

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: **DELICA HARDWOOD**
Agreement # **30-102086**

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

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

Washington Department of Natural Resources
South Puget Sound Region
950 Farman Ave N.
Enumclaw, WA 98022
Contact: Audrey Mainwaring

4. Date checklist prepared: **12/03/2021**

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

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

a. Auction Date:
08/23/2022

b. Planned contract end date (but may be extended):
05/31/2024

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:
No site preparation herbicide application is currently planned.

b. Regeneration Method:
Both units will be hand-planted with native red alder seedlings following harvest.

c. Vegetation Management:
Possible treatments including a thinline herbicide application for bigleaf maple management, 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. No broadcast herbicide treatments will occur.

d. Other:

Road maintenance assessments will be conducted and may include periodic ditch and culvert cleanout, and grading as necessary.

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: **Kennedy Creek**

temp

sediment

completed TMDL (total maximum daily load)

Landscape plan:

Watershed analysis: **Kennedy Creek**



Approved watershed analyses are available on the DNR website, under Forest Regulations. CKF

Interdisciplinary team (ID Team) report:

Road design plan: **Road Plan by Jacob Gross, dated December 1, 2021**

Wildlife report:

Geotechnical report: **Engineering Geologic Risk Assessment by Susie Wischart, State Lands Licensed Engineering Geologist, dated December 17, 2021**



Geologic assessment is available for review in Forest Practices Application Review System (FPARS) with FPA/N 2422920. CKF

Other specialist report(s):

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

Rock pit plan:

Other: **The following information is reviewed using DNR’s GIS database: Weighted Old Growth Habitat Index (WOGHI); WAU Rain-On-Snow Layer; Marbled Murrelet Habitat Layer; Spotted Owl Habitat Layer; and USGS and GLO maps. Communications with State Lands Geologist, State Lands Archaeologist, 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 # 2422920

FPHP

Board of Natural Resources Approval

Burning permit

Shoreline permit

Existing HPA

Other:

FPA/N 2422920 is available for viewing in FPARS CKF

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 Delica Hardwood timber sale consists of two variable retention harvest units in the Capitol State Forest. The original area considered for harvest was 66 acre and was reduced to a net timber sale area of approximately 43 acres after protections for riparian and wetland areas and

acreage deduction of leave trees. Approximately 1,405 MBF of mixed conifer and hardwoods will be harvested. Due to existing forest health issues (extensive laminated root rot) observed onsite, red alder will be planted following harvest rather than conifer species that are susceptible to this issue.

Net unit acreage is as follows:

Unit 1: 15

Unit 2: 28

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	1926	Douglas-fir, bigleaf maple, red alder, western hemlock, western redcedar, grand fir	Variable Retention Harvest
2	1935	Douglas-fir, bigleaf maple, red alder, western hemlock, western redcedar, grand fir	Variable Retention Harvest

Origin date for Unit 1 determined from data collected by on-site tree core assessments.

Origin date for Unit 2 was determined using DNR’s Combined Origin Year raster layer on GIS.

Many of the existing conifer species exhibit indications of laminated root rot.

Overall Unit Objectives:

The objective of this proposal is to manage the stands for trust revenue (specifically the University Transferred (05), and Capital Grant (07) trusts), establish a new stand of trees less susceptible to laminated root rot, maintain long-term informal recreation use, and protect riparian and other sensitive environmental features.

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		0	0	0
Reconstruction		0		0
Maintenance		13,390		0
Abandonment		0	0	0
Bridge Install/Replace	0			0
Stream Culvert Install/Replace (fish)	0			
Stream Culvert Install/Replace (no fish)	0			
Cross-Drain Install/Replace	0			

Routine maintenance will occur on existing roads throughout the duration 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 in Section 13 of Township 18 North, W.M., Range 4 West, and Section 18 of Township 18 North, Range 3 West, W.M. Schneider Quarry in Section 4 of Township 18 North, Range 3 West, W.M.** All occurring in Thurston County. CKF

b. Distance and direction from nearest town:

This sale is located approximately 11 miles from the City of Olympia, and 10 miles from the town of McCleary. From SR 8, near milepost 16, turn north onto Summit Lake Road NW. Turn right onto the S-Line. After 0.1 miles, turn left onto the S-1000. Continue 1.0 mile to Unit 1. Continue an additional 0.6 miles to Unit 2. From the S-Line, S-1000 junction, stay straight on the S-Line for 3.7 miles to Schneider Quarry.

