

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

**DETERMINATION OF NEPA ADEQUACY (DNA)**

OFFICE: Siuslaw Field Office, BLM Eugene District

TRACKING NUMBER: DOI-BLM-ORWA-E050-2016-0018-DNA

PROJECT NAME: Hot Dog Timber Sale

LOCATION/LLEGAL DESCRIPTION: T. 17 S., R. 7 W., Sec. 1, Will. Mer.

**A. Description of Proposed Action**

The proposed action is to implement the Hot Dog Timber Sale by thinning approximately 55 acres within the General Forest Management Area (GFMA) land use allocation (LUA). Approximately 36 acres associated with Riparian Reserves (RR) LUA will be thinned. The project site is located within the Long Tom Landscape Plan EA planning area. The proposed action (including silvicultural prescriptions; logging systems; 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 Environmental Assessment (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:

*"Design silvicultural systems on General Forest Management Areas to meet a high level of timber production within a framework of mitigating measures and project design features which protect environmental quality and habitat for wildlife, fish and botanical species" (RMP 1995, p. 86).*

*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).

United States Fish and Wildlife Service Biological Opinion for the Long Tom Landscape Plan EA.

**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 Alternative 4 (preferred alternative) 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:

*In matrix lands "Forest stands between 30 and 79 years of age would be thinned using the traditional silvicultural technique of thin from below to relative densities in the mid-thirties, generally ranging from 32 to 38. Spotted owl dispersal habitat would be maintained to USFWS standards (EA, p. 11)." (Long Tom EA, p. 11).*

Hot Dog consists of approximately 88 acres of matrix thinning and associated riparian reserves that are approximately 50 to 60 years of age. The Hot Dog Timber Sale will thin trees to a Curtis relative density of 32. Thinning will retain 130 square feet basal area per acre, averaging about 84 conifer trees per acre, maintaining more than an average canopy closure of 40 percent. This prescription will maintain northern spotted owl dispersal and foraging habitat.

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

All streams within the thinning unit will receive a minimum 60 foot buffer within which no thinning would occur, see the attached prescription for detailed stream buffers.

*"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." (p. 16).*

Approximately 4,093 feet of new road will be constructed; approximately 4,066 feet of road will be renovated or improved.

*"Decommissioning strategy for Matrix 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 but are not needed for future management (decommissioning will be implemented using the design features listed in the EA) (EA 2011, p. 8).*

Approximately 4,093 feet of road (including newly constructed roads) would be decommissioned (see the implementation prescription for design features). The resource area botanist will monitor the site for ensuring high priority weed control.

**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. 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). The effects of thinning on spotted owl nest patches (pp. 32-33) were analyzed as well. 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 designation. 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) provides new information; however, the existing analysis in the EA is adequate and conferencing with USFWS was completed. Trees with potential marbled murrelet nesting structure located within the harvest area have been painted yellow and will be reserved. The proposed unit is not designated Critical Habitat for the murrelet.

**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 and foraging habitat within the South Willamette North Umpqua Area of Concern, the project is not located in the South Willamette North Umpqua Area of Concern, canopy cover is being maintained to protect dispersal habitat.

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). In the short term low quality foraging habitat would function as dispersal habitat after thinning. Dispersal habitat that is thinned would continue to function as owl dispersal habitat since the silvicultural prescriptions for these units maintain at least 40% canopy cover. Marbled murrelet protocol surveys have not been conducted in the unit. However, there is suitable habitat adjacent to the unit and potential nesting structure located within as well. Potential nesting structure in the unit will be painted in the summer 2013 and will be protected from damage during harvest operations.

A 100 yard disruption buffer will be delineated around this un-surveyed suitable habitat. This area will be subject to seasonal restrictions to minimize possible disruption of nesting murrelets.

Site visits and surveys did not identify any unique conditions (such as special habitats or special status species), there is no specially designated areas Research Natural Area (RNA) in the project area. 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 to answer any questions from the public about the EA. The EA and preliminary FONSI were made available during 30-day public review and comment period beginning 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 inquired if surveys for survey and manage species will be performed in stands greater than 80 years of age.

