

STATE FOREST LAND
SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at <http://www.dnr.wa.gov/sepa>. These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. BACKGROUND

1. Name of proposed project, if applicable:

Timber Sale Name: **BRIGHTY**

Agreement # 30-093936

2. Name of applicant: **Washington Department of Natural Resources**

3. Address and phone number of applicant and contact person:

Pacific Cascade Region

PO Box 280

Castle Rock, Washington 98611-0280

Phone: (360) 577-2025

Contact Person: Marcus Johns

4. Date checklist prepared: **03/21/2016**

5. Agency requesting checklist: **Washington Department of Natural Resources**

6. Proposed timing or schedule (including phasing, if applicable):

a. *Auction Date:* **02/23/2017**

b. *Planned contract end date (but may be extended):* **12/31/2018**

c. *Phasing:* **None.**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

Yes.

Timber Sale:

a. *Site preparation:*

Site preparation, including a ground based herbicide treatment, may be used to ensure that regeneration can be achieved at acceptable stocking levels to meet or exceed Forest Practice standards following harvest. Slash piles on landings may be burned during the fall before planting.

b. *Regeneration Method:*

The units will be hand planted with native conifer species following harvest.

c. *Vegetation Management:*

*- FPA # 2932506 indicates areas will be replanted with Douglas-fir, western hemlock, and western redcedar after ^{January 2016} harvest activities are complete.
TM*

Possible treatments, including hand slashing and/or herbicide applications, could occur following harvest. Treatments will be based on vegetative competition, and will ensure a free-to-grow status that complies with Forest Practices standards.

d. *Thinning:*

Pre-commercial thinning needs will be assessed at approximately 7-10 years of age. Commercial thinning potential will be assessed at approximately 25 years of age. Thinning will be done as needed to meet desired density, stocking, species diversity, and growth.

Roads:

Road maintenance assessments will be conducted and include periodic ditch and culvert cleanout, and grading as necessary. Construction, reconstruction, pre-haul maintenance and abandonment are associated with forest management activities.

Rock Pits and/or Sale:

Rock for this proposal will come from the Jupe Quarry located in Section 32 of Township 12 North, Range 02 East, W.M.

Other:

Piled slash may be burned in the fall following harvest activities. Firewood permits for the sale area may be issued to the public after timber harvest activities are completed.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

303 (d) – listed water body in WAU: temp sediment completed TMDL (total maximum daily load):

Landscape plan:

Watershed analysis:

Interdisciplinary team (ID Team) report:

Road design plan: Available upon request at the Pacific Cascade Region office.

Wildlife report:

Geotechnical report: See attached report.

Other specialist report(s):

Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):

Rock pit plan: Available upon request at the Pacific Cascade Region office.

Other: Forest Practices Activity Maps; Policy for Sustainable Forests (PSF 2006); State Soil Survey; Habitat Conservation Plan (HCP 1997); HCP Checklist; Planning and Tracking Reports and associated maps; Road Maintenance and Abandonment Plan (RMAP): # 2502125. The following information is provided by DNR's GIS database: Weighted Old Growth Habitat Index (WOGHI); WAU Rain-On-Snow Layer; and USGS and GLO maps, Marbled Murrelet Habitat Layer; Spotted Owl Habitat Layer; and State

- Geotechnical report is available with FPA # 2932506 on FPARS. TM

Lands Geologist Remote Review(SLGRR) layer; Statewide Landslide Inventory (LSI) screening tool maintained by the DNR Forest Practices Division.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known.

10. List any government approvals or permits that will be needed for your proposal, if known.

- FPA #2932506
 FHPA
 Burning permit
 Shoreline permit
 Incidental take permit 1168 & PRT 812521
 Existing HPA
 Other:

- FPA # 2932506 is available on FPARS. TM

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

Brighty is a Variable Retention Harvest (VRH) with a Wetland Management Zone (WMZ) attached to Unit 1 and two Right of Way unit sale in the Winston Creek block. Rock will be obtained from the Jupe Quarry. This proposal will use ground based and cable methods.

a. Complete proposal description:

Unit	Proposal Acres	RMZ/WMZ Acres	Unstable Slope Acres	Existing Road Acres	Sale Acres	Leave Tree Clump Acres	Harvest Acres
	<i>gross</i>			<i>within unit</i>			<i>net</i>
1	28	10	5*	0	13	0	13
2	33	2	<1*	0	31	2	29
3	19	12	<1*	0	8	2	6
4	15	5	<1*	0	10	2	8
5	54	0	47	0	7	1	6
6	23	0	0	<1	22	2	20
7(ROW)	2	0	0	0	2	0	2
8(ROW)	2	0	0	0	2	0	2
Totals	176	29	52	<1	95	9	86

*Fifty two acres of unstable area are in no-harvest RMZ/WMZ

- FPA # 2932506 indicates Unit 1 is 12 acres and Unit 6 is 21 acres. TM

b. Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.

Stand Description

Unit 1 (12 acres): This stand of timber originated in 1948. It consists of a Douglas-fir overstory with a minor component of western hemlock, red alder, western redcedar, and bigleaf maple. The forest floor consists primarily of vine maple, salal, sword fern, Oregon grape, and salmonberry.

Unit 2 (29 acres): This stand of timber originated in 1950. It consists of a Douglas-fir overstory with a minor component of western hemlock, red alder, western redcedar, black cottonwood, and bigleaf maple. The forest floor consists primarily of vine maple, salal, sword fern, Oregon grape, and salmonberry.

Unit 3 (6 acres): This stand of timber originated in 1946. It consists of a Douglas-fir overstory with a minor component of western hemlock, red alder, western redcedar, and bigleaf maple. The forest floor consists primarily of vine maple, salal, sword fern, Oregon grape, and salmonberry.

Unit 4 (8 acres): This stand of timber originated in 1946. It consists of a Douglas-fir overstory with a minor component of western hemlock, red alder, western redcedar, and bigleaf maple. The forest floor consists primarily of vine maple, salal, sword fern, Oregon grape, and salmonberry.

Unit 5 (6 acres): This stand of timber originated in 1944. It consists of a Douglas-fir overstory with a minor component of western hemlock, red alder, western redcedar, and bigleaf maple. The forest floor consists primarily of vine maple, salal, sword fern, Oregon grape, and salmonberry.

Unit 6 (21 acres): This stand of timber originated in 1941. It consists of a Douglas-fir overstory with a minor component of western hemlock, red alder, western redcedar, and Bigleaf maple. The forest floor consists primarily of vine maple, salal, sword fern, Oregon grape, and salmonberry.

Unit 7 (2 acres): This is a Right-of-Way Unit (ROW) this stand of timber originated in 1950 and 1976. It consists of a Red-Alder overstory with a minor component of western hemlock, western redcedar. The forest floor consists primarily of vine maple, salal, sword fern, Oregon grape, and salmonberry.

Unit 8 (2 acres): This is a Right-of-Way Unit (ROW) this stand of timber originated in 1970. It consists of a Douglas-fir overstory with a minor component of western hemlock, red alder, western redcedar, and bigleaf maple. The forest floor consists primarily of vine maple, salal, sword fern, Oregon grape, and salmonberry.

Type of Harvest

This proposal is a variable retention harvest of 82 acres, 4 acres of Right of Way, and 4 acres of WMZ Thinning in Unit 1.