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 Kennedy Creek WAU agriculture and home sites or other structures are located in the valleys near the major streams including within floodplains or alluvial fans, therefore peak flows and slope stability are the primary concerns. Other concerns include water quality for

fish habitat and human use of downstream Summit Lake. 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 harvest, thinnings, and partial cuts. The WAU has experienced a high concentration of forestland conversion to residential use, primarily around Summit Lake.

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 (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 Policy for Sustainable Forests incorporated into this proposal include:

- **Generally limiting even-aged harvests to less than 100 acres per unit.**
- **Managing for consideration of viewshed impacts. Mitigation measures include a higher number of leave trees retained within the units than the minimum per DNR's HCP, design of and location of individual and grouped leave trees scattered throughout the harvest units, focusing on long-lived conifers with full crowns across varying elevations.**

Development of older forests is an expected outcome of the 1997 Trust Lands Habitat Conservation Plan (HCP), and a policy objective stated in DNR's Policy for Sustainable Forests. Landscape assessments made in May 2021, demonstrate that through implementation of the HCP and other Policies and laws, older forest targets will be met in conservation areas over time. These conservation areas include identified long-term forest cover under the marbled murrelet long-term conservation strategy, riparian areas, areas conserved under the multispecies conservation strategy, potentially unstable slopes, spotted owl nest patches, and spotted owl habitat that must be maintained to comply with the northern spotted owl conservation strategy (within NRF and South Puget Planning Unit dispersal management areas).

- **The South Puget HCP Planning Unit will meet at least 10% older forest within conservation areas by 2100.**

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.**

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 Groundwater Recharge Area of the Glacial Deep-seated landslide in/near Unit 1 was assessed and considered to be low-risk (see Engineering Geologic Risk Assessment by the State Lands Licensed Engineering Geologist Susie Wisheart for additional information). All other 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 areas.

Geological assessment is available for viewing with FPA/N 2422920 is FPARS. CKK

The HCP strategy for riparian conservation (in concert with other conservation areas throughout the HCP Planning Unit) will contribute to the retention and development of older forests, while the leave tree procedure will enhance the structural diversity of forests across the landscape over time.

Broadcast spray application of herbicides prior to replanting is not planned for this proposal as an additional mitigation measure for water quality protection.

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 generally defined as occurring within the next 7 years. This data was obtained from DNR’s Land Resource Manager System on the date of processing this checklist and may be subject to change.

WAU Name	Total WAU Acres	DNR-managed 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
KENNEDY CREEK	23378	10228	1239	44	476

Data current as of 12/03/2021 was obtained from the agency’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).*

WAU:	<u>KENNEDY CREEK</u>
WAU Acres:	<u>23378</u>
Elevation Range:	<u>0 - 2304 ft.</u>
Mean Elevation:	<u>550 ft.</u>
Average Precipitation:	<u>52 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)?

74% is reflected in DNR’s database as the steepest slope onsite. From field observations, this appears to be associated with a road cutslope. The average slopes onsite are significantly less steep.

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 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
7216	V.GRAVELLY LOAM
1640	V.GRAVELLY LOAM
7213	V.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 Licensed Engineering Geologist remotely reviewed all units utilizing LiDAR, orthophotos, historic aerial photographs, and other data sets available in the DNR GIS database. A field review was conducted in and around all units by foresters with training in unstable slopes identification as well as State Lands Licensed Engineering Geologist on 5/11/2021 to further evaluate the presence of potentially unstable slopes. All areas of 70% slopes and convergence and potential landslide morphology were reviewed. Based on the State Lands Licensed Engineering Geologist, and foresters' field reviews, there is one Category E. shallow failure in Unit 1 (as defined by Forest Practices rule-identified landforms), which is excluded by non-tradeable leave trees. Also in Unit 1 there is a toe slope of a relict deep-seated landslide >65% which is excluded by non-tradeable leave trees. The groundwater recharge area of this dormant glacial deep-seated landslide was identified in and near the sale. Approximately 3.5% of this recharge area is included in this proposal, leaving approximately 80% of the area in mature forest. Given this, and the natural drainage patterns that are being maintained in the area, it is interpreted to result in low likelihood of landslide reactivation or sediment delivery. For further information reference, Delica Hardwood Engineering Geologic Risk Assessment.

