50 feet within 1 mile of listed fish) for intermittent streams and 60-100 feet (100 feet within 1 mile of listed fish) for perennial streams will maintain the current amounts and distribution of CWD as well as maintaining current species composition and structural diversity of plant communities in riparian areas and wetlands. Existing CWD would be retained throughout the Riparian Reserve.

    In addition, trees would be retained throughout the Riparian Reserve, providing for future recruitment of additional CWD. Therefore the project would not prevent the attainment of ACS objective #8 (EA sections 2.3.1; 2.3.4; 3.3.1; 3.3.2; and 3.3.5).

10.6 Aquatic, Riparian Reserve, and Riparian habitat

12. *"It is not sufficient to say that there is a high degree of effective shade, and that therefore temperatures are low enough, or DO and pH within natural parameters."*

    Response to 12: The commenter provides no rationale for why the BLM's analysis is not sufficient.

    Streams temperatures in the project area meet Oregon Department of Environmental Quality (DEQ) water quality standards. Based on field surveys of streams and riparian zones in the project area, review of aerial photographs and IVMP (Interagency Vegetation Mapping Project) data, and effective shade curves, the area hydrologist concluded that effective shade is near to full potential along most of the perennial streams on public lands in the project area with effective shade in the range of 80-95% along stream reaches field reviewed, depending on stream channel orientation with a "near stream disturbance zone" of 25-50 feet. It is precisely because of the high stand density, and hence high effective shade, in this area that some forest stands are proposed for thinning. Therefore, the existing riparian vegetation in the project area is adequate to maintain perennial streams in the temperature range required by the ODEQ under the Clean Water Act because the shade produced does not allow sufficient light to penetrate and increase summer stream temperatures above standards (EA p. 55).

13. *Where are the water intakes for the municipal water supplies, relative to the project area?*

    Response to 13: There are no municipal water intakes within the project area. Three water providers have withdrawals in Clear Creek and Mill Creek, downstream of the project area (Hydrology Report, p. 16, EA p. 54).

14. *This operation will compromise the temperature and sediment levels in the diverse water systems of these valleys.*

Response to 14: The EA (section 3.3.2-3.3.4) describes the effects of the Highland Fling project on temperature and sediment levels in the project area. The EA described project design features (pp. 17-20) that would retain or enhance the existing shade component on all streams. The risk of stream sedimentation is low because the terrain is gentle to moderately sloping providing little opportunity for surface water to flow. Project design features include a contract requirement prohibiting operations during wet conditions, to reduce the risk of generating sediment that could enter streams. For activities that could generate stream sediment, effects to water quality would not be evident more than 1/2 mile downstream of any harvest operation" (EA p. vi, 61).

Preventing erosion and the resulting sedimentation into streams is a critical element in BLM's design and use of roads. Locations and road designs are selected to prevent potential erosion. In addition to location and design, the BLM employs a variety of erosion and sediment control measures, including rock, mulch, debris, seeding, sediment traps, waterbars and potentially other methods designed specifically for individual sites to ensure that the project meets ODEQ standards and the Clean Water Act. Commenter provides no evidence to support his claim.

15. *All roads adjacent, present in or leading to RR should be dropped… road construction is in direct conflict with the goals stated in the Aquatic Conservation Strategy.*

Response to 15: The EA shows how the project meets the Aquatic Conservation Strategy (EA pp. 117-122). The effects of road construction within the Riparian Reserve LUA are described in the EA, pp. 57, 58, 60-61, 71). Commenter has not presented evidence to support their claim that the planned road construction is in conflict with ACS objectives.

10.7 Soils

16. *Commenter has concerns about skyline logging and suggests dropping all skyline yarding from the Highland Fling Thinning plans.*

Response to 16: No skyline yarding is included in the selected action. See DR section 3.0, #4 – Selected Action. The environmental effects of the proposed action harvest activities are found in EA section 3.3.4.1, pp. 74-77. Pages 60-61 also address tree harvest and yarding direct and indirect effects. To protect soils, project design features require that the leading ends of logs be lifted free of the ground during yarding. This action prevents gouging of the soil by the leading end of logs being yarded and allows the logs to ride on top of the slash to reduce the weight in contact with the ground, reducing potential for any compaction (EA pp. 18, 19).

