

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
EUGENE DISTRICT OFFICE

DETERMINATION OF NEPA ADEQUACY (DNA)

OFFICE: Siuslaw Resource Area, BLM Eugene District

TRACKING NUMBER: DOI-BLM-OR-E050-2013-012-DNA

PROJECT NAME: Owens Crown Timber Sale

LOCATION/LEGAL DESCRIPTION: T.15 S., R.6 W., Section 33

A. Description of Proposed Action:

The proposed action is to implement the Owens Crown Timber Sale by thinning approximately 155 acres of Late Successional Reserve (LSR) and Riparian Reserves (RR) Land Use Allocations (LUAs). The project site is located within the Long Tom Landscape Plan Environmental Assessment (EA) planning area. The proposed action (including silvicultural prescriptions; logging systems; RR treatments; road construction and renovation; road decommissioning prescription; wildlife, botany, and fuels mitigation measures) is described in the attached "Implementation Prescription".

B. Land Use Plan (LUP) Conformance

The Eugene District initiated planning and design for this project to conform and be consistent with the following:

- Eugene District Record of Decision and Resource Management Plan (RMP), as amended. Date approved: June 1995
- Long Tom Landscape Plan EA. Date approved: July 2011

The proposed action is in conformance with the applicable LUPs because it is specifically provided for in the following LUP decisions:

"If needed to create and maintain late-successional forest conditions, conduct thinning operations in forest stands up to 80 years of age. This will be accomplished by pre-commercial or commercial thinning of stands regardless of origin (planted after logging or naturally regenerated after fire or blowdown)."

(RMP, 1995, p. 30)

In Riparian Reserves "Design and implement wildlife habitat restoration and enhancement activities in a manner that contributes to attainment of Aquatic Conservation Strategy objectives... Manage riparian areas for a late seral stage unless watershed analysis identifies reasons for alternate objectives... Maintain the riparian/wetland conditions within the historic range of conditions as much as can be determined..."

(RMP 1995 p. 42)

C. Identify applicable National Environmental Policy Act (NEPA) documents and other related documents that cover the proposed action.

The proposed action is covered by the Long Tom Landscape Plan EA (July 2011).

Other NEPA documents and related documents that are relevant to the proposed action include:

- Eugene District RMP/Environmental Impact Statement (November 1994) and Record of Decision (June 1995)

- Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage Protection Buffer, and other Mitigation Measures Standards and Guidelines (January 2001)
- U.S. Fish and Wildlife Service Biological Opinion for the Long Tom Landscape Plan (FY 2011)
- Late-Successional Reserve Assessment for the Oregon Coast Province - Southern Portion – RO267, RO268, 1997
- Long Tom Watershed Analysis (2000)
- Owens Crown project analysis file

D. NEPA Adequacy Criteria

1. **Is the new proposed action a feature of, or essentially similar to, an alternative analyzed in the existing NEPA document(s)? Is the project within the same analysis area, or if the project location is different, are the geographic and resource conditions sufficiently similar to those analyzed in the existing NEPA document(s)? If there are differences, can you explain why they are not substantial?**

The proposed thinning is part of the action analyzed in the Long Tom Landscape Plan EA and is contained within the EA analysis area. The current proposed action implements the following specific actions in the selected alternative:

“Forest stands between 30 and 79 years of age would be thinned using two silvicultural techniques to introduce variation in forest structure and complexity. 75% percent of forest stands would be thinned using a proportional thinning technique to relative densities generally ranging from 26 to 35; this activity would occur in stands less than 80 years old at the time of treatment and within the LSR and adjacent Riparian Reserve LUA. Spotted owl dispersal habitat would be maintained to USFWS standards.” (EA, p. 11)

Owens Crown consists of approximately 165 acres that range from about 50 to 79 years of age. The Owens Crown Timber Sale will thin trees to a relative density of 33. Thinning will retain about 104 trees per acre maintaining an average canopy closure of 60 percent at the stand level. This prescription will maintain northern spotted owl dispersal habitat.