Geologic assessment is available for viewing in FPARS with FPA/N 2422920. CKF

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

No Yes, describe the proposed activities:

Approximately 3 acres of this proposal are in the groundwater recharge area of a dormant glacial deep-seated landslide.

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 all other potentially unstable slopes were excluded from the harvest areas.**
- **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.**
- **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**

Approx. acreage new landings: **0.3**

Fill Source: **Schneider 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 landings, 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):*
Less than 0.1% 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 and WMZ will function to protect streams and wetlands from sediment delivery.**
- **Seasonal restrictions will limit operations to the typical dry season to reduce soil impacts.**
- **Yarding will be suspended when potential for excessive soil disturbance exists.**
- **Roads will be crowned, ditched and cross-drained. Cross-drains may be installed and maintained.**
- **Seasonal timing restrictions may prohibit road construction activities during saturated soil conditions.**
- **Leave tree clumps were left around the headwalls of most Type 5 streams and seeps; all Type 5 streams will be protected with a 30-foot Equipment Limitation Zone.**
- **Harvested areas will be replanted with native red alder.**
- **Skid trails will be left in a condition to not channel water towards riparian areas.**
- **Drainage control devices such as culverts (including energy dissipaters), 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:
None.

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: **Summit Lake**

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

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in feet (per side for streams)
Unnamed stream	3	2	Average 165
Unnamed stream	4	1	Minimum 100
Wetland	Forested (>1/4 acre, < 1 acre)	1	Minimum 100

c. List any additional RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures and wind buffers.
None

- 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, but beyond the buffer distances listed in the table in B-3a-1-b. Trees may be cut in RMZs for safety or operational needs, but will be left in place to provide large woody debris functions.

Timber harvest may occur over Type 5 streams and wetlands less than ¼ acres. Type 5 streams or wetlands less than ¼ acres may have timber yarded across them. Leave trees were placed along most of the Type 5 streams and most of the forested wetlands less than ¼ acre. Type 5 streams also receive a 30-foot equipment limitation zone.

FPA/N 2422920 indicates: three Type 3 waters; two Type 4 waters; eight Type 5 waters; five wetlands all within 200 feet of the proposal. CKF

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.
None.
- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. (*Include diversions for fish-passage culvert installation.*)
- No Yes, description:
- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
- No Yes, describe 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)?*
- KENNEDY CREEK = 6.9 (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:

There is evidence of changes to channels across the WAU. These changes are a result of natural events such as spring runoff from snowmelt and significant storm events. Channel migration, scouring, and deposition of material can be seen in channels across the WAU; this indicates those channels historically experience higher water levels and peak flows

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. It is not likely the proposed activity will change the timing, duration, or volume of water during a peak flow event. This proposal limits harvest unit size and proximity to other recent harvests, minimizes the extent of the road network, incorporates road drainage disconnected from stream networks, and implements wide riparian buffers and leave trees within the harvest unit, which all of have mitigating effects on the potential for this proposal to increase peak flows that could impact areas downstream or downslope of the proposal area.*

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):

Summit Lake is approximately 700 feet downslope. Additionally, there are two subsurface wells approximately 500 feet and 1900 feet downslope from the sale area. 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 RMZ 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 100 acres or less to minimize impacts to watershed hydrology.**
- **No harvest equipment will be allowed to cross Type 5 streams.**

- **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.**
- **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:

Summit Lake is approximately 700 feet downslope. Additionally, there are two subsurface wells approximately 500 feet and 1,900 feet downslope from the sale area. 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-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**

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 is private land. To the east is 62 year-old conifer. To the south is 14 year-old reprod. To the west is 48 year-old conifer.**
- **Unit 2: to the north is private land. To the east is 58 year-old conifer. To the south is 67 year-old conifer, 14 year-old reprod, 3 year-old reprod, and private land. To the west is 63 year-old conifer and 12 year-old reprod.**

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

None found in corporate database

Forest Practices Risk Assessment Mapping (FPRAM) review confirms no conflicts with T&E plant species. CKF

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 red cedar, grand fir, bigleaf maple and red alder were left for green tree retention and snag recruitment. Retention tree numbers were based on leaving an average of 13 trees per acre in Unit 1 and 9 trees per acre in Unit 2. Trees were left in clumps and as scattered individuals. This type of leave tree pattern is conducive to a safe harvest operation and allows the distribution of wildlife trees throughout the proposal as well as lessening aesthetic impacts in the downslope viewshed. 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. Additionally, due to the widespread laminated root rot in both units, red alder will be replanted following harvest to mitigate ongoing forest health concerns.