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. During the scoping process, the BLM sent letters which described the Plan EA and requested information regarding tribal issues or concerns about the project to 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. During the public comment period the BLM sent the tribes copies of the EA and no responses or comments 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 Low Down 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. Northern spotted owl critical habitat was re-designated in 2012 and conferencing with USFWS has been completed for this project. The proposed action is not likely to adversely affect northern spotted owls because road construction would occur in spotted owl dispersal habitat. The project will likely adversely affect marbled murrelet habitat due to thinning near trees that have potential nesting platforms and from road construction in non-habitat. The Long Tom Watershed does not contain critical habitat for coho salmon. Because the current proposed action would have no effect on coho salmon and its 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**

<b><u>Name</u></b>	<b><u>Title</u></b>	<b><u>Resource</u></b>
Karin Baitis	Soil Scientist	Soils/Road Decom.
Peter O'Toole	Planning Forester	Team Lead
Emily Timoshevskiy	Silviculturist	Silviculture
Doug Goldenberg	Botanist	Botany
Jeff Spring	Civil Engineering Technician	Engineering
Tom Jackson	IT Specialist	GIS
Kristen Allison	Fuels Specialist	Fuels
Randy Miller	Wildlife Biologist	Wildlife
Sarah Wernecke	Forester	Logging Systems
Leo Poole	Fisheries Biologist	Fisheries
Sharmila Premdas	Landscape Planner	NEPA
Steve Steiner	Hydrologist	Hydrology

**Prepared By**

/S/ Chris Worthington

Chris Worthington, NEPA Planner

Date: April 26, 2016

**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/ Michael J. Korn

Michael J. Korn, Field Manager,  
Siuslaw Field Office

Date: April 26, 2016

**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.

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BUREAU OF LAND MANAGEMENT  
EUGENE DISTRICT OFFICE

**DECISION RECORD**  
DOI-BLM-ORWA-E050-2016-0018-EA  
Hot Dog Timber Sale

**DECISION**

It is my decision to implement this action as described in the Determination of NEPA Adequacy Documentation DOI-BLM-ORWA-E050-2016-0018-DNA.

**PLAN CONFORMANCE**

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.

**SURVEY AND MANAGE**

The project is consistent with court orders relating to the Survey and Manage mitigation measure of the Northwest Forest Plan, as incorporated into the district Resource Management Plan.

In 2006, the District Court (Judge Pechman) had invalidated the agencies' 2004 RODs eliminating Survey and Manage due to NEPA violations. Following the District Court's 2006 ruling, parties to the litigation had entered into a stipulation exempting certain categories of activities from the Survey and Manage standard (hereinafter "Pechman exemptions").

Judge Pechman's Order from October 11, 2006 directs: "Defendants shall not authorize, allow, or permit to continue any logging or other ground-disturbing activities on projects to which the 2004 ROD applied unless such activities are in compliance with the 2001 ROD (as the 2001 ROD was amended or modified as of March 21, 2004), except that this order will not apply to:

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

Hot Dog project has been reviewed in consideration of Judge Pechman's October 11, 2006, order. Because the Hot Dog project includes no regeneration harvest and includes thinning only in stands less than 80 years old, I have made the determination that this project meets Exemption A of the Pechman Exemptions (October 11, 2006 Order), and therefore may still proceed to be offered for sale.

