

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-E050-2013-013-DNA

PROJECT NAME: Priceless Timber Sale

LOCATION/LEGAL DESCRIPTION: T.17 S., R.7 W., Section 13

**A. Description of Proposed Action:**

The proposed action is to implement the Priceless Timber Sale by thinning approximately 105 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 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 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:

*"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)
- Priceless 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.” (EA, p.11)*

Proportional thinning in stands from 59 to 79 years of age may receive a lighter thinning to a relative density of 40 based on stand conditions. Proportional thinning would maintain a minimum average 40% canopy closure throughout the stand (to USFWS standards), and is intended to facilitate the development of late successional forest structural characteristics while maintaining spotted owl dispersal habitat.

25% of the stands would be thinned using a variable density technique to a range in relative densities from 20 to 30. Variable density thinning would generally be applied to stands primarily between 30 and 50 years of age. Spotted owl dispersal habitat would be maintained (to USFWS standards) where proportional thinning is applied but may not be maintained (to USFWS standards) where variable density thinning is applied. The variable density thinning areas may include a range of variations in treatments from wide gaps (approximately half an acre in size) to dense riparian stands.

Priceless consists of approximately 105 acres. The proposed treatment area can be broken up into three stands. Stand 1 is a 65 year old stand that will be proportionally thinned. Stand 2 is a 40 year old stand and Stand 3 is a 50 year old stand that will be thinned using a variable density technique. The Priceless Timber Sale will thin trees to a Curtis relative density of 38, 28 and 20 respectively. Thinning will retain 152, 112 and 94 square feet basal area/acre, averaging about 129, 83 and 43 trees per acre, maintaining an average canopy cover of 62, 53 and 43 percent respectively. 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 13-2a, 13-9b, 13-10, 13-13, 13-17 and the west side of 13-3.
- Streamside protection buffers are 75 feet on each side of Streams 13-2 above the confluence with Stream 13-3, 13-4, the lower reaches of 13-5, 13-6, 13-7, 13-8, 13-9, 13-11 (from the headwater to the confluence with Stream 13-12), 13-12, 13-14, 13-15, 13-16, 13-18 and 13-19.

- Maintain streamside protection buffers of 75 feet on the north and east side of Stream 13-1 above the confluence with Stream 13-11, the north and west side of Stream 13-11 above the confluence with Stream 13-1 to the confluence with Stream 13-12, the east side of the upper reaches of Stream 13-5, and the west side of Stream 13-2 below the confluence with Stream 13-3.
- Maintain streamside protection buffers of 100 feet both sides of Stream 13-1 below the confluence with Stream 13-11. Maintain streamside protection buffers of 100 feet on the south and west sides of Poodle Creek adjacent to the project area, the south and west sides of Stream 13-1 above the confluence with Stream 13-11, and the south and east sides of Stream 13-1 above the confluence with Stream 13-1 and below the confluence with Stream 13-12.

*“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 2,305 feet of new road will be constructed; approximately 3,790 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 6,095 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. Trees with potential marbled murrelet nesting structure located within the harvest area have been painted yellow and will be reserved. 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 an 83% canopy cover. Critical habitat for northern spotted owls is not being thinned. Marbled murrelet protocol surveys were conducted and an occupied site has been delineated. All seasonal and timing restrictions will be implemented.

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 2,305 feet of new road will be constructed (22 feet per acre), which is slightly above 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 3,790 feet of road will be renovated (37 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 Priceless 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 is likely to adversely affect northern spotted owls and marbled murrelets. The proposed action is likely to adversely affect marbled murrelet critical habitat and has no effect to spotted owl critical habitat. Because the current proposed action would have no effect on listed fish species 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
Peter Huppi	Civil Engineering Technician	Engineering
Tom Jackson	IT Specialist	GIS
Eric Johnson	Deputy Fire Staff	Fuels
Dan Crannell	Wildlife Biologist	Wildlife
Janet Zentner	Forester	Team Lead, Logging Systems
Leo Poole	Fisheries Biologist	Fisheries
Sharmila Premdas	Landscape Planner	NEPA
Steve Steiner	Hydrologist	Hydrology
Dana Wilson	Landscape Planner	NEPA
Peter O'Toole	Planning Forester	Forestry

**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.

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

**DECISION RECORD**

DOI-BLM-OR-E050-2013-0013-DNA  
Priceless Timber Sale

**DECISION**

It is my decision to implement this action as described in the Determination of NEPA Adequacy documentation DOI-BLM-OR-E050-2013-0013-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.

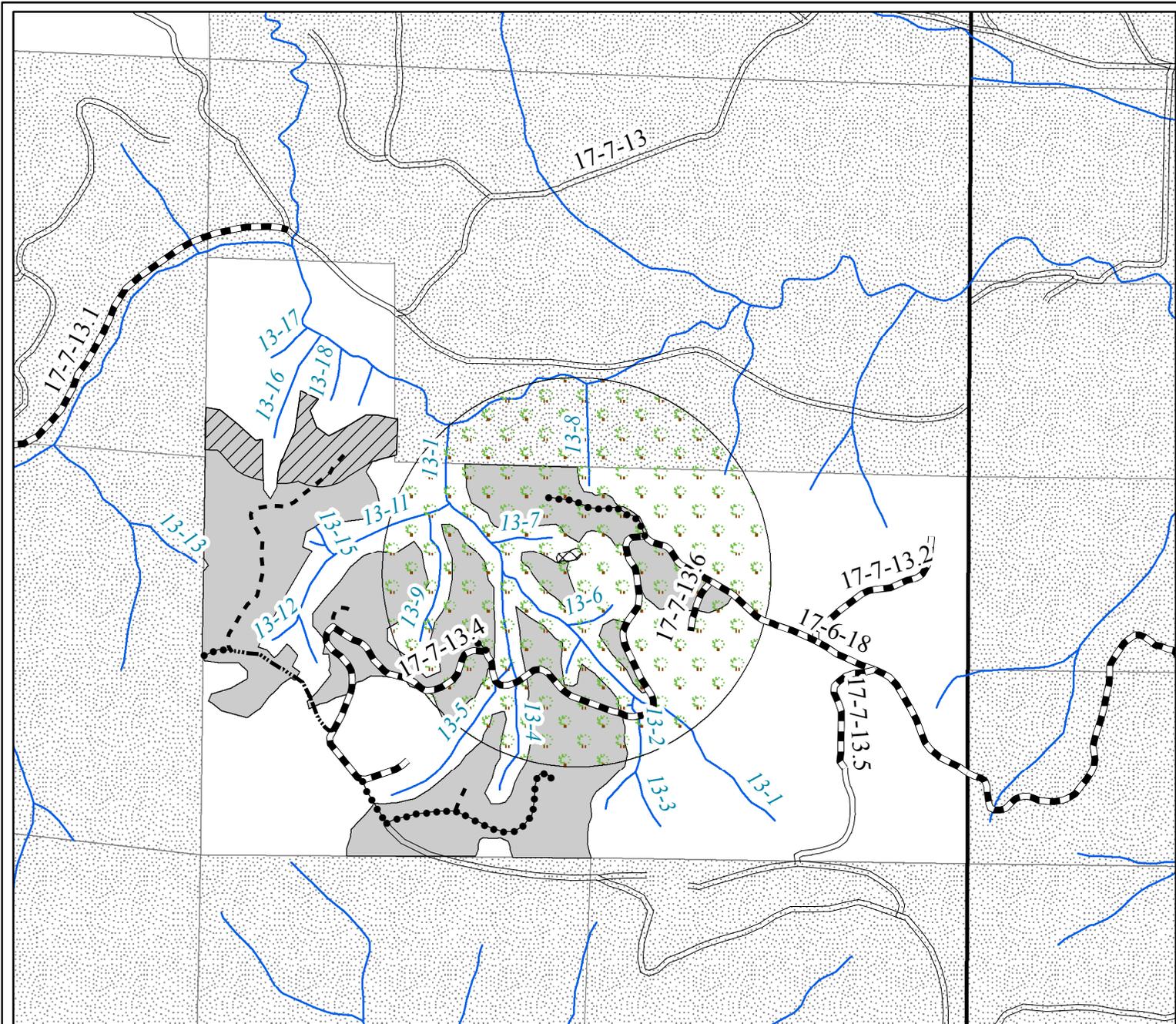
**ADMINISTRATIVE REMEDIES**

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

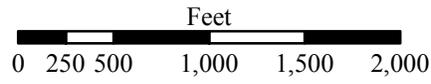
April 22, 2013  
Date



# Priceless DNA

## T.17 S., R. 7 W. Sec. 13

- Rocked Road
- Road, Other
- Road Construction
- Road Renovation
- Road Improvement
- Streams
- Wetlands
- Hawk Seasonal Restriction Area
- MAMU Seasonal Restriction Area
- Thinning Area