10.8 Special Status Species

17. *"The Cumulative Effects section was not adequate with respect to SSS."*
How were the following species dealt with (a) species recently transferred from Survey and Manage to SSS programs, (b)rare species found within Riparian Reserves,

(c) other SSS not transferred from S & M, but of concern to other agencies. What is the effect on lichens and fungi species? The short paragraph on P. 39 is not an adequate response to my scoping comments, nor perhaps to the most recent Survey and Manage court decision. The 'effects' section on p. 42 is conclusory and also an inadequate response to my scoping comments." Request more detail on the surveys for botanical special status species of lichen, bryophytes, fungi, and vascular plants? What about SSS mollusks, are they all terrestrial, were there surveys for aquatic mollusk species? Request more detail on species surveyed for.

Response to 17: Regardless of which list a species may be attached to, all species are treated individually and if protection is needed or required, appropriate protection is provided.

All botanical surveys conducted on the proposed Highland Fling Thinning Timber Sale as well as all proposed timber sale projects within the Cascades Resource Area are conducted to the same standards as was required under Survey & Manage (2001 ROD). Known sites for any listed botanical species in the proposed project area or close proximity are identified, all habitat, with a focus on suitable habitat, is inventoried and all botanical species (vascular plants, lichens, bryophytes and fungi) encountered are identified. All botanical species encountered during survey efforts of the proposed project area are common species with no concern for persistence. The proposed project area contains no T&E species or suitable habitat (EA pp. 42).

Methodology for the analysis of Special Status Botanical species are described in the EA pp. 28, 29 and results are described in the EA, p. 42.

Methodology for the analysis of Special Status animal species are described in the EA pp. 30, 31 and results are described in the EA, pp. 82-83.

See DR section 5.0.

10.9 Snags, Spotted Owl Habitat, and Threatened/Endangered Species

18. *Thinning captures mortality reducing and delaying recruitment of snags having a negative effect on habitat development for spotted owls and dead wood availability to streams for pool formation.*

Response to 18: The EA fully assessed the impacts of thinning on current and future snag recruitment both in the matrix and riparian reserve land use allocations (EA pp. 86, 87, 92, 94). BLM does not disagree that thinning "captures future mortality".

The majority of this future mortality would consist of the smaller suppressed trees that the project is targeting for removal (EA pp. 86). The EA fully analyzed the effects of thinning on dead wood. Science has demonstrated that the larger snags receive greater wildlife use (EA, page 81, Table 10). The project identified a shortage of large diameter snags (greater than 20" dbh) in the Riparian Reserve LUA. Development of spotted owl habitat is an objective for the Matrix LUA (RMP, page 20). Based on the areas that are being deferred from treatment, the no cut buffers along all stream courses and the numbers of trees being retained following thinning in the Riparian Reserves, there will be ample dead and live wood in the near and long term for pool development.

19. *BLM relies on scientifically discredited potential population methods of determining how many snags need to be provided.*

Response to 19: The NWFP and Salem District RMP are the current management guidelines for the Salem District. The "intent of the Northwest Forest Plan and RMP" directs BLM's land management activities, including the Highland Fling Thinning project. Changing management standards for the NWFP and the Salem District RMP are outside the scope of this project. The NWFP and current RMP continue to be in accordance with the O&C Act, Endangered Species Act, Clean Water Act, and other applicable laws. BLM has no new land management mandates or direction to manage for snag levels greater than those in the 1995 RMP.

BLM has considered recent science concerning wildlife management, including snag management (EA, pp. 79, 86, 92). BLM has fully addressed snags and down wood in the EA (pp. 86-87, 92, 94).

20. *BLM should design thinning projects in the matrix to support abundant and diverse populations of owl prey species for spotted owls.*

Response to 20: As stated in the EA page 82 the majority of the project area is not suitable owl habitat. The Highland Fling Thinning units are in the Willamette Valley, BLM's ownership consists of scattered parcels bordered primarily by small private land owners (less than 80 acres) and in some areas industrial timber lands. Thus, BLM's ownership in the project vicinity does not constitute larger forested areas, even if adjacent ownerships are considered, that are adequate to support spotted owls (EA, p. 92). Therefore, it is not reasonable to manage for spotted owl prey species in the project area.

If spotted owls were to visit the area it is anticipated that the prey species that are currently available in the areas proposed for thinning would continue to be present following thinning (EA, p. 92). Additionally, prey species populations would remain relatively unchanged in the areas not proposed for thinning at this time.

21. *Thinning in the matrix must be restorative and variable for spotted owl habitat.*

Response to 21: The EA fully evaluated the projects effects on the Northern Spotted Owl (EA, 87 - 89, Table 12). The Highland Fling project area has very low potential as spotted owl habitat (see response to comment #18). BLM also consulted with the U.S Fish and Wildlife Service and received a Letter of Concurrence (LOC) of "not likely to adversely affect" (EA, p. 93). Project design features to further protect the northern spotted owl and its habitat are described in the EA (pp. 22-24).

