

# Documentation of Land Use Plan Conformance and NEPA Adequacy (DNA)

U.S. Department of the Interior  
Bureau of Land Management (BLM)  
Eugene District, Oregon

## River Camp Restoration Project DOI-BLM-OR-E050-2009-0007-DNA

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- A. Description of the Proposed Action:** The proposed action is to implement the River Camp Project by commercially thinning approximately 337 acres within the Upper Siuslaw Late-Successional Reserve Restoration Plan EIS and the Upper Siuslaw Landscape Plan EA planning areas. The proposed action (including silvicultural prescriptions, logging systems, Riparian Reserve treatments, road construction, renovation, and decommissioning prescriptions, botany and fuels mitigation measures) is described in the attached "Implementation Prescription."  
**Location** T. 19 S., R. 6 W., Secs. 15, 19, 21; and T. 19 S., R. 7 W., Sec. 13, 23,25 Will. Mer.

**B. Conformance with the Land Use Plan (LUP) and Consistency with Related Subordinate Implementation Plans**

- Eugene District Resource Management Plan (RMP), June 1995, as amended.
- Upper Siuslaw Landscape Plan Environmental Assessment, July 2009.
- Record of Decision for Upper Siuslaw Late-Successional Reserve Restoration Plan: Upland Thinning Actions (Upper Siuslaw Upland Thinning Actions ROD). July 2004.

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

*"Plan and implement silvicultural treatments inside Late-Successional Reserves that are beneficial to the creation of late-successional habitat.*

*"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, p.30.)*

**C. Identify the applicable NEPA document(s) and other related documents that cover the proposed action.**

The proposed action is covered by the Upper Siuslaw Late-Successional Reserve Restoration Plan Environmental Impact Statement (Upper Siuslaw LSR EIS) - April 2004 and the Upper Siuslaw Landscape Plan Environmental Assessment – July 2009.

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

- Eugene District RMP/Environmental Impact Statement. November 1994
- 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.
- Water Quality Restoration Plan (appended to Upper Siuslaw Thinning ROD).
- U.S. Fish and Wildlife Service Biological Opinion 2004 (appended to Upper Siuslaw Thinning ROD).
- Late-Successional Reserve Assessment for the Oregon Coast Province - Southern Portion – RO267, RO268. 1997
- Siuslaw Watershed Analysis. 1996.
- River Camp Project Analysis File.

**D. NEPA Adequacy Criteria**

**1. Is the current proposed action substantially the same action (or is a part of that action) as previously analyzed?**

The proposed action for units 1, 2 and portions of units 3 and 4 are part of the proposed action analyzed in the Upper Siuslaw Landscape Plan Environmental Assessment and are contained

within the EA analysis area. The current proposed action implements the following specific actions in the selected alternative:

*“Trees identified for harvest would generally be from the smaller diameter classes, varying spacing to reserve the larger, more vigorous trees to a specified basal area. Thinning would be to an RD in the mid-30s which is expected to result in a residual canopy closure of 45 to 60 percent.” 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).*

The proposed action would thin units 1 and 2 and portions of units 3 and 4 to an RD of 34 and a basal area between 130 and 140. No new roads are being constructed in the units being treated under this EA. 3640 feet of road would be renovated or improved.

The proposed action for portions of units 3 and 4 and units 5, 6, 7, 8, 9, and 11 are part of the proposed action analyzed in the Upper Siuslaw LSR EIS and is within the EIS analysis area. The current proposed action implements the following specific actions in the selected alternative:

*“Among stands aged 21 to 30 years that were pre-commercially thinned, thin approximately 1/3 of stands in the uplands (i.e., >100' from streams) to a treated stand average of 60-80 Douglas-fir trees per acre.” (Upper Siuslaw Upland Thinning Actions ROD, Appendix A, p. 2).*

The proposed action would thin approximately 6 acres of stands aged 21-30 (at the time of the EIS analysis baseline, p. 61) to an average of 60-80 trees per acre with variable spacing (see implementation prescription).

*“Among stands aged 31 to 50 years, thin approximately ¼ of stands in uplands (i.e., >100' from streams) to a treated stand average of 60-80 Douglas-fir trees per acre, without regard to spacing.” (Upper Siuslaw Upland Thinning Actions ROD, Appendix A, p. 3).*

The proposed action would thin approximately 107 acres of stands aged 31-50 (at the time of the EIS analysis baseline, p. 61) to an average of 60-80 trees per acre with variable spacing (see attached implementation prescription).

*“Among stands aged 31 to 50 years, thin approximately ¼ of stands in uplands (i.e., >100' from streams) to a treated stand average of 80-110 Douglas-fir trees per acre, without regard to spacing.” (Upper Siuslaw Upland Thinning Actions ROD, Appendix A, p. 3).*

The proposed action would thin approximately 105 acres of stands aged 31-50 (at the time of the EIS analysis baseline, p. 61) to an average of 80-110 trees per acre with variable spacing (see attached implementation prescription).

*“Among stands aged 51 to 60 years, thin approximately ¼ of stands in uplands (i.e., >100' from streams) to a treated stand average of 60-80 Douglas-fir trees per acre, without regard to spacing.” (Upper Siuslaw Upland Thinning Actions ROD, Appendix A, p. 3).*

The proposed action would thin approximately 1.2 acres of stands aged 55 (at the time of the EIS analysis baseline, p. 61) to an average of 60-80 trees per acre with variable spacing (see attached implementation prescription).

*“Renovate and improve existing roads and construct new spur roads as needed to access areas selected for thinning.” (Upper Siuslaw Upland Thinning Actions ROD, Appendix A, p. 5).*

The current proposed action would renovate fifteen existing roads for approximately 5200 feet and would include new temporary construction at the end of the Spur 7A road in Unit 7 (200 feet). The guideline from the ROD (Appendix A, p. 5) states “New spur roads will generally be less than 200' in length.” The additional length of new construction is needed in order to reach the topographic break of the ridge in Unit 7. All new temporary road construction would be decommissioned the same season that logging occurs. See the engineering portion of the attached prescription for further detail.

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

The Upper Siuslaw Landscape Plan Environmental Assessment analyzed four alternatives in addition to the no action alternative. The alternatives analyzed a variety of thinning prescriptions and include a range of alternatives from considering limited road construction in LSR lands and spotted owl critical habitat units to building new roads as needed. The types of roads to be decommissioned varied between alternatives to reflect the variety of decommissioning opportunities that may exist. 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.

The EIS analyzed six alternatives in detail: the No Action alternative and five action alternatives. (Upper Siuslaw LSR EIS, pp. 33-42). The alternatives varied widely in their approach to subject of thinning stands, including no action, thinning stands without commercial timber harvest, and a wide variety of thinning prescriptions (Upper Siuslaw LSR EIS, pp. 34-35). The alternatives also considered a variety of approaches to road management, ranging from no new road construction to new road construction as needed to provide access (pp. 34-35). These alternatives cover the full spectrum of available alternative approaches to the current proposed action. Comments on the Draft Upper Siuslaw EIS did not suggest development of any additional alternatives (Upper Siuslaw LSR EIS, pp. 288-312). No new environmental concerns, interests, resource values, or circumstances have been revealed since the final EIS was published in 2004 that would indicate a need for additional alternatives.