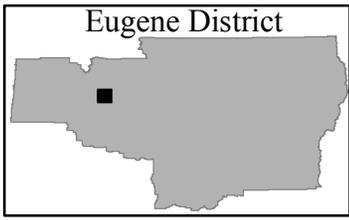


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 Zone 10, North American Datum 1983

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**Long Tom Landscape Plan  
Project Implementation Prescription  
Priceless - Tract No. 13-514  
T.17 S., R.7 W., Section 13**

**Summary**

The Priceless Timber Sale is an approximately 100 acre thinning project in the Long Tom Watershed. The estimated harvest volume is approximately 1.72 MMBF. The land use allocation (LUA) is Late-Successional Reserve (LSR) with associated Riparian Reserves (RR).

**Stand Characteristics**

The proposed treatment area can be broken up into three stands. The stands' birthdates range from 1947-1969.

Stand 1, located primarily across the western half of the section, is a 65 year old stand that was naturally regenerated following harvest activities in the late 1940s. Stand 1 can be generally characterized as a well-stocked, two-aged stand of primarily second-growth timber that has entered the stem exclusion stage of development. A second overstory cohort of approximately five trees per acre is most likely a function of a seed tree regeneration harvest during the last entry.

Stand 2 is located in the northeast quarter of the project area; the 40 year age class stand can be characterized as a single cohort of mature, well-stocked second growth timber. The Douglas-fir dominated stand has entered the stem exclusion stage of development supported by a high relative density and observed suppression mortality.

Stand 3, located in the southeast quarter of the project area, is a 50 year age class stand that can be characterized as a single cohort of mature, well-stocked second growth timber. The Douglas-fir dominated stand has entered the stem exclusion stage of development supported by a high relative density and observed suppression mortality.

**Pre-Harvest Stand Metrics**

Stand	QMD	TPA	BA (ft2)	Curtis RD	Canopy Cover
1	14.8	236	280	72	84%
2	12.2	312	252	72	87%
3	14.6	210	245	64	83%

**Silviculture**

- Maintain existing species diversity; retain minor species such as Pacific yew and native hardwoods to the extent possible, and leave in the stand if felled for safety or operational reasons.
- Select reserve trees based on the following hierarchy: western redcedar, followed by Douglas-fir, and western hemlock.
- Select leave trees that are generally of good form and relatively free of defect. However, retain trees with unique structure such as wolf trees, broken tops, and/or cavities in sufficient numbers to maintain presence in the stands.
- Thin Riparian Reserves using 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.
- Create 2-1/2 acres of gaps (in which all trees are harvested) in the stand in strategically located positions in Stands 2 and 3. These group selections include two ½ acre and three ¼ acre circular gaps in Stand 2, as well as one ½ acre and one ¼ acre circular gap in Stand 3.
- Do not yard non-merchantable tree tops and limbs to the landing; leave them on site to contribute to soil productivity.

- After at least three winters following the conclusion of harvesting operations, assess the stand to determine the need for coarse woody debris and both clumped and dispersed snags in accordance with the Long Tom EA.

Resulting Stand Condition for all 3 Stands -- LSR (75 acres) and RR (40 acres)

Stand	Conifer					Hardwood				
	QMD	TPA	BA (ft2)	Curtis RD	Canopy Cover	QMD	TPA	BA (ft2)	Curtis RD	Canopy Cover
1	16.5	96	143	35	58	7	33	9	3	58
2	20	47	100	22	47	8	36	12	6	6
3	22	29	80	17	37	17.5	8	14	3	6

RD = Curtis Relative Density

BA = Basal area, measured in square feet per acre

**Logging systems design features to minimize impacts to soil productivity**

**Cable Yarding Design Features (65 acres, of which 10 acres may be roadside shovel yarded)**

- Cable yard to designated or approved landings.
- Space cable corridors to 150 feet apart and limit width to 12 feet (a cable system capable of 75 foot lateral yarding would be used).
- Require a minimum one-end suspension. Intermediate supports may be necessary to achieve the required suspension.
- Require full suspension on yarding across all 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.
- Locate cable corridors used for yarding in concave slopes above stream channel initiation points (headwall areas) at 45 degrees of perpendicular to 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 (50 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).
- 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.
- Within Riparian Reserves, locate skid trails at least 75 feet from the posted no-cut boundary. Do not allow ground-based yarding equipment to operate off of 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.