**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.

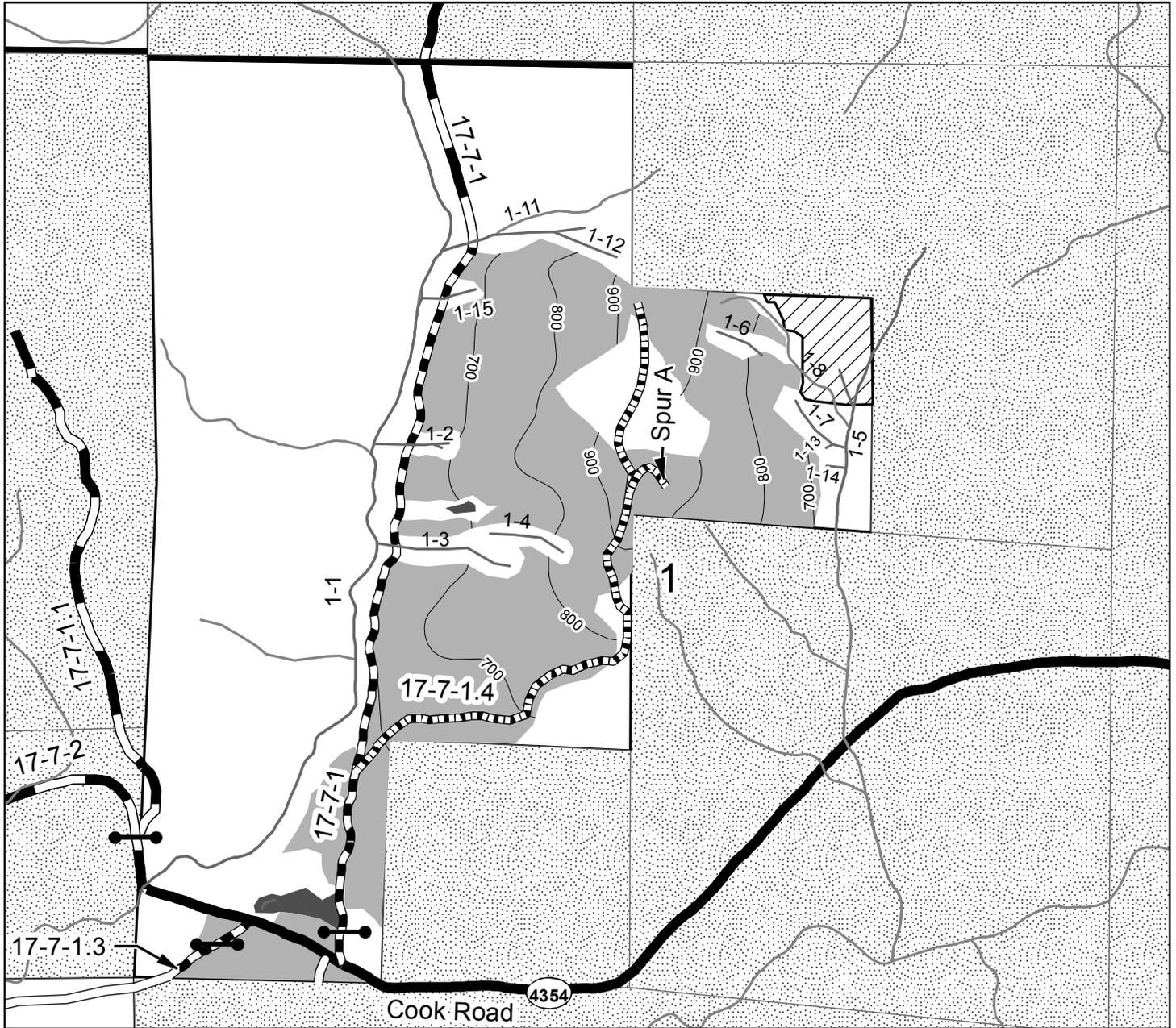
Signature of the Responsible Official:

*/S/ Michael J. Korn*

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Michael J. Korn  
Field Manager, Siuslaw Field Office  
Eugene District Office

*April 26, 2016*

\_\_\_\_\_  
Date



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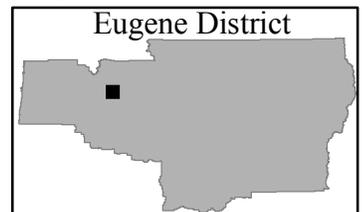
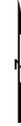
Universal Transverse Mercator  
 Zone 10, North American Datum 1983

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# Hot Dog 2016 DNA

T.17 S., R.7 W. Sec. 1

	Partial Harvest Area		Stream
	BLM Ownership		Road Construction
	Private Ownership		Road Renovation
	Wetland		Rocked Road
	Marbled Murrelet Suitable Habitat		Paved Road
			Natural Road



**Long Tom Landscape Plan  
Project Implementation Prescription  
Hot Dog - Tract No. 15-539  
T.17 S., R.7 W., Sec. 1**

**Summary**

The Hot Dog Timber Sale is an approximately 91 acre thinning project in the General Forest Management Area and Riparian Reserve Land Use Allocations. The estimated harvest volume is 1.7 MMbf. The planned sale date is May, 2016.

