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: **SERENDIPITY**
   Agreement # **30-105259**

2. Name of applicant:
   Washington Department of Natural Resources

3. Address and phone number of applicant and contact person:
   950 Farman Ave N.
   Enumclaw, WA 98022
   Contact: Audrey Mainwaring
   (360) 825-1631

4. Date checklist prepared:
   02/05/2024

5. Agency requesting checklist:
   Washington Department of Natural Resources

6. Proposed timing or schedule (including phasing, if applicable):
   a. *Auction Date:*
   01/28/2025

   b. *Planned contract end date (but may be extended):*
   11/30/2026

   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 for VRH Units 1 – 3 and 5 includes an herbicide application, which will be used to control noxious weeds, help planted trees withstand the effects of drought, and to ensure that planting can be achieved at acceptable stocking levels to exceed Forest Practices Standards following harvest. Slash piles may be burned during the fall before planting.

   b. Regeneration Method:
   VRH Units 1 – 3 and 5 will be planted at a density that meets or exceeds Forest Practices standards per WAC 222-34-010. Plantings will be supplemented by natural

regeneration from adjacent conservation areas and leave trees within harvest units. Following planting, DNR will conduct surveys and additional reforestation actions as necessary based on survey results to ensure reforestation standards are met.

c. *Vegetation Management:*
Treatment needs will be assessed using current vegetation management guidelines. Treatments will be based on vegetative competition and will ensure a free-to-grow status that complies with Forest Practices standards. Control of competing brush within the proposal area and along roads will be done in accordance with current guidelines. Possible treatment is an herbicide application to control noxious weeds. Surveys will be conducted to determine Pre-Commercial Thinning (PCT) needs at 8-12 years of age. Information from these surveys will be used to schedule PCT. Commercial thinning potential will be assessed at approximately 25 to 35 years of age. Thinning will be done as needed to meet desired density, stocking, species diversity, and growth.

d. *Other:*
Road maintenance assessments will be conducted and will include periodic ditch and culvert cleanout and grading as necessary.

Rock will be obtained from the Wedge Pit for road building and associated forest management activities. Rock will also be obtained from the Saddle Mountain Pit, or on site for Units 3 and 4.

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

Extreme Fire Hazard Abatement will be completed to reduce the potential of wildfire hazard in Unit 3 along USFS 24 road and adjacent to private property in accordance with WAC-332-24.

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

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

☐ *Landscape plan:*
☐ *Watershed analysis:*
☐ *Interdisciplinary team (ID Team) report:*
☒ *Road design plan:* **Included in the Road plan, dated June 6, 2024**
☐ *Wildlife report:*
☐ *Geotechnical report:*
☒ *Other specialist report(s):* **Geologic field summary by Susie Wisehart, LEG, dated**

June 24, 2024, and Bald mitigation plan by Alan Mainwaring dated June 10, 2024

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

☒ *Rock pit plan:* **Included in the Road Plan, dated June 6, 2024**

☒ *Other:* **The following analyses, policies, procedures, documents, and data layers directly pertain to or were reviewed as part of this proposal:**

- **DNR Policies and Implementation**
  - **Policy for Sustainable Forests (PSF; 2006a)**
  - **Final Environmental Impact Statement on the Policy for Sustainable Forests (2006b)**
  - **Alternatives for the Establishment of a Sustainable Harvest Level for Forested State Trust Lands in Western Washington Final Environmental Impact Statement (2019)**
  - **Landscape Assessment to Identify and Manage Structurally Complex Stands to Meet Older-Forest Targets in Western Washington, May 2024 (Revised September 2024)**
  - **Identifying Mature and Old Forests in western Washington by Robert Van Pelt (2007)**
  - **Silvicultural Rotational Prescriptions**
  - **Land Resource Manager Reports, including Special Concerns Report, and associated maps**
- **DNR Trust Lands Habitat Conservation Plan and Supplemental Information**
  - **Final Habitat Conservation Plan (HCP; 1997)**
  - **Final (Merged) Environmental Impact Statement for the Habitat Conservation Plan (1998)**
  - **Long-Term Conservation Strategy for the Marbled Murrelet Final Environmental Impact Statement (2019)**
  - **Final State Trust Lands Habitat Conservation Plan Amendment: Marbled Murrelet Long-term Conservation Strategy**
  - **Riparian Forest Restoration Strategy (RFRS; 2006)**
  - **USFWS letter to DNR, signed 10/27/2021 clarifying projections of forest types and stand structural conditions on Washington DNR State Trust Lands**
  - **Spotted Owl Habitat GIS Layer**
  - **Marbled Murrelet Habitat GIS Layer**
  - **WAU Rain-On-Snow GIS Layer**
  - **Biological Opinion on the HCP, USFWS; January 27, 1997**
  - **Biological Opinion on the HCP, NMFS; January 29, 1997**
  - **Biological Opinion on the HCP Marbled Murrelet Long-term Conservation Strategy Amendment, USFWS; November 7, 2019**
  - **Reinitiated Biological Opinion on the Incidental Take Permit (PRT-812521), USFWS; March 21, 2024**
- **Forest Practices Regulations and Compliance**
  - **Forest Practices Rules (Title 222 WAC)**
  - **Forest Practices Board Manual**
  - **Forest Practices Activity Maps**
  - **Trust Lands HCP Addendum and Checklist**

- **Supporting Data for Unstable Slopes Review**
  - **State Lands Geologist Remote Review (SLGRR)**
  - **Lidar Data and Derivatives**
  - **Draft Landform Remote Identification Model (LRIM) screening tool**
  - **Published Landslide Inventories**
  - **Historic Aerial Photographs**
  - **Published Geologic Mapping**
- **Supporting Data for Cultural Resources Review**
  - **Historical Aerial Photographs**
  - **USGS and GLO maps**
  - **Department of Archaeology and Historical Preservation database for architectural and archaeological resources and reports (WISAARD)**
- **Additional Supporting Data for Policy Compliance**
  - **Weighted Old Growth Habitat Index (WOGHI)**
  - **State Soil Survey**
  - **DNR inventory layers, including RS FRIS**
  - **Stand Origin Assessment form for Serendipity Timber Sale**
  - **Stand Development Stage Assessment form for Serendipity Timber Sale**
  - **FY'25 Timber Sales Fish and Wildlife Remote Review for Hood Canal District, dated April 25, 2023 by wildlife biologist Alan Mainwaring**
- **Sustainable Forestry Initiative certification standards and audit reports**
- **Reviews by and 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 #* **2424128** ☒ *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 Serendipity Timber Sale proposal encompasses approximately 178 acres of forested land spanning the Lilliwaup Watershed Administrative Units on DNR managed trust land within the Hood Canal State Forest. The proposal area was evaluated by the unit forester, region biologist, archaeologist, geologist, and engineer. Areas where timber harvest is inconsistent with one or more of the

agency's objectives have been excluded from planned harvest and contribute to conservation areas (e.g. potentially unstable slopes, riparian and wetland buffers, old growth stands, or habitat for state or federally listed species needed to meet DNR's Habitat Conservation Plan objectives and other conservation commitments, etc.).

Having identified areas to be reserved for conservation, the final proposal design includes 123 gross acres and 118 net acres of timber harvