

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: **SMUGGLER VRH RMZ**
Agreement # **30-099053**

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

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

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

4. Date checklist prepared: **01/29/2020**

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

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

a. *Auction Date:*
11/17/2020

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: **McLane Creek**

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, dated February 28, 2020

Wildlife report:

Geotechnical report:

Appendix D. slope stability informational form:

Other specialist report(s):

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

Rock pit plan: Attached to Road Plan, dated February 28, 2020

Other:

Forest Practices Activity Maps; DNR’s Land Resource Manager program and associated maps; The following DNR GIS databases were reviewed: Weighted Old Growth Habitat Index (WOGHI); WAU Rain-On-Snow Layer; Marbled Murrelet Habitat Layer; Spotted Owl Habitat Layer; and USGS and GLO maps; 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 # **2421793***

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 Smuggler Timber Sale consists of three variable retention harvest (VRH) units, two right-of-way (ROW) units, and three riparian restoration units located in and adjacent to the Capitol State Forest. The original proposal area was 274 acres, and was reduced to approximately 201 acres for protection of potentially unstable slopes, multiple streams and wetlands. The net timber sale area is approximately 182 acres after deducting leave tree areas, existing roads, and utility Rights-of-Way. Approximately 8,390 MBF of mixed conifer and hardwood will be harvested. Net unit acreage is as follows:

- Unit 1: 39 acres**
- Unit 2: 57 acres**
- Unit 3: 78 acres**
- Unit 4: 2 acres**
- Unit 5: 2 acres**
- Unit 6: 3 acres**
- Unit 7: <1 acre**
- Unit 8: <1 acre**

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:

Unit	Origin Date	Major Timber Species	Type of Harvest
1	1880-1956	Douglas-fir, western hemlock, western redcedar, grand fir, red alder, bigleaf maple	Variable Retention Harvest
2	1948-1956	Douglas-fir, western hemlock, western redcedar, grand fir, red alder, bigleaf maple	Variable Retention Harvest
3	1945-1958	Douglas-fir, western hemlock, western redcedar, red alder, bigleaf maple	Variable Retention Harvest
4	1956	Red alder, bigleaf maple	Riparian Restoration
5	1956	Red alder, bigleaf maple	Riparian Restoration
6	1956	Red alder, bigleaf maple	Riparian Restoration
7	1956	Douglas-fir, western hemlock, western redcedar, red alder, bigleaf maple	Right-of-Way
8	1995	Douglas-fir, western hemlock	Right-of-Way

Overall Unit Objectives:

The objective of this proposal is to:

- **Produce revenue for the State Forest Transfer (01), and Forest Board Repayment (42) Trusts through the production of saw logs, poles, and pulp material.**
- **To restore riparian habitat by developing vertical stand structure and age class distribution of long-lived native conifer species in the future stand.**

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		4,498	2	
Reconstruction		814		
Abandonment		1,993	1	
Bridge Install/Replace				
Stream Culvert Install/Replace (fish)	0			
Stream Culvert Install/Replace (no fish)	2			
Cross-Drain Install/Replace	15			

Routine maintenance will occur on roads used during the life of this 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:

**Harvest – Sections 25, 26 & 34 of Township 18 North, Range 03 West, W.M.
Rock Pits – Sections 15, 26 & 35 of Township 18 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):

From Olympia on US HWY 8 turn south at approximately Mile Marker 16 onto the Rock Candy Mountain RD SW. Continue on B-Line for 0.4 miles, and turn left (east) onto the B-8000 for 2.2 miles. Turn left (east) onto the B-8400 for 2.0 miles to the B-8430. Turn left

(west) and continue for 0.3 miles to Perry Creek Quarry. From the B-8000/B-8400 junction continue 1.8 miles. Turn right (south) on the B-8700 and follow for 0.8 miles to Units 1, 2, 4, 5, 6, and 7. From Unit 2, continue another 0.9 miles to the B-8790. Turn left (east) and continue for 0.4 miles to the Delphi Quarry. From the B-8000/8700 junction, continue on the B-8000 for 2.3 miles to Unit 3 on the B-8900 and Unit 8 below. Continue and additional 0.3 miles to Borrow Source "A".

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).

This proposal is located within the McLane Creek Watershed Administrative Unit (WAU). Agriculture and home sites are located in the valleys near the major streams, therefore peak flows and slope stability are the primary concerns. Forested stands within the WAU appear to be primarily second and third growth stands. This WAU is intensively managed for timber production, including variable retention harvests, thinnings, and partial cuts.

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 Habitat Conservation Plan (1997; HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service concerning threatened and endangered species and their habitats. The applicable Habitat Conservation Plan (HCP) strategies incorporated into this proposal include:

- **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.**
- **Wetland Management Zones (WMZ) will protect water quality, sensitive wetland soils, and to maintain hydrologic function and natural water flow. WMZs will develop older wetland forest characteristics that, in combination with other strategies, will help support older 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 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.**

Agency policies and guidelines from the 2006 Policy for Sustainable Forests incorporated into this proposal include:

- **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.**

The 2010 South Puget HCP Planning Unit Forest Land Plan EIS guides the Agency's management of older forests towards achieving 10 to 15 percent of the South Puget HCP planning unit within 70 to 100 years as older forests. Over time, trends show that as less complex forest stand development stages (Ecosystem Initiation, Competitive Exclusion, and Understory Development) decline, structurally complex stand development stages (Niche Diversification and Fully Functional) increase. Most stands exhibiting older-forest conditions are found in upland and riparian areas and occur as a result of meeting all of DNR's stated objectives.

To achieve older-forest conditions, DNR actively manages forests to attain various objectives that increase structural complexity. Actively managing stands will have the following outcomes:

- **Achievement of older-forest structures across 10 to 15 percent of the South Puget HCP planning unit within 70 to 100 years; DNR is projected to achieve this goal around 2050.**
- **An estimated 33 percent of stands in the South Puget Planning Unit will have reached older-forest conditions by 2109.**

Forest modeling processes as part of the Sustainable Harvest Calculation are used to identify and prioritize stands in the development stages that are most capable of meeting the 10 percent older-forest condition target by 2106. Forest models allow DNR to continually review and analyze forest management strategies over time to ensure that DNR is on a trajectory to meet the objective.

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

All landforms that were determined to be rule-identified landforms according to the Forest Practice Board Manual were excluded from the sale or protected with non-tradeable leave tree clumps.

Mitigation through active riparian management is planned for Units 4-6 per the Riparian Forest Restoration Strategy appendix of the Habitat Conservation Plan.

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
MCLANE CREEK	26869	3722	238	131	269

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

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).

WAU:	<u>MCLANE CREEK</u>
WAU Acres:	<u>26869</u>
Elevation Range:	<u>0 - 1859 ft.</u>
Mean Elevation:	<u>221 ft.</u>
Average Precipitation:	<u>51 in./year</u>
Primary Forest Vegetation Zone:	<u>Western Hemlock</u>

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)?

85% for a short stretch.

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
0578	SILT LOAM
5689	SILT LOAM
6640	SILT LOAM
0054	GRAVELLY SANDY LOAM
8037	GRAVELLY 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 around the sale area by the State Lands GIT and a forester on 3/15/2019 and 11/15/2019 to further evaluate the presence of potentially unstable slopes. Based on these reviews, potentially unstable slopes or landforms defined as rule-identified landforms (RILs) by Forest Practices were identified.

Intermittent inner gorge slopes were identified in some of the drainages in Units 1, 2, and 3. These were all located well within the stream buffers. Two Category E shallow rapid failures were identified upslope of Unit 1 and one within the unit which was excluded with non-tradeable leave trees. Two small failures were found in Unit 3, however through runout analyses it was determined they do not have delivery potential. Two small bedrock hollows were identified in Unit 3. One is well within the RMZ buffer and one is excluded with non-tradeable leave trees. See Forest Practices Application Slope Stability Form addendum for further information.

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

No Yes, describe the proposed activities:

Two small failures in Unit 3 were identified as potentially unstable but do not have delivery potential. Harvesting and yarding activities will take place in and around these features.

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 Rule-identified landforms with delivery potential were excluded from the harvest areas by Timber Sale Boundary tags and non-tradeable leave tree areas.
- No tailholds will be allowed within and no timber will be yarded across Forest Practices Rule-Identified Landforms with delivery potential.
- 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.
- Soil protection measures will be taken to minimize damage throughout the proposal area. These include but are not limited to; water barring, grass seeding, “sweeping” with logs, and placement of slash.
- Skid trails may be water barred post harvesting activities, if necessary to avoid concentrating surface water runoff.
- Roads will be constructed during dry weather conditions as much as possible.
- 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: 2

Approx. acreage new landings: 1-2

Fill Source: Native material from Perry Creek Quarry, Delphi Quarry, and Borrow Source “A”.

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

- The no harvest RMZs will function to protect streams and wetlands from sediment delivery.
- In the no harvest RMZ where yarding timber will be necessary, full suspension of logs will be required to minimize disturbance through compaction or rutting.
- Non self-leveling ground-based harvesting will only occur on sustained slopes measuring 45 percent and less, and self-leveling shovels may occur on sustained 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 and wetlands from sediment delivery.
- Roads will be crowned, ditched and cross-drained. The M01 road will be insloped away from the nearby stream per Forest Practices request. Cross-drains may be installed and maintained.
- Seasonal timing restrictions may prohibit road construction during wet weather conditions.
- 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 harvesting operations may 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), cross drains, and waterbars will be utilized to allow for proper drainage.
- Stream culverts on haul routes will be replaced as needed with larger culverts to reduce flow impediment.

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:

There are multiple streams that flow into Beaty Creek and McLane 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)
Stream	3	2	154
Stream	3	2	186 (1 managed for restoration)
Stream	3	1	192
Stream	4	9	100 foot minimum

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

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 twenty Type 5 streams and most of the seven identified forested wetlands less than ¼ acre. 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.

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

Local knowledge of prevailing wind direction/being on the leeward side of the drainage determined no wind buffers were necessary.

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):

Harvest will occur within 200 feet of streams and wetlands, but beyond the buffer distances listed above unless in the designated RMZ riparian restoration units where the HCP's Riparian Restoration Addendum prescriptions will be followed. All conifer trees will be left uncut in these areas as well as two bigleaf maple per acre to provide shade. Trees may be cut in other RMZs for safety or operational needs, (including yarding corridors for one Type 4 stream in Unit 3) but will be left in place to provide large woody debris functions. Tradeable leave tree clumps may be relocated for safety or operational needs. One culvert will be installed in a Type 4 stream. One culvert will be installed in a Type 5 stream and removed following the harvest.

- 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:* **Temporary diversion or pumping may be necessary for the culvert installations and replacements on typed streams if water is present. Water will be returned to the original stream channel at the best possible location.**

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

No *Yes, describe activity and location:* **The one Np culvert installation will occur within the 100-year floodplain. A FPHP will be obtained from DNR Forest Practices. See Forest Practice Application and FPA maps for live water culvert locations.**

- 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)?*

MCLANE CREEK = 6.2 (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 transpiration 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 approximately 0.5 miles downstream from the proposal. Based on the protection measures outlined in B.1.d.5, B.1.h, and B.3.a.16., 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.

- **Type 3 and Type 4 no-harvest RMZs will maintain forest cover.**
- **Most Type 5 streams have been protected with leave tree clumps, and a 30-foot Equipment Limitation Zone will be utilized to maintain stream function, stream bank integrity, and minimize possible sediment delivery.**
- **The proposal's harvest units are each less than 100 acres to minimize impacts to watershed hydrology.**
- **See B.1.d.5 and B.1.h. for further protection measures.**

b. Ground Water:

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

No 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 0.5 miles) 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.

a. 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: **None**

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: **Pacific Yew**
 Shrubs:
 Huckleberry Rhododendron Salmonberry Salal
 Other:
 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 "WAU Map(s)" and "Timber Harvest Unit Adjacency Map(s)" 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.)

- **Unit 1: To the north and west is a 95 year-old conifer stand. To the east is a RMZ buffer. To the south is an RMZ buffer and a 64 year-old conifer stand.**
- **Unit 2: To the north is an 18 year-old conifer plantation. To the east is the B-8700 road and 9 and 18 year-old conifer plantations. To the south is the B-8700 road and a 30 year-old conifer plantation. To the west is a RMZ buffer.**
- **Unit 3: To the north is an RMZ buffer and a 12 year-old conifer plantation. To the east is an RMZ buffer and a 6 year-old conifer plantation. To the south is the B-8900 road, a 61 year-old conifer stand, and a 23 year-old conifer plantation. To the west is a 6-year old conifer plantation.**
- **Unit 4: This unit is surrounded by Unit 2 except to the west which is an RMZ and a 64 year-old conifer stand.**
- **Unit 5: This unit is surrounded by Unit 2 except to the west which is an RMZ and Unit 1.**

- **Unit 6:** This unit is surrounded by Unit 1 except to the east which is an RMZ and Unit 2.
- **Unit 7:** This unit is surrounded by Units 1&2 except to the north which is an 18 year-old conifer plantation
- **Unit 8:** To the north, east, and south is a 30 year-old conifer stand. To the west is Unit 3.

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, grand fir, bigleaf maple and red alder were left for green tree retention and snag recruitment. Retention tree numbers were based on leaving 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. In the riparian restoration units, all conifer will be retained as well as 1-3 bigleaf maple per the Riparian Restoration guidelines to maintain a shaded riparian habitat.

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.

After harvest, the units will be replanted with native conifer species.

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

Small amounts of scotch broom and holly are found in the harvest units.

5. Animals

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

birds:

eagle hawk heron owls songbirds

other:

mammals:

bear beaver coyote cougar deer elk

other:

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 found in corporate database

- 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:

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

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

Species /Habitat: **Aquatic Habitat**

Protection Measures: **100 foot no-harvest buffers on Type 4 streams and 154, 186, & 192 foot buffers on Type 3 streams, some of which will be managed for riparian restoration.**

Species /Habitat: **Upland habitat**

Protection Measures: **A minimum of 8 leave trees per acre were left clumped and scattered. Snags will be left where operationally feasible. Older large down woody debris will be left onsite.**

- e. List any invasive animal species known to be on or near the site.
- **Barred Owls**
 - **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 leafrollers of concern that are present in Washington.**

6. Energy and natural resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.
Petroleum fuel (diesel or gasoline) will be used for heavy equipment during active road building, timber harvest operations, and for transportation. No energy sources will be needed following project completion.
- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
No.
- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:
None.

7. Environmental health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.
- 1) Describe any known or possible contamination at the site from present or past uses.
None known.
 - 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.
None known.

- 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.
Petroleum-based fuel and lubricants may be used and stored on site during the operating life of this project.
- 4) 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.)*

The state land surrounding the sale area is managed for timber production and recreation by the DNR. Current use on nearby or adjacent properties is agriculture and home sites down in the valleys and should not be affected by this proposal.

- a. 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.
- b. Describe any structures on the site.
None.
- c. Will any structures be demolished? If so, what?
No.
- d. What is the current zoning classification of the site?
Long-Term Forestry
- e. What is the current comprehensive plan designation of the site?
The proposal area is zoned undeveloped land.
- f. If applicable, what is the current shoreline master program designation of the site?
Not applicable.
- g. Has any part of the site been classified as a critical area by the city or county? If so, specify.
No.
- h. Approximately how many people would reside or work in the completed project?
None.
- i. Approximately how many people would the completed project displace?
None.
- j. Proposed measures to avoid or reduce displacement impacts, if any:
Does not apply.
- k. 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.
- l. 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 the harvest units may be visible from US Highway 101, adjacent residential sites and recreation trails.
 - 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 3, Type 4, and some Type 5 streams. There will also be leave tree clumps scattered throughout each harvest unit. This view will change to one of a young plantation after seedlings are planted and the new trees continue to grow.
- c. Proposed measures to reduce or control aesthetic impacts, if any:
None.

11. Light and glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
None.
- b. Could light or glare from the finished project be a safety hazard or interfere with views?
No.
- c. What existing off-site sources of light or glare may affect your proposal?

None.

- d. Proposed measures to reduce or control light and glare impacts, if any:
None.

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?
There are no designated recreational trails in or adjacent to this proposal. Informal recreational activities include hunting, berry picking and sightseeing.
- b. Would the proposed project displace any existing recreational uses? If so, describe.
There may be some disruptions to recreational use 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:
None

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. There is a set of abandoned railroad grades within the proposed project area. See B-13-b below.

- 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.

Yes, site 45TN518 is located in the proximity of the proposal. A DNR Archaeologist and Cultural Resource Technician have conducted a site review and survey of the area and recorded site. This site has been determined by Department of Archaeology and Historical Preservation to not be eligible for National Register of Historic Places.

- 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.

A desk review of the project area was conducted by a DNR cultural resource technician. A field review was completed by a DNR cultural resource technician on 07/08/2019.

- 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.

No additional mitigation was necessary for this proposal. 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.

Forest roads lead to State Route 8 which links to the I-5 corridor.

- 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 spot is approximately 10 miles away.

- 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: Laurie Bergvall

Name of signee Laurie Bergvall

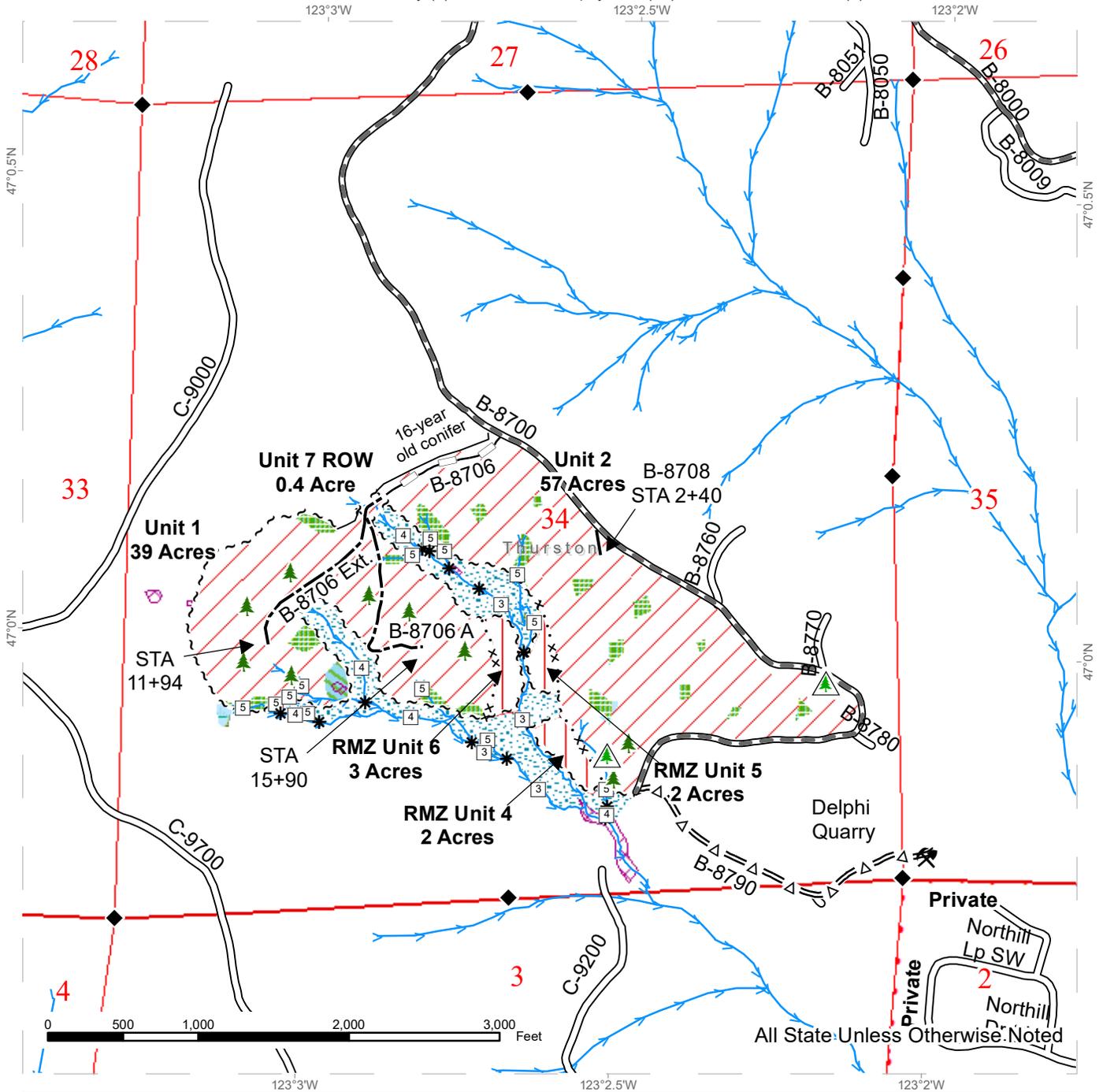
Position and Agency/Organization SLA/DNR SPS Region

Date Submitted: 8/28/2020

TIMBER SALE MAP

SALE NAME: SMUGGLER VRH RMZ
AGREEMENT #: 30-099053
TOWNSHIP(S): T18R3W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Transfer (1)

REGION: South Puget Sound Region
COUNTY(S): Thurston
ELEVATION RGE: 200-1400



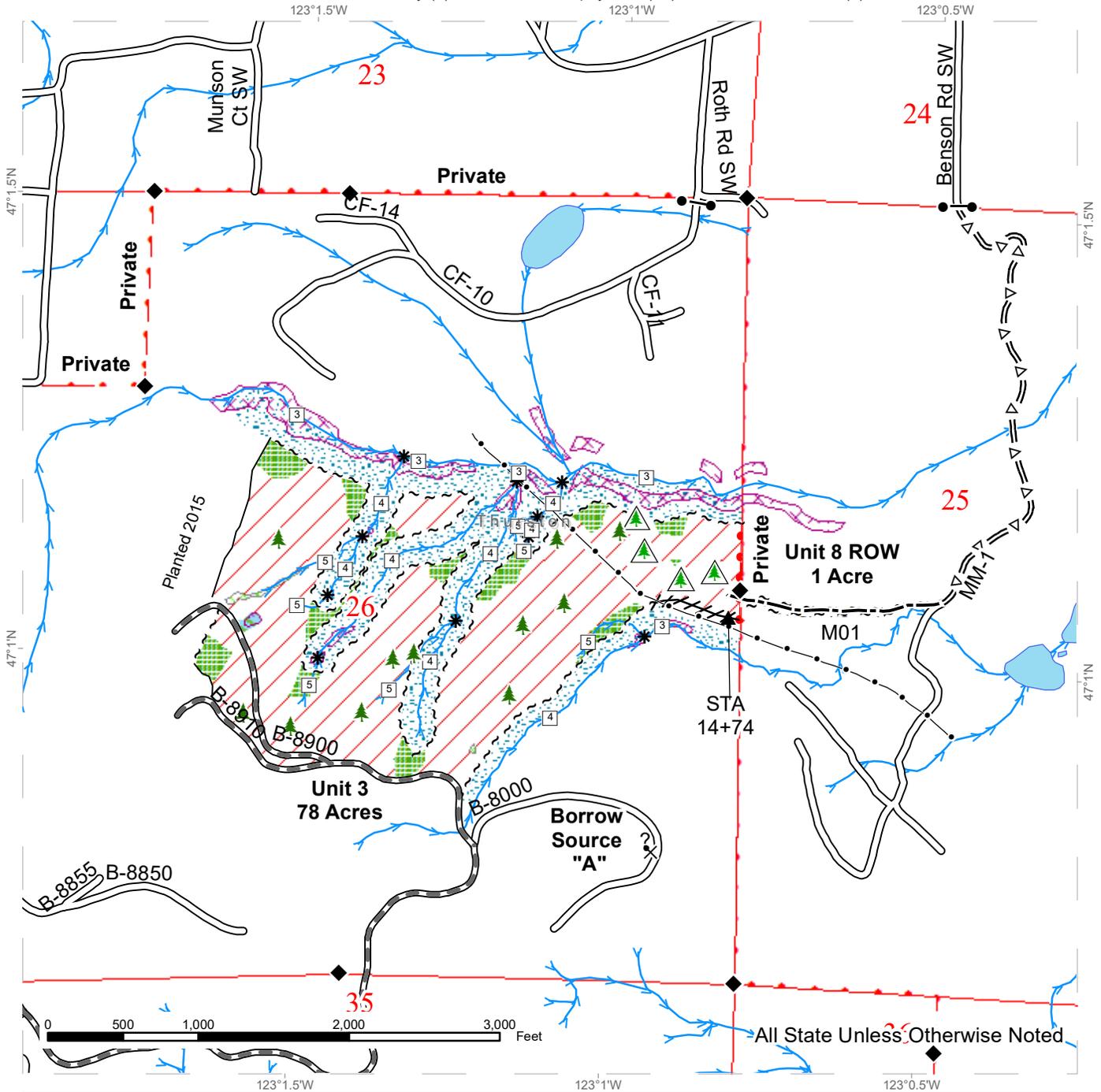
Variable Retention Harvest	Sale Boundary Tags	Streams
Riparian Restoration	Special Mgmt Area	Stream Type
Tailhold Restriction Area	Right of Way Tags	Stream Type Break
Leave Tree Area	Timber Type Change	Survey Monument
Riparian Mgt Zone	Existing Roads	Leave Tree Area <1/4-acre
Forested Wetland	Required Pre-Haul Maintenance	Non-Tradeable Leave Trees
Non-Tradeable Leave Tree Area	Optional Pre-Haul Maintenance	Rock Pit
	Optional Construction	
	Optional Reconstruction	



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All State Unless Otherwise Noted

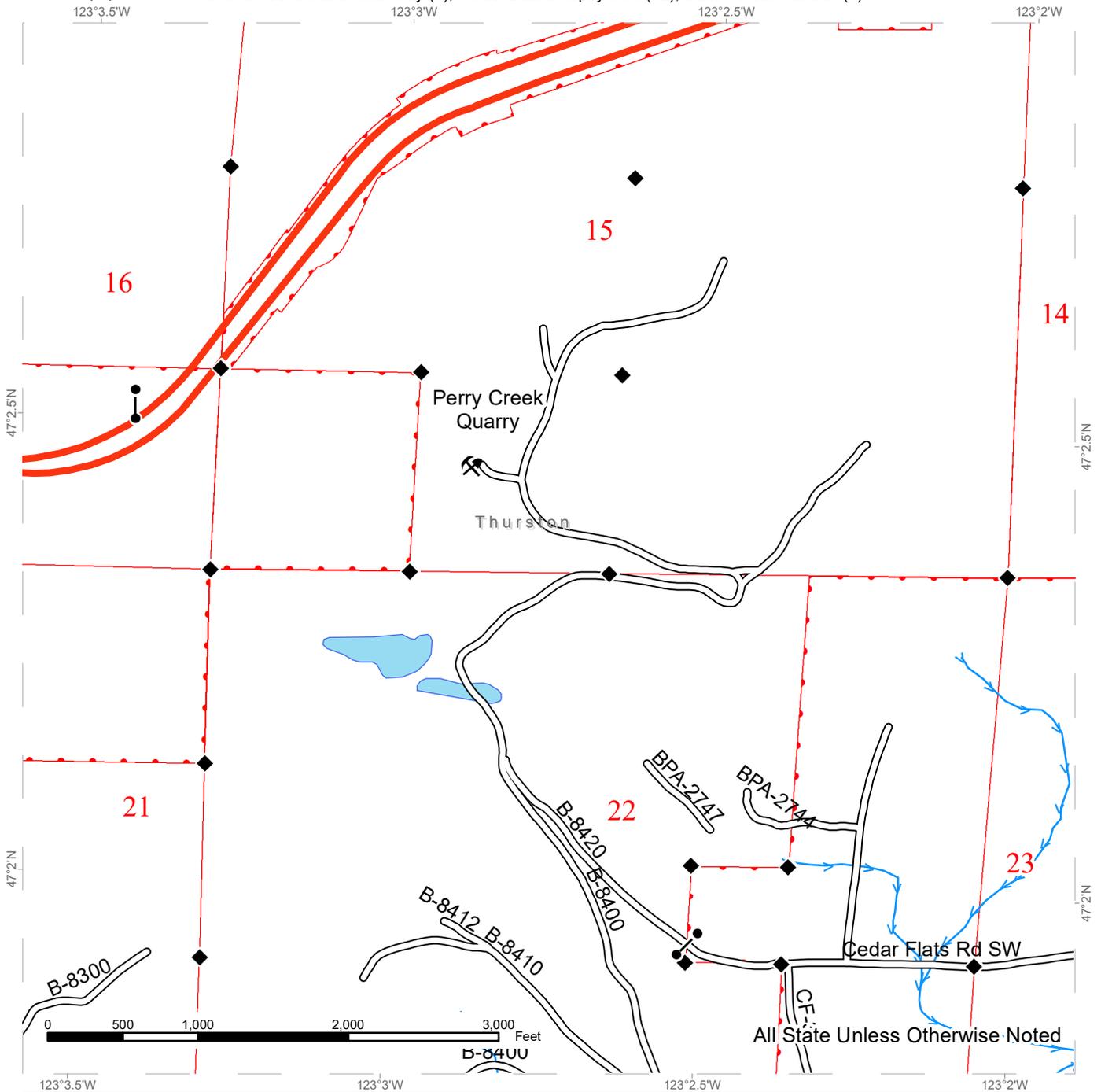
Variable Retention Harvest	Sale Boundary Tags	Streams
Tailhold Restriction Area	Right of Way Tags	Stream Type
Leave Tree Area	Property Line	Stream Type Break
Riparian Mgt Zone	Flag Line	Survey Monument
Forested Wetland	Timber Type Change	Gate (Master H957)
Non-Tradeable Leave Tree Area	Existing Roads	Leave Tree Area <1/4-acre
Slope Mitigation Area	Required Pre-Haul Maintenance	Non-Tradeable Leave Trees
Pipeline	Optional Pre-Haul Maintenance	Potential Rock Source
	Optional Construction	



TIMBER SALE MAP

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AGREEMENT #: 30-099053
TOWNSHIP(S): T18R3W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Transfer (1)