**Silviculture**

- Maintain existing species diversity; Pacific yew and native hardwoods would be retained to the extent possible, and left in the stand if fell for safety or operational reasons.
- Reserve all yellow painted MAMU habitat trees.
- Reserve all remnant trees in all strata, including seed trees or “plus trees”.
- Thin Riparian Reserves to the same prescription as the adjacent uplands.
- Retain existing snags and coarse woody debris, except for safety or operational reasons.
- Retain in the stand any snags felled for safety or operational reasons

**Section 1:** Thin all conifers from below to an approximate basal area per acre of 130 ft<sup>2</sup>. Vary the leave tree spacing as needed to generally reserve the larger diameter, more vigorous trees.

**Logging systems**

**Cable Yarding Design Features (65 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). Yarding distance up to 1400 feet can be expected.
- Require a minimum one-end suspension. Intermediate supports may be necessary to achieve the required suspension.
- Require full suspension on all yarding across streams.
- Yarding trees across stream numbers 1-7 is anticipated and full suspension is feasible.
- 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.
- Protect both yellow painted MAMU habitat trees within and outside the unit
- Require pre-approval of tailholds within the MAMU suitable habitat adjacent to the harvest unit”.
- No landing construction or yarding along Spur A through the reserve area.
- There is a power line (Blachly-Lane) and an underground telephone cable (US West Communications #21551) along Road No. 17-7-2.0. Ensure that the following protective measures required by the companies are followed:
  1. Trees shall be felled directionally away from the power lines
  2. Purchaser shall contact Blachly-Lane prior to beginning any operations near the power lines.
  3. All landings shall be a minimum of 100 feet from the power line.
  4. Locate slash piles for burning at least 20 feet away from the power line.

Ground-Based Yarding Design Features (26 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.
- Pre-designate 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 Partial Harvest Unit. This can be accomplished by 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.
- Decompress 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. Decompression should immediately follow logging operations. If decompression 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.
- Drainage and erosion control measures, including water barring of skid trails, should occur prior to winter rains.
- Do not allow excavation (gouging) on skid trails in excess of one foot in depth. Fell trees to lead of the skid trail.
- Limit yarding and hauling to Road No. 17-7-1.4 and natural surface roads to the dry season

Engineering

Roads with wet weather haul allowed:

**New construction:**

Name/Number	Length (feet)	Rock	Buy-out?	Comments
17-7-1.4	3,766	Required	Yes	
Spur A	327	Required	Yes	

- 40.93 stations new construction
- Subgrade to a 14' width, out-sloped where possible
- Suggested surfacing gradation: Subgrade 6" minus compacted depth 8", Cap Rock 3" minus compacted 6" depth.

**Renovation:**

Name/Number	Length (feet)	Rock	Buy-out?	Comments
17-7-1 (por 1)	1,064		Yes	Portion from -1.4 to County Road

- 10.64 stations renovation
- Do not grade the ditch line
- Brush, scarify or grade and/or widen existing subgrade to a 14' width
- Suggested surfacing gradation 3" minus; compacted depth 6"

**Roads with Dry Weather Haul:**

**Renovation:**

Name/Number	Length (feet)	Comments
17-7-1	2,474	From Jct. -1.3 to end of unit
17-7-1.3	528	Summer only

- 30.02 stations renovation
- Brush, scarify or grade and/or widen existing subgrade to a 14' width

**Summary:**

40.93 stations new construction; 40.66 stations 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.

Short distances of +/-18% grades may be needed to access necessary landing sites.

**Soils**

- Limit road and landing construction and renovation, activities to the dry season.
- **Retain tops and limbs where the source tree is felled**

**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 greater than 6 inches in diameter, where available, on surfaces in a discontinuous pattern, as directed by the Authorized Officer.
- (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
17-7-1.4	X	X	X**	X	X		X
17-7-1.0					X		
17-7-1.3		X					
Spur A	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. If culverts are left in place, deep drainage ditches (water bars) should be angled in the roadbed in to positions above and below where necessary to prevent the culvert from plugging from any debris.

## Hydrology

- Maintain adequate, high quality (durable) aggregate on the haul route with particular emphasis in the areas with sediment delivery potential during wet season haul.
- Replace four stream crossings, add four cross drains, and replace three cross drains (as funding permits) to reduce long term sedimentation from these roads.
- Restrict haul on road segments with sediment delivery potential during periods of ditch line flow, when road surfaces are rutted or pumping fines, when an increase in turbidity is apparent below stream crossings or cross drains (in close proximity of a stream) within the project area (due to haul), and/or when road surfaces are saturated and high rainfall amounts are predicted.
- Avoid ditch line brushing (i.e. maintain vegetation), if feasible, on road segments with the potential for sediment delivery (direct or indirect) to streams to reduce the amount of sediment delivery from haul and road maintenance.
- Maintain adequate, high quality aggregate on winter haul road segments with sediment delivery potential. The recommended aggregate is a minimum of 6" to 8" of depth with low percentage of fines and high resistance to abrasion.
- Stream buffers of 60' are recommended on both sides of streams 1-4 and 1-6.
- Stream buffers of 75' are recommended on both sides of streams 1-2/2b, 1-3, 1-7, 1-13, 1-14, 1-15, Stream buffers of 75' are also recommended on the unit side of streams 1-5, 1-8, 1-11, and 1-12.
- Stream buffer of 100' are recommended on the unit side of stream 1-1.

Stream buffer width recommendations by the Siuslaw Area Hydrologist were based on on-site conditions and proposed actions. The minimum buffer width allowed in the Long Tom Landscape Plan Environmental Assessment is 60'. The primary factors for determining stream buffer widths for each stream in the project area were: flow (perennial/intermittent), tree height, vegetation density, slope, harvest prescription, and aspect (stream orientation).

## 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.

## Wildlife

### Threatened and Endangered Species

#### Northern Spotted Owls (NSO):

- Dispersal habitat would be maintained by retaining an approximate minimum average of 55-60% canopy cover, post-harvest.
- This proposed unit is not within current Critical Habitat (CH) for the spotted owl.

#### Marbled Murrelets (MAMU):

- There is suitable habitat adjacent to the unit and potential nesting structure located within the unit as well. Potential nesting structure in the unit was painted in the summer 2013 and will be protected from damage during harvest operations.
- Protocol surveys were not conducted in the unit. A 100 yard disruption buffer was delineated around this un-surveyed suitable habitat as depicted on the project map.

This area will be subject to seasonal restrictions to minimize possible disruption of nesting murrelets (refer to mitigation section, below).

- No landing construction or yarding along Spur A through the reserve area.
- Proposed road construction within about 60 yards of un-surveyed suitable habitat does not require restrictions because this road work is not likely to disturb nesting murrelets if they were nesting because there is a ridge between this road work and a single potential nest tree that is about 60 yards from this work and because the other potential nest trees are not within disruption distance (100 yards) of the other 15 potential nest trees in the delineated murrelet habitat.
- The proposed unit is not designated Critical Habitat for the murrelet.

#### 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, and other areas as appropriate, after operations have been completed.
- Control existing false brome populations prior to project activity, monitor for at least 5 consecutive years after timber sale implementation, and control weed infestations discovered through monitoring as appropriate.

#### **Fuels**

- Pile and cover all landing slash and machine pile and cover slash within 25 feet of Spur A and Road Nos. 17-7-1, 17-7-1.3, 17-7-1.4, within the Harvest Area.
- Slash concentrations and piles along temporary roads may be scattered over the road surface to discourage OHV use and/or decrease erosion, any piles not scattered may be covered and burned.
- Burn piles in the late fall when favorable smoke dispersion conditions are common and risk of fire spread is low.