**3. Is the existing analysis adequate and are the conclusions adequate in light of any new information or circumstances? Can you reasonably conclude that all new information and all new circumstances are insignificant with regard to analysis of the proposed action?**

There is no significant new information or circumstance relative to the analyses in the Upper Siuslaw Landscape Plan EA and the Upper Siuslaw EIS and the current proposed action. The affected environment and environmental effects have been considered in the EA (pages 19-42) and there is no new information or circumstances relative to these analyses. We received one comment about the consideration of carbon sequestration during the public comment period. The appropriate scale at which carbon storage estimates should occur are at the Resource Management Plan or larger. Since the EA tiered to the 1995 RMP, the analysis has been completed in the EIS that accompanied the 1995 RMP. The 1995 RMP did consider increases in carbon dioxide release from forest management activities. The two forest management activities that were considered as having a measureable impact (based on research available at that time) included large scale clear cutting of old growth (age class 200+) and prescribed burning after harvest of those acres. The total increase in atmospheric carbon would not exceed 0.01 percent due to those actions under the 1995 Proposed Resource Management Plan (pages 4-9; 4-10 1995 FEIS). All other forest management actions were considered to have much less of an impact and therefore were not considered. In contrast, the current proposed action under the Upper Siuslaw Landscape Plan Environmental Assessment is a thinning project and does not include clear cut harvest of old growth and associated prescribed burning. The proposed action includes piling of slash within 25 feet of roads. Slash from these piles would be used to scatter over decommissioned roads, and the remaining material would be covered and burned to increase safety in the event of wildfire occurrences. The carbon released from these slash piles is not expected to have measurable impacts to increases in carbon dioxide in the atmosphere due to the small amount and short duration of burning that is to occur. The conclusions in the 1995 RMP/EIS analysis of carbon sequestration support that thinning such as this proposed action would have a negligible effect on carbon sequestration. Therefore, there is no new information or circumstances with regards to carbon sequestration with regards to the proposed action.

The Upper Siuslaw EIS (Chapters 3 and 4) and the U.S. Fish and Wildlife Service Biological Opinion (appended to Upper Siuslaw Upland Thinning Actions ROD) analyzed existing conditions and environmental effects, and there is no new information or circumstances relative to these analyses. There have been no new assessments or analyses of project area of the current

proposed action, nor have there been any new designations of resources that would be affected by the current proposed action. Additional details are provided in the River Camp Project Analysis File.

**4. Do the methodology and analytical approach used in the existing NEPA document(s) continue to be appropriate for the current proposed action?**

The Upper Siuslaw Landscape Plan EA analyzed the effects of thinning on Critical Habitat for Spotted Owls and Marbled Murrelet habitat (pages 35-36). The Upper Siuslaw LSR EIS analyzed most of the effects of stand thinning using stand modeling results from the Landscape Management System (EIS, pp. 61-62). The EIS specifically analyzed the effect of stand thinning on the development of late-successional forest structural characteristics, marbled murrelet habitat, and northern spotted owl habitat. Analysis of these issues identified specific criteria for analysis (pp. 66-74). There is no new information that would alter the utility of the Landscape Management System for this analysis or change the criteria used for analysis.

**5. Are the direct and indirect impacts of the current proposed action substantially unchanged from those identified in the existing NEPA document(s)? Does the existing NEPA document sufficiently analyze site-specific impacts related to the current proposed action?**

There is no new information or circumstances that would alter the effects analysis in the Upper Siuslaw Landscape Plan EA or the Upper Siuslaw LSR EIS.

The Upper Siuslaw 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 spotted owls and marbled murrelets.

The Upper Siuslaw LSR EIS analyzed direct and indirect impacts of actions such as the current proposed action. Relevant to the current proposed action, the Upper Siuslaw LSR EIS concluded that stand thinning would speed the development of:

- late-successional forest structural characteristics (pp. 125-132);
- target habitat conditions for marbled murrelets (p. 133);
- suitable habitat and target habitat conditions for northern spotted owls (p. 134).

The EIS analysis concluded that thinning would downgrade some existing northern spotted owl dispersal habitat, but only outside of current owl home ranges (p. 134). Thinning and associated slash creation would result in a short-term increase in fire risk, followed by a long-term reduction in the risk of severe fire, relative to leaving stands unthinned (pp. 124-125). Road renovation, new road construction, and log haul would produce negligible, if any, sediment delivery to streams, because of restrictions on road locations (Upper Siuslaw LSR EIS, p. 136; Upper Siuslaw Thinning ROD, p. 7). Road renovation and new road construction could result in some further establishment and spread of noxious weeds (p. 136).

The site-specific effects of the current proposed action would be consistent with the effects analysis in the Upper Siuslaw LSR EIS. The stand conditions in the project area for the current proposed action are consistent with those anticipated in the Upper Siuslaw LSR EIS (p. 53). Portions of Unit 5; and all of Unit 6, of the project are within current northern spotted owl home ranges, but contain no treatments in stands older than 50 years of age. The silvicultural prescriptions for these units maintain at least a 40% canopy cover, so the stands would still function as owl dispersal 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. The segment of the Siuslaw River nearby has been found suitable for inclusion as a Wild and Scenic River, but the project maintains the river segment's outstandingly remarkable values (RMP, pp. 78-79). The current proposed action would include considerably less new road construction than anticipated in the Upper Siuslaw LSR EIS. The EIS estimated that there would be 15,480' of new road construction associated with 1,300 acres (12' per acre on average) of commercial timber harvest in 41-60-year-old stands over the 10 year implementation of the restoration plan (p. 124). At this average rate of road construction, the current 220 acre project area located in the EIS area would be expected to include 2,619 feet

of new road construction. The current proposed action would include only 200' of new construction, well below the average projection. Additional details are provided in the River Camp Project Analysis File.

**6. Can you conclude without additional analysis or information that the cumulative impacts that would result from implementation of the current proposed action are substantially unchanged from those analyzed in the existing NEPA document(s)?**

The Upper Siuslaw Landscape Plan EA analyzed the cumulative impacts of the proposed action within the watershed. The EA concluded that thinning would benefit the wildlife species on LSR lands. Coarse wood and snags would be created to improve habitat for wildlife. Road decommissioning would occur where wildlife and fish habitat may benefit from it. The Upper Siuslaw LSR EIS analyzed the cumulative impact of a wide range of management actions over time. Relevant to the current proposed action, the Upper Siuslaw LSR EIS concluded that stand thinning across the landscape would slow development of northern spotted owl dispersal habitat but always maintain the current amount (p. 134). In addition to commercial timber harvest (such as the current proposed action), non-commercial stand thinning, snag and coarse woody debris creation and planting would contribute to the development of late-successional forest structural characteristics (pp. 67, 125-132). Road renovation and new road construction would be greatly exceeded by the amount of road decommissioning (pp. 121-124). Stand thinning and associated road construction (such as the current proposed action) would not contribute to any cumulative impact on fish or other aquatic resources (pp. 135-136).

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

Public involvement for the Upper Siuslaw Landscape Plan EA has been adequate for the proposed action. Scoping was completed before the analysis for the EA began in the form of a letter describing the proposed project and project area which was mailed to interested parties on March 20, 2007. The EA and preliminary FONSI were made available for a 30 day public review on December 10, 2008, three comments were received. One comment suggested a "hybrid" alternative combining matrix thinning as described in alternative B and LSR heavy thinning as described for alternative D. The EA analyzed thinning in the matrix and heavy thinning on LSR lands; the proposed action includes both treatments. One other comment indicated inadequate analysis of the hardwood conversions included in the proposed action. Hardwood conversions will be analyzed in a separate NEPA document and are not part of the proposed action in the EA. BLM did not receive any protests following the publication of the Decision Record.

BLM notified the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians, and the Confederated Tribes of the Grand Ronde of the Upper Siuslaw 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. We received no responses.

BLM has consulted with the U.S. Fish and Wildlife Service (USFWS). BLM completed formal consultation under the Endangered Species Act with the USFWS on effects of the River Camp restoration project on the northern spotted owl, and marbled murrelet. The current proposed action is consistent with the description of the action in the Habitat Modification and Disturbance Biological Opinion issued by the USFWS. 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 NOAA Fisheries is not required.

Public involvement and interagency review associated with the Upper Siuslaw LSR EIS are adequate for the current proposed action. BLM conducted informal scoping for two years prior to publishing a Notice of Intent to prepare an EIS in the Federal Register beginning the formal scoping period. During the public comment period for the draft EIS, BLM received 11 comment letters and one letter after the comment period. None of the comments suggested development of additional alternatives or pointed out flaws or deficiencies in analysis (Upper Siuslaw LSR EIS, p. 288; Upper Siuslaw Upland Thinning Actions ROD, pp. 9-10). BLM did not receive any comments following publication of the final EIS, and did not receive any protests following publication of the Record of Decision.

BLM notified the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians, and the Confederated Tribes of the Grand Ronde of the Upper Siuslaw LSR Restoration Plan during the scoping process, requesting information regarding tribal issues or concerns relative to the project. BLM also sent the tribes copies of the draft and final EIS. We received no responses (Upper Siuslaw Upland Thinning Actions ROD, p. 10).

BLM engaged the U.S. Fish and Wildlife Service (USFWS) as a formal cooperator in the preparation of the Upper Siuslaw LSR EIS. BLM completed formal consultation under the Endangered Species Act with the USFWS on effects of the Upper Siuslaw LSR Restoration Plan on northern bald eagle, northern spotted owl, and marbled murrelet (Upper Siuslaw Upland Thinning Actions ROD, pp. 8-9; Appendix C). The current proposed action is consistent with the description of the action in the Biological Opinion issued by the USFWS. 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 NOAA Fisheries is not required.

BLM prepared a Water Quality Restoration Plan (WQRP) for the Upper Siuslaw LSR Restoration Plan and provided the WQRP to the Oregon Department of Environmental Quality for review (Upper Siuslaw Upland Thinning Actions ROD, p. 7; Appendix B).

**E. Interdisciplinary Analysis:** Identify those team members conducting or participating in the preparation of this worksheet.

Steve Steiner	Hydrologist	Hydrology
Karin Baitis	Soil Scientist	Soils
Scott Richards	Engineer	Roads
Dan Crannell	Wildlife Biologist	Wildlife
Sharmila Premdas	Landscape Planner	NEPA
Leo Poole	Fish Biologist	Fisheries
Mark Stephen	Silviculturist	Planning Forester
Dave Reed	Fuels Specialist	Fuels
Molly Widmer	Botanist	Botany
Janet Zentner	Forester	Logging Systems Forester

**F. Mitigation Measures:** List any applicable mitigation measures that were identified, analyzed, and approved in relevant LUPs and existing NEPA document(s). List the specific mitigation measures or identify an attachment that includes those specific mitigation measures. (see attached implementation prescription)

**REVIEWED BY**

/s/ Sharmila Premdas  
NEPA Coordinator

7/28/09  
Date

**CONCLUSION**

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

/s/ William E. Hatton  
Field Manager  
Siuslaw Resource Area

7/28/09  
Date

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

DECISION RECORD  
Documentation of NEPA Adequacy  
River Camp Restoration Project  
**DOI-BLM-OR-E050-2009-0007-DNA**

Decision:

It is my decision to implement the River Camp Restoration Project as described in the Documentation of NEPA Adequacy **DOI-BLM-OR-E050-2009-0007-DNA** and in the attached implementation prescription.

The proposed action has been reviewed by Resource Area Staff and appropriate project Design Features as specified in the Upper Siuslaw Landscape Plan EA and Upper Siuslaw Late-Successional Reserve Restoration Plan EIS which analyzed these actions will be incorporated into the proposal. Based on the Documentation of NEPA Adequacy, I have determined that the proposed action involves no significant impact to the human environment and no further analysis is required.

On July 16, 2009 the U.S. Department of the Interior, withdrew the Records of Decision (2008 ROD) for the Western Oregon Plan Revision and directed the BLM to implement actions in conformance with the resource management plans for western Oregon that were in place prior to December 30, 2008.

Since project planning and preparation of National Environmental Policy Act documentation for this project began prior to the effective date of the 2008 ROD, this project had been designed to comply with the land use allocations, management direction, and objectives of the 1995 resource management plan (1995 RMP).

The Proposed Action is in conformance with the standards and guidelines of the 1995 Eugene District Record of Decision and Resource Management Plan (as amended).

Administrative Remedies:

The forest management decision to be made on the action described in the Documentation of NEPA Adequacy is subject to protest under 43 CFR subpart 5003. Under 43 CFR 5003.2 subsection (b), the decision will be published in local newspaper(s) and this notice shall constitute the decision document. Under 43 CFR 5003.3 subsection (a), protests may be filed with the authorized officer within 15 days of the publication date of this decision. Under 43 CFR 5003.3 (b), protest(s) filed with the authorized officer shall contain a written statement of reasons for protesting the decision. A decision on this protest would be subject to appeal to the Interior Board of Land Appeals, although, under 43 CFR 5003.1 subsection (a), filing a notice of appeal under 43 CFR part 4 does not automatically suspend the effect of a decision governing or relating to forest management under 43 CFR 5003.2 or 5003.3.

Authorizing Official:

/s/ William E. Hatton  
\_\_\_\_\_  
William E. Hatton  
Field Manager  
Siuslaw Resource Area

7/28/09  
\_\_\_\_\_  
Date

**Project Implementation Prescription**  
**River Camp Tract No. 09-563**  
**T19S, R6W, Sections 15, 19, 21;**  
**T19S, R7W, Section 13, 23, 25**

**Silviculture Prescription**

The project is a density management thinning on Units 1-9 and Unit 11. *\*(Unit 10 was dropped during project development due to low volume and high road building costs. Unit 11 will become Unit 10 within the sale contract.)*

The marking guide for upland and riparian stands is as follow:

- Vary the leave tree spacing as needed to generally reserve the larger diameter, more vigorous trees when using basal area (BA) marking/ thinning from below.
- Vary the leave tree spacing as needed to generally reserve the more vigorous trees within each diameter class when using proportional thinning.
- Selected leave trees should generally be of good form and relatively free of defect; however, trees with unique structure such as wolf trees, forked tops, and cavities shall be reserved in sufficient numbers to maintain presence in the stands.
- Select/mark conifer leave trees to protect desired structure such as snags and understory trees and to release trees in the understory.
- Do not cut trees larger than 20 inches (in Units 3-11) except for safety reasons, and do not cut trees larger than 32 inches.
- Reserve hardwoods and Pacific yew trees.
- Western redcedar will be favored over Douglas-fir in selection of retention trees in Units 1 and 2.
- Western redcedar and western hemlock shall be reserved in Units 3-11.
- Snags and coarse woody debris of decay classes 3, 4, and 5 shall be reserved in all units.
- Non-merchantable tree tops and limbs shall be retained where the source tree is felled.
- Upon completion of thinning operations, the project areas and adjacent stands will be evaluated for the need to provide additional down wood and snags.
- Selected leave trees will range from 68-105 trees/acre (*see unit prescriptions below*).
- Retention of target basal area will range from 80-125 ft<sup>2</sup> basal area per acre (*see unit prescriptions below*).
- Resulting stand relative density (RD) (Curtis) ranges from 21-34 (*see unit prescriptions below*)
- The silvicultural prescription is designed to maintain 40% post harvest canopy closure in existing dispersal habitat (stands greater than 40 years old) within current 1.5 mile radius owl home ranges (Units 5 and 6).
- Units will be underplanted with minor species and/or Douglas-fir based on seedling availability and site evaluation after thinning.

Retention by Unit						
Unit	BA/Acre (DF)	BA/Acre (All Conifer)	TPA (DF)	TPA (All Conifer)	RD	Type Thinning
1		115		73	34	From Below (all conifers)
2		125		68	34	From Below (all conifers)
3	80		86		34	From Below (DF)
4	125		105		34	From Below (DF)
5	110		72		27	From Below (DF)
6	80		68		22	From Below (DF)
7	80		68		21	From Below (DF)
8	80		68		21	From Below (DF)
9	80		85		26	Proportional (DF)
10	N/A	N/A	N/A	N/A	N/A	Unit Dropped*
11	100		69		27	From Below (DF)

<b>Thinning Sale Volume and Acres</b>			
<b>Unit</b>	<b>Estimated Acres</b>	<b>Estimated Volume/Acre (MBF)</b>	<b>Estimated Sale Volume (MBF)</b>
1	50	9.7	485
2	67	11.2	750
3	26	2.9	75
4	62	4.5	279
5	16	13.3	213
6	7	5.6	34
7	27	4.8	130
8	16	14.8	237
9	23	21.6	497
11	43	8.9	383
<b>TOTAL</b>	<b>337</b>		<b>3,083</b>

Estimated LSR Upland            226 AC = 2.1 MMBF  
Estimated Riparian Reserves    111 AC = 1.0 MMBF

### **Logging Systems**

- Unit 11: Exclude approximately 5 acres with Kilchis Soils from the timber harvest area.
- Do not yard logs through TPCC designated fragile soils.

### **Cable Yarding Design Features – approximately 281 acres**

- All cable yarding shall be to designated or approved landings.
- To minimize impacts, keep spacing of cable corridors 150 feet apart at one end whenever possible, and limit to 12 feet in width (a cable system capable of 75 foot lateral yarding should be used).
- Minimum one-end suspension is required. Intermediate supports may be necessary to achieve the required suspension.
- Cable yarding system should be laid out to eliminate gouging (log dragging) to reduce concentration of drainage delivering to streams.
- Full suspension is required when yarding over streams.
- Full suspension is required where attainable within the buffer of Stream 23-29 (Unit 1, Stream 1 on map) and Stream 19-7 (Unit 7, Stream 2 on map).
- Locate cable corridors over streams and on concave slopes above stream channel initiation points (headwalls) so that they are within 45 degrees of perpendicular to the stream, where possible. This is to provide a sharp channel junction to dissipate the energy of any potential debris flows or torrents.

### **Ground Based Yarding Design Features – approximately 56 acres**

- Require that operations occur 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.
- Use existing skid trails wherever possible.
- Limit skid trails to slopes less than 35%.
- Pre-designate skid trails.
- Limit skid trails to <10% of the harvest area by requiring a minimum 150 foot spacing between skid trails at one end, and limiting the width of skid trails to 12 feet.
- Limit low ground pressure (<6 psi) ground-based yarding equipment to one round trip when operating outside designated primary skid trails, utilizing downed slash to minimize soil disturbance.
- Require felling of trees to lead to the skid trails and maximize winching distances.
- Skid logs to designated or approved landings.
- Till all skid trails and landings and place slash and brush on trails with an excavator. Tilling would immediately follow logging operations and take place prior to the onset of the fall rainy season. If tillage cannot be accomplished the same operating season, all trails would be left in an erosion resistant condition and blocked.
- Prohibit skidding equipment within 75 feet of posted riparian boundaries.

**Engineering**

Construction/Renovation/ Improvement Required:

Unit	Road No.	Type	Length (feet)	Notes
1	19-7-26A,B	Renovation		Replace 4 cross drains
	19-7-23A	Renovation		Replace 1 cross drain
	19-7-23B	Renovation	2,285	
	Spur 1A	Improvement	70	
2	19-7-23.5	Renovation	439	
	19-7-26.3B	Improvement	846	(285' on private 1 <sup>st</sup> use)
3	19-7-26A-D	Renovation	380	
	19-7-26E	Improvement	330	
	19-7-23.1 (portion)	Renovation		Replace 2 cross drains
	19-7-23.4 (portion)	Renovation		Replace 2 cross drains
	Spur 3A	Improvement	580	Rocking
4	Spur 4A	Renovation	425	Rocking
5	19-6-18A,B,C1	Renovation		Replace 7 cross drains, add 1 cross drain
6	19-6-18.1A,B	Renovation		Replace 9 cross drains and 2 stream crossings on Rd No. 19-6-18.1
	Spur 6A	Renovation	200	No rock; summer haul required
7	19-6-30A,B	Renovation		Replace 6 cross drains and two stream crossings, and add 1 cross drain
	Spur 7A	Construction	200	No rocking; build, use and decommission in one operating season
8	N/A	None		None
9	19-7-25.71	Renovation	1,340	No rocking; pad or armor two old growth trees adjacent to road @ sta. 4+25 during renovation
11	19-6-15.6	Renovation	1,615	
	19-6-15.71	Renovation	660	
	19-6-10	Renovation	9,346	Replace 3 cross drains
	19-6-15.1A (portion)	Renovation	1,690	Replace 1 cross drain

Renovation work may consist of brushing, scarifying the subgrade to a 14' width, outsloping where possible, replacing and/or adding culverts, and road rocking. Improvement may consist of replacing old culverts, installing new culverts, and adding crushed rock surfacing. To facilitate winter hauling/logging operations, approve winter haul roads as necessary.

Design new construction as natural surfaced, with 14 foot wide subgrade (SN-14) and no ditches; outslope subgrades with road grades 0-12% and inslope grades over 12%. Use drain dips and rolling dips where possible with minimal use of culverts. Unit 1 potentially includes a Logger's choice spur estimated at 800 feet in length (*refer to USLP EA*). Logger's choice spurs in Units 3 through 10 shall be limited to 200 feet in length and may not be rocked.

In Units 1 and 2, block renovated or natural surfaced roads at the end of each operating season, and place them in an erosion-resistant condition by constructing drainage dips, waterbars, and/or lead-off ditches.

## Haul Route

Unit	Road No.	Season of Haul Classification (to reduce sediment delivery to streams)	Source of Season of Haul Classification	ID Team Proposed Season of Haul for Harvest Unit	Comments
1	County Rd 4390	Winter/summer	EIS table; road is chip sealed	Winter/summer	Siuslaw Rd
	19-7-25 (portion)	Winter/summer	EIS table; road is chip sealed	Winter/summer	Upper Siuslaw Rd
	19-7-25.1	Winter/summer	EIS table; road is chip sealed	Winter/summer	East Oxbow Rd
	19-7-26A	Winter/summer	EIS table	Winter/summer	Letzen Mtn. Renovation: replace 4 cross drains
	19-7-26B	Winter/summer	EIS table	Winter/summer	
	19-7-23A	Winter/summer	Field survey	Winter/summer	Letzen Spur Renovation: replace 1 cross drain
	19-7-23B	Winter/summer	Field survey	Winter/summer	Letzen Spur: Renovation 2,285 ft
	Spur 1A	Winter/summer	Field survey	Winter/summer	Improvement: 70 ft rocking
2	County Rd 4390	Winter/summer	Rd is chip sealed	Winter/summer	Siuslaw Rd
	19-7-25 (portion)	Winter/summer	EIS table; road is chip sealed	Winter/summer	Upper Siuslaw Rd
	19-7-25.1	Winter/summer	EIS table; road is chip sealed	Winter/summer	East Oxbow Rd
	19-7-26A	Winter/summer	EIS table	Winter/summer	Letzen Mtn
	19-7-26B (portion)	Winter/summer	EIS table	Winter/summer	Letzen Mtn
	19-7-23.5	Winter/summer	Field survey	Winter/summer	Renovation: 439 ft
	19-7-26.3B	Winter/summer	Field survey	Winter/summer	Improvement: 846 ft rocking (285 ft private rd; first use)
3	County Rd 4390	Winter/summer	Rd is chip sealed	Winter/summer	Siuslaw Rd
	19-7-25 (portion)	Winter/summer	EIS table; road is chip sealed	Winter/summer	Upper Siuslaw Rd
	19-7-25.1	Winter/summer	EIS table; road is chip sealed	Winter/summer	East Oxbow Rd
	19-7-26A	Winter/summer	EIS table	Winter/summer	Letzen Mtn
	19-7-26B	Winter/summer	EIS table	Winter/summer	Letzen Mtn
	19-7-26C	Winter/summer	EIS table	Winter/summer	Letzen Mtn
	19-7-26D	Winter/summer	EIS table	Winter/summer	Letzen Mtn; Improvement: 380 ft
	19-7-26E	Winter/summer	EIS table	Winter/summer	Improvement: 330 ft
	19-7-23A	Winter/summer	Field survey	Winter/summer	Letzen Spur: Renovation
	19-7-23.1 (portion)	Winter/summer	EIS table	Winter/summer	Renovation: replace 2 cross drains
	19-7-23.4 (portion)	Winter/summer	EIS table	Winter/summer	Renovation: replace 2 cross drains
Spur 3A	Winter/summer	Field survey	Winter/summer	Improvement: 580 ft to be rocked	

Unit	Road No.	Season of Haul Classification (to reduce sediment delivery to streams)	Source of Season of Haul Classification	ID Team Proposed Season of Haul for Harvest Unit	Comments
4	County Rd 4390	Winter/summer	Rd is chip sealed	Winter/summer	Siuslaw Rd
	19-7-25 (portion)	Winter/summer	EIS table; road is chip sealed	Winter/summer	Upper Siuslaw Rd
	19-7-25.1	Winter/summer	EIS table; road is chip sealed	Winter/summer	East Oxbow Rd.
	19-7-26A	Winter/summer	EIS table	Winter/summer	Letzen Mtn
	19-7-26B (portion)	Winter/summer	EIS table	Winter/summer	Letzen Mtn
	19-7-23.2	Winter/summer	EIS table	Winter/summer	
	Spur 4A	Winter/summer	Field survey	Winter/summer	Renovation: 425 ft to be rocked
5	County Rd 4078	Winter/summer	Rd is chip sealed	Winter/summer	Wolf Creek Rd
	19-6-16 (portion)	Winter/summer	Field survey	Winter/summer	L-Line
	19-6-18A;B	Winter/summer	EIS table	Winter/summer	Renovation: replace 7 cross drains; add 1 cross drain
	19-6-18C1	Winter/summer	EIS table	Winter/summer	
6	County Rd 4078	Winter/summer	Rd is chip sealed	Summer	Wolf Creek Rd
	19-6-16 (portion)	Not surveyed		Summer	
	19-6-16 (portion)	Winter/summer		Summer	
	19-6-18.1A	Summer only	Field Survey	Summer	Renovation: replace 9 cross drains; 2 stream crossings
	19-6-18.1B (portion)	Summer only	Field Survey	Summer	
	Spur 6A	Summer only	Field survey	Summer	Renovation: 200 ft (no rock). Haul route requires summer haul.
7	County Rd 4390	Winter/summer	Rd is chip sealed	Summer	Siuslaw Rd
	19-6-30A	Summer only	Field Survey	Summer	Renovation: Replace 6 cross drains; two stream crossings; add 1 cross drain
	19-6-30A (portion)	Summer only	Field Survey	Summer	
	19-6-30B (portion)	Summer only	Field Survey	Summer	
	Spur 7A	Summer only	Field survey	Summer	New Construction: 200 ft; no rocking. Haul route requires summer haul.
8	County Rd 4390	Winter/summer	Rd is chip sealed	Summer	Siuslaw Rd
	19-6-30A (portion)	Summer only	Field Survey	Summer	
	19-6-30A (portion)	Summer only	Field Survey	Summer	
9	County Rd 4390	Winter/summer	Rd is chip sealed	Summer	Siuslaw Rd
	19-7-16 (portion)	Winter/summer	Field survey	Summer	
	19-7-16 (portion)	Winter/summer	Field survey	Summer	
	19-7-25.71	Winter/summer	Field survey	Summer	Renovation: 1,340 ft; no rock; tractor yarding and cable; protect old growth trees close to road renovation
11	County Rd 4078	Winter/summer	Rd is chip sealed	Summer	Wolf Creek Rd
	19-6-10A,B,C (portion)	Winter/summer	Field Survey	Summer	Replace 3 cross drains
	19-6-15.1A (portion)	Winter/summer	EIS table	Summer	High Point Rd
	19-6-15.2A (portion)	Winter/summer	Field survey	Summer	
	19-6-15.6	Winter/summer	Field survey	Summer	Renovation: 1,615 ft
	19-6-15.71	Winter/summer	Field survey	Summer	Renovation: 660 ft

Note: Summer haul only for Unit 9 due to amount ground-based yarding available, proximity to 2 old growth trees requiring protection, and potential sediment delivery in conjunction with winter haul. Summer haul only for Unit 11 due to cost to rock road.

**Road Decommissioning**

Decommission roads in Units 1 and 2 per the requirements in the USLP EA. Decommission newly constructed roads, loggers choice spurs, and skid roads in Units 3-11 in the same season of construction per the requirements in the LSR 267 EIS. Use the decommissioning measures listed below:

- (aa) Purchaser shall till all skid trails and natural surfaced roads and landings with decompaction equipment. Skid trails may be tilled using a modified bucket attached to a track mounted excavator. Decommissioning should occur during the dry season.
- (bb) Purchaser shall construct drainage dips, waterbars and/or lead-off ditches, as directed by the Authorized Officer. Waterbars and drainage dips shall be constructed in accordance with the specifications shown on Exhibit H.
- (cc) Purchaser shall place logging slash on natural surfaced roads and graveled landings outside of road prisms, where available.
- (dd) Purchaser shall block roads at entry points, using stumps, slash, and/or cull logs, as directed by the Authorized Officer.

Road Number	Road Rocking for wet weather haul	If not rocked (dry season haul only)				If rocked for wet weather haul		
		(aa)	(bb)	(cc)	(dd)	(bb)	(cc)	(dd)
		Tilling	Drainage	Logging Slash	Blocking	Drainage	Logging Slash	Blocking
Skid & equipment trails	Not allowed	X	X	X	X			
Logger's choice spurs, Units 1&2	Optional	Appropriate measures determined by the Authorized Officer						
Logger's choice spurs, Units 3-10	Not Allowed	Appropriate measures determined by the Authorized Officer						
<b>UNIT 1</b>								
19-7-23B	Required*		X	X	X	X	X	X
Spur 1A	Required*	X	X	X		X	X	
<b>UNIT 2</b>								
19-7-23.5	Required*		X	X	X	X	X	X
19-7-26.3B	Required*	X	X		X	X		X
<b>UNIT 3</b>								
19-7-26D	NA		X	X	X	X	X	X
19-7-26E	Required*	X	X	X	X	X	X	X
Spur 3A	Required*	X	X	X	X	X	X	X
<b>UNIT 4</b>								
Not required								
<b>UNIT 5</b>								
Not required								
<b>UNIT 6</b>								
Spur 6A	Not Allowed	X	X	X	X			
<b>UNIT 7</b>								
Spur 7A	Not allowed	X	X	X	X			
<b>UNIT 9</b>								
19-7-25.71	Not Allowed	X**	X	X	X			
<b>UNIT 11</b>								
19-6-15.71	Not Allowed	X	X	X	X			
19-6-15.6	Not Allowed		X	X	X			

\* Road rocking required for wet weather haul.

\*\* Avoid tilling in vicinity of 2 old-growth trees

## **Hydrology and Fisheries**

Maintain minimum no-harvest buffers from streams: 75-100 feet in Units 1-4, and 100 feet in Units 5-11. No cutting would occur within the primary shade zone, except for limited cutting for yarding corridors. Post Harvest treatment could include 1 to 2 trees per acre in the primary shade zone for large woody debris addition to streams.

## **Fisheries**

The Oregon Coastal Coho Salmon ESU is listed as threatened under the Endangered Species Act.

- Unit 1: Require full suspension where attainable when yarding over the buffer of Stream 23-29 (Stream 1 map) due to the presence of cutthroat trout.
- Unit 7: Require full suspension where attainable when yarding over the buffer of Stream 19-17 (Stream 2 on map) which is fishbearing (coho salmon).

## **Wildlife**

### **Threatened and Endangered Species**

#### *Spotted Owls*

- Operations shall be restricted seasonally as follows:
  - Prohibit harvest activities, with the exceptions of hauling, within 65 yards of a known spotted owl activity center or a "predicted" spotted owl nest patch between March 1 and July 7 of each year. (Special Operating Area (NSO) on map)
- Maintain 40% canopy closure in the overstory of Units 5 and 6.

*Marbled Murrelets*: No trees providing nesting structure were identified or marked with yellow paint within the proposed units

- Operations shall be restricted seasonally as follows:
  - With the exceptions of hauling, within 100 yards of occupied or unsurveyed murrelet habitat, prohibit harvest activities from two hours prior to sunset to two hours after sunrise from April 1 through September 15 of each year. (Special Operating Area (MAMU) on map)

*Bald eagles*: No restrictions or mitigations required.

## **Botany**

### **Threatened and Endangered Species:**

No federally listed Threatened and Endangered plant species were found during surveys

### **Special Status Species:**

#### *Vascular plants:*

*Cimicifuga elata*, Vascular plant. Bureau Sensitive; State Candidate; Oregon Natural History Program (ONHP) List 1; Lane County T&E list.

- Located in untreated riparian buffer in Unit 3; no other protection is required.

#### *Non-vascular Plants:*

No special status lichens or bryophytes (mosses, liverworts) were found in any unit.

### **Noxious weeds:**

- Notify Resource Area Weed Coordinator prior to operations to arrange for mowing or otherwise treating roads to limit transportation of weed seeds into harvest areas.
- Wash all logging or road building equipment prior to entering BLM lands to reduce the introduction of new weed seed in newly opened areas.
- Seed decommissioned roads with native species or plant with conifers to help shade out weeds, lessen erosion, and speed revegetation, Prescribe these actions based on on-site evaluation after logging has been completed.

## **Fuels**

- Pile roadside slash as needed within 25 feet of the following roads within the sale area: Road Nos. 19-6-15.1, -15.6, -16, -18, -18.1, and 19-7-26. Leave material greater than 9" in diameter out of piles.
- Scatter roadside and landing piles across roads to be closed after harvest. Scatter slash in a manner that does not create a deep continuous fuel bed.
- Cover and burn remaining roadside piles and landing piles.

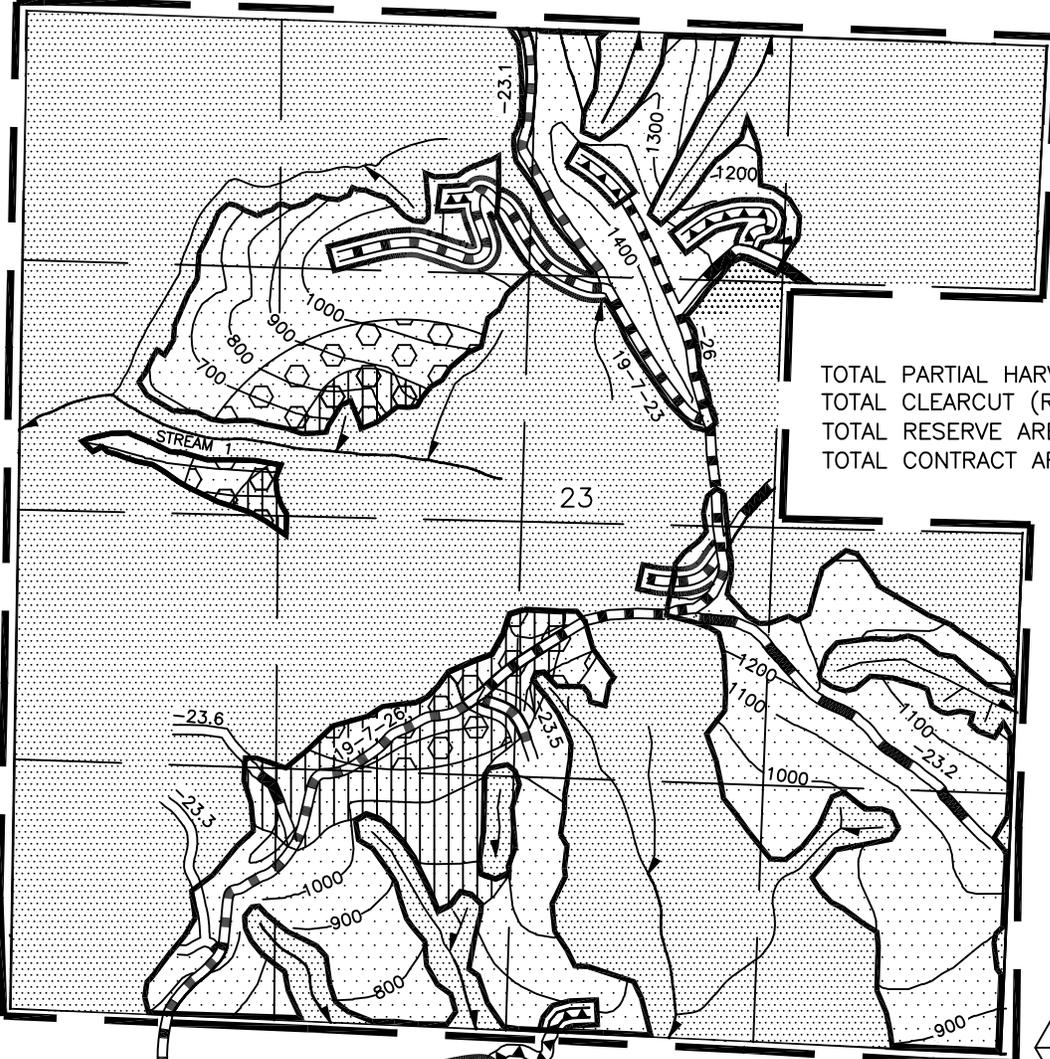
UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT  
 PROJECT AREA MAP: RIVER CAMP

T. 19 S., R. 7 W., SEC. 23, WILL. MER., EUGENE DISTRICT



3  
22

1  
44



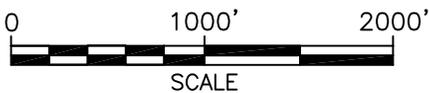
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TOTAL CLEARCUT (R/W) AREA	5.40
TOTAL RESERVE AREA	1,065.54
TOTAL CONTRACT AREA	<u>1,359.94 A.</u>