-FPA #2932506 indicates Unit 1 is 12 acres of even-age harvest. TM

Overall Unit Objective

The objective of this proposal is to produce revenue for the State Forest Purchase(2), Common School and Indemnity(3), Normal School(8), and the Scientific School(10) trust through the production of saw logs, poles, and pulp material while maintaining wildlife and riparian habitat.

The habitat objective is achieved by retaining structural components of the stand to develop vertical canopy structure and age class distribution in the future.

c. Road activity summary. See also forest practice application (FPA) for maps and more details.

-FPA #2932506 indicates 7,500 cubic yards of spoils will be generated with this proposal. TM

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		7345	5	
Reconstruction		2123		
Abandonment				
Prehaul Maintenance		43115		
Bridge Install/Replace				
Culvert Install/Replace (fish)				
Culvert Install/Replace (no fish)	3			

-FPA #2932506 indicates there will be 7,893 feet of road construction, and 6 type Ns and 3 type Np stream crossing culverts installed. TM

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

a. Legal description: :

Unit 1 is located in portions of Section 24 of Township 12 North, Range 01 East, W.M.

Unit 2 is located in portions of Sections 25 & 26 of Township 12 North, Range 01 East, W.M.

Unit 3 is located in portions of Section 30 of Township 12 North, Range 02 East, W.M.

Unit 4 is located in portions of Section 25 of Township 12 North, Range 01 East, and portions of Section 30 of Township 12 North, Range 02 East W.M.

Unit 5 is located in portions of Section 24 & 25 of Township 12 North, Range 01 East, W.M.

Unit 6 is located in portions Section 28 & 33 of Township 12 North, Range 02 East, W.M.

Unit 7 is located in portions of Section 25 of Township 12 North, Range 01 East, W.M.

Unit 8 is located in portions of Sections 24 and 25 of Township 12 North, Range 01 East, W.M.

Jupe Quarry is located in Section 32 of Township 12 North, Range 02 East, W.M.

b. Distance and direction from nearest town (include road names):

The proposal area is approximately 12 miles southwest from the town of Mossyrock, WA. The route from Mossyrock is via State Route 12 to Winston creek road to Salmon creek Road to the W-1000, and then by adjoining forest roads.

c. Identify the names of all watershed administrative units (WAU). See also landscape/WAU map on DNR website: <http://www.dnr.wa.gov/sepa> under the topic "Current SEPA Project Actions – Timber Sales" for a broader landscape perspective.

WAU Name	WAU Acres	Proposal Acres
COWLITZ RIVER/MILL CREEK	28085.30	105
Subbasin #4		71
Subbasin #5		35
Winston Creek	28885.7	23
Subbasin #1		23

13. Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website <http://www.dnr.wa.gov/sepa> for a broader landscape perspective.)

This proposal is located within the Cowlitz River/Mill Creek and Winston Creek WAU. Agriculture and home sites are located in the valleys near the major streams with some home sites located in the uplands. The uplands are primarily managed for timber production. Ownership includes large industrial forests, small private forests, and DNR managed forests. Forest stands within the WAU appear to be almost exclusively second and third growth stands. A 1990 aerial photo indicates many of the stands on private lands within the WAU were regeneration harvested in the 1970s and 1980s. The number of Forest Practices shown on the WAU maps (referenced above on the DNR website), along with observations within the WAU, indicates that the remaining second growth timber stands

are intensively managed. Management includes regeneration harvests, thinning, and partial cuts. The following table is an estimated summary of past and future activities on DNR-managed land and privately managed land in the Cowlitz River/Mill Creek WAU (information is based on Forest Practices applications that have been approved in the last seven years as of March 23, 2016 compiled by the DNR's GIS database). No attempt was made to predict future timber harvest on private ownerships within the WAU. The source for this information only provided the acreage at the WAU level.

Cowlitz River/Mill Creek WAU	WAU ACRES	ACRES OF EVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	ACRES OF UNEVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	PROPOSED EVEN-AGED HARVEST IN THE FUTURE*	PROPOSED UNEVEN-AGED HARVEST IN THE FUTURE*
DNR MANAGED LAND	2,383	596	191	714 (estimated)	5 (estimated)
PRIVATE OWNERSHIP	25,702	1,840 (estimated)	692 (estimated)	Unknown	Unknown
TOTAL	28,085	2,436	883	714	5

*Future is defined as occurring within the next 5-7 years (approximately).

Winston WAU	WAU Acres	Acres of Even-Aged Harvest Within the Last Seven Years	Acres of Uneven-Aged Harvest Within The Last Seven Years	Proposed Even-Aged Harvest In The Future*	Proposed Uneven-Aged Harvest In The Future*
DNR MANAGED LAND	8369	868	854	917 (estimated)	1685 (estimated)
PRIVATE OWNERSHIP	20517	2136 (estimated)	557 (estimated)	Unknown	Unknown
TOTAL	28,886	3004 (estimated)	1411 (estimated)	917 (estimated)	1685 (estimated)

*Future is defined as occurring within the next 5-7 years (approximately).

The Department of Natural Resources has a multi-species Habitat Conservation Plan (HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service concerning threatened and endangered species and their habitats, which requires the Department to manage landscapes to provide and sustain long-term habitat in exchange for an Incidental Take

Permit. This agreement substantially helps the Department to mitigate for cumulative effects related to management activities. The applicable strategies incorporated into this proposal are as follows:

- **Retaining Riparian Management Zones (RMZs) averaging 182 feet wide adjacent to harvest areas along Type 3 streams, and a minimum 100 feet wide adjacent to harvest areas along Type 4 streams, measured from the outer edge of the 100-year floodplain. There will be no timber harvested within the RMZs. These measures are intended to protect water quality, stream bank integrity, stream temperatures, and provide down woody debris. RMZs will develop older riparian forest characteristics that, in combination with other strategies, will help support older riparian forest dependent wildlife and aquatic species.**
- **Evaluating the proposal for potential slope instability, and excluding harvest activities from approximately 52 acres that exhibited indicators of potentially unstable slopes.**
- **Retaining a minimum of 8 trees per acre (greater than 10 inches Diameter at Breast Height) clumped and scattered throughout the units. This strategy will provide legacy elements for recruitment of future snags, coarse woody debris, multi-layered stands, and large diameter trees. In combination, these features will provide elements of older forest habitat characteristics within the new plantation.**
- **Analyzing, designing, and constructing roads to minimize effects on the environment.**
- **The WMZ that will be harvested has been evaluated for wind throw risk and will maintain the Basal Area at or above 120 sq. ft.**
- **The road construction through the WMZ is placed in the driest area available and one acre of the WMZ will be left unmanaged for mitigation of said road.**

After harvest, tree seedlings will be planted to reforest the site and may be complemented by the natural regeneration that is expected to occur. Understory vegetation will be disturbed and/or reduced within the proposed harvest area as a result of timber felling, bucking, yarding and site prep activities. After herbicide application, vegetation growth will be slowed and vegetation color will change, then most of the vegetation will re-establish within 2 – 3 years.