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.

d. List all noxious weeds and invasive species known to be on or near the site.
Scotch Broom, Tansy, Himalayan Blackberry, English ivy, holly are common invasive species in this county and western Washington.

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:

All of Washington State is considered part of the Pacific Flyway. No impacts are anticipated as a result of this proposal.

- 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.

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

Bald eagles are known to use the vicinity, but no nests were observed or known to be within or near the site.

Species /Habitat: **Aquatic Habitat**
Type 3 and 4 streams.

Protection Measures: **No-harvest RMZs on**

Species /Habitat: **Upland Habitat** Protection Measures: **Approximately 13**
leave trees per acre were left clumped and scattered in Unit 1 and 9 trees per acre in
Unit 2. 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

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. Summit Lake, downstream of the proposal has experienced a past toxic algae bloom.
- 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.

Herbicide use will be in accordance with EPA, Washington Department of Agriculture, Forest Practices regulations and follows the standards of the federal Clean Water Act.

- 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.

No broadcast site preparation spray will occur due to extra caution in the Summit Lake watershed. Depending on the density of bigleaf maple reestablishment or if noxious weeds were to establish on the site, we may need to do a direction or spot herbicide treatment. Should site conditions develop over time where a directed or spot treatment is necessary, the herbicide to be used will be determined based on specific site conditions, plant species being treated, etc. If spray is necessary, outreach to adjacent landowners will occur prior to the application to include timing, location and specific ingredients for the selected herbicide.

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 at the site of the proposal. Adjacent to the proposal use of the land includes timber production, residential 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.

This proposal will not change the use of or affect the current/long term land use of areas associated with this activity.

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?
Long Term Forestry in Thurston County
- 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 are visible from Summit Lake and Summit Lake Shore Road as well as some local residences.

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 RMZs, WMZ, Type 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 and individuals 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?

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 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:
No additional protection measures.

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. A DNR Archaeologist assessed the area and recorded sites in Department of Archaeology and Historic Preservation's WISAARD database.
G—FPRAM review confirms no conflicts with cultural or historical sites. CKF
- 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. On-site consultation with the DNR State Lands Archaeologist identified the above resources.
G—FPRAM review confirms no conflicts with cultural or historical sites. CKF
- 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 was completed by a DNR Cultural Resources technician. The technician reviewed DNR land management records, a historic map of the Mason County Logging Company system, Government Land Office plat maps and historical United States Geological Survey topographic quadrangles. The Department of Archaeology and Historic Preservation's WISAARD database was also reviewed. No indications of known or potential cultural resources were identified in these materials. A field review was completed by a DNR cultural resource technician on 07/27/2021, as well as a field review by a State Lands Archaeologist on 11/03/2021 and 1/20/2022.
- 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.
Outreach was sent to neighboring tribes on 3/10/22. As of 4/25/22 two tribes have responded, sharing no concerns. If a presently-unknown cultural resource is discovered during project operations, DNR will comply with the Cultural Resources Inadvertent Discovery Guidance dated March 2010 or its successor procedure.

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.

Summit Lake Shore Road and State Route 8 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 spot is approximately 11 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: Brandon Mohler