2  
59

4  
55

PARTIAL HARVEST AREA	180.0
CLEARCUT (R/W) AREA	3.1
RESERVE AREA	416.9
CONTRACT AREA	<u>600.0 A.</u>

LEGEND

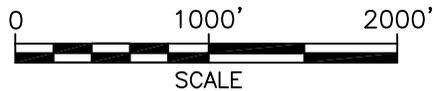
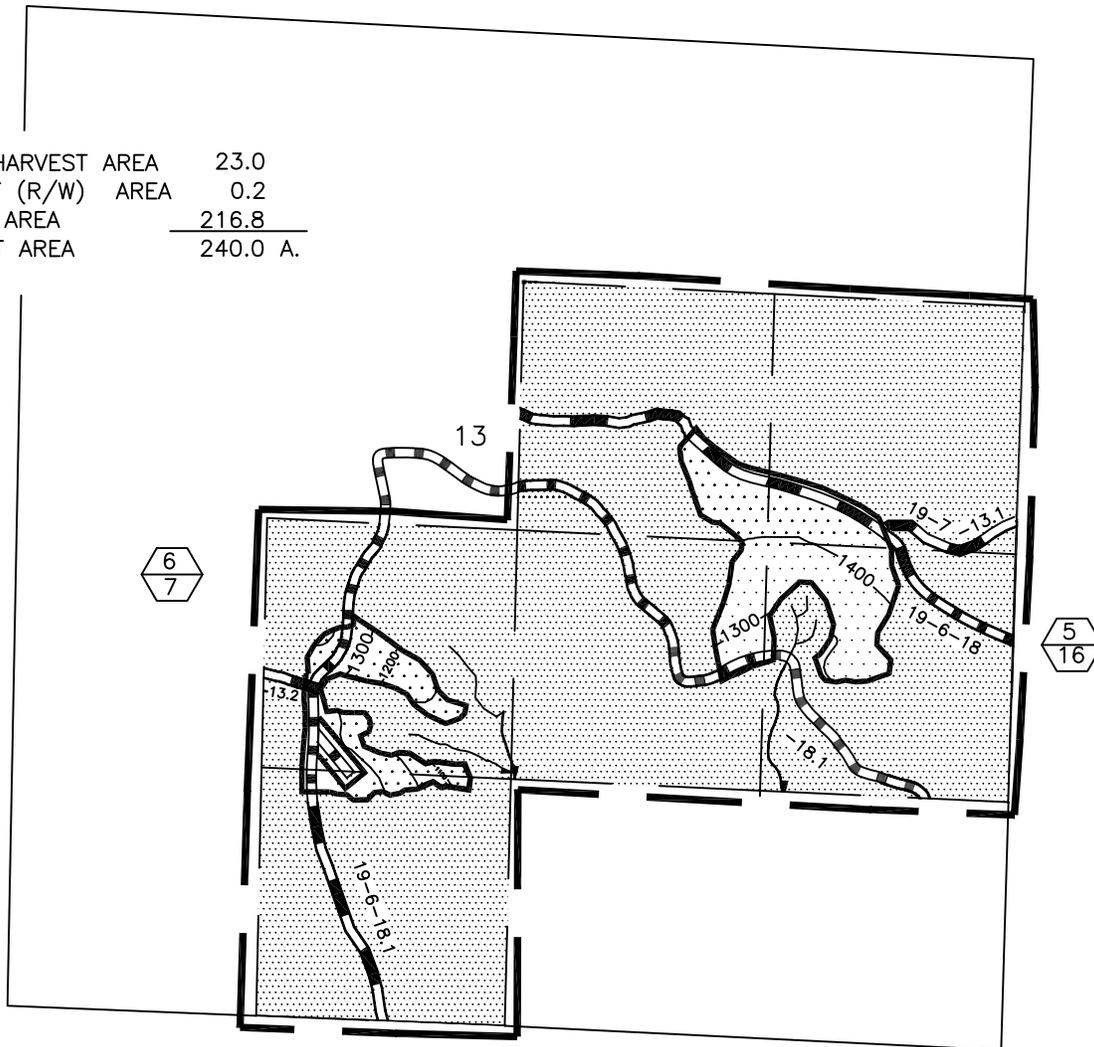


- PARTIAL HARVEST AREA
- RESERVE AREA
- CLEARCUT (R/W) AREA
- SPECIAL OPERATING AREA (NSO)
- SPECIAL OPERATING AREA (MAMU)
- PARTIAL HARVEST NUMBER ACRES
- BOUNDARY - CONTRACT AREA
- BOUNDARY - CUTTING AREA (BLAZED, PAINTED & POSTED)
- PAVED ROAD
- ROCK SURFACED ROAD
- ROAD TO BE IMPROVED
- ROAD TO BE RENOVATED
- NATURAL SURFACED ROAD
- GATE
- STREAM

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT

PROJECT AREA MAP: RIVER CAMP  
 T. 19 S., R. 7 W., SEC. 13, WILL. MER., EUGENE DISTRICT

PARTIAL HARVEST AREA	23.0
CLEARCUT (R/W) AREA	0.2
RESERVE AREA	216.8
CONTRACT AREA	<u>240.0 A.</u>



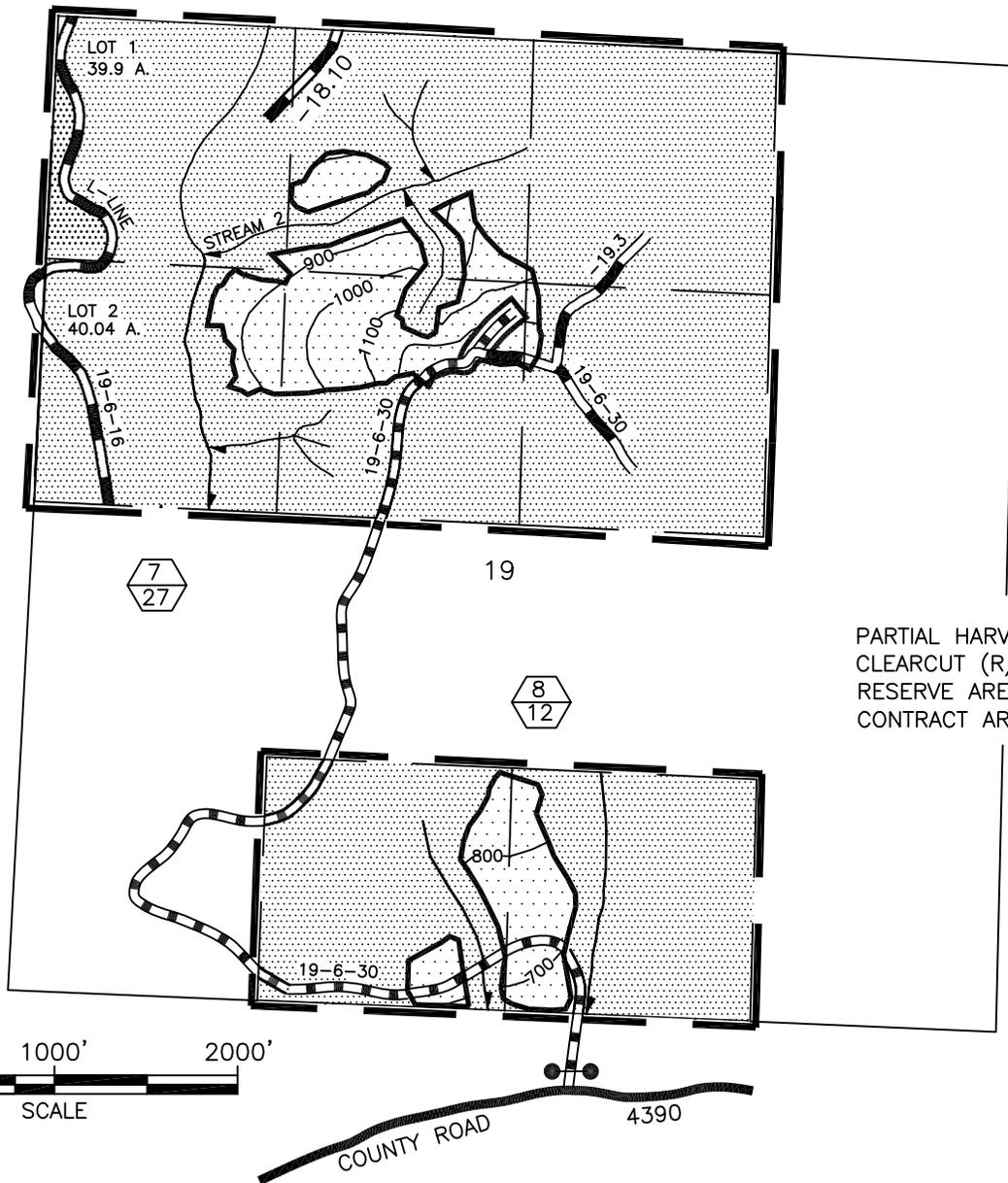
LEGEND

- |   |                                 |   |   |
|---|---------------------------------|---|---|
|  | PARTIAL HARVEST AREA            |  | BOUNDARY - CONTRACT AREA                              |
|  | RESERVE AREA                    |  | BOUNDARY - CUTTING AREA<br>(BLAZED, PAINTED & POSTED) |
|  | CLEARCUT (R/W) AREA             |  | ROCK SURFACED ROAD                                    |
|  | PARTIAL HARVEST NUMBER<br>ACRES |  | ROAD TO BE RENOVATED                                  |
|   |                                 |  | STREAM  |