“All streams would receive a minimum buffer of approximately 60 feet within which no thinning would occur.” (EA, p.12)

Streams will receive no-harvest buffers as follows:

- Streamside protection buffers are 60 feet on each side of Streams 33-1 (above road 15-6-33.1), 33-4, 33-5, 33-6 (above headwater), 33-7, 33-11 and 33-13.
- Streamside protection buffers are 75 feet on each side of Streams 33-1 (below road 15-6-33.1), 33-2, 33-2a, 33-8, 33-9 and 33-10. Stream buffers are also recommended on the west side of Stream 33-12.

“Roads would be constructed or renovated/improved as needed. Approximately 20 to 30 miles of construction and approximately 170 to 190 miles of renovation/improvement would occur.” (page 16)

Approximately 2,547 feet of new road will be constructed; approximately 2,636 feet of road will be renovated.

“For LSR lands, all newly constructed and non-inventoried roads used for harvest activities; renovated/improved roads within late successional stands that are natural surface or have been rocked to facilitate harvest activities; other existing roads that are not needed for future management will be decommissioned using the design features listed in the EA.”

Approximately 5,183 feet of road (including newly constructed roads) would be decommissioned (see the implementation prescription for design features).

2. Is the range of alternatives analyzed in the existing NEPA document(s) appropriate with respect to the new proposed action, given current environmental concerns, interests, and resource values?

The Long Tom Landscape Plan EA analyzed four alternatives in addition to a no action alternative. The alternatives analyzed a variety of thinning prescriptions and include a range of alternatives. The EA analyzed the effects of thinning on suitable and potentially suitable habitat for northern spotted owls (pp. 29-32) and marbled murrelet habitat (p. 31) and the effects of thinning on spotted owl nest patches (pp. 32-33). The effects of road use and improvements on ACS objectives were analyzed (pp. 24-29). The effects of management activities on the release or storage of carbon were analyzed (pp. 39-41). Comments received were taken into consideration both before and after the alternatives were analyzed. No new environmental concerns, interests, resource values or circumstances have been revealed since the EA was published that would indicate a need for additional alternatives.

3. Is the existing analysis valid in light of any new information or circumstances (such as, rangeland health standard assessment, recent endangered species listings, updated list of BLM-sensitive species)? Can you reasonably conclude that new information and new circumstances would not substantially change the analysis of the new proposed action?

There is no significant new information or circumstance relative to the analyses in the Long Tom Landscape Plan EA and the current proposed action. The project is not located in the 2012 northern spotted owl critical habitat designations; it is located within marbled murrelet critical habitat unit OR-04-J. The Revised Recovery Plan for the Northern Spotted Owl (USDI-FWS, Revised Recovery Plan for the Northern Spotted Owl 2011), (USDI-FWS, Revised Critical Habitat for the Northern Spotted Owl; Final Rule (FWS-RI-ES-211-0112; 45000 30114) U.S. GOVERNMENT: 50 CFR PART 17 2012) and the Survey and Manage Settlement Agreement (Settlement Agreement: Conservation Northwest v. Sherman 2011) provide new information; however, the existing analysis is adequate because the actions do not change the adequacy of the existing analysis. Consistency is a result of project design features for the northern spotted owl and exemption from Survey and Manage requirements that are allowed by the Settlement Agreement.

4. Are the direct, indirect and cumulative effects that would result from implementation of the new proposed action similar (both quantitatively and qualitatively) to those analyzed in the existing NEPA document?

There is no new information or circumstance that would alter the effects analysis in the Long Tom Landscape Plan EA.