Name of signee **Brandon Mohler**

Position and Agency/Organization **State Lands Assistant Region Manager/DNR**

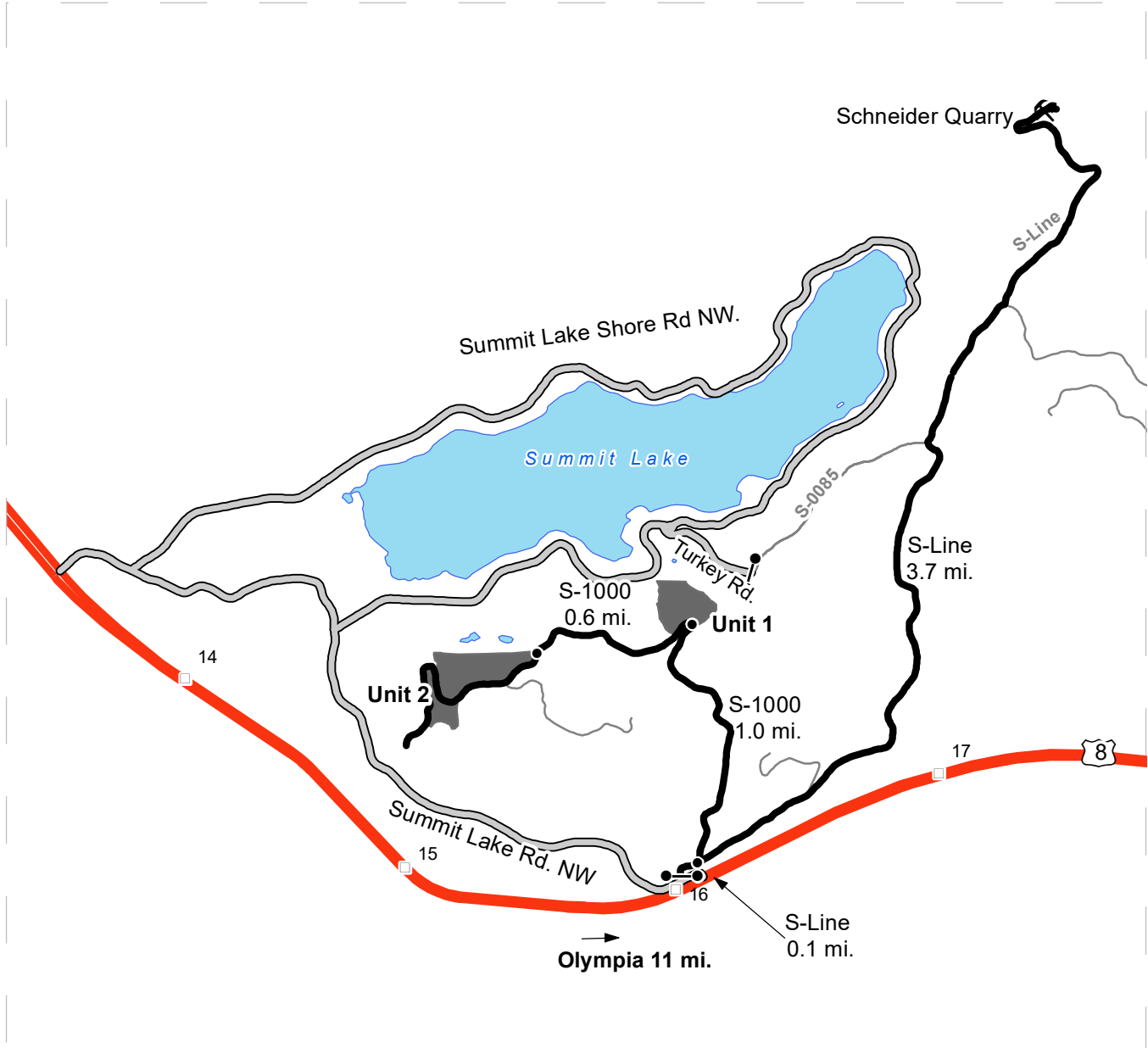
Date Submitted: 05/06/2022

AEM 5/4/2022

DRIVING MAP

SALE NAME: Delica Hardwoods
AGREEMENT#: 30-102086
TOWNSHIP(S): T18R3W, T18R4W
TRUST(S): Capitol Grant (7), University - Transferred (5)

REGION: South Puget Sound Region
COUNTY(S): Thurston
ELEVATION RGE: 560-1120



Map may not be to scale

- Timber Sale Unit
- Haul Route
- Other Road
- Milepost Markers
- Rock Pit
- Distance Indicator
- Gate (Master H-957)
- Highway
- County Road

Driving Directions

From SR 8, near milepost 16, turn north onto Summit Lake Shore Rd.
 Turn right onto the S-Line.
 After 0.1 miles, turn left onto the S-1000. Continue 1.0 mile to Unit 1. Continue an additional 0.6 miles to Unit 2.
 From the S-Line, S-1000 junction, stay straight on the S-Line for 3.7 miles to Schneider Quarry



TIMBER SALE MAP

SALE NAME: DELICA HARDWOOD
AGREEMENT #: 30-102086
TOWNSHIP(S): T18R3W, T18R4W
TRUST(S): Capitol Grant (7), University - Transferred (5)

REGION: South Puget Sound Region
COUNTY(S): Thurston
ELEVATION RGE: 560-1120