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

PROJECT AREA MAP: RIVER CAMP

T. 19 S., R. 6 W., SEC. 19, WILL. MER., EUGENE DISTRICT



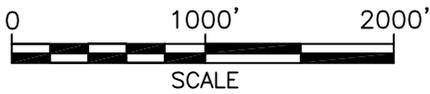
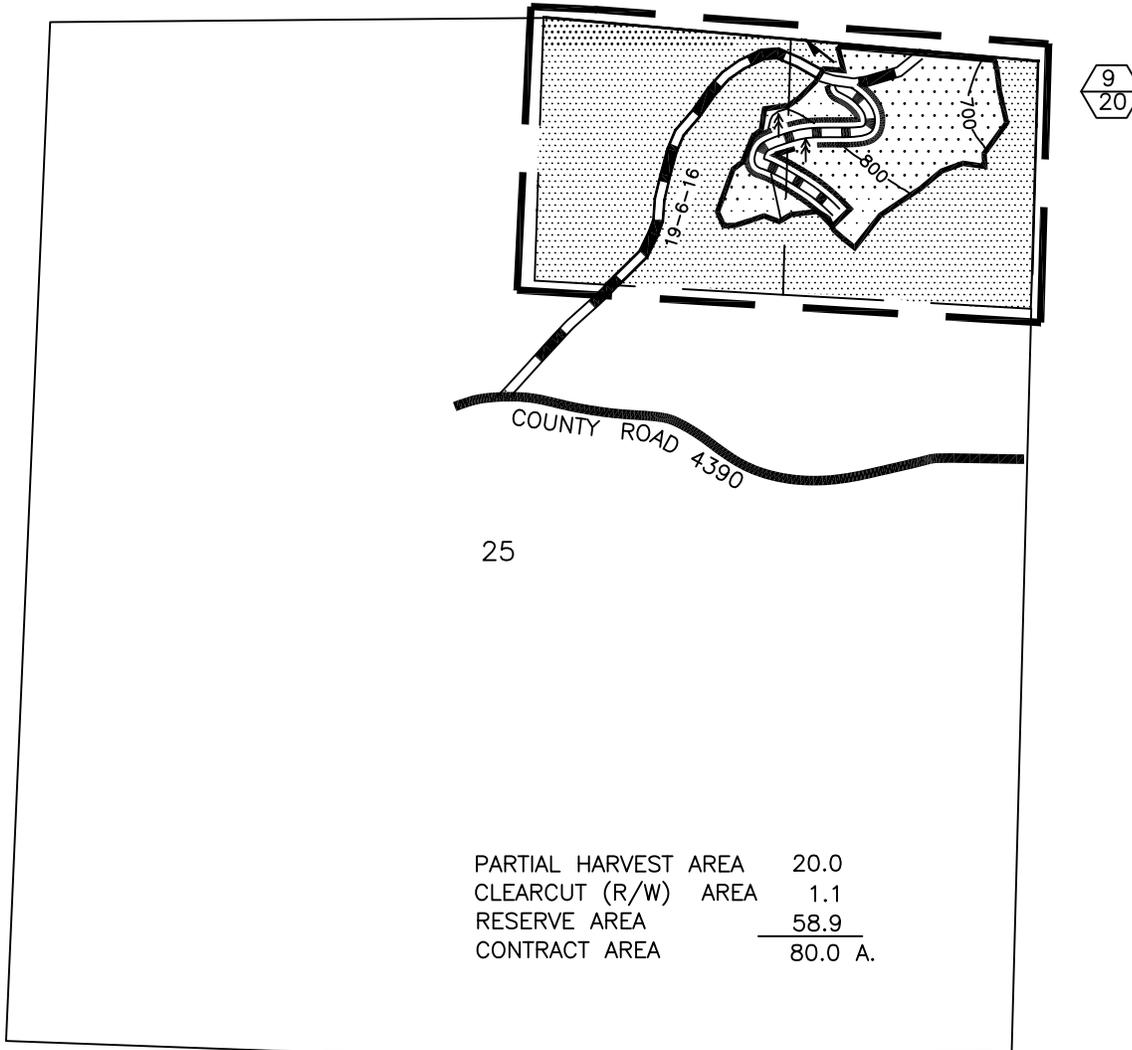
PARTIAL HARVEST AREA	39.00
CLEARCUT (R/W) AREA	0.10
RESERVE AREA	280.84
CONTRACT AREA	<u>319.94</u>

LEGEND

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|--|--|
|  PARTIAL HARVEST AREA           |  BOUNDARY - CONTRACT AREA                           |
|  RESERVE AREA                   |  BOUNDARY - CUTTING AREA (BLAZED, PAINTED & POSTED) |
|  CLEARCUT (R/W) AREA            |  ROCK SURFACED ROAD                                 |
|  PARTIAL HARVEST NUMBER 1 ACRES |  ROAD TO BE CONSTRUCTED                             |
|  PARTIAL HARVEST NUMBER 2 ACRES |  ROAD TO BE RENOVATED                               |
|  GATE                           |  STREAM   |

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT  
 PROJECT AREA MAP: RIVER CAMP

T. 19 S., R. 7 W., SEC. 25, WILL. MER., EUGENE DISTRICT



LEGEND

- |   |                                 |   |   |
|---|---------------------------------|---|---|
|  | PARTIAL HARVEST AREA            |  | BOUNDARY - CONTRACT AREA                              |
|  | RESERVE AREA                    |  | BOUNDARY - CUTTING AREA<br>(BLAZED, PAINTED & POSTED) |
|  | CLEARCUT (R/W) AREA             |  | ROCK SURFACED ROAD                                    |
|  | PARTIAL HARVEST NUMBER<br>ACRES |  | ROAD TO BE RENOVATED                                  |
|   |                                 |  | APPROXIMATE LOCATION OF<br>LEGACY TREES (2)           |
|   |                                 |  | STREAM  |

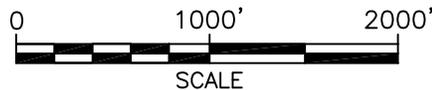
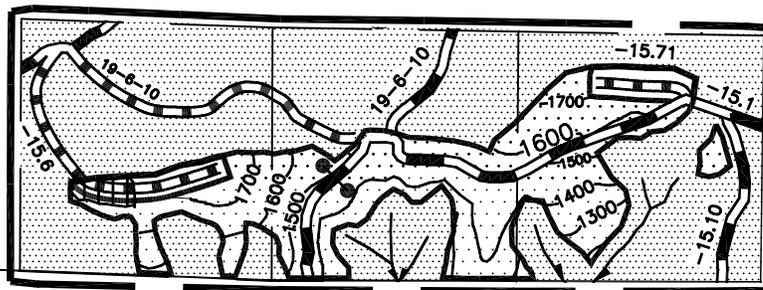
UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT  
 PROJECT AREA MAP: RIVER CAMP

T. 19 S., R. 6 W., SEC.15, WILL. MER., EUGENE DISTRICT

PARTIAL HARVEST AREA	27.0
CLEARCUT (R/W) AREA	0.9
RESERVE AREA	92.1
CONTRACT AREA	<u>120.0 A.</u>

15

10  
27



LEGEND

- |   |                                 |   |   |
|---|---------------------------------|---|---|
|  | PARTIAL HARVEST AREA            |  | BOUNDARY - CONTRACT AREA                              |
|  | RESERVE AREA                    |  | BOUNDARY - CUTTING AREA<br>(BLAZED, PAINTED & POSTED) |
|  | CLEARCUT (R/W) AREA             |  | ROCK SURFACED ROAD                                    |
|  | SPECIAL OPERATING AREA (MAMU)   |  | NATURAL SURFACE ROAD                                  |
|  | PARTIAL HARVEST NUMBER<br>ACRES |  | ROAD TO BE RENOVATED                                  |
|   |                                 |  | GATE  |
|   |                                 |  | STREAM  |