The Long Tom Landscape Plan EA analyzed direct and indirect impacts of the proposed action; the current project consists of treatments that were described in the proposed action for the EA. The EA concluded that thinning the stands would improve growing conditions and improve the quality of habitat for northern spotted owls. The EA analysis concluded that habitat within known current owl home ranges would maintain the ability of the stand to function as dispersal habitat and that the actions outlined in this timber sale will not exceed the anticipated effects on wildlife. Thinning and associated activities would result in slash creation in the short-term, increasing fire risk, followed by a long term reduction in the risk of severe fire, relative to leaving stands un-thinned (EA, p. 38). Road renovation, new road construction, and log-haul would produce negligible, if any, sediment delivery to streams, while road improvements such as replacement of culverts and upgrading surfacing would reduce long-term sediment delivery (EA, p. 26). Stream buffers will protect streams from sediment that may be generated from logging operations (EA, p. 26). Reduction in canopy closure from thinning, road renovation and new road construction could result in some further establishment and spread of noxious weeds; however, weed levels will decrease as the canopy recovers and shade is restored to these sites. Weed introductions will be minimized by cleaning of vehicles prior to entry into the stand (EA, p. 36). The EA analyzed both the short-term and long-term effects of carbon emissions and carbon storage. The analysis indicated that long-term cumulative carbon emissions levels were less than the long term carbon sequestration levels 30 years after thinning.

The site specific effects of the current proposed action are consistent with the effects analysis in the Long Tom Landscape Plan EA. The stand conditions in the project area for the current proposed action are consistent with those anticipated in the Long Tom Landscape Plan (EA, pp. 14-16). Dispersal habitat thinned would continue to function as owl dispersal habitat since the silvicultural prescriptions for these units maintain at least a 40% canopy cover. Critical habitat for northern spotted owls is not being thinned; thinning will occur in murrelet critical habitat. Marbled murrelet protocol surveys were not completed on adjacent suitable habitat.

Site visits and surveys did not identify any unique conditions (such as special habitats or special status species), and there are no specially designated areas (such as ACECs or RNAs) in the project area. Approximately 2,547 feet of new road will be constructed (16 feet per acre), which is below the feet per acre (21 feet per acre) of new road construction for the entire planning area, analyzed in the Long Tom Landscape Plan EA and has the same effect on resources. Approximately 2,636 feet of road will be renovated (16 feet per acre), which is below the feet per acre (121 feet per acre) of road renovation or improvement for the entire planning area analyzed in the Long Tom Landscape Plan EA: "approximately 30 to 35 miles of construction and approximately 195 to 200 miles of renovation/improvement would occur" (EA, p. 13). These feet of road work per acre are within the estimated road miles for the Long Tom Landscape Plan EA, many sales implemented under the Long Tom Landscape Plan EA are expected to have less road work and the cumulative totals analyzed in the Long Tom Landscape Plan EA are not expected to be exceeded. Additional details are provided in the Long Tom Landscape Plan EA project analysis file.

5. Are the public involvement and interagency review associated with existing NEPA document(s) adequate for the current proposed action?

Public involvement for the Long Tom Landscape Plan EA has been adequate. Scoping was completed before the analysis for the EA began. An information sheet describing the proposed project and project area was included in the Long Tom Watershed Council newsletter in March of 2009. A letter was mailed to interested parties on March 15, 2009. Representatives of the BLM attended a Long Tom Watershed Council meeting on March 29, 2011. The EA and preliminary FONSI were made available for a 30-day public review on March 15, 2011; twelve comments were received. One comment suggested a wider range of alternatives and mentioned that thinning to 60% canopy cover be analyzed as a separate alternative. One comment requested a more open, inclusive and collaborative process of review and analysis. The EA process included an adequate scoping and public comment period which began approximately three years ago. One comment suggested that county commissioners should be allowed to make recommendations for road decommissioning but not allowed decision making authority. The EA incorrectly stated that county commissioner "approval" will be obtained before road decommissioning measures are implemented. That statement in the EA has been changed to state county commissioners will "review" decommissioning measures before implementation. Two comments questioned if surveys for survey and manage species will be performed in stands greater than 80 years of age. All survey and manage requirements will be met at the time of implementation.

BLM received one protest following the publication of the Decision Record, filed August 8, 2011. The protest was denied on January 10, 2012. The appeal period ended on February 21, 2012. BLM notified the Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians; the Confederated Tribes of the Siletz; and the Confederated Tribes of the Grand Ronde of the Long Tom Landscape Plan EA during the scoping process, requesting information regarding tribal issues or concerns relative to the project. BLM also sent the tribes copies of the EA and no responses were received.