Haul routes for this proposal have been evaluated for potential environmental impacts. A regular maintenance schedule will be followed to allow for proper road surface run-off and drainage. To ensure sediment is minimized during hauling, cross-drains, sediment ponds, and other structures will be used to disconnect ditch water from flowing streams. Road ditch water will be routed to the forest floor for filtering to prevent it from entering live streams. New road construction was located on stable ridge-top locations, where possible. Road cut banks will be re-vegetated with native grass seed prior to the onset of wet weather to reduce the risk of potential erosion, sediment delivery and soil instability. Road system analysis and design required under the HCP and analysis required under the Forest Practices RMAP process in the Winston Creek Block was completed and approved.

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. General description of the site (check one):

Flat, Rolling, Hilly, Steep Slopes, Mountainous, Other:

Unit 1 is flat with one steep slope to the north, Unit 2 is Rolling-Hilly, Unit 3 & 4 are Hilly, Unit 5 and 6 is Flat – Rolling, Unit 7 (ROW) is Flat, and Unit 8 (ROW) is Flat.

- 1) *General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).*

Cowlitz River/Mill Creek WAU:

The sub-basins within the Cowlitz River/Mill Creek WAU are generally hilly topography between 120 and 2,892 feet in elevation. There are some slopes up to 100% above the Cowlitz River, but most vary between 20% and 65%. The WAU averages about 49 inches of precipitation per year. The primary Forest Vegetation Zone is western hemlock, with the major timber type being Douglas-fir with western hemlock and western redcedar on the upland soils. Red alder and bigleaf maple are found in the draws. The Cowlitz River flows from east to west.

Winston WAU:

The sub-basins within the Winston WAU are generally hilly topography between 405 and 3,661 feet in elevation. There are some slopes up to 100% above the Cowlitz River, but most vary between 20% and 65%. There are no rain-on-snow zones in the sub-basins of this proposal. The WAU averages about 54 inches of precipitation per year. The major timber types are Douglas-fir and western hemlock.

- 2) *Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).*

None.

- b. What is the steepest slope on the site (approximate percent slope)?

65% in the harvest units and up to 70% within no-harvest RMZs.

- FPA #2932506 indicates a side-slope of 80% on the proposed road construction for the W-1310 Ext road.
TM

- c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

State Soil Survey #	Soil Texture
7142	SLT.CLY.LOAM
7141	SLT.CLY.LOAM
7191	SLT.CLY.LOAM
3940	SILT LOAM
0650	SILT LOAM
9426	V.COBBLY SANDY LOAM
9136	GRAVELLY LOAM
7139	SLT.CLY.LOAM

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) *Surface indications:*

A DNR State Lands geologist (Licensed Engineering Geologist and Qualified Expert) remotely reviewed all units of the sale that included utilizing historic aerial photographs. The geologist conducted a field review in Units 2 and 5 to evaluate glacial deep seated landslides and the associated ground water re-charge areas. The areas in unit 2 are unlikely to be affected by harvest operations and were not bounded out of the harvest area. A Geotechnical Report was prepared and is available on request. In Unit 1 and 3, several small areas were found to have potential for mass wasting; including one inner gorge, a headwall scarp, debris slide and shallow rapid failure. The geologist subsequently visited these features with the forester to identify the area needed to protect the potentially unstable landforms. The areas (approximately 52 acres) were excluded from the harvest area with "Timber Sale Boundary" tags, "Leave Tree Area" tags, and scattered leave trees. The areas are excluded from harvest within the no harvest RMZ and scattered leave tree area, leave trees were placed above the feature along the RMZ boundary to provide additional protection.

- Geotechnical report is available with FPA # 2932506 on FPARS-TM

- 2) *Is there evidence of natural slope failures in the sub-basin(s)?*

No Yes, *type of failures (shallow vs. deep-seated) and failure site characteristics:*

There is evidence of shallow slope failures within the sub-basins. These are generally associated with slopes greater than 70% within convergent landforms such as bedrock hollows and inner gorges. These landforms typically occur within the RMZs, lower slopes of the main draws, and on headwalls at the top of steep draws. There is evidence of deep seated landslides within the sub-basins. Some of these landslides occur along the edge of terraces where steeper slopes are present while others occur on slopes within the uplands. Deep seated

landslides in the vicinity are described in the aforementioned Geotechnical Report.

- Geotechnical report is available with EPA # 2932506 on FPARS. TM

- 3) Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?

No Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:

Associated management activity:

- 4) Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?

No Yes, describe similarities between the conditions and activities on these sites:

There were no shallow slope failures found in the proposal area. However, the proposal area has planar slopes up to 70%, which is similar topography to other areas within the sub-basins that experienced shallow rapid slope failures adjacent to streams during the storms of 1996, 2007, and 2009 when southwest Washington experienced high amounts of precipitation.

- 5) Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.

- Potentially unstable landforms in Unit 5 (approximately 47 acres of headwall scarp, debris slide, groundwater recharge area to glacial deep seated landslide, and shallow rapid failure contained within the no harvest RMZ) were excluded from the harvest area with white "Timber Sale Boundary" tags and scattered leave trees.
- Potentially unstable landforms in Units 1-4 (approximately 6 acres of inner gorges in the RMZs) were excluded from the harvest area with white "Timber Sale Boundary" tags and leave trees.
- Ground based harvest in U-2 will require the use of low ground pressure tracked equipment (9 psi or less) and will only occur during dry soil conditions.
- Ground based yarding equipment is restricted to slopes of 40% or less.
- Ground based yarding equipment shall only operate during dry soil conditions.
- Cross-drains and ditchouts will be utilized to minimize the potential for mass wasting and slope failures associated with poor drainage.
- Some steeper Type 5 headwalls have leave tree clumps protecting them.
- Lead end suspension will be required on all cable settings.
- Roads will be constructed during dry weather conditions.

- e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Approx. acreage new roads: 3 *Approx. acreage new landings:* <1
Fill Source: **Jupe Quarry** *Approx. cubic yards of fill:* **1,000**
Purpose: **Culvert installations.**

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Yes. Some erosion could occur as a result of building new roads, installing culverts, and hauling timber.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*

Approximately 2% will be covered by impervious surfaces in the form of gravel roads.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: *(Include protection measures for minimizing compaction or rutting.)*

Erosion control and reduction measures are addressed in the sale layout and harvest system design.

- **The no harvest RMZs will function to protect streams from sediment delivery.**
- **The WMZ will have a harvest timing restriction to protect streams and minimize soil disturbance.**
- **Harvested areas will be replanted with coniferous tree species to reestablish root bound soils.**
- **Roads will be constructed during dry weather conditions.**
- **Areas of soil exposed through road construction will be grass seeded.**
- **The proposal will be harvested utilizing lead end suspension to minimize soil disturbance.**
- **Leave tree clumps were left around the headwalls of some Type 5 streams.**

2. Air

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Minimal amounts of engine exhaust and dust from logging equipment, log trucks, and automobile exhaust will be emitted as a result of this proposal. If slash is burned, smoke will be emitted into the air.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None known.

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:

If landing debris is burned, it will be in accordance with Washington State's Smoke Management Plan. A burn permit will be obtained before burning occurs.

3. Water

- a. Surface Water:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. (see timber sale map available at DNR region office, or forest practice application base maps.)

Yes.

- a. Downstream water bodies:

Brights Creek, Ferteg Creek, and the Cowlitz River.

- b. Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in feet (per side for streams)
Brights Creek	3	1	182
Unnamed Stream	3	1	182
Unnamed Stream	4	3	100
Unnamed Stream	5	16	None
Forested Wetland (>1ac)	N/A	2	182

- c. *List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.*

Leave trees were placed along portions of some Type 5 streams. RMZs are no harvest buffers. Wind buffers were not used on the Type 3 streams in this proposal due to topography, prevailing wind direction, and/or streams being less than 5 feet in width.

WMZ will maintain a basal area of 120 sq ft with seasonal timing of road construction and harvest activities. One acre of the WMZ will be left unmanaged for mitigation purposes.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No Yes (See RMZ/WMZ table above and timber sale map available at DNR region office.)

Description (include culverts):

Trees will be felled away from all streams. Trees may be cut in RMZs for safety or operational needs, but will be left in place to provide large woody debris functions in the riparian area.

Cables may be strung through the Type 3 and Type 4 RMZs, however, no timber will be yarded through them. Timber harvest may occur within approximately 182 feet (required average RMZ width) to the Type 3 streams adjacent to the proposal. Timber harvest may occur as close as 100 feet (required minimum RMZ width) to all Type 4 streams in the proposal area.

WMZ thinning prescriptions in Unit 1 were developed using Washington State DNRs Forest Resource Plan (FRP) and a Habitat Conservation Plan (HCP) which requires post-harvest basal area to be at least 120sqft.

There will be 3, Type 4 culverts installed at stations 7+64 of W-1240, 8+31 of W-1310 EXT, and 7+85 of W-1310 roads.

Type 5 streams may have tailhold cable strung over them and/or timber yarded over them. Lead-end suspension is required across all Type 5 streams. Ground based yarding across Type 5 streams will only occur if and when the channel is dry.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Approximately 600 cubic yards of fill will be placed over the 3 Type 4 culverts and approximately 300 cubic yards of fill will be placed over the 6 Type 5 culverts.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. (*Include diversions for fish-passage culvert installation*).

No Yes, description:

2932506

Temporary diversions may be necessary for the live water culvert installation and removals. If there is flowing water in the channel at time of installation, replacement, or removal. This activity will include creating a check dam and diverting the water around the work area to prevent sediment delivery to water. Water will be returned to the original stream channel at the best possible location.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No Yes, describe location:

The culvert installations and removals will require work in the 100-year floodplain of Type 4 and 5 streams.

-FPA #2932506 does not include any stream crossing removals. tm

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No Yes, type and volume:

7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?

Yes. Generally, the sub-basin soils or terrain susceptible to surface erosion or mass wasting are located on slopes steeper than 70%.

Based upon current Department of Natural Resources timber harvest management practices as outlined above, the potential for eroded material to enter surface water is minimized. Some eroded material could enter the Type 4 or Type 5 stream channels during culvert installation and removal.

8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?

No Yes, describe changes and possible causes:

During the winters of 1996, 2007, and 2009, (suspected) 100-year return interval precipitation events occurred. The storms set rainfall and flood level records in Southwest Washington and Northwest Oregon. The events caused many shallow mass-wasting events, which caused stream channels to change location and/or dimension. The full extent and long-term impacts across the WAU from these storms is not known due to varying ownerships.

9) Could this proposal affect water quality based on the answers to the questions 1-8 above?

No Yes, explain:

This proposal could introduce small amounts of sediment into the streams associated with this proposal during wet weather within or adjacent to the proposal area as a result of road building and harvest activities. The erosion control measures and operation procedures outlined in B.1.d.5. and B.1.h. are expected to minimize sediment delivery.

10) *What are the approximate road miles per square mile in the WAU and sub-basin(s)? Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?*

No Yes, describe:

Information available is only for the WAU. Road mileages for the sub-basins are approximately the same as for the WAU. Due to the high amount of industrial forests in these sub-basins, there are 4.7 road miles per square mile within the Cowlitz River/Mill Creek WAU.

The Winston WAU averages 5.0 miles per square mile, Salmon Creek WAU averages 4.9 miles per square mile. Sub-basins are similar to the WAU average as the area is largely forest land with little development. Winston WAU has a higher number of road miles per square mile due to the amount of private ownership and urbanized environment.

11) *Is the proposal within a significant rain-on-snow (ROS) zone? If not, **STOP HERE** and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*

No Yes, approximate percent of sub-basin(s) in significant ROS zone:

Or, approximate percent of WAU:

12) *If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?*

13) *Is there evidence of changes to channels associated with peak flows in the WAU and sub-basin(s)?*

No Yes, describe observations in the WAU and in the sub-basin(s):

Normally, there are few significant changes associated with peak flows in the WAUs and sub-basins. During the winters of 1996, 2007, and 2009, (suspected) 100-year return interval precipitation events occurred. Many channels in the WAUs were altered during these events due to high stream flows. In some cases the channels have been scoured down to bedrock, in others the increase in sediment loads and large woody debris delivery has changed channel locations and increased pool/riffle ratios.

14) *Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether*

and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.

The current proposal may slightly change the timing, duration, and/or magnitude of peak flows due to decreased evapotranspiration, but measurable impacts are not anticipated.

- 15) *Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?*

No Yes, possible impacts:

- 16) *Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.*

- **Type 3 and 4 no harvest RMZs to protect stream banks from erosion.**
- **The proposal's harvest units are each less than 100 acres to minimize impacts to watershed hydrology.**
- **Installing culverts on roads to divert water to the forest floor before entering live water.**
- **Grass seeding cut banks to reduce erosion potential.**
- **WMZ thinning will retain a minimum 120 ft²/ac. of basal area.**
- **Allowing green-up (regenerated stands post-harvest that are either 4 feet tall or 5 years of age) of adjacent stands to minimize impacts to watershed hydrology.**

See B.1.d.5. and B.1.h. for further protection measures.

b. Ground Water:

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Minor amounts of oil, fuel, and other lubricants may inadvertently be discharged to the ground as a result of heavy equipment use or mechanical failure. No lubricants

will be disposed of on-site. All spills are required to be contained and cleaned-up. This proposal is expected to have no impact on ground water.

3) Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?

No Yes, describe:

There are a few private wells downstream (approximately 0.4 miles) from the proposal. Due to the distance from the proposal area, ground water amounts, timing and movements are not expected to be changed by this proposal. There are no known areas of slope instability down slope of the proposal area.

a. Note protection measures, if any.

No additional protection measures were identified as necessary to protect these resources beyond those described in B.1.d.5. and B.1.h.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Storm water runoff from road surfaces and intercepted subsurface flow will be collected by roadside ditches and diverted onto the forest floor via ditch-outs and cross drain culverts.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No Yes, describe:

Waste materials, such as sediment or slash, may enter surface water.

- This proposal must follow Forest Practice Rules. The delivery of sediment to typed waters will be minimized. tm

a. Note protection measures, if any.

No additional protection measures will be necessary to protect these resources beyond those described in B.1.d.5., B.1.h., B.3.a.2., and B.3.a.16.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No. Surface and subsurface flow may be intercepted by roads and associated cut banks and ditches. Any intercepted water will be diverted to the forest floor via ditch-outs and cross drain culverts. No significant changes to drainage patters are expected.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.

4. Plants

a. Check the types of vegetation found on the site:

deciduous tree:

alder, maple, aspen, cottonwood, western larch, birch,
other: **Oregon Ash.**

evergreen tree:

Douglas fir, grand fir, Pacific silver fir, ponderosa pine, lodgepole pine, western hemlock, mountain hemlock, Englemann spruce, Sitka spruce, red cedar, yellow cedar, other: **Pacific Yew.**

shrubs:

huckleberry, salmonberry, salal, other: **Oregon Grape, Blackberry, Vine Maple, Sword Fern.**

grass

pasture

crop or grain

wet soil plants:

cattail, buttercup, bullrush, skunk cabbage, devil's club,
other: **Water Parsley, Sedges.**

water plants:

water lily, eelgrass, milfoil, other:

other types of vegetation: **Oxalis**

plant communities of concern:

b. What kind and amount of vegetation will be removed or altered? (See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)

- FPA # 2932506 indicates 82 acres will be average harvested, and 4 acres will be right-of-way harvest, removing approx. 2,077 MBF of timber volume. tm

All conifer and hardwood trees will be removed as part of this harvest proposal, except the wildlife leave trees, green recruitment trees and the vegetation within the RMZs. All of the blue banded trees in the WMZ will be retained and the rest removed. Understory vegetation will be disturbed and/or reduced within the proposed harvest area as a result of timber felling, bucking, yarding and site preparation operations. Most of the vegetation will re-establish within 2 – 3 years.

1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See color landscape/WAU and adjacency maps on the DNR website:

<http://www.dnr.wa.gov/sepa>

(Click on the DNR region under the Topic "Current SEPA Project Actions - Timber Sales.")

Unit 1: To the north is a 67-year-old Douglas-fir plantation. To the east is RMZ, Brights Creek and a 9-year-old Douglas-fir plantation. To the south is a 40-year-old Douglas-fir plantation. To the west is a (private) Douglas-fir plantation approximately 25 years-old.

Unit 2: To the north is a private Douglas-fir plantation approximately 25 years-old. To the east is a 40-year-old Douglas-fir plantation, primarily Red Alder now. To the south is a private 30-year-old Douglas-fir plantation. To the west is a (private) Douglas-fir plantation approximately 25 years-old.

Unit 3: To the north is RMZ, Brights Creek. To the east is a 19-year-old Douglas-fir plantation. To the south is a 19-year-old Douglas-fir plantation. To the west is a Douglas-fir plantation approximately 43 years-old.

Unit 4: To the north is RMZ, Brights Creek. To the east is a 19-year-old Douglas-fir plantation. To the south is a 19-year-old Douglas-fir plantation. To the west is a Douglas-fir plantation approximately 43 years-old.

Unit 5: To the north is a 72-year-old natural stand. To the east is a 3-year-old Douglas-fir plantation. To the south is a 41-year-old Douglas-fir plantation. To the west is a Douglas-fir plantation approximately 41 years-old.

Unit 6: To the north is a 15 year-old Douglas-fir plantation. To the east is a 41 year-old Douglas-fir plantation. To the south and west is a 17 year-old Douglas-fir plantation.

Unit 7 (ROW): To the north is a 40-year-old Douglas-fir plantation. To the east is a 40-year-old Douglas-fir plantation. To the south is a 40-year-old Douglas-fir plantation. To the west is a Douglas-fir plantation approximately 40-years-old.

Unit 8 (ROW): To the north is a 67-year-old Douglas-fir plantation. To the east is RMZ, Brights Creek. To the south is a 40-year-old Douglas-fir plantation. To the west is a (private) Douglas-fir plantation approximately 20-25 years-old.

2) *Retention tree plan:*

A combination of Douglas-fir, western redcedar, bigleaf maple and red alder were left for green tree retention and snag recruitment. Reserve tree numbers were based on leaving eight trees per acre in each FMU. Trees were left individually and in clumps. This type of leave tree pattern is conducive to a safe harvest operation and allows the distribution of wildlife trees throughout the proposal. When selecting wildlife trees, the highest preference was given to trees having form defects that may be desirable for birds, the largest trees, and the most windfirm species. A minimum Basal Area of 120 ft²/ac will be maintained within the WMZs.

- c. List threatened and endangered *plant* species known to be on or near the site.

None found in database search or observed onsite.

- FPRAM check confirms NO conflict with T+E plant species. TM

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Retention tree clumps are identified across the harvest area. Some clumps were selected for their species diversity of native flora. These clumps will provide a local seed source for native overstory and understory species. Some natural regeneration of native species will occur on site after harvest. Wildlife trees were left in areas to protect snags, large down logs, advanced regeneration, Type 5 streams, and potentially unstable slopes. Trees with defects such as split or broken tops, dominant crowns, large diameters and large limbs were favored as leave trees to enhance wildlife potential. Older legacy trees were identified and retained individually and in leave tree clumps.

- e. List all noxious weeds and invasive species known to be on or near the site.

Scotch broom and Himalayan blackberry have been observed near the harvest units.

5. Animals

- a. List any birds and other animals or unique habitats which have been observed on or near the site or are known to be on or near the site. Examples include:

birds: hawk, heron, eagle, songbirds, pigeon, other: Osprey

mammals: deer, bear, elk, beaver, other:

fish: bass, salmon, trout, herring, shellfish, other: **Sculpin**

unique habitats: talus slopes, caves, cliffs, oak woodlands, balds, mineral springs

- FPRAM check confirms NO conflict with eagles or osprey.

- b. List any threatened and endangered species known to be on or near the site include federal- and state-listed species).

- FPRAM check confirms the presence of Chinook, Coho, and Cutthroat in the vicinity of the proposal. However, RMZs will

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
1	82812	Steelhead	Threatened	Unknown
1	94839	Steelhead	Threatened	Unknown

of the proposal. However, RMZs will

- c. Is the site part of a migration route? If so, explain.

Pacific flyway Other migration route: Explain if any boxes checked:

be required along fish streams so no impacts are anticipated. TM

This proposal is located in the Columbia River Flyway, which is part of the Pacific Flyway. Migratory waterfowl use the Chehalis River Flyway; however, the area in

which this proposal is contained is not generally the type of area used for resting or feeding by migratory waterfowl. While migrating through Pacific Northwest Forests, many Neotropical migratory birds are closely associated with riparian areas, cliffs, snags, and structurally unique trees. Riparian areas and special habitats are protected through implementation of the Department's Habitat Conservation Plan.

d. Proposed measures to preserve or enhance wildlife, if any:

This sale has been designed to comply with the Department's HCP and provides for the protection of wildlife and their habitats. Scattered and clumped leave trees provide nesting, roosting and foraging areas for avian species. Well engineered and constructed roads reduce potential water quality impacts for downstream fish populations. Grass seeding exposed soil aids water quality and provides forage for ungulates. Large diameter leave trees, and leave trees with unique structure, will remain post-harvest to enhance the wildlife habitat value of the future stand. The regenerated stand will be composed of mixed conifer species.

1) *Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.*

- **Riparian habitat**
 - **No harvest RMZs on Type 3 and 4 streams**
 - **Lead-end suspension required on all cable settings**
- **Wetland habitat**
 - **WMZ thinning will maintain a wind firm stand of at least 120sqft of basal area to protect wetland hydrology and function.**
- **Upland habitat**
 - **A minimum of 8 leave trees per acre were left clumped and scattered**
 - **Snags will be left where operationally feasible**
 - **Older large down woody debris will be left onsite**

e. List any invasive animal species known to be on or near the site.

Invasive species have not been observed on or near the site.

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Petroleum fuel (diesel or gasoline) will be used for heavy equipment during active road building and timber harvest operations.

b. Would your project affect the potential use of solar energy by adjacent properties?
If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

None.

7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal?
If so, describe.

Minimal hazards incidental to operation of heavy machinery such as the risk of fire or small amounts of oil and other lubricants may be accidentally discharged as a result of heavy equipment use.

1) Describe any known or possible contamination at the site from present or past uses.

None known.

- Any hazardous or toxic spill that occurs, or contamination that is discovered, will be reported to the Dept. of Ecology. TM

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

None known.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Petroleum fuel and oil will be used during active road building and timber harvesting. Typically these substances are stored in small transfer tanks located in passenger vehicles. No toxic or hazardous chemicals will be stored on-site following active operations.

4) Describe special emergency services that might be required.

There are no special emergency services required at this time. In the event of a lubricant spill the Purchaser will contact the Department of Natural Resources and the Department of Ecology.

5) Proposed measures to reduce or control environmental health hazards, if any:

The cessation of operations may occur during periods of time when the risk of fire is increased. Fire tools and equipment, including pump trucks and/or

pump trailers, will be required on site during fire season. Quick response spill kits are required to be on site in case of smaller spills, as are larger spill kits if hazardous materials are going to be stored on site during operations. No oil or lubricants will be allowed to be disposed of on site.

- Any hazardous or toxic spill that occurs, or contamination that is discovered, will be reported to the Dept. of Ecology. TM

b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Log trucks will use forest roads, county roads, and State Route 12. This is normal activity for this area and is consistent with existing traffic. Noise will be increased during daylight hours generated from the operation of machinery and power tools.

- 3) Proposed measures to reduce or control noise impacts, if any:

None.

8. Land and shoreline use

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. (Site includes the complete proposal, e.g. rock pits and access roads.)

The land surrounding the units is managed for timber productions by the DNR and private industry. The proposal will not affect the current land uses on site or adjacent to the proposal.

- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

This proposal site has been used as working forest lands. This proposal will retain the site in working forest lands.

- 1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

This proposal is consistent with current and standard forest land harvest activities; there will be no effect on this or adjacent lands that would affect normal forest land

business operations. Equipment access, application of pesticides, and timber harvesting are normal activities that would be expected on forest lands.

c. Describe any structures on the site.

None.

d. Will any structures be demolished? If so, what?

No.

e. What is the current zoning classification of the site?

Forest resource Lands, and RDD-10.

f. What is the current comprehensive plan designation of the site?

Forest Resource Lands.

g. If applicable, what is the current shoreline master program designation of the site?

None.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

None.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

This proposal is consistent with the Department's Habitat Conservation Plan and Policy for Sustainable Forests, as well as the county's comprehensive plan designation and zoning classification.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

This proposal is consistent with the Department's Habitat Conservation Plan and Washington Forest Practices Rules.

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

- c. Proposed measures to reduce or control housing impacts, if any:

None.

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

This proposal has no proposed structures associated with it.

- b. What views in the immediate vicinity would be altered or obstructed?

Views from adjacent forest roads may be altered by the removal of trees.

- 1) *Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?*

No Yes, viewing location:

- 2) *Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?*

No Yes, scenic corridor name:

- 3) *How will this proposal affect any views described in 1) or 2) above?*

This proposal will not affect any views described in 1) or 2) above.

- c. Proposed measures to reduce or control aesthetic impacts, if any:

None.

11. Light and glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

- c. What existing off-site sources of light or glare may affect your proposal?

None.

- d. Proposed measures to reduce or control light and glare impacts, if any:

None.

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?

There is no designated recreation within the proposal area. However, hunting, hiking, horseback riding, mushroom and berry picking, and other informal outdoor recreation activities may occur within the proposal.

- b. Would the proposed project displace any existing recreational uses? If so, describe.

Some types of informal recreation may be displaced during periods of active logging.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None at this time.

13. Historic and cultural preservation

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe.

No.

*- FPRAM and USGS Historical Map
check confirm NO conflict with
historical sites or resources. TM*

- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material

evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

- FPRAM and USGS Historical map check indicate no presence of archaeological or cultural sites or resources
- Information submitted with FPA # 2932506 and verified with DAMP indicate no conflict with archaeological or cultural sites or resources. TM

Yes. A site survey was conducted by a DNR Cultural Resource Technician (CRT) and the DNR Archaeologist.

- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

The site was remotely assessed by a DNR Archaeologist and a DNR Cultural Resource Technician, Reviewing GLO and Historic maps, and existing recorded historical sites that have been recorded by DAHP.

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

In the event that archaeological resources are encountered, ground disturbing activities would be halted and a Department of Natural Resource Archaeologist will be contacted to survey the site and update the Site Protection Plan. The Department's Inadvertent Discovery Plan is available at the Region office.

14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

State Route 12 to Winston Creek Road to Salmon Creek Road provide access to the forest roads which access the harvest units.

- 1) *Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?*

No.

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

No. The nearest transit stop is in Chehalis, WA which is approximately 36 miles northwest from this proposal.

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

None.

- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

Yes, see A.11.c above.

- 1) *How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?*

This proposal expands the network of Department of Natural Resources forest roads in the area.

- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

Traffic volumes are estimated by using the proposed volume of the sale to be removed and roadwork required. An extra 5-20 trips per day during harvesting activities with periodic trips post-harvest to conduct monitoring and timber stand improvements. Traffic will be logging and dump trucks with peak hours being from 4am to 3pm.

- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

- h. Proposed measures to reduce or control transportation impacts, if any:

None.

15. Public services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No.

- b. Proposed measures to reduce or control direct impacts on public services, if any.

None.

16. Utilities

a. Check utilities currently available at the site:

electricity natural gas water refuse service telephone sanitary sewer
 septic system other:

None.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

None.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: ^{For}  Mary D Robertson

Name of signee Hunter Decker Mary D. Robertson

Position and Agency/Organization Natural Resources Specialist 1/DNR

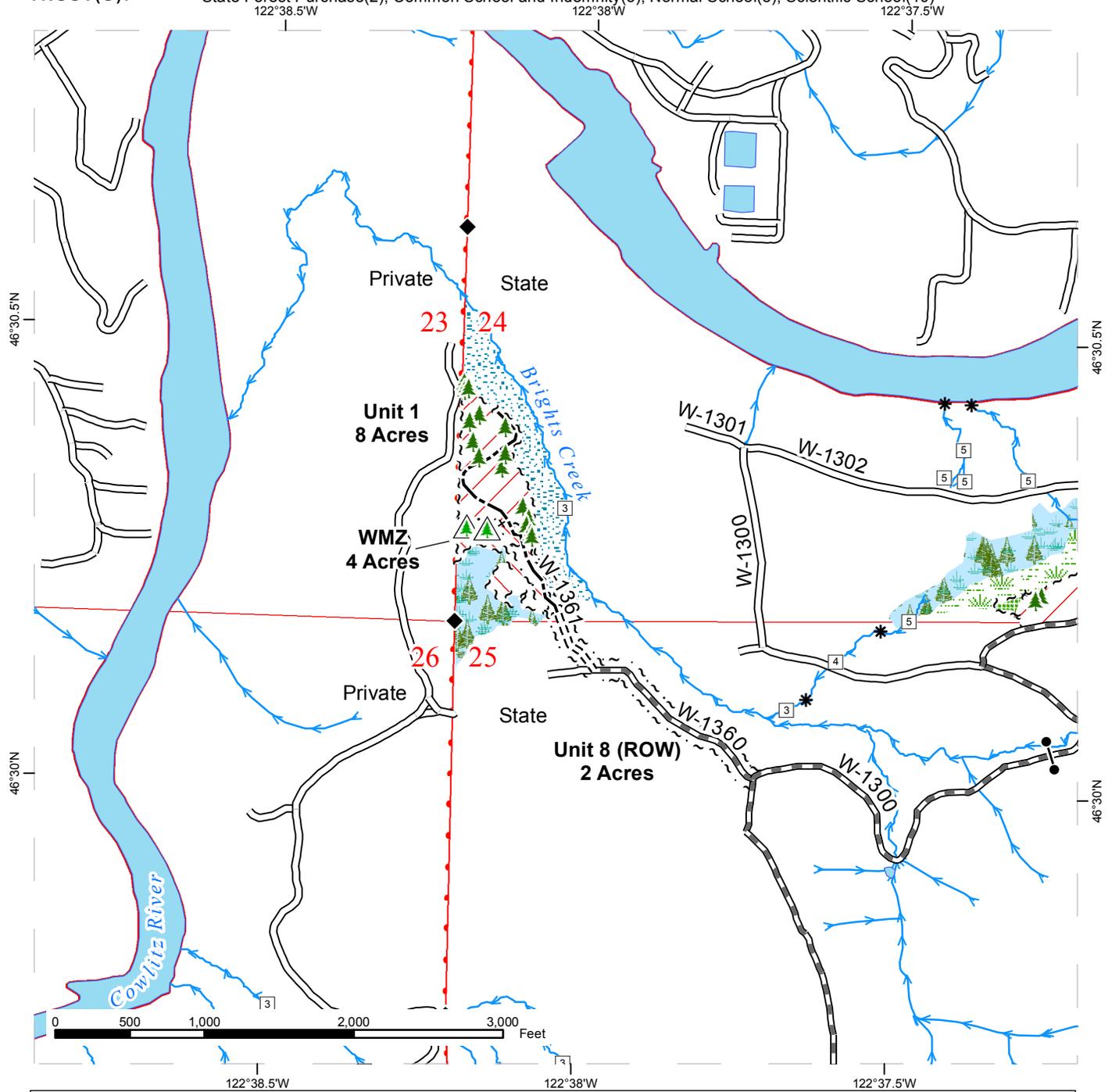
Date Submitted: 6-1-16 Natural Resources Specialist 2,

Reviewed By: Taylor Mizar - DNR Forest Practices / Tayl K My ITM
Date: 11/8/2016

TIMBER SALE MAP

SALE NAME: BRIGHTY
AGREEMENT #: 30-093936
TOWNSHIP(S): T12R02E, T12R01E
TRUST(S): State Forest Purchase(2), Common School and Indemnity(3), Normal School(8), Scientific School(10)

REGION: Pacific Cascade Region
COUNTY(S): 344-813
ELEVATION RGE: LEWIS



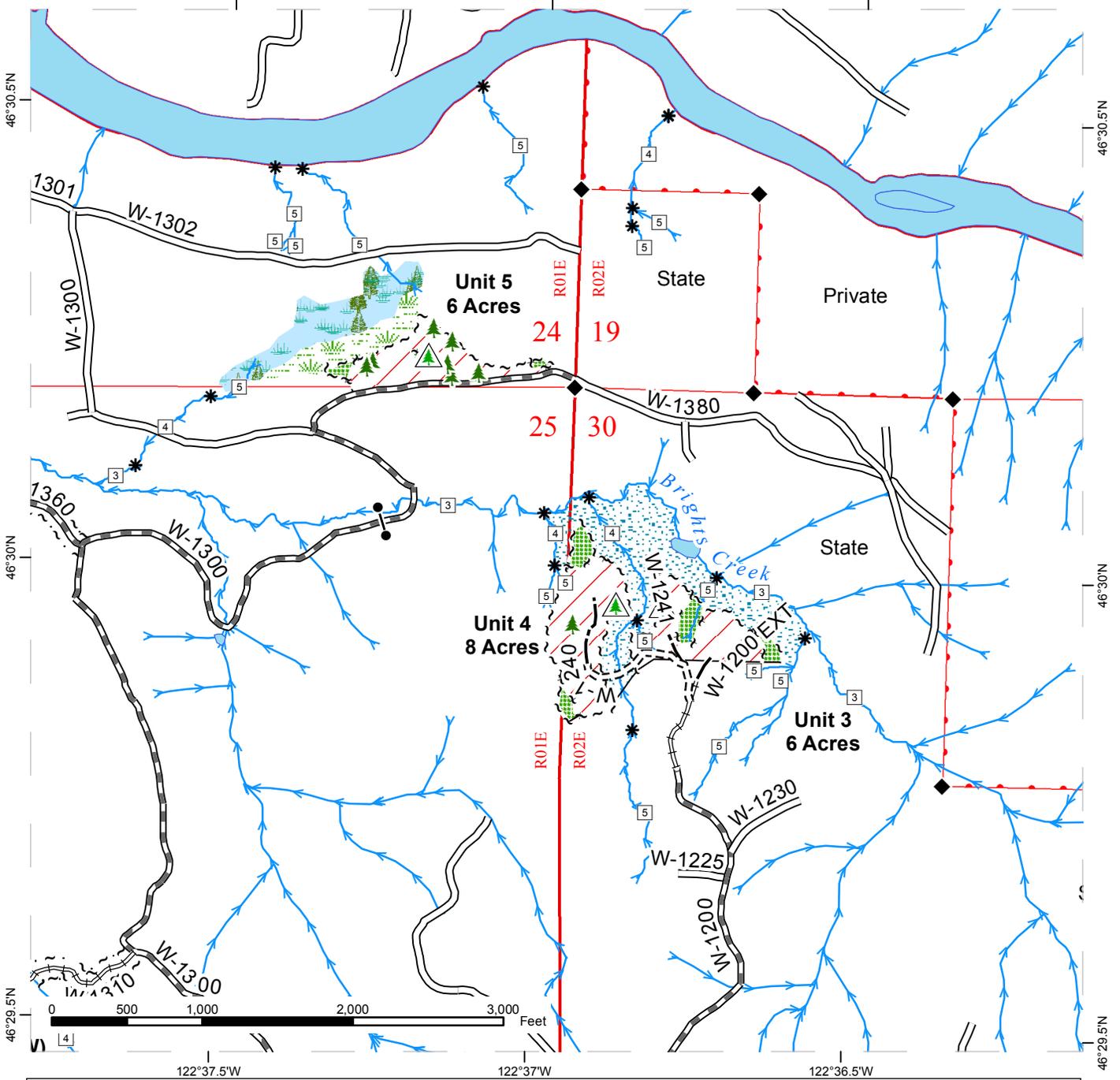
Variable Retention Harvest	Sale Boundary Tags	Existing Roads	Streams
Thinning	Special Mgmt Area	Required Pre-Haul Maintenance	Stream Type
Leave Tree Area	Leave Tree Tags	Required Construction	Stream Type Break
Special Mgt Area	Right of Way Tags	Optional Construction	Monumented Corners
Riparian Mgt Zone			Leave Trees
Forested Wetland			Gate (PCP 1-1)
Wetland Mgt Zone			Non-tradeable Leave Tree



TIMBER SALE MAP

SALE NAME: BRIGHTY
AGREEMENT #: 30-093936
TOWNSHIP(S): T12R02E, T12R01E
TRUST(S): State Forest Purchase(2), Common School and Indemnity(3), Normal School(8), Scientific School(10)

REGION: Pacific Cascade Region
COUNTY(S): 344-813
ELEVATION RGE: LEWIS

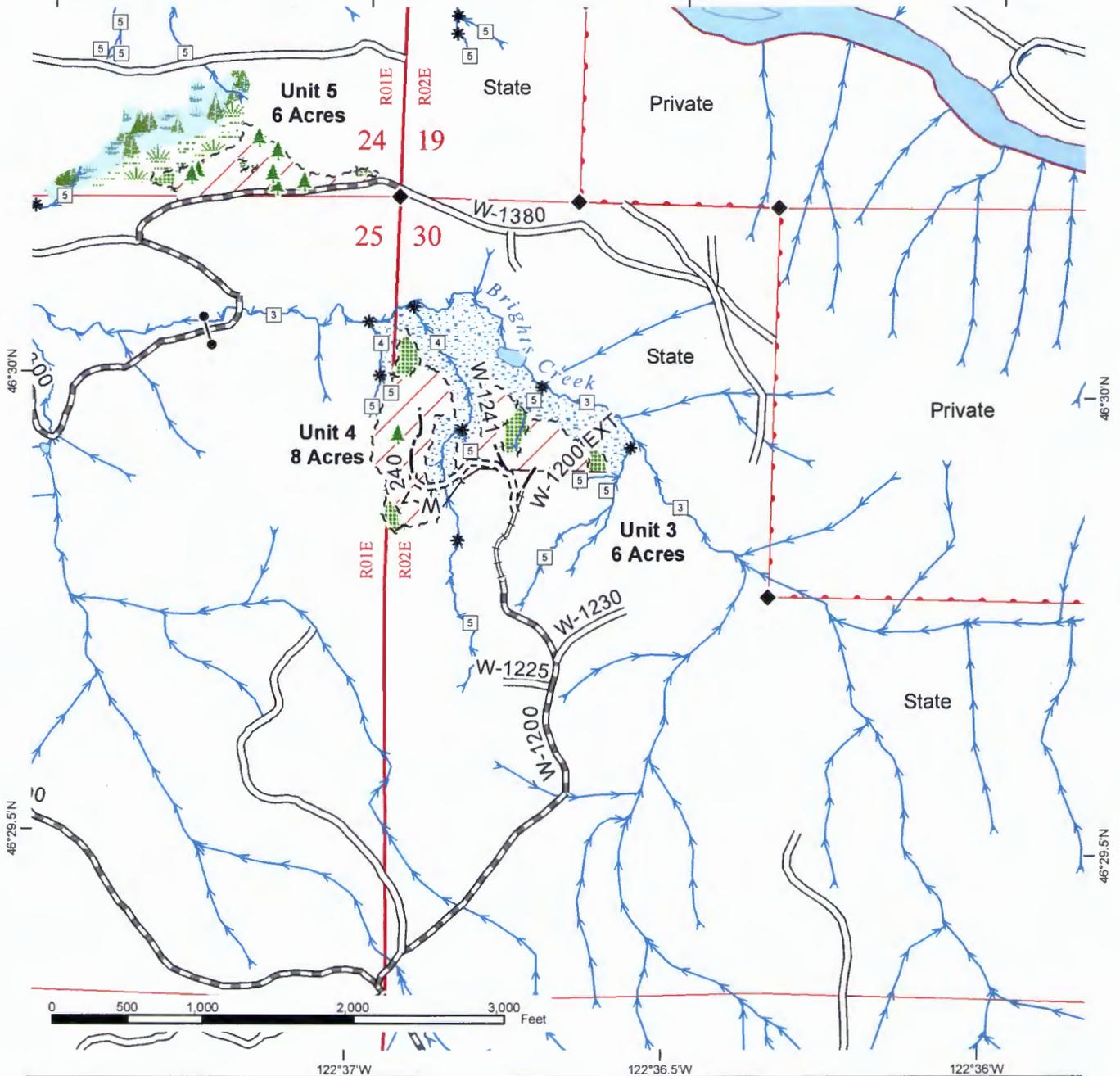


Variable Retention Harvest	Sale Boundary Tags	Existing Roads	Streams
Leave Tree Area	Leave Tree Tags	Required Pre-Haul Maintenance	Stream Type
Riparian Mgt Zone	Right of Way Tags	Required Construction	Stream Type Break
Forested Wetland	Reprod	Required Reconstruction	Monumented Corners
Wetland Mgt Zone		Optional Construction	Leave Trees
			Gate (PCP 1-1)
			Non-tradeable Leave Tree

TIMBER SALE MAP

SALE NAME: BRIGHTY
AGREEMENT #: 30-093936
TOWNSHIP(S): T12R02E, T12R01E
TRUST(S): State Forest Purchase(2), Common School and Indemnity(3), Normal School(8), Scientific School(10)

REGION: Pacific Cascade Region
COUNTY(S): 344-813
ELEVATION RGE: LEWIS



Variable Retention Harvest	Sale Boundary Tags	Existing Roads	Streams
Leave Tree Area	Leave Tree Tags	Required Pre-Haul Maintenance	Stream Type
Riparian Mgt Zone	Reprod	Required Construction	Stream Type Break
Forested Wetland		Required Reconstruction	Monumented Corners
Wetland Mgt Zone		Optional Construction	Leave Trees
			Gate (PCP 1-1)



DRIVING MAP

SALE NAME: BRIGHTY
AGREEMENT#: 30-093936
TOWNSHIP(S): T12R02E, T12R01E
TRUST(S): State Forest Purchase(2), Common School and Indemnity(3), Normal School(8), Scientific School(10)

REGION: Pacific Cascade Region
COUNTY(S): LEWIS
ELEVATION RGE: 344-813



- Timber Sale Unit
- Highways
- Haul Route
- Other Route
- Milepost Markers
- Distance Indicator
- Gate (PCP 1-1)
- Existing Rock Pit

DRIVING DIRECTIONS:

From US Highway 12, before mile post 83, turn south onto Winston Creek Road. Continue for 3.6 miles to Longbell Road. Winston Creek Road Turns into Salmon Creek Road at the intersection with Longbell. Continue on Salmon Creek Road for another 0.6 miles to the W-1000. Turn right on the W-1000 and continue 2.8 miles to Unit 6. Continue 0.5 miles to the W-1040. Turn left on W-1040 and continue for 0.1 miles to the Jupe Quarry, or; continue on the W-1000 for 2 miles to the intersection with the W-1300, turn right onto the W-1200 to access Units 3 & 4. Continue on the W-1300 for 0.6 miles, Unit 2 is on the left down the W-1310 for 0.5 miles on foot. Continue down the W-1300 for 0.6 miles and turn left on the W-1360 for 0.3 miles on foot to Unit 1. Continue on the W-1300 for 0.7 miles through the gate to the W1380. Turn right and head up the hill for 0.1 miles and Unit 5 will be on your left.