**Engineering****Roads with wet weather haul allowed:****New construction:**

Name/Number	Length (feet)	Rock	Buy-out?	Comments
17-7-13.8	1840	Required	Yes	Surfaced with 8" depth of 6"-
Spur A	260	Required	Yes	Surfaced with 8" depth of 6"-
Spur B	205	Purchaser Option	N/A	

- Approximately 23.05 stations new construction.
- Subgrade to a 14' width, out-sloped where possible.

**Renovation:**

Name/Number	Length (feet)	Rock	Buy-out?	Comments
County Road No. 4350	50	Required	No	Permit from County required; add one cross drain and rock 50' of roadway
17-6-18 (portion)	1000	Required	No	Replace/add 20 cross-drains/culverts/stream crossings and resurface 50' of roadway per culvert
17-6-18 (portion)	160	Required	Yes	Landing rock only
17-7-13.3	790	Required	Yes	Add'tl surfacing: 4" depth 3"-
17-7-13.71	330	Purchaser Option	N/A	Currently Natural Surface
17-7-13.72	1460	Purchaser Option	N/A	Currently Natural Surface

- Approximately 37.90 stations renovation.
- Renovation includes brushing, light grading and pulling ditch.
- Stream crossing replacement on Road No. 17-6-18 will occur during time period approved by Oregon Department of Fish and Wildlife for in-stream work.

**Improvement:**

Name/Number	Length (feet)	Rock	Buy-out?	Comments
17-7-13.7 (portion)	950	Required	Yes	Add'tl surfacing: 8" depth 3"-; junction -13.4/-13.7 to junction -13.7/-13.8

- Approximately 9.50 stations improvement.
- Brushing, light grading and pulling ditch.

**Summary:**

Approximately 23.06 stations new construction.

Approximately 37.90 stations renovation.

Approximately 9.50 stations improvement.

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

Green trees are available for guylines except when yarding to Road No. 17-8-18 between streams 13-4 and 13-10, and possibly at the end of Road No. 17-8-18 (where renovated).

Short distances of +/-20% grades may be needed to access necessary landing sites.

**Soils**

Utilize BMPs as described in Logging Systems.

Road decommissioning recommendations are described below. All decommissioning 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; remove 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, cull logs, and/or earthen barricades, as directed by the Authorized Officer.

Road Number	Wet Weather Haul	Road Rocking	If Not Rocked				If Rocked		
			(aa)	(bb)	(cc)	(dd)	(bb)	(cc)	(dd)
			Decompact	Drainage	Logging Slash	Blocking	Drainage	Logging Slash	Blocking
Skid Trails	N/A	N/A	X	X	X	X			
Spur A	If rocked	Required	X	X	X	X	X	X	
Spur B	If rocked	Purch. Opt.	X	X	X		X	X	
17-6-18(por)	Yes						X		
17-7-13.3	If rocked	Required	X	X	X		X		
17-7-13.4	Yes								
17-7-13.7	If rocked	Required	X	X	X	XEB	X		XEB
17-7-13.71	If rocked	Purch. Opt.	X	X		XEB	X		XEB
17-7-13.72	If rocked	Purch. Opt.	X	X	X		X	X	
17-7-13.8	If rocked	Required	X	X	X		X		
*Do not place slash on Road No. 17-7-13.71 due to presence of false brome.									
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.									
*EB-Earthen Barricade									