BLM has consulted with the U.S. Fish and Wildlife Service (USFWS). BLM completed formal consultation under the Endangered Species Act (ESA) with the USFWS on effects of the Owens Crown Timber Sale on the northern spotted owl and marbled murrelet. The current proposed action is consistent with the description of the action in the Long Tom Landscape Plan Biological Opinion issued by the USFWS in 2011. The proposed action has no effect to northern spotted owl critical habitat and is not likely to adversely affect marbled murrelets or their critical habitat.

Because the current proposed action would have no effect on listed fish species in the project area or their designated critical habitat, as well as no adverse effect on Essential Fish Habitat, consultation with the National Oceanic and Atmospheric Administration - Fisheries is not required.

E. BLM Staff Consulted

<u>Name</u>	<u>Title</u>	<u>Resource</u>
Karin Baitis	Soil Scientist	Soils/Road Decom.
Clint Foster	Silviculturist	Silviculture
Molly Widmer	Botanist	Botany
Luis Palacios	Civil Engineering Technician	Engineering
Tom Jackson	IT Specialist	GIS
Eric Johnson	Deputy Fire Staff	Fuels
Dan Crannell	Wildlife Biologist	Wildlife
Crystal Perez-Gonzalez	Forester	Logging Systems
Leo Poole	Fisheries Biologist	Fisheries
Sharmila Premdas	Landscape Planner	NEPA
Steve Steiner	Hydrologist	Hydrology
Dana Wilson	Landscape Planner	NEPA
Peter O'Toole	Timber Sale Planner	Team Lead

Prepared By

/s/ Dana Wilson
Dana Wilson, Landscape Planner

Date: April 22, 2013

Conclusion

Based on the review documented above, I conclude that this proposal conforms to the applicable land use plan. Additionally, the NEPA documentation fully covers the proposed action and constitutes BLM's compliance with the requirements of the NEPA.

/s/ Alan Corbin
Alan Corbin, Field Manager, Siuslaw Resource Area

Date: April 22, 2013

Note: The signed Conclusion on this Worksheet is part of an interim step in the BLM's internal decision process and does not constitute an appealable decision. However, the lease, permit, or other authorization based on this DNA is subject to protest or appeal, under 43 CFR Part 4, and the program specific regulations.

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DECISION RECORD
DOI-BLM-OR-E050-2013-012-DNA
Owens Crown Timber Sale

DECISION

It is my decision to implement this action as described in the Determination of NEPA Adequacy documentation DOI-BLM-OR-E050-2013-012-DNA.

DECISION RATIONALE

The proposed action has been reviewed by BLM staff. The Proposed Action is in conformance with the 1995 Eugene District Record of Decision and Resource Management Plan (as amended). Based on the Determination of NEPA Adequacy, I have determined that the existing NEPA documentation fully covers the proposed action and constitutes BLM's compliance with the requirements of the NEPA.

