

*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:* **ONION**  
*Agreement #* **30-097288**

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

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

**South Puget Sound Region**  
**950 Farman Ave. N.**  
**Enumclaw, WA 98022**  
**Phone: (360) 825-1631**  
**Contact: Audrey Mainwaring**

4. Date checklist prepared: **07/02/2019**

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

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

a. *Auction Date:*  
**05/26/2020**

b. *Planned contract end date (but may be extended):*  
**10/31/2022**

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.

*No, go to question 8.*

*Yes, identify any plans under A-7-a through A-7-d:*

a. *Site Preparation:*

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

b. *Regeneration Method:*

**All units will be hand-planted with native conifer seedlings following harvest.**

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. Other:*

**Road maintenance assessments will be conducted and may include periodic ditch and culvert cleanout, and grading as necessary. Firewood permits for the sale area may be issued to the public after completion of timber harvest activities. Brush picking may also occur in the future after harvest.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. *Note: All documents are available upon request at the DNR Region Office.*

- 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: **Road Plan by Jacob Gross 8/30/2019**
- Wildlife report:
- Geotechnical report:
- Other specialist report(s):
- Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):
- Rock pit plan: **Attached to Road Plan, dated 8/30/2019**
- Other: **Forest Practices Activity Maps; Agency special concerns report; Communications with State Lands Geologist-in-Training and Region Biologist.**

**Referenced documents may be obtained at the region office responsible for this proposal.**

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 # 2421484       FPHP       Board of Natural Resources Approval
- Burning permit       Shoreline permit       Existing HPA
- Other:

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.)

*a. Complete proposal description:*

**The Onion Timber Sale consists of three variable retention harvest (VRH) units located in the Capitol State Forest. The original proposal area was 146 acres and was reduced to approximately 113 gross sale acres for protection of streams and potentially unstable slopes. The net timber sale area is approximately 104 acres after deducting leave tree areas. Net unit acreage is as follows:**

- Unit 1: 76 acres**
- Unit 2: 6 acres**
- Unit 3: 22 acres**

**Approximately 7,030 mbf of mixed conifer and hardwood logs will be harvested. Approximately 8 trees per acre larger than 10 inches in diameter at breast height will be retained in leave tree clumps distributed throughout the units. Some leave tree clumps were used to protect sensitive areas.**

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

***Pre-harvest Stand Description:***

<b>Unit</b>	<b>Origin Date</b>	<b>Major Timber Species</b>	<b>Type of Harvest</b>
<b>1</b>	<b>1942/1935</b>	<b>Douglas-fir, western hemlock, western redcedar, red alder, bigleaf maple</b>	<b>Variable Retention Harvest</b>
<b>2</b>	<b>1901</b>	<b>Douglas-fir, western hemlock, western redcedar, red alder, bigleaf maple</b>	<b>Variable Retention Harvest</b>
<b>3</b>	<b>1941/1955</b>	<b>Douglas-fir, western hemlock, western redcedar, red alder, bigleaf maple</b>	<b>Variable Retention Harvest</b>

***Overall Unit Objectives:***

**The objective of this proposal is to produce revenue for State Forest Purchase (02), Common School (03), and Forest Board Repayment (42) trusts through the production of saw logs, poles, and pulp material.**

c. Describe planned road activity. Include information on any rock pits that will be used in this proposal. See associated forest practice application (FPA) for maps and more details.

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		2,398	0.9	0
Reconstruction		563		0
Abandonment		831	0.3	0
Bridge Install/Replace	0			0
Stream Culvert Install/Replace (fish)	0			0
Stream Culvert Install/Replace (no fish)	1			
Cross-Drain Install/Replace	8			

Routine maintenance will occur on roads used throughout the life of the proposal.

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 (See "WAU Map(s)" and "Timber Harvest Unit Adjacency Map(s)" as referenced on the DNR website: <http://www.dnr.wa.gov/sepa>. Click on the DNR region of this proposal under the Topic "Current SEPA Project Actions - Timber Sales." Proposal documents also available for review at the DNR Region Office.)

a. Legal description:

**Unit 1 is located in Section 8, Township 17 North, Range 03 West, W.M.**

**Unit 2 is located in Section 8, Township 17 North, Range 03 West, W.M.**

**Unit 3 is located in Sections 4 and 5, Township 17 North, Range 03 West, W.M.**

**Timberline Quarry is located in Section 4, Township 17 North, Range 03 West, W.M.**

b. Distance and direction from nearest town (see the driving map listed on the DNR website for further information):

**The proposal is located approximately 8 miles by road West of Littlerock, Washington. Access to the proposal is via Waddell Creek Road, turn left on Sherman Valley Road to the C-9000, or continue to Noschka Road, turn right onto Noschka Road to the C-8100**

13. Cumulative Effects

a. Briefly describe any known environmental concerns that exist regarding elements of the environment in the associated WAU(s). (See WAC 197-11-444 for what is considered an element of the environment).

**Within the Waddell Creek WAU peak flows, older forest, and slope stability are the primary concerns.**

- b. Briefly describe existing plans and programs (i.e. the HCP, DNR landscape plans, retention tree plans) and current forest practice rules that provide/require mitigation to protect against potential impacts to environmental concerns listed in question A-13-a.*

**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. In addition to the HCP, the Department of Natural Resources follows the Washington State Forest Practices Rules.**

- c. Briefly describe any specific mitigation measures proposed, in addition to the mitigation provided by plans and programs listed under question A-13-b.*

**The applicable strategies incorporated into this proposal are as follows:**

- **Retaining Riparian Management Zones (RMZ) 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.**
- **Identifying and designating stands to meet older forest targets. Stands designated to meet older forest targets across the South Coast HCP Planning Unit include old growth stands and structurally complex stands located in special ecological management areas such as spotted owl and marbled murrelet habitat, riparian management zones, natural areas, gene pool reserves, etc.**
- **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.**
- **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.**
- **The proposal's harvest units are each less than 100 acres to minimize impacts to watershed hydrology.**

Agency policies and guidelines from the Policy for Sustainable Forests incorporated into this proposal include:

- Assessing for and protecting significant historic, archaeological and cultural areas.
- Generally limiting even-aged harvests to less than 100 acres per unit.

Current Forest Practice Rules also require that:

- Potentially unstable slopes and landforms are evaluated and rule-identified landforms with the potential to delivery to public resources are excluded from the sale area.
- Allowing green-up (regenerated stands that are either 4 feet tall or 5 years of age) of adjacent stands to minimize impacts to watershed hydrology.
- Best management practices for road construction and maintenance is implemented to prevent sediment delivery to typed waters and avoid improper drainage patterns that may create slope failures.
- After harvest, tree seedlings will be planted to reforest the site and may be complemented by the natural regeneration that is expected to occur.

d. Based on the answers in questions A-13-a through A-13-c, is it likely potential impacts from this proposal could contribute to any environmental concerns listed in question A-13-a?

No.

e. Complete the table below with the reasonably foreseeable future activities within the associated WAU(s) (add more lines as needed). Future is defined as occurring within the next 7 years.

WAU Name	Total WAU Acres	DNR-owned WAU Acres	Acres of DNR proposed even-aged harvest in the future	Acres of DNR proposed uneven-aged harvest in the future	Acres of proposed harvest on non-DNR-managed lands currently under active FP permits
WADDELL CREEK	24322	17703	1700	0	64

\*This data was obtained on 4/11/2019 from DNR's Land Resource Manager system.

Other management activities, such as stand and road maintenance, will likely occur within the associated WAU(s).

## 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 associated WAU(s) or sub-basin(s) within the proposal (landforms, climate, elevations, and forest vegetation zone).

<b>WAU:</b>	WADDELL CREEK
<b>WAU Acres:</b>	24322
<b>Elevation Range:</b>	80 - 2659 ft.
<b>Mean Elevation:</b>	620 ft.
<b>Average Precipitation:</b>	52 in./year
<b>Primary Forest Vegetation Zone:</b>	Western Hemlock

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

**This proposal is a representative example of the WAU at the same elevation and aspect.**

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

70%

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.

*Note: The following table is created from state soil survey data. It is an overview of general soils information for the soils found in the entire sale area. The actual soil conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors.*

State Soil Survey #	Soil Texture
5689	SILT LOAM
6640	SILT LOAM

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

No, go to question B-1-e.

Yes, briefly describe potentially unstable slopes or landforms in or around the area of the proposal site. For further information, see question A-8 for related slope stability documents and question A-10 for the FPA number(s) associated with this proposal.

**A DNR State Lands Geologist-in-Training (GIT) remotely reviewed all units of the sale utilizing LiDAR, orthophotos, and other datasets available in the DNR GIS database. A field review was also conducted in and near all units with the GIT to further evaluate presence of potentially unstable slopes. Based on the State Lands GIT and forester's field review, areas identified and interpreted to be Forest Practices rule-identified landforms were protected by non-tradeable leave tree clumps or have been excluded within Riparian Management Zones from the timber sale unit.**

In a field review on 11/08/2018, a DNR State Lands forester with training in unstable slope identification identified three inner gorge areas and one Category E shallow failure southeast of Unit 1. These occur in the Riparian Management Zone and are therefore bound out of the sale. A DNR State Lands GIT identified two areas within Unit 1 that were the toe of a deep-seated landslide with slopes >65% and delineated them in the field on 12/12/2018. These were excluded from the sale by non-tradeable leave tree areas. Downslope of Unit 2 inner gorge areas and a Category E RIL shallow failure are in the Riparian Management Zone and excluded from the sale. The areas on the toe of a deep-seated landslide with slopes 65%, and the bedrock hollow downslope of Unit 2 are bound out and all excluded from the sale as determined by the GIT. In Unit 3 the Category E RIL shallow failure is protected with non-tradeable leave trees as identified by the forester. Downslope of the northern portion of Unit 3 there is a Category E RIL shallow failure within the Riparian Management Zone and is excluded from the sale.

1) *Does the proposal include any management activities proposed on potentially unstable slopes or landforms?*

*No*    *Yes, describe the proposed activities:*

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

- **Remote and field reviews were conducted to ensure that potentially unstable slopes were excluded from the harvest areas.**
- **Rule-identified landforms were excluded from harvest by Timber Sale Boundary tags or non-tradeable Leave Tree Area tags.**
- **No tailholds will be allowed within and no timber will be yarded across Forest Practices Rule-Identified Landforms.**
- **Stream culverts on haul routes will be replaced as needed with larger culverts to reduce flow impediment.**
- **Cross-drains and ditch-outs will be utilized to minimize the potential for mass wasting and slope failures associated with poor drainage by dispersing water onto stable forest floor.**
- **Skid trails may be water barred post harvesting activities, if necessary to avoid concentrating surface water runoff.**
- **Road construction will be restricted during periods of saturated soil conditions.**
- **Most Type 5 streams and their headwalls have been protected with leave tree clumps.**

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: 0.9*

*Approx. acreage new landings: 1.8*

*Fill Source: Timberline Quarry or native material.*

- 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 1.0% of the site will remain as 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.)*

- **The no harvest RMZs will function to protect streams from sediment delivery.**
- **Ditches and culverts will be utilized and placed so as not to concentrate runoff directly above potentially unstable slopes or areas identified as bedrock deep-seated landslides.**
- **Non self-leveling ground-based harvesting will only occur on slopes measuring 45 percent and less, and self-leveling shovels may occur on slopes measuring 55 percent and less. Ground based equipment will be suspended when potential for excessive soil disturbance exists.**
- **The proposal will be harvested utilizing lead-end suspension to minimize soil disturbance.**
- **New road construction was designed to protect streams from sediment delivery.**
- **Roads will be crowned, ditched and cross-drained. Cross-drains may be installed and maintained.**
- **Leave tree clumps were left around the headwalls of most Type 5 streams and seeps; other Type 5 streams will be protected with a 30-foot Equipment Limitation Zone.**
- **Harvested areas will be replanted with coniferous species.**
- **Road construction and ground-based harvesting operations will be restricted during saturated soil conditions.**
- **Skid trails are to be water barred post harvesting activities, if necessary.**
- **Drainage control devices such as rolling drain dips, culverts (including energy dissipaters), and cross drains, and waterbars will be utilized to allow for proper drainage.**

## 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.

**Minor amounts of engine exhaust from logging and road construction equipment and dust from vehicle traffic on roads will be emitted during proposed activities. 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 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 “WAU Map(s)” and “Timber Harvest Unit Adjacency Map(s)” as referenced on the DNR website: <http://www.dnr.wa.gov/sepa>. Click on the DNR region of this proposal under the Topic “Current SEPA Project Actions - Timber Sales.” Proposal documents also available for review at the DNR Region Office.)

No  Yes, describe in 3-a-1-a through 3-a-1-c below

a. Downstream water bodies: **Waddell Creek**

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)
Waddell Creek	1	1	200 feet minimum
Unnamed Stream	3	3	Average 188 feet
Unnamed Stream	4	8	100 feet minimum

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

**Disposal areas for organic debris during road construction will not occur within 100 feet of streams.**

- 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 maps which are available on the DNR website: <http://www.dnr.wa.gov/sepa>. Timber sale maps are also available at the DNR region office.)

*Description (include culverts):*

**RMZs for this proposal are designed in accordance with the Department's HCP procedures and their stream type identified by the stream's physical characteristics per the water typing system for Forested State Trust HCP lands. All RMZs are measured horizontally from the edge of the 100-year floodplain. Leave trees were placed along most of the Type 5 streams. Type 5 streams also receive a 30-foot equipment limitation zone, except crossing where approved by contract administrator, to maintain stream function, stream bank integrity, and minimize possible sediment delivery. One forested wetland less than ¼ acre did not impact the boundary due to other typed waters that received buffers that were closer to the proposed harvest boundary.**

**Harvest will occur within 200 feet of streams, but beyond the buffer distances listed above. Trees may be cut in RMZs for safety or operational needs, but will be left in place to provide large woody debris functions. Trees within RMZs may be felled for safety. Any trees felled in RMZs will be left onsite. Leave tree clumps may be relocated for safety or operational needs, except for the non-tradeable clumps placed around rule-identified unstable slope features.**

**Timber harvest may occur over Type 5 streams. Type 5 streams or wetlands less than ¼ acres may have tail-hold cables strung over them and/or timber yarded across them.**

**One culvert replacement in live water (non-fish stream) is planned with this proposal.**

- 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.

**When installing and replacing culverts, fill will be removed and replaced, but no fill will be placed in or below the high water mark. All work will be completed in accordance with Forest Practices Rules.**

- 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: **If water is present during road culvert replacement at Type 5 stream crossing, the stream water will be diverted to avoid sediment delivery.**

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

No       Yes, describe activity and 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.

**It is not likely that any waste materials will be discharged into the surface water(s). However, minor amounts of oil, fuel, and other lubricants may inadvertently be discharged to the adjacent surface water(s) as a result of heavy equipment use or mechanical failure. No lubricants will be disposed of on-site.**

7) *Is there a potential for eroded material to enter surface water as a result of the proposal considering the protection measures incorporated into the proposal's design?*

No       Yes, describe:

**Soils and terrain susceptible to surface erosion 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-h.**

8) *What are the approximate road miles per square mile in the associated WAU(s)?*

**WADDELL CREEK = 5.1 (mi./sq. mi.)**

9) *Are there forest roads or ditches within the associated WAU(s) that deliver surface water to streams, rather than back to the forest floor?*

No       Yes, describe:

**It is likely some roads or road ditches within the WAU intercept sub-surface flow and deliver surface water to streams. However current road construction, reconstruction, and/or maintenance standards will be applied that address this issue by installing cross-drains to deliver ditch water to stable forest floors.**

10) *Is there evidence of changes to channels associated with peak flows in the proposal area (accelerated aggradations, surface erosion, mass wasting, decrease in large organic debris (LOD), change in channel dimensions)?*

No       Yes, describe observations:

**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 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.**

- 11) Describe any anticipated contributions to peak flows resulting from this proposal's activities which could impact areas downstream or downslope of the proposal area.

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

- 12) Is there a water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity?

No       Yes, describe the water resource(s):

**There are a few private surface water intakes downstream (approximately 0.25 miles) from the proposal. Based on the protection measures outlined in B.1.d.2 and B.1.h, no measurable impacts are anticipated.**

*a. Is it likely a water resource or an area of slope instability listed in B-3-12 (above) will be affected by changes in amounts, quality or movements of surface water as a result of this proposal?*

No       Yes, describe possible impacts:

- 13) Describe any protection measures, in addition to those required by other existing plans and programs (i.e. the HCP, DNR landscape plans) and current forest practice rules included in this proposal that mitigate potential negative effects on water quality and peak flow impacts.

**See B.1.d.2 and B.1.h. for further protection measures in addition to HCP, Policy for Sustainable Forests and Forest Practice Rule protections.**

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 water will be withdrawn or discharged.**

- 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 downslope of the proposed activity?*

No             *Yes, describe:*

**There are a few private water wells downstream (approximately 1/2 mile) from the proposal. Based on the protection measures outlined in B-1-d-2, B-1-h, B-3-a-2, and B-3-a-13, no measurable impacts are anticipated.**

4) *Is it likely a water resource or an area of slope instability listed in B-3-b-3 (above) could be affected by changes in amounts, timing, or movements of groundwater as a result this proposal?*

No             *Yes, describe possible impacts:*

*Note protection measures, if any:*

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.

**Water runoff, including storm water, from road surfaces 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.**

*Note protection measures, if any:*

**No additional protection measures will be necessary to protect these resources beyond those described in B-1-d-2, B-1-h, B-3-a-2, and B-3-a-13.**

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

**No changes to drainage patterns 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-13, B-3-b-3, and B-3-c-2.**

#### 4. Plants

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

Deciduous tree:

Alder  Aspen  Birch  Cottonwood  Maple  Western Larch

Other:

Evergreen tree:

Douglas-Fir  Engelmann Spruce  Grand Fir  Lodgepole Pine

Mountain Hemlock  Noble Fir  Pacific Silver Fir  Ponderosa Pine

Sitka Spruce  Western Hemlock  Western Redcedar  Yellow Cedar

Other:

Shrubs:

Huckleberry  Rhododendron  Salmonberry  Salal

Other: Oregon grape, vine maple, blackberry

Ferns

Grass

Pasture

Crop or Grain

Orchards  Vineyard  Other Permanent Crops

Wet Soil Plants:

Bullrush  Buttercup  Cattail  Devil's Club  Skunk Cabbage

Other:

Water plants:

Eelgrass  Milfoil  Water Lily

Other:

Other types of vegetation:

Plant communities of concern:

b. What kind and amount of vegetation will be removed or altered? (Also see answers to questions A-11-a, A-11-b and B-3-a-2).

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 the C-9430 road and a 15-year old conifer stand. To the east is a 76 - 83-year old RMZ stream buffer and a 29-year old conifer stand. To the south is an 18-year old conifer stand, and private land. To the west is an 18-year old, and 46-year old conifer stand.**

**Unit 2: To the north is a 117-year old stand in the RMZ stream buffer. To the east is the C-9400 road and an 8-year old conifer stand. To the south is a 16-year old conifer stand. To the west is a 16-year old conifer stand and a 117-year old RMZ stream buffer.**

**Unit 3: To the north is a 63-year old RMZ stream buffer, a 33-year old conifer stand and a 1-year old conifer stand. To the east is a 28-year old conifer stand. To the south and west is a 15-year old conifer stand.**

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

**None found in corporate database**

- 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. A combination of Douglas-fir, western hemlock, western redcedar, and red alder were left for green tree retention and snag recruitment. Retention tree numbers were based on leaving an average of eight trees per acre. Trees were mostly left 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. Wind firm 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.**

**The stands and the mature RMZ stands adjacent to the units have multi-layered canopies with scattered small to large snags and a moderate component of large down woody debris. Within some of the larger leave tree clumps, there are some components of older large down woody debris within the undisturbed vegetation.**

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

**While no noxious or invasive plant species were found onsite, a comprehensive list of plants found throughout Thurston County can be found on the County's website.**

## 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:

eagle  hawk  heron  owls  songbirds

other:

mammals:

bear  beaver  coyote  cougar  deer  elk

other: Northern Sea Otter (A biotic detection occurred on 08/16/1994, effort ID 216646 and object ID 145071, within 5,280 feet of the proposal while conducting the annual sea otter survey. However, there's no record of any detections since then and no accounts were witnessed by field personnel working on this proposal.)

fish:

bass  herring  salmon  shellfish  trout

other:

amphibians/reptiles:

frog  lizard  salamander  snake  turtle

other:

unique habitats:

balds  caves  cliffs  mineral springs  oak woodlands  talus slopes

other:

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

**None known.**

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

Pacific flyway  Other migration route:

*Explain:*

**This proposal is located in the Pacific Flyway. Migratory waterfowl use the Pacific 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:

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

Species /Habitat: **Aquatic habitat**

Protection Measures: **No harvest RMZs on Type 1, Type 3, and Type 4 streams.**

Species /Habitat: **Upland habitat**

Protection Measures: **An average 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 animal species known to be in the geographic area include:**

- **Starlings**
- **House sparrows**

- Eurasian collared-dove
- Bullfrogs are found throughout the lowlands of Washington.
- Nutria are found in lakes, wetlands, sloughs, drainage ditches, and irrigation canals along the Columbia River and north to Skagit County.
- There are several exotic leaf rollers of concern that are present in Washington.

None of these species were observed on or near the site.

## 6. Energy and natural resources

- 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, timber harvest operations, and for transportation. No energy sources will be needed following project completion.**
- Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.  
**No.**
- 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

- 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.
  - Describe any known or possible contamination at the site from present or past uses.  
**None known.**
  - 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.**
  - 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-based fuel and lubricants may be used and stored on site during the operating life of this project.**
  - Describe special emergency services that might be required.  
**The Department of Natural Resources, private, and fire protection district suppression crews may be needed in case of wildfire. In the event of personal**

**injuries, emergency medical services may be required. Hazardous material spills may require Department of Ecology and/or county assistance.**

- 5) Proposed measures to reduce or control environmental health hazards, if any:  
**No petroleum-based products will be disposed of on site. If a spill occurs, containment and cleanup will be required. Spill kits are required to be onsite during all heavy equipment operations. The cessation of operations may occur during periods of increased fire risk. Fire tools and equipment, including pump trucks and/or pump trailers, will be required on site during fire season.**

*NOTE: If contamination of the environment is suspected, the proponent must contact the Department of Ecology.*

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.  
**There will be short term, low level and high level noise created by the use of harvesting equipment and hauling operations within the proposal area. This type of noise has been historically present in this geographical area.**
- 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.*)

**Current use of site and adjacent land types: Timber production and recreation**

**Current use on nearby or adjacent properties should not be affected by this proposal.**

**This proposal adheres to the DNR's Policy for Sustainable Forests and HCP and will not change the use of or affect the current/long term land use of areas.**

- 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:  
**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?  
**All areas of this proposal are zoned Long-Term Forestry (LTF).**
- f. What is the current comprehensive plan designation of the site?  
**Designated Long-Term Forest Lands in Thurston County**
- 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 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:  
**Does not apply.**
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:  
**This project is consistent with current comprehensive plans and zoning classifications.**
- m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:  
**None.**

## 9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.  
**Does not apply.**

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

**Does not apply.**

- 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?

**Does not apply.**

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

- 1) *Is this proposal visible from a residential area, town, city, recreation site, major transportation route or designated scenic corridor (e.g., county road, state or interstate highway, US route, river or Columbia Gorge SMA)?*

No       Yes, name of the location, transportation route or scenic corridor:

**Portions of this proposal may be visible from the south on Noschka and Sherman Valley Roads.**

- 2) *How will this proposal affect any views described above?*

**This proposal will resemble previous timber harvests in the area and background views will change from a stand of mature timber to a view of a recent harvest with mature trees remaining around Type 1, 3, 4, and some Type 5 streams. There will also be clumps of leave trees scattered throughout. This view will change to that of a young plantation after seedlings are planted and planted trees continue to grow.**

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

**Leave tree clumps were scattered across all units to help reduce the aesthetic impacts.**

## 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?

**Waddell Basin E. Trail is located within this proposal. This trail system is mainly used by motorized riders. Several other informal recreational activities include hunting, berry-picking, sightseeing, and other informal outdoor recreation activities may occur within the proposal area.**

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

**There may be some disruptions to recreational use including trail closures in affected areas during periods of harvesting and hauling.**

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

**The affected portions of the trails will be posted with signs to inform trail users of the activity. Trail re-routes will be posted. Portions of the trails affected during this proposal will be restored to original condition following the completion of all activities. The District Recreation Manager was notified of the future activity and will be kept informed on start dates for this proposal when in proximity to the Waddell Basin E. Trail.**

## 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? If so, specifically describe.

**Yes. Site TN00512 was documented and evaluated within the proposed area, but was determined not to be eligible for listing in the National Register of Historical Places. Site TN00423 is associated with this proposal.**

- 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.

**DNR archaeologist has conducted a survey of the area and recorded site discussed above.**

- 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.

**This proposal was reviewed for archeological/historic resources using USGS and GLO maps. A DNR Cultural Resource Technician and DNR archaeologist were consulted.**

- 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.

**TN00423 is adjacent to and partially overlaps the proposal. The overlap area of the site will be avoided with a tagged non-tradeable leave tree area.**

**If a presently-unknown cultural resource is discovered during project operations, DNR will comply with the March 2010 Cultural Resources Inadvertent Discovery Guidance.**

#### **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.

**Noschka and Sherman Valley Roads provide access to the forest roads which access the harvest units.**

- 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. Nearest transit stop is approximately 11 miles away in Olympia.**
- 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.**
  - 1) *How does this proposal impact the overall transportation system/circulation in the surrounding area and any existing safety problem(s), if at all?*  
**This project will have minimal to no additional impacts on the overall transportation system 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 non-passenger vehicles). What data or transportation models were used to make these estimates?

**Approximately 10 to 15 truck trips per day while the operation is active. Peak volumes would occur during the yarding and loading activities between 4:00 a.m. and 4:00 p.m. of the operating period. The completed project will generate less than one vehicular trip per day. Estimates are based on the observed harvest traffic of past projects.**

- 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:
- 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: Dean R Adams

Name of signee Dean R Adams

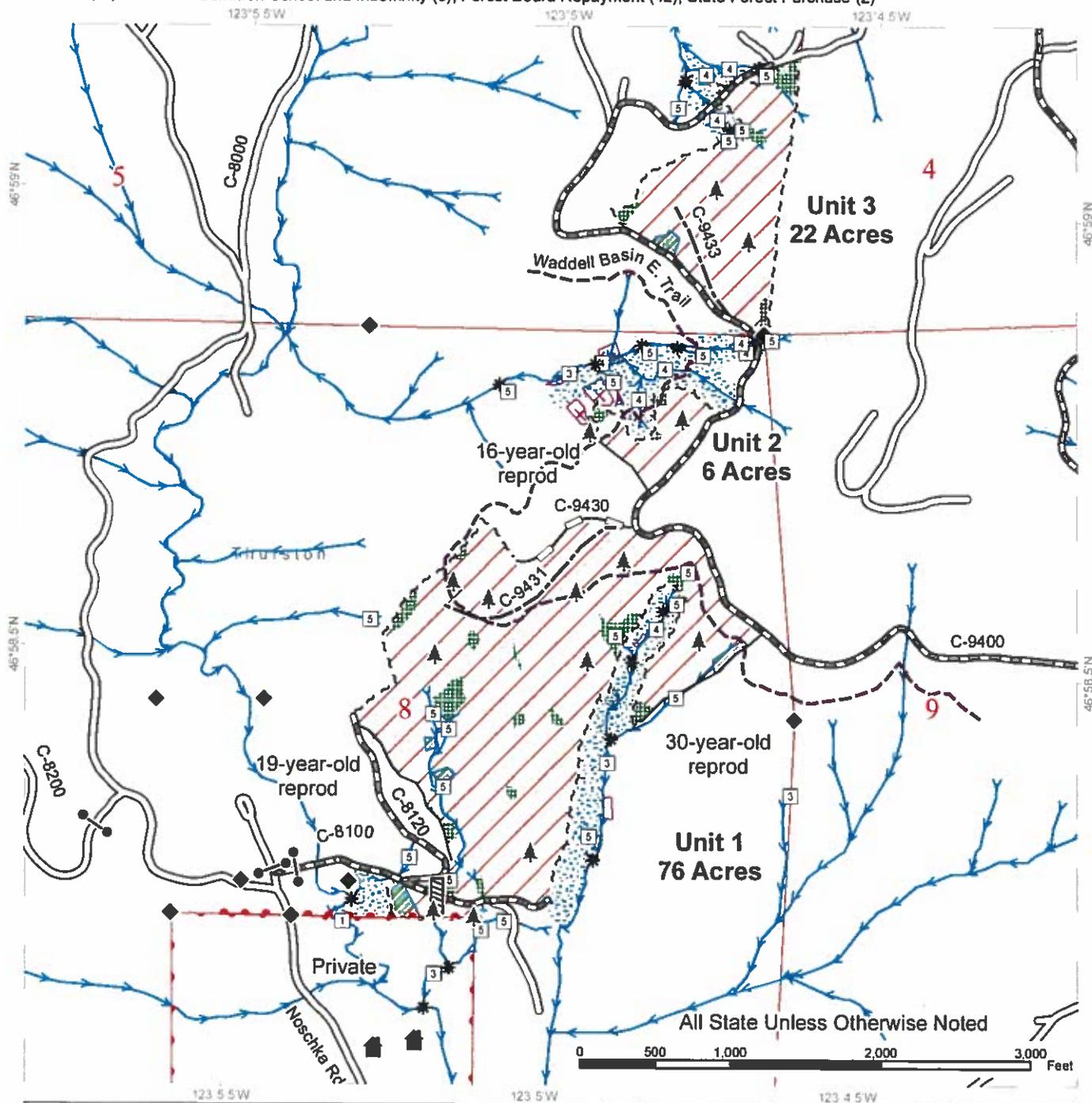
Position and Agency/Organization State Lands Assistant Region Manager/SPS Region

Date Submitted: 3/31/2020

# TIMBER SALE MAP

**SALE NAME:** ONION  
**AGREEMENT #:** 30-097288  
**TOWNSHIP(S):** T17R3W  
**TRUST(S):** Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

**REGION:** South Puget Sound Region  
**COUNTY(S):** Thurston  
**ELEVATION RGE:** 400-1443

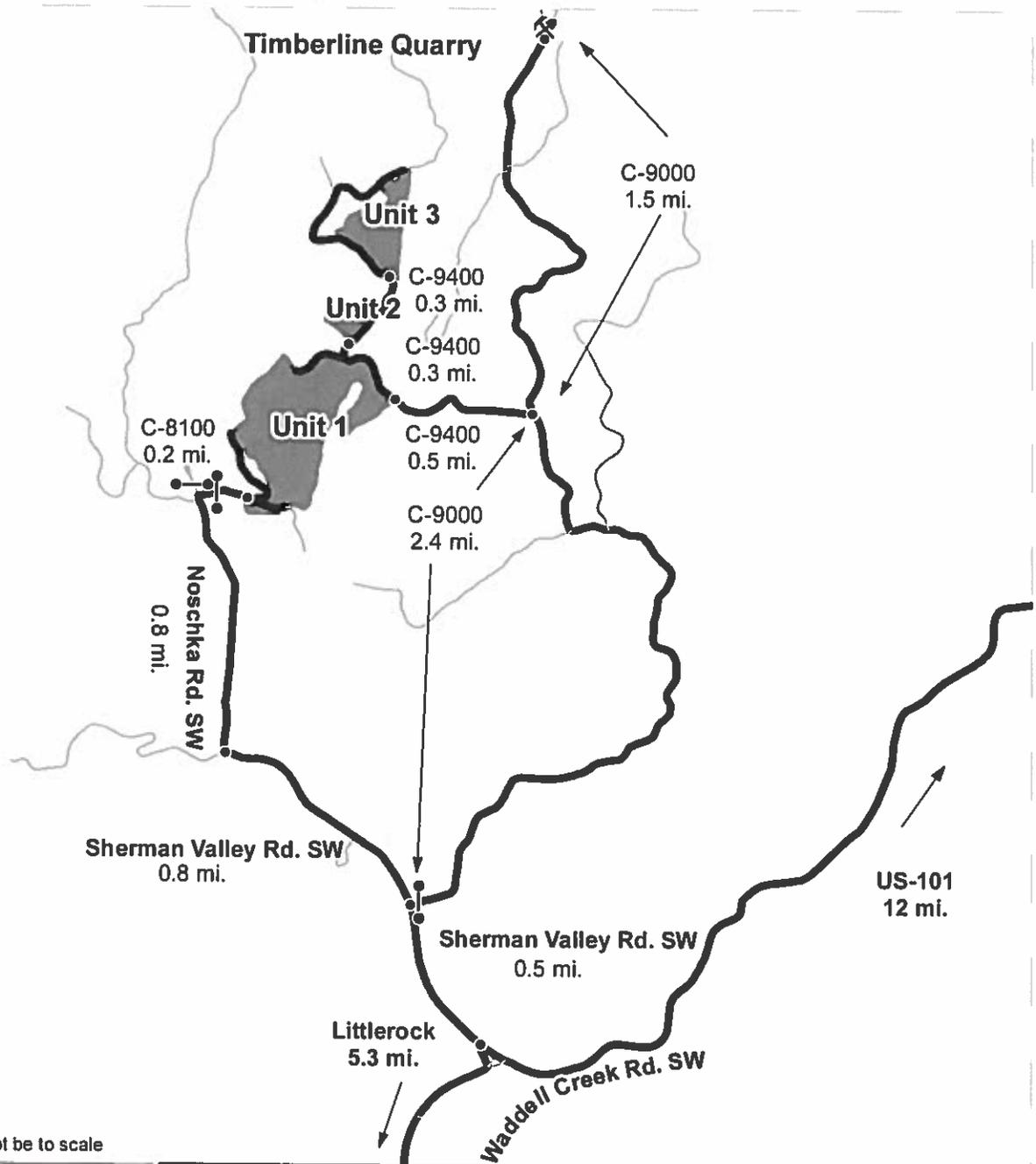


Variable Retention Harvest	Sale Boundary Tags	Streams
Tailhold Restriction Area	Property Line	Stream Type
Forested Wetland	Timber Type Change	Stream Type Break
Leave Tree Area	Existing Roads	Survey Monument
Riparian Mgt Zone	Required Pre-Haul Maintenance	Culvert
Non-Tradeable Leave Tree Area	Optional Construction	Leave Tree Area <1/4-acre
Recreation Trails	Optional Reconstruction	Structure

# DRIVING MAP

SALE NAME: ONION  
 AGREEMENT#: 30-097288  
 TOWNSHIP(S): T17R3W  
 TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region  
 COUNTY(S): Thurston  
 ELEVATION RGE: 400-1443



Map may not be to scale

	Timber Sale Unit
	Haul Route
	Other Road
	Distance Indicator
	Gate (Master-957)
	Rock Pit

**DRIVING DIRECTIONS:**

From I-5, take exit 95, turn East and follow Maytown Rd. SW for 2.8 miles to the town of Littlerock. From Littlerock follow 128th Ave SW for 0.8 miles to intersection with Waddell Creek Rd. Turn right onto Waddell Creek Rd. SW for 4.5 miles. Turn left onto Sherman Valley Rd. SW, follow for 0.5 miles to the C-9000 gate on right.

Take C-9000 for 2.4 miles, turn left onto C-9400 and follow for 0.5 miles to Unit 1 on left. Continue for 0.3 miles to Unit 2 on left. Continue another 0.3 miles to Unit 3 on left.

Continue another 0.8 miles down Sherman Valley Rd. SW from the C-9000 gate to Noschka Rd. SW on right. Follow for 0.8 miles to the C-8100 gate on right. Follow C-8100 for 0.2 miles to Unit 1.

From the C-9000 and C-9400 junction, keep right on the C-9000 and follow for 1.5 miles to Timberline Quarry