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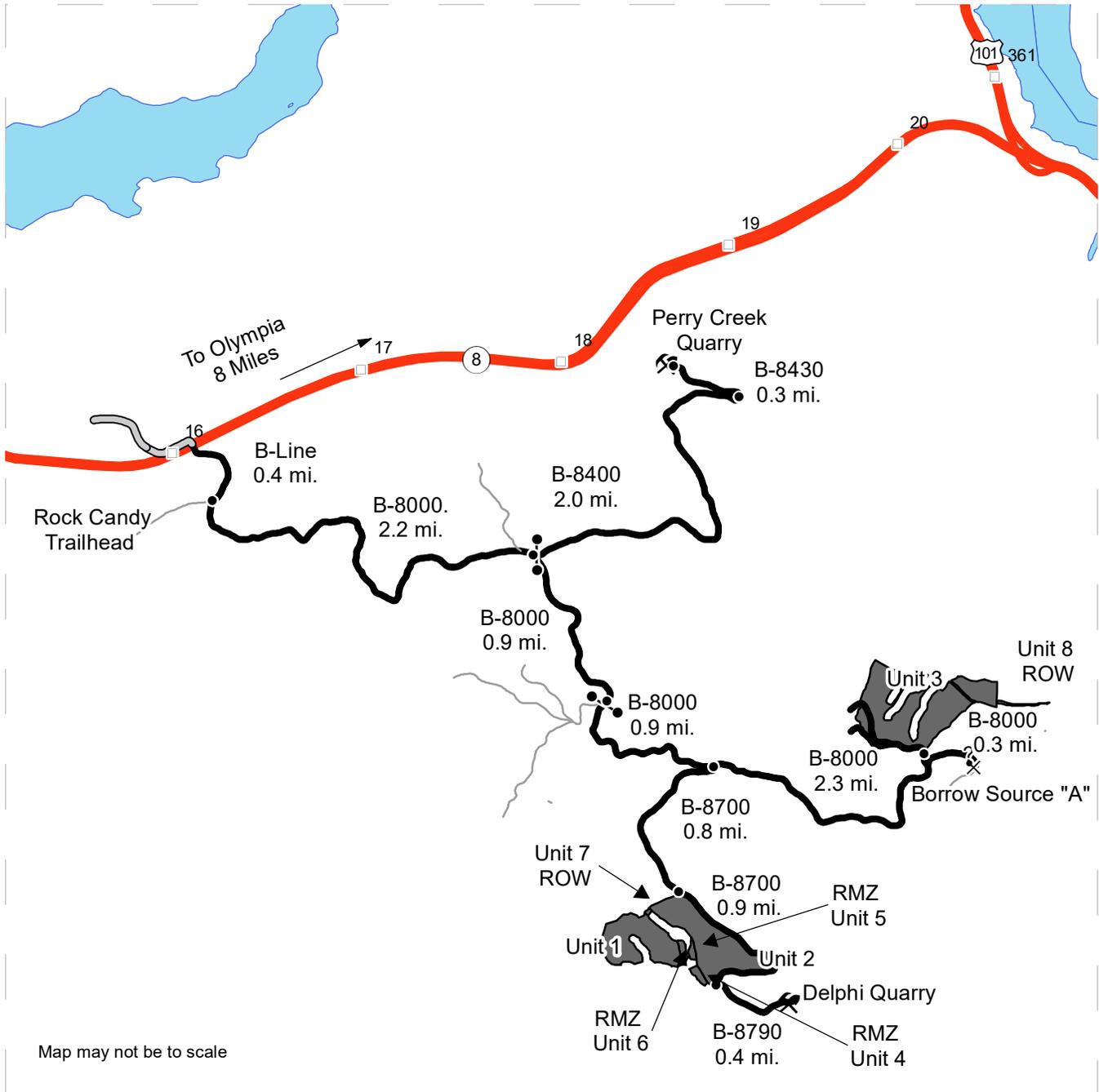
Existing Roads	Streams
Stream Type	Stream Type Break
Survey Monument	Rock Pit



DRIVING MAP

SALE NAME: SMUGGLER VRH RMZ
AGREEMENT#: 30-099053
TOWNSHIP(S): T18R3W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Transfer (1)

REGION: South Puget Sound Region
COUNTY(S): Thurston
ELEVATION RGE: 200-1400



- Timber Sale Unit
- Haul Route
- Other Road
- Highway
- Milepost Markers
- Distance Indicator
- Gate (Master H957)
- Potential Rock Source
- Rock Pit

DRIVING DIRECTIONS:

From State Route 8 (milepost 16.1), turn south onto the B-Line (Rock Candy Mountain RD SW) and follow for 0.4 miles. Turn north (left) onto the B-8000 junction for an additional 2.2 miles to the B-8400 junction. Continue on the B-8000 for 0.9 miles. Stay left on the B-8000 for another 0.9 miles to the B-8700 junction. Turn south (right) and continue 0.8 miles to units 1, 2, 4-7. From the B-8000 and the B-8700 junction stay straight on the B-8000 for another 2.3 miles to Unit 3.

Perry Creek Quarry: On the B-8000 and the B-8400 Junction, keep east (left) and continue on the B-8400 for 2.0 miles. Turn onto the B-8430 for 0.4 miles. Turn west (left) onto the B-8431 for 0.1 miles.