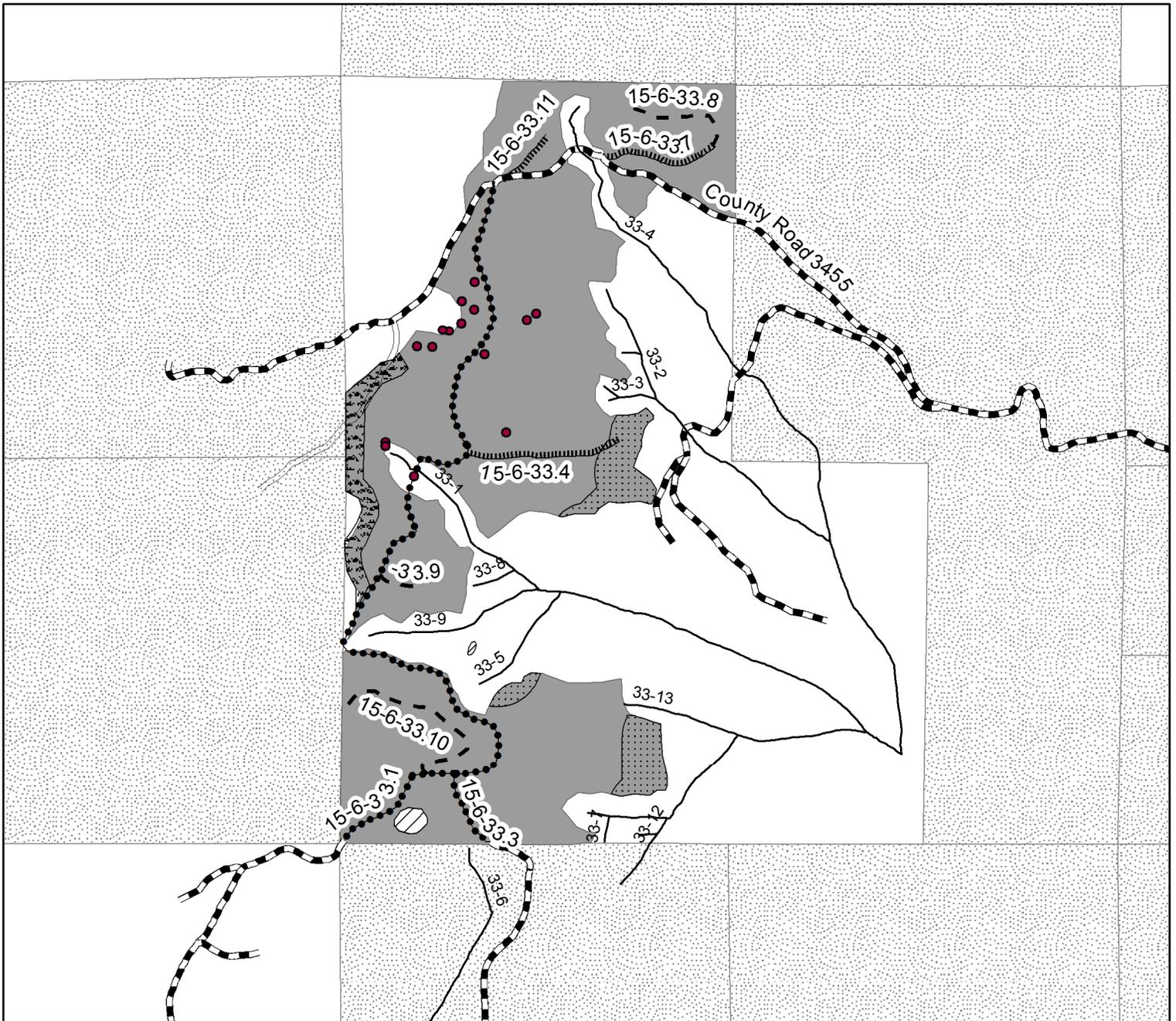
ADMINISTRATIVE REMEDIES

The decision to implement this project may be protested under 43 CFR 5003 - Administrative Remedies. In accordance with 43 CFR 5003.2, the decision for this project will not be subject to protest until the notice of sale is first published in the Eugene Register-Guard. This published notice of sale will constitute the decision document for the purpose of protests of this project (43 CFR 5003.2b). Protests of this decision must be filed with this office within fifteen (15) days after first publication of the notice of sale. As interpreted by BLM, the regulations do not authorize the acceptance of protests in any form other than a signed, written hard copy that is delivered to the physical address of the BLM Eugene District Office.