22. *Manage for habitat diversity through the creation of gaps and developing decadence.*

Response to 22: Managing for habitat diversity was addressed in the purpose and need within the Riparian Reserve portion of the Highland Fling project (EA, pg. 3). The EA fully addresses the project's effects on habitat diversity across the landscape (EA sections 3.3.1 and 3.3.5). The RMP does not direct BLM to manage for structurally complex stands that optimize snags or "old growth" conditions in the Matrix LUA.

23. *The Highland Fling EA erroneously asserts that there would be no adverse effect on T & E species; especially in regards to spotted owls.*

Response to 23: The project's effects on T & E species and spotted owls in particular were addressed in the EA (pp. 64-65, 82, 87-89). The project area is not currently inhabited by T & E species and for the reasons addressed in the EA most likely will not support T & E species such as spotted owls in the future. See responses 20 and 21.

24. *The cumulative effects analysis is flawed because the statement "Beneficial cumulative effects to CWD, snag habitat and associated species may occur as a result of implementing the projects, since larger trees would be available sooner than without thinning to contribute additional large snags and CWD recruitment in future stands" is not true.*

Response to 24: As discussed on page 81 of the EA, most of the project area is deficient in large snags; those 15 inches in diameter or greater. Large snags provide the highest quality habitat for dead wood reliant species (EA, p.81, Wildlife Report, p.9). Even though mortality rates decline for a period of time following thinning (those trees most likely to die in the short-term, smaller and suppressed trees, are removed in a thinning), mortality is ongoing throughout the life of the stand. Over time, those trees that die following thinning will be larger in size and of higher quality for dead wood dependant species sooner than for unthinned stands.

As discussed in responses to comments #18-19, snag mortality will continue in all existing size classes in those areas not proposed to be thinned and in the no-entry buffers along all perennial stream courses.

10.10 Carbon and Climate Change

25. *The carbon and climate consequences of logging should be fully and accurately disclosed. BLM should review the critique of the Gordon Creek carbon/climate analysis in the Salem BLM's recent Gordon Creek revised EA and the Rickard Creek EA submitted by Oregon Wild.*

Response to 25: The Highland Fling EA thoroughly assessed the consequences of the proposed timber sale on carbon and climate (EA, pg. 103-112). BLM has no legal mandate to avoid or minimize emissions, store more carbon, or apply mitigations to address carbon sequestration or climate change.

I have thoroughly reviewed Oregon Wild's critique of the carbon/climate analysis found in Salem's Gordon Creek revised EA. I have previously responded to the issues raised by Oregon Wild in the Gordon Creek Decision Rationale, April 28, 2009 and my protest response to Oregon Wild April 26, 2010. Additionally, I have thoroughly reviewed Oregon Wild's critique of the carbon/climate analysis found in Salem's Rickard Creek EA. It is my determination that BLM has fully considered the most current science, information presented by the commenter, and that the analysis for the Highland Fling project is appropriate and thorough.

26. *One cannot burn large amounts of fossil fuel to harvest a mature forest and validly make the argument that when the forest is again allowed to mature it is now enhanced with extra capacity to absorb the carbon dioxide released from the fuel previously used to harvest it.*

Response to 26: The EA does not make the argument that the forest would be enhanced with extra capacity to absorb carbon from the atmosphere. The BLM is only stating the amount of carbon expected to be sequestered in live tree carbon by the project area after thinning. The commenter did not provide the BLM with an alternate calculation or expected measurement for carbon sequestration, storage and emissions at the project scale. Information on fuel consumption as well as methodology can be found in EA section 3.3.7 (pp. 103-106).

10.11 Cultural Resources

27. *Are the remains of a settler's cabin in section 1 registered as a historic site… was the State Historic Preservation Office (SHPO) consulted?*

Response to 27: Resource methodology and affected environment are covered in the Highland Fling EA (EA section 3.3.9, p. 114). The only cultural resources found in the project area and vicinity are railroad grades and the remains of a cedar cabin (unit 1-4S3E) thought to have been used by a woodcutter after the original logging in the area. These resources are interesting, but they are not unique and do not provide new or significant information about forest use or domestic life in the early to mid 20th century. The cabin is not a registered historic site, therefore the BLM archeologist was not required to consult on the culture resources found within the project area.