STATE FOREST LAND
ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *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 under "SEPA Center." 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.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

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.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered " does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

   Timber Sale Name: **I SEE A PICEA** *Agreement #:***30-085387**

2. Name of applicant: **Washington State 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: **12/05/2012**

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

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

   a. *Auction Date:* **6/20/2013**
   b. *Planned contract end date (but may be extended):* **November 30, 2013**
   c. *Phasing:* **This site specific analysis is the second phase of environmental review; the first phase occurred in conjunction with non-project level environmental review of The Minor Administrative Amendment No.2 to Department of Natural Resources Habitat Conservation Plan (HCP), Revision to Interim Conservation Strategy for the Marbled Murrelet in the Columbia and South Coast Planning Units (Minor Amendment). (referenced in A.8 below).**

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 prep, including a chemical herbicide application, may be used to ensure that planting 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 advanced planting stock following harvest to promote the continuation of a healthy conifer forest with diversity of tree species.

c. *Vegetation Management:*

Possible treatments, including a chemical herbicide application, 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 when the planted trees are 10 to 15 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 by Department of Natural Resources staff, and may include periodic ditch and culvert cleanout, and grading as necessary to meet Forest Practices standards. Maintenance schedule will be followed to allow for proper road surface run-off and drainage. Road system analysis and design required by the HCP and analysis required under the Forest Practices Road Maintenance and Abandonment Plan (RMAP) process in the Radar/Nemah Block was completed and approved. Road improvement projects identified in the RMAP began in 2003.

Rock Pits and/or Sale:

None

Other:

Slash may be burned following harvest activities or sold as biomass. 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 at the Pacific Cascade Region Office.**
☒ *Wildlife report:* **Region Fish and Wildlife Biologist Assessment, and Leave Tree Placement (Attached).**
☐ *Geotechnical report:*
☐ *Other specialist report(s):*
☐ *Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*
☐ *Rock pit plan:*
☒ *Other:* **Forest Practices Board Manual; Forest Practices Activity Maps; Policy for Sustainable Forests (PSF 2006); State Soil Survey; Habitat Conservation Plan (HCP 1997); HCP Checklist; Riparian Forest Restoration Strategy (RFRS); Planning and Tracking Reports and associated maps; Road Maintenance and Abandonment Plan (RMAP): #2900196-4; A 2008 scientific report, titled, "Recommendations and Supporting Analysis of Conservation Opportunities for the Marbled Murrelet Long-term Conservation Strategy" (Raphael 2008) (Science Team Report). The Minor Administrative Amendment No.2 to Department of Natural Resources Habitat Conservation Plan (HCP), Revision to Interim Conservation Strategy for the Marbled Murrelet in the Columbia and South Coast Planning Units (Minor Amendment) (Reference SEPA file #12-022702). The United States Fish and Wildlife Service(USFWS) memo dated 2/19/2013(Attached) The following information is provided by DNR's GIS database: Weighted Old Growth Habitat Index (WOGHI); WAU Rain-On-Snow Layer; Marbled Murrelet Habitat Layer; Spotted Owl Habitat Layer; and USGS and GLO maps.**

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.

☐ *HPA* ☒ *Burning permit* ☐ *Shoreline permit* ☒ *Incidental take permit* **1168 & PRT 812521** ☒ *FPA #* **2926150** ☐ *Other:*

11. Give brief, complete description of our 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 specific information on project description.)

a. *Complete proposal description:*

I SEE A PICEA is a variable retention harvest located in the Radar Block. This timber sale will be harvested using ground based equipment.

Unit	Proposal Acres	RMZ/WMZ Acres	Unstable Slope Acres	Existing Road Acres	Sale Acres	Leave Tree Clump Acres	Harvest Acres
	gross			*within unit*			*net*
1	21	1	0	1	19	1	18
Totals	21	1	0	1	19	1	18

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

Unit	Origin year	Species Composition
1	1964	**Overstory:** Sitka spruce, western hemlock, and occasional silver fir. **Understory:** oxalis.

Type of Harvest:

This proposal is a variable retention harvest of 18 net harvest acres.

Overall Unit Objectives:

The objective of this proposal is:
1) Produce revenue for the Common School Trust (03) through the production of saw logs and pulp material.
2) provide for wildlife and riparian habitat by developing vertical stand structure and age class distribution in the future stand.

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

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		0	0	0
Reconstruction		0		0
Abandonment		0	0	0
Bridge Install/Replace	0			0
Culvert Install/Replace (fish)	0			0
Culvert Install/Replace (no fish)	0			

12. Location of 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. *(See timber sale map available at DNR region office, and/or color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

a. Legal description:

Unit #1 is located in portions of Section 21 of Township 11 North, Range 09 West, W.M.

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

The sale is located approximately 4 miles north of the town of Naselle. State Route 4 to the Radar Road (C-line) to the C-4000.

c. *Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")*

WAU Name	WAU Acres	Proposal Acres
Nemah	**38,842**	
Sub-basin #17	**3,072**	**18**
Lower Naselle	**37,604**	
Sub-basin #5	**1,905**	**2**

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 under "SEPA Center" for a broader landscape perspective.)*

This proposal is located within the Nemah and Lower Naselle Watershed Administrative Units (WAUs). Agriculture and home sites are located in the valleys near the major streams. There appears to be a trend towards increasing conversion of agriculture and forest land to home sites in the lower elevation ranges. The uplands are mainly managed for timber production. Ownership includes large industrial forests, small private forests, and Department of Natural Resources (DNR) managed forests. Forested stands within the WAU appear to be primarily second and third growth stands. The numbers of forest practice activities shown on the WAU maps (referenced above on the Department's website) along with observations within the WAUs indicate that the WAUs are intensively managed for timber production, including variable retention harvest, thinning, and partial cuts.

The following table is an estimated summary of past and future activities on Department of Natural Resources managed land and privately managed land in the Nemah and Lower Naselle WAUs (information is based on Forest Practices applications that have been approved in the last seven years as of December 05, 2012 compiled by the Department'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.

Nemah 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	10,444	962	0	18	0
OTHER STATE (NON-DNR)	1	0	0	0	0
PRIVATE OWNERSHIP	28,397	6,536	406	Unknown	Unknown
TOTAL	38,842	7,498	406	18	0

Lower Naselle 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	6,016	91	0	2	0
OTHER STATE (NON-DNR)	280	0	0	0	0
PRIVATE OWNERSHIP	31,308	657	755	Unknown	Unknown
TOTAL	37,604	748	755	2	0

The Department of Natural Resources (DNR) has a multi-species Habitat Conservation Plan (HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service covering threatened and endangered species and their habitats. The HCP requires DNR to manage landscapes to provide and sustain long-term habitat in exchange for an Incidental Take Permit. This agreement identifies specific strategies DNR implements to mitigate for potential, landscape cumulative effects related to individual management activities. The applicable HCP strategies and mitigation measures incorporated into this proposal are as follows:

- Retaining Riparian Management Zones (RMZ) a minimum 100 feet wide adjacent to harvest areas along one Type 4 stream, measured from the outer edge of 100 year floodplain. This measure is 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.
- Retaining a minimum of 8 trees per acre (greater than 10 inches Diameter at Breast Height) clumped and scattered throughout the unit to provide legacy elements for recruitment of future snags, coarse woody debris, multi-layered stands, protection of sensitive areas, and large diameter trees. In combination, these features will provide elements of older forest habitat characteristics within the new plantation. Also, as a requirement of The Minor Administrative No.2 to Department of Natural Resources Habitat Conservation Plan (HCP), Revision to Interim Conservation Strategy for the Marbled Murrelet in the Columbia and South Coast Planning Units (Minor Amendment), leave trees for regeneration harvest will be selected to favor the development of future marbled murrelet habitat. The selection of live leave trees will focus on retaining trees for potential recruitment of suitable marbled murrelet habitat structure within proposed Marbled Murrelet Management Areas* (MMMa). See Region wildlife biologist report for details.
- Well-designed roads reduce potential for slope failures, erosion, and improve water quality. A regular maintenance schedule will be followed to allow for proper road surface run-off and drainage. Haul routes for this proposal have been evaluated for potential environmental impacts. 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. Road system analysis and design required under the HCP and analysis required under the Forest Practices RMAP process in the Radar/Nemah Block was completed and approved. Road improvement projects identified in the RMAP began in 2003.
- This proposal does not have any impacts on murrelets, since it is not adjacent to Occupied or surveyed unoccupied reclassified habitat. This proposal is located within a proposed Marbled Murrelet Management Area*; and is consistent with The Minor Administrative No.2 to Department of Natural Resources Habitat Conservation Plan (HCP), Revision to Interim Conservation Strategy for the Marbled Murrelet in the Columbia and South Coast Planning Units (Minor Amendment), because it does not involve the harvest of occupied sites or reclassified habitat, nor is it within buffers established for occupied sites and reclassified habitat found inside a proposed Marbled Murrelet Management Area.*
- This proposal has been evaluated for noise mitigation, such as the need to implement daily timing restrictions on activity during the marbled murrelet nesting season. As this proposal is located greater than 0.25 miles from the nearest occupied site, no mitigation for noise will be necessary.

After harvest stock tree seedlings will be planted to complement 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 herbicide application. Site preparation following harvest for the proposal area may result in reduction of growth and/or discoloration of understory vegetation for a year, or two, following treatment. Most of the vegetation will re-establish within 2 – 3 years. As a requirement of The Minor Administrative No.2 to Department of Natural Resources Habitat Conservation Plan (HCP), Revision to Interim Conservation Strategy for the Marbled Murrelet in the Columbia and South Coast Planning Units (Minor Amendment), regeneration harvests within the proposed MMMa will be regenerated using advanced planting stock.

* In the Science Team Report, Chapter 3, pages 3-1 through 3-61 "Marbled Murrelet Management Areas" (MMMA) were identified and recommended as proposed boundaries for future management and habitat enhancement areas. These recommended areas are identified in The Minor Administrative No.2 to Department of Natural Resources Habitat Conservation Plan (HCP), Revision to Interim Conservation Strategy for the Marbled Murrelet in the Columbia and South Coast Planning Units (Minor Amendment).

B. ENVIRONMENTAL ELEMENTS

1. **Earth**

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

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

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

The topography of the Nemah WAU is variable. Rolling hills surround the lower reaches of the major streams, which occupy broad, flat alluvial valleys. These merge into estuaries at their confluences with Willapa Bay. As the elevation increases, the topography becomes well-dissected by the upper reaches of the major streams and their tributaries. These typically occupy deep valleys and v-notched draws that are confined by steep and broken hill slopes.

The Forest Vegetation Zone is Sitka spruce, with the major timber types being western hemlock, Sitka spruce, pacific silver fir, and Douglas fir. Elevations in the Nemah WAU range from 0-1,977 feet with an average annual rainfall of 80-120 inches.

The topography of the Lower Naselle WAU is variable with rolling hills surrounding the lower reaches of the major streams occupying broad flat alluvial valleys that merge into estuaries at their confluences with Willapa Bay. As elevation increases, the topography is well dissected with the upper reaches of the main streams, along with their tributaries, typically occupying fairly deep valleys and v-notched draws confined by steep and broken hill slopes.
The Forest Vegetation Zone is Sitka spruce. The timber types in this area are primarily western hemlock and Douglas-fir. Elevations in the Lower Naselle WAU range from sea level to 1,955 feet with an average annual rainfall of 80 to 120 inches. The Lower Naselle WAU is within the Sitka spruce forest vegetation zone.

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

The proposal is in the upper elevations of the WAUs and is located entirely within the Rain on Snow Zone. The proposal is very similar to the above description except there is no Douglas-fir within the sale and is comprised of mostly Sitka spruce.

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

The steepest slope within the site is approximately 37%.

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 prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.* ***Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. The state soil survey is a compilation of various surveys with different standards.***

State Soil Survey #	Soil Texture or Soil Complex Name
3982	Knappton silt loam
8165	Traham gravelly loam
8166	Traham gravelly loam

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

No.

1) *Surface indications:*

None

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 small, 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, per local knowledge, typically occur within the RMZs, lower slopes of the main draws, and on headwalls at the top of steep draws.

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:

Indicators of small shallow slope failures are evident in harvested areas within the sub-basins, and failures of sidecast material along inactive grades built prior to the Forest Practices rules (1974).

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:*

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

- **Ground based logging will be restricted to slopes less than 40%, and rutting will not be permitted.**

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: ***0*** *Approx. acreage new landings:* ***0*** *Fill source:* **NA**

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

Some erosion could occur as a result of 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):*

Less than 1% of the site will be covered with impervious surfaces after project completion. Approximately 2% of the site will be a permanent road running surface. This is based on existing conditions, as all roads are existing.

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.

- **Harvested areas will be replanted with coniferous tree species to reestablish root bound soils.**
- **Ground-based harvesting will only occur on slopes measuring less than 40%.**
- **Skid trails will be water barred post-harvest if rutting occurs.**
- **The no harvest RMZ will function to protect streams from sediment delivery.**

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust *from truck traffic, rock mining, crushing or hauling*, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Small amounts of engine exhaust from logging and road construction equipment and dust from vehicle traffic on roads will be emitted. If landing debris is burned after harvest is completed, smoke will be generated. There will be no emissions once the proposal is complete.

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:

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.)*

a) Downstream water bodies:

Unnamed Type 4 and Type 5 streams flow into larger order streams flowing into the Middle Nemah 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)
Unnamed Stream	**4**	**1**	**100**
Unnamed Stream	**5**	**3**	**NA**

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

RMZ on the Type 4 stream is a no harvest buffer. Leave trees were placed along portions of the Type 5 streams.

2) Will the project require any work over, in, or adjacent to (within 200 feet) to 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 RMZ for safety needs, but will be left in place to provide large woody debris functions in the riparian area. Type 5 streams may have timber yarded across them.

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.

None.

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:*

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒*No* ☐*Yes, describe location:*

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:*

This proposal could possibly 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 harvest operation

activity. The erosion control measures and operation procedures outlined in B.1.d.5. and B.1.h are expected to minimize sediment delivery.

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. Within the sub-basins, soils and terrain susceptible to surface erosion and/or mass wasting are generally located on slopes steeper than 70%. The potential for eroded material to enter surface water is minimized due to the erosion control measures and operational procedures outlined in B.1.d.5. and B.1.h.

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 precipitation events occurred. The storms set rainfall and flood level records in Southwest Washington and Northwest Oregon. The events caused 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:*

There are an estimated 2.8 miles of road per square mile in the Nemah WAU and 5.6 miles of road per square mile in the Lower Naselle WAU. Road density estimates for the sub-basins are similar. Also, this proposal will not construct any new roads.

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 WAU in significant ROS zone.*
Approximate percent of sub-basin(s): **Approximately 17% of the sub-basin is in the peak rain on snow zone in the Nemah #17 Sub-basin. Approximately 5.9% of the sub-basin is in the peak rain on snow zone in the Lower Naselle #5 Sub-basin.**

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?*

Approximately 80% of the timber in the Nemah #17 sub-basin is hydrologically mature. Approximately 88% of the timber in the Lower Naselle #5 sub-basin is hydrologically mature.

13) *Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?*
☐*No* ☒*Yes, describe observations:*

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 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 transpiration and canopy interception, 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 4 no harvest RMZs to protect stream banks from erosion.**
- **The proposal's harvest unit is less than 100 acres to minimize impacts to watershed hydrology. (Harvest unit = 18 acres).**
- **Allowing green-up (regenerated stands that are either 4 ½ 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 ground water be withdrawn, or will water be discharged to ground water? 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.\

Small 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:*

a) *Note protection measures, if any.*

No specific 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 storm water):

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.

None.

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

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

a) *Note protection measures, if any.*

Slash that enters typed waters will be removed post harvest. No other specific 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.

d. Proposed measures to reduce or control surface, ground, and runoff water 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.)

See surface water, ground water, and water runoff sections above, questions B.1.d.5., B.1.h., B.3.a.1.c., B.3.a.16., and B.3.c.2.a.

4. Plants

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

☒deciduous tree: ☒alder, ☐maple, ☐aspen, ☐*cottonwood,* ☐*western larch,* ☐*birch,* ☐other:
☒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:
☐shrubs: ☐*huckleberry,* ☐*salmonberry,* ☐*salal,* ☒*other:* **oxalis**
☐grass
☐pasture
☐crop or grain
☐wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☐skunk cabbage, ☐*devil's club,* ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☐other types of vegetation:
☐*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.)*

All conifer and hardwood trees will be removed as part of this harvest proposal, except the wildlife leave trees and green recruitment trees. 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 after forestry activities are complete.

1) *Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")*

To the east is a 4 year old Sitka spruce plantation. To the north and west are 49 year old Sitka spruce and western hemlock stands. To the south is a 56 year old western hemlock stand.

2) *Retention tree plan:*

A combination of Sitka spruce, western hemlock, and Pacific silver fir were left for green tree retention and snag recruitment. Reserve tree numbers were based on leaving eight trees per acre. 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 wind firm species, as well as trees that provide recruitment of future suitable marbled murrelet

habitat as a requirement of The Minor Administrative No.2 to Department of Natural Resources Habitat Conservation Plan (HCP), Revision to Interim Conservation Strategy for the Marbled Murrelet in the Columbia and South Coast Planning Units (Minor Amendment).

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

TSU Number	FMU ID	Common Name	Federal Listing Status	WA State Listing Status
None Found in Database Search				

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. 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 large down logs, advanced regeneration, and limb structure. Trees with defects such as split or broken limbs, dominant crowns, large diameters, and large limbs were favored as leave trees to enhance wildlife potential.

5. Animal

a. Circle or check any birds animals *or unique habitats* which have been observed on or near the site or are known to be on or near the site:

birds: ☒hawk, ☐heron, ☐eagle, ☒songbirds, ☐*pigeon*, ☒other: **marbled murrelet**
mammals: ☒deer, ☒bear, ☒elk, ☐beaver, ☐other:
fish: ☐bass, ☐salmon, ☐trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐*talus slopes,* ☐*caves,* ☐*cliffs,* ☐*oak woodlands,* ☐*balds,* ☐*mineral springs*

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

There is a marbled murrelet occupied site approximately 1.75 miles to the west of the proposal area.
There is a reclassified habitat (modeled and surveyed to be unoccupied) stand approximately 1.82 miles to the west of the proposal area.

c. Is the site part of a migration route? If so, explain.
☒*Pacific flyway* ☐*Other migration route:* *Explain if any boxes checked:*

This proposal is located in the Columbia River Flyway, which is part of the Pacific Flyway. Migratory waterfowl also use the Columbia 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 departments HCP, and provide for the protection of wildlife and their habitats. Clumped and scattered leave trees provide feeding, roosting, and nesting areas for Neotropical migratory birds. Well engineered and constructed roads reduce potential water quality impacts for down-stream fish populations. Grass seeding exposed soil aids water quality and provides forage. Large diameter leave trees, and leave trees with unique crowns, will remain post harvest to enhance 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 4 stream**
- **Upland habitat**
  - **A minimum of 8 leave trees per acre will be left clumped and scattered to provide additional structure in the regenerated stand. As a requirement of The Minor Administrative No.2 to Department of Natural Resources Habitat Conservation Plan (HCP), Revision to Interim Conservation Strategy for the Marbled Murrelet in the Columbia and South Coast Planning Units (Minor Amendment), leave trees for regeneration harvest will be selected to favor the development of future marbled murrelet habitat. The selection of live leave trees will focus on retaining trees for potential future recruitment of suitable marbled murrelet habitat structure within proposed Marbled Murrelet Management Areas (MMMA). See Region wildlife biologist report for details (Attached document).**
- **Marbled Murrelets**
  - **This proposal has been evaluated for noise mitigation, such as the need to implement daily timing restrictions on activity during the marbled murrelet nesting season. As this proposal is located greater than 0.25 miles from the nearest occupied site, no mitigation for noise will be necessary.**
  - **As a requirement of The Minor Administrative No.2 to Department of Natural Resources Habitat Conservation Plan (HCP), Revision to Interim Conservation Strategy for the Marbled Murrelet in the Columbia and South Coast Planning Units (Minor Amendment), regeneration harvests within the proposed MMMA will be regenerated using advanced planting stock.**
  - **Because the stand that will be harvested contains no habitat, and is over 1.75 miles away from the nearest known occupied site, it does not provide any biological support to known murrelets and does not contain habitat characteristics known to be needed by marbled murrelets for nesting. Therefore, no specific protection or mitigation could be applied to this proposal to provide any benefit to known murrelets beyond DNR's existing management practices under its HCP.**
- **See sections above, questions A.13, B.4.b.2., and B.4.d.**

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.

Not applicable.

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

Not applicable.

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:

Not applicable.

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 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.

2) 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. No oil or lubricants will be allowed to be disposed of on site. 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.

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 long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.

Log trucks will use forest roads, US HWY 101, and State Route 4. 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:

See question B. 5.d.1.

8. **Land and Shoreline Use**

a. What is the current use of the site and adjacent properties? *(Site includes the complete proposal, e.g. rock pits and access roads.)*

The state land surrounding the unit is managed for multiple timber related objectives and production by the Department of Natural Resources. South of the proposal there are multiple communication sites leased to public and private entities by the Department.

b. Has the site been used for agriculture? If so, describe.

No.

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?

Long-Term Forestry.

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

The comprehensive plan designation is resource lands, forest of long term significance.

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

Not applicable.

h. Has any part of the site been classified as an "environmentally sensitive" area? 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 current landscape objectives. There is no change to the existing land use, and no impacts from adjacent land uses on this proposal.

9. Housing

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

Not applicable.

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

Not applicable.

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

Not applicable.

10. Aesthetics

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

Not applicable.

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

Views in the immediate area will be temporarily altered by the removal of trees. This site is not part of any views from communities or public corridors.

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?

NA

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?

Not Applicable.

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 on the proposal area. However, hunting, hiking, horseback riding, mountain biking, mushroom and berry picking, and other informal outdoor recreation activities may occur on the proposal area.

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

Informal recreation will be displaced for the short term 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:

No proposed measures are necessary because informal recreation will only be displaced for the short-term and then will resume.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

There is an archaeological observation about 1.5 miles to the southeast of the sale area. There are footings from an abandoned fire lookout on Cowan Peak at that location.

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)

This proposal was reviewed for archeological/historic resources using DNR's Planning and Tracking database and USGS and GLO maps. In the event that any unknown archaeological resources are encountered, ground disturbing activities would be halted and a Department of Natural Resources Archaeologist will be contacted to survey the site and develop a 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, and describe proposed access to the existing street system. Show on site plans, if any.

State Route 4 to Radar Road (C-line) and the C-4000 or US HWY 101, C-line, E-line, A-5600, A-5690, A-5695, and the A-5695.5.

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 site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No.

c. How many parking spaces would the completed project have? How many would the project eliminate?

None.

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

No.

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

This proposal uses the existing network of Department of Natural Resources' forest roads in the area.

e. Will the project 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? If known, indicate when peak volumes would occur.

Five to 20 trips per day during harvesting activities and periodic trips post harvest to conduct monitoring and timber stand improvements.

g. 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, 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. Circle 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.

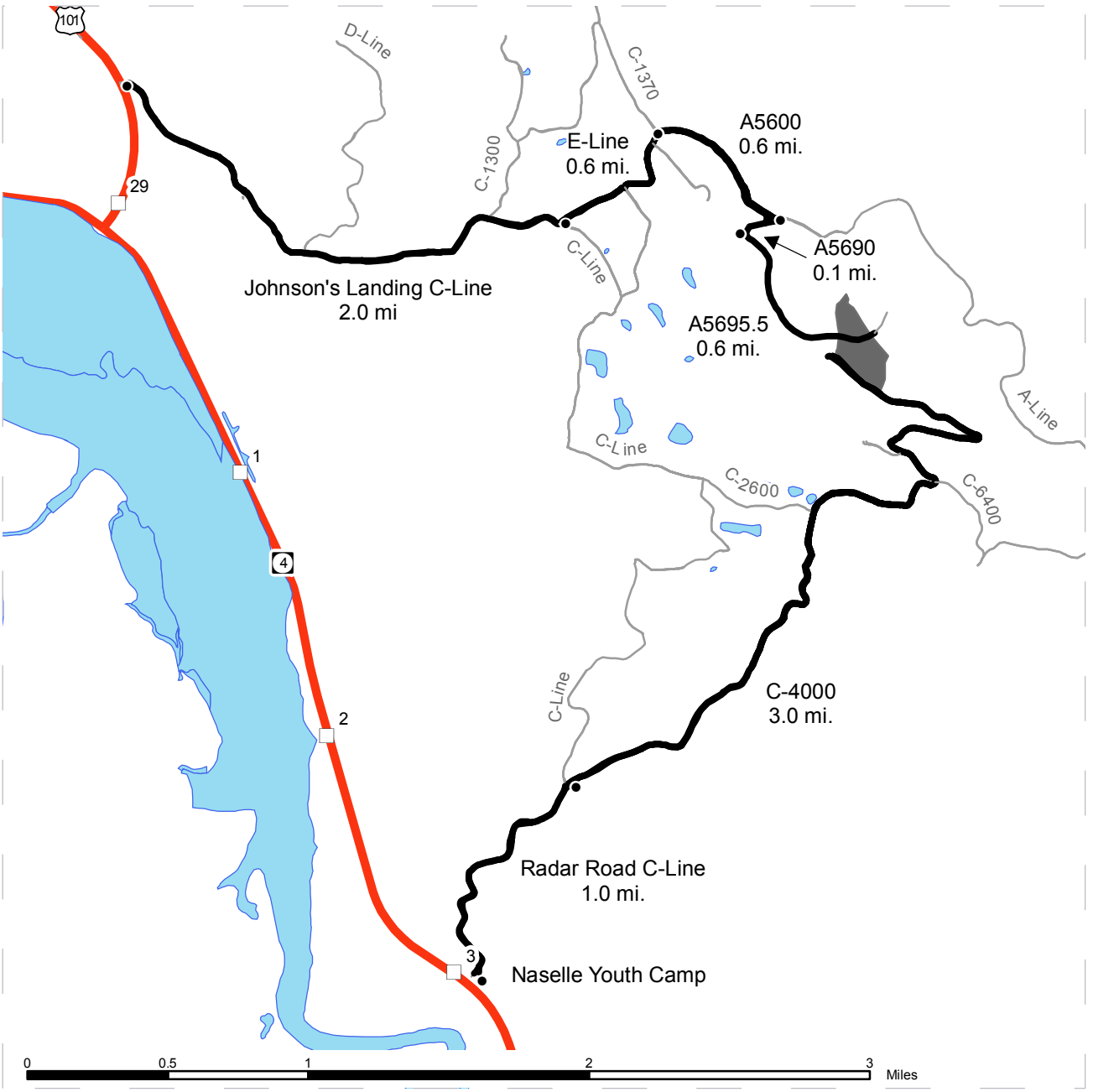
Completed by: Steve Ogden For Mary Robertson District Manager Date: 12/11/2012
Product Sales Forester 2 Title

Reviewed by: Marcus A. Johns Prod. Sales Mgr. Date: 1/7/2013
Title

DRIVING MAP

SALE NAME: I SEE A PICEA
AGREEMENT#: 30-085387
TOWNSHIP(S): T11N R09W
TRUST(S): Common School and Indemnity(3)

REGION: Pacific Cascade Region
COUNTY(S): PACIFIC
ELEVATION RGE: 1586-1849



Timber Sale Unit
Highways
Haul Route
Other Route
Milepost Markers
Distance Indicator

DRIVING DIRECTIONS:

From US 101: Turn East on Johnson's Landing C-Line and Continue for 2.0 miles.
Continue 0.6 miles on the E-Line. Continue Northeast on A-5600 for 0.6 miles.
Turn south on A-5690 for 0.1 miles. Turn east on A-5695.5 for 0.6 miles to Unit #1.

From SR4: Turn north on Radar Road C-line and follow for 1.0 miles.
The C-Line turns into C-4000.
Continue north for 3.0 miles on C-4000 to the top of Radar Ridge and Unit #1 is on the north side of the ridge.

N

Prepared By: sogd490 Creation Date: 8/13/2009 Modification Date: 12/3/2012