**Hydrology**

- Reserve the wetland as directed by the area hydrologist.
- Maintain streamside protection buffers of **60 feet** on each side of Streams 13-2a, 13-9b, 13-10, 13-13, 13-17. Maintain streamside protection buffers of **60 feet** on the west side of Stream 13-3.
- Maintain streamside protection buffers of **75 feet** on both sides of Stream 13-2 above the confluence with Stream 13-3; Stream 13-4; the lower reaches of Stream 13-5 (within the project area); Streams 13-6, 13-7, 13-8, 13-9, 13-11 (from the headwater to the confluence with Stream 13-12), 13-12, 13-14, 13-15, 13-16, 13-18, and 13-19. Maintain streamside protection buffers of **75 feet** on the north and east side of Stream 13-1 above the confluence with Stream 13-11, the north and west side of Stream 13-11 above the confluence with Stream 13-1 to the confluence with Stream 13-12, the east side of the upper reaches of Stream 13-5, and the west side of Stream 13-2 below the confluence with Stream 13-3.
- Maintain streamside protection buffers of **100 feet** both sides of Stream 13-1 below the confluence with Stream 13-11. Maintain streamside protection buffers of **100 feet** on the south and west sides of Poodle Creek adjacent to the project area, the south and west sides of Stream 13-1 above the confluence with Stream 13-11, and the south and east sides of Stream 13-11 above the confluence with Stream 13-1 and below the confluence with Stream 13-12.
- Locate snag and coarse woody debris creation areas, as described in **Wildlife**, outside of the Riparian Reserve land use allocation to the extent possible, or in the outer portions of the secondary shade zones (perennial streams) to avoid possible stream temperature impacts.

- Add 1 stream crossing culvert on Price Road (County Road 4350), and add 5 cross drains, replace 9 cross drains, and replace 6 stream crossing culverts on Road No. 17-6-18 to reduce current sediment delivery miles and the long-term risk of culvert/fill failures.
- Allow wet weather haul on Price Road (County Road 4350) so long as the aggregate surface is properly maintained.

## **Fisheries**

### **Threatened and Endangered Species**

No Endangered Species Act listed fish are associated with this action. No critical or essential fish habitat is designated within the tributaries of the Long Tom River associated with this thinning. Stream reaches within the partial harvest area contain no fish.

## **Wildlife**

### **Threatened and Endangered Species**

#### **Northern Spotted Owls (NSO):**

- Maintain 40% post-harvest canopy closure (NSO dispersal habitat).
- No other mitigations are required for the northern spotted owl.
- The proposed harvest area does not fall within 2012 critical habitat.
- A predicted owl site overlaps a portion of the proposed harvest area and is considered unoccupied.
- A known (historic) home range overlaps a portion of the proposed harvest area and is considered unoccupied.

#### **Marbled Murrelets (MAMU):**

- Trees with potential MAMU nesting structure located within the harvest area have been painted yellow and will be reserved.
- Protocol surveys of suitable habitat have been completed. MAMU occupancy was documented north of the partial harvest area and has been delineated (MAMU Occupied Stand) in July of 2012. Within 100 yards of the MAMU Occupied Stand, the use of power equipment is prohibited from April 1-August 5 of each year (MAMU Seasonal Restriction Area). Additionally, from August 6 through September 15, harvest operations within that same area may not begin until two hours after sunrise and must cease two hours prior to sunset.
- The proposed harvest area lies within critical habitat for the MAMU.

### **Bureau Sensitive Species**

No Bureau sensitive species were located during field surveys.

### **Other Species**

During field reviews, personnel encountered an agitated hawk whose aggressive behavior indicated it was protecting an active nest. Subsequent searches were unsuccessful in 2012 and will continue in 2013. If an active nest is found, a 0.25 mile buffer will be established around the nest wherein no activities other than hauling, including foot travel off of the road, would be allowed from March 1-July 15 of each year (Hawk Seasonal Restriction Area), unless non-nesting or nest failure is documented.

### **Coarse Woody Debris**

After at least 3 winters following the conclusion of harvest operations, assess the stand for coarse woody debris and snag needs. If needed, create snags and down wood in clumps that are well distributed..

## **Botany**

### **Threatened and Endangered Species**

No federally-listed Threatened or Endangered plant species were located during surveys.

### **Bureau Sensitive Species**

No Bureau Sensitive plant species were located during surveys.

### **Noxious Weeds and Invasive Non-native species**

- Clean 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 decompacted roads and other areas as appropriate, upon completion of operations.
- Do not place logging slash on Road No. 17-7-13.71 so that efforts to eradicate the false brome population can continue.

### **Fuels**

- Grapple pile slash located within 25 feet of Road Nos. 17-6-18 and 17-7-13.4.
- Cover roadside and landing piles, and burn piles in the late fall or early winter when favorable smoke dispersion conditions are common and risk of fire spread is low.
- Instead of covering and burning piles, the slash may be hauled away by the operator for biomass utilization.