Signature of the Responsible Official:

/s/ Alan Corbin
Alan Corbin
Field Manager, Siuslaw Resource Area
Eugene District Office

April 22, 2013
Date



Owens Crown DNA

T.15 S., R.6 W. Sec. 33

United States Department of the Interior
Bureau of Land Management

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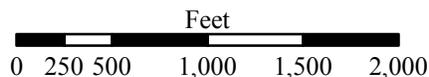
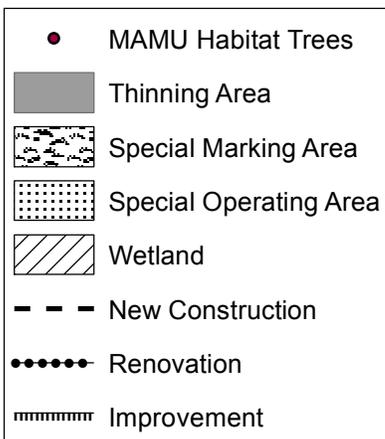
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Website: <http://www.blm.gov/or/districts/eugene>

Universal Transverse Mercator
Zone 10, North American Datum 1983

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

Eugene District



**Long Tom Landscape Plan
Project Implementation Prescription
Owens Crown - Tract No. 13-506
T.15 S, R.6 W, Sec. 33**

Summary

The Owens Crown timber sale is an approximately 165 acre thinning project in the Late Successional Reserve and Riparian Reserve Land Use Allocations. The estimated harvest volume is 5 MMbf. The planned sale date is May 23, 2013. During project design, approximately 15 acres were dropped from the project due to blind leads, narrow slivers, poor stocking, and MAMU suitable habitat.

Silviculture

- Reserve 78 conifer trees per acre.
- Reserve all large remnant trees.
- All trees marked with yellow paint are wildlife leave trees.
- Reserve trees proportionally equal from all diameter classes.
- Generally reserve trees without regard to form or defect; however, trees with unique structure such as wolf trees, broken tops, and/or with cavities shall be reserved in sufficient numbers to maintain presence in the stands; and as much as possible selected leave trees should have a live crown ratio greater than 30%.
- Reserve trees using the following hierarchy: western redcedar, Douglas-fir, and western hemlock.
- Retain pacific yew, snags, hardwoods, and down logs. Retain on site any of these trees felled for safety or operational reasons.
- Non-merchantable tree tops and limbs would not be yarded to the landing and should be left on site to contribute to soil productivity.
- Post-harvest stand condition projected to average 125 sq.ft. basal area/ac, Curtis RD of 33.

Special mark area along west boundary- wind buffer

- Select conifer leave trees to reserve 95 trees/acre

LSR – thin 130 acres

Riparian Reserve – thin 35 acres using the same prescription as the adjacent upland LSR.

Logging systems

Cable Yarding Design Features (125 acres)

- Cable yard to designated or approved landings.
- Space cable corridors 150 feet apart and limit to 12 feet in width (a cable system capable of 75 foot lateral yarding).
- Require a minimum one-end suspension. Intermediate supports may be necessary to achieve the required suspension.
- Require full suspension on all yarding across streams.
- Lay out cable yarding system to eliminate gouging (log dragging) to reduce concentration of drainage delivering to streams.
- Make cable yarding corridors erosion resistant if needed where severe gouging has occurred.
- Layout cable corridors used for yarding in concave slopes above stream channel initiation points (headwall areas) at 45 degrees to perpendicular of the centerline. This is to provide a sharp channel junction to dissipate the energy of any potential debris flows or torrents.
- Minimize sidehill yarding across headwall areas to reduce soil disturbance and slope failures.

Ground-Based Yarding Design Features (40 acres)

- Limit operations to when soil moisture content provides the most resistance to compaction (generally less than 25%--during the dry season, typically, July 1 to October 15, as approved by the Authorized Officer in consultation with the Soil Scientist).
- Monitor soil moisture contents on soils identified for ground based logging.
- Limit skid trails to slopes less than 35% with approval from the Authorized Officer.

- Predesignate and approve all skid trails.
- Use existing skid trails wherever possible.
- Preplan (map) and designate (flag) skid trails to occupy less than 10% of the Unit. This can be accomplished by a minimum 150 foot spacing between skid trails, and maintaining width of the skid trail to 12 feet (felling of trees to-lead to the skid trails optimizes winching distances that can be as much as 100 feet so that distances between trails could reach 200 feet).
- Limit use of low ground pressure (recommended <6 psi) ground-based yarding equipment to one round trip when operating outside designated primary skid trails, walking the equipment over downed slash to minimize soil disturbance.
- Skid logs to designated or approved landings.
- Decompact all skid trails and landings and place slash and brush on trails. Use of an excavator with a bucket with teeth that can be used to shatter but not mix the soil is optimum for density thins. Care should be taken not to mix or displace the soil profile. In density thins, roots can be avoided with use of a modified bucket. Decompaction should immediately follow logging operations. If decompaction cannot be accomplished the same operating season, all trails should be left in an erosion resistant condition and blocked.
- When logging with ground-based equipment within 210 feet of any stream, skid trails shall be located at least 75 feet from the posted boundary. Within 210 feet of any stream, ground-based yarding equipment shall not leave the designated trail.

Engineering

Roads with wet weather haul allowed:

New construction:

Name/Number	Length (feet)	Rock	Buy-out?	Comments
15-6-33.8	804	Yes	Y	Option not to rock if hauled in summer
15-6-33.9*	323	Yes	Y	Option not to rock if hauled in summer
15-6-33.10	1,420	Yes	Y	Option not to rock if hauled in summer

- Approx. 25.47 stations of new construction
- Subgrade to a 14' width, outsloped where possible
- Surfacing gradation 3" minus; Compacted Depth 8"
- * Tractor assist on Road No.15-6-33.9

Improvement:

Name/Number	Length (feet)	Rock	Buy-out?	Comments
15-6-33.4*	1050	Yes	Y	Option not to rock if hauled in summer
15-6-33.7	850	Yes	Y	Option not to rock if hauled in summer
15-6-33.11	411	Yes	Y	Option not to rock if hauled in summer

- Approx. 23.11 stations of improvement
- Subgrade to a 14' width, outsloped where possible
- Surfacing gradation 3" minus; Compacted Depth 8"
- *R/W width shall be widened to a total of 50' for the first 80' feet of the improvement to support a truck turn around

Renovation:

Name/Number	Length (feet)	Rock	Buy-out?	Comments
15-6-33.3	325	No	NA	Purchaser's Option to Rock for Wet Weather Haul

- Approx. 3.25 stations of renovation
- Subgrade to a 14' width, outslope where possible.

Drainage Renovation:

Name/Number	Culverts to be Replaced	Required	Buy-out?	Comments
15-6-33.1	10	Yes	No	

- Average length of culverts is approximately 30 feet with a fill depth of 2-4 feet
- Surfacing gradation is 1 ½” minus; compacted depth 12”
- Approximately 20’ of road length to be replaced per culvert

Summary:

25.47 stations of new construction; 23.11 stations of improvement; 3.25 stations of renovation

Logger’s choice landings/spurs requested by Purchaser are subject to approval by the Authorized Officer.

Green trees are available for guylines at all roads.

Soils

- To maintain soil productivity, utilize BMP’s as described in Logging Systems.
- Road decommissioning recommendations are described in the Road Decommissioning table.

Road decommissioning

All decommissioning measures shall be completed during the dry season.

- (aa) Decompact all natural surfaced roads and landings with decompaction equipment, such as a track mounted excavator with a thumb that is capable of moving logging slash.
- (bb) Construct drainage dips, waterbars and/or lead-off ditches, and remove all culverts and cross drains as directed by the Authorized Officer.
- (cc) Place logging slash on surfaces where available.
- (dd) Block at entry points using stumps, slash, and/or cull logs, or earthen barricades, as directed by the Authorized Officer.

	If Not Rocked				If Rocked		
	(aa)	(bb)	(cc)	(dd)	(bb)	(cc)	(dd)
Road Number	Decompact	Drainage	Logging Slash	Blocking	Drainage	Logging Slash	Blocking
15-6-33.10	X	X	X	X	X	X	X
15-6-33.9	X	X	X	X	X	X	X
15-6-33.8	X	X	X	X	X	X	X
15-6-33.7	X	X	X	X	X	X	X
15-6-33.11	X	X	X	X	X	X	X
15-6-33.3	X	X	X	X	X	X	X
15-6-33.4	X	X	X	X	X	X	X

Storm proofing roads and placing them in a self-maintaining condition consists of site-specific measures to stabilize roadside slopes, prevent erosion of soil and/or sediment delivery to streams by reducing the concentration of water on the road prism and ditchlines, before blocking.

Hydrology

- Avoid use of ground based machinery within 75' of posted boundary on streams and wetlands. The exception to this would be to allow a skidder to set up on Road No. 15-6-33.1 to harvest the area adjacent to the wetland located in the southwest corner of section 33. Thinned trees adjacent to the wetland buffer would be directionally felled. This will facilitate yarding without the need for a skid trail in this vicinity and to avoid sedimentation to the wetland.
- Rd.No.15-6-33.11 will be blocked and waterproofed upon completion of use to avoid sedimentation to stream 33-4. Placement of slash on this road is also recommended to discourage OHV use and reduce sedimentation. This road should be weatherized between logging seasons if it is only used during the dry season and is not rocked.
- A waste site might be needed off of the 15-6-33.4 road improvement for a small amount of fill. The recommended location would be outside the Riparian Reserves of streams 33-3 or 33-3a in a topographically stable location with a low probability of sedimentation to the stream system.
- Streamside protection buffers are 60 ft on **both sides** of streams 33-1 (above road 15-6-33.1), 33-4, 33-5, 33-6 (above headwater), 33-7, 33-11, and 33-13.
- Streamside protection buffers are 75 ft on **both sides** of streams 33-1 (below road 15-6-33.1), 33-2, 33-2a, 33-3, 33-3a, 33-8, 33-9, and 33-10. Stream buffers of **75'** are also recommended on the west side of stream 33-12.

Stream buffer width recommendations by the Siuslaw Area Hydrologist were based on on-site conditions. The minimum buffer width allowed in the Long Tom Landscape Plan Environmental Assessment is 60'. The streams recommended for 60' buffers under this action are intermittent streams on gentle to moderately sloped topography. The streams recommended for 75' buffers under this action are intermittent streams located on moderately steep to steep topography, and perennial streams on gentle to moderately steep topography.

Fisheries

Threatened and Endangered Species

No ESA listed fish species are associated with this project.

There is **no critical or essential fish habitat** designated within tributaries of the Long Tom River associated with this thinning. Owens Creek is a tributary of Bear Creek, a major tributary of the Long Tom River.

Wildlife

Threatened and Endangered Species

Northern Spotted Owls (NSO):

- Dispersal habitat would be maintained by retaining a minimum average of 40% canopy cover.

Marbled Murrelets (MAMU):

- There is unsurveyed suitable habitat adjacent to the project. From April 1 through August 5, no harvest operations will occur, and from August 6 through September 15, harvest operations are not permitted until two hours after sunset and will cease two hours before sunset in the area shown as MAMU 100yd buffer on project map. Timber haul is excluded from this restriction.
- There is potential nesting structure within the harvest area. Do not harvest or damage trees with potential nesting structure. Approximately 19 trees located within the harvest area have been marked with yellow paint and are shown as wildlife trees on the project map.

Bureau Sensitive Species

No mitigation measures.

Botany

Threatened and Endangered Species

No federally listed Threatened or Endangered plant species were located during surveys, and no effects to these species are anticipated. No mitigation measures are necessary.

Bureau Sensitive Species

No Sensitive plant species were located during surveys. No mitigation measures are necessary.

Noxious Weeds and Invasive Non-native species

- Clean all yarding and road construction equipment prior to arrival on BLM-managed lands to lessen the spread of noxious weed seed.
- Sow native grass seed on decommissioned, decompacted roads after operations have been completed.
- Monitor weeds for at least 3 consecutive years after timber sale implementation, and control weed infestations as needed.

Fuels

- Grapple pile along High Pass Road (County Road 3455) and Road No.15-6-33.1. Pile within 25 feet of the roads: treatment area would be approximately 10 acres. Cover and burn or utilize all piles.
- Spur roads will be blocked with slash or other material to prevent OHV use.
- Burn piles in the late fall when favorable smoke dispersion conditions are common and risk of fire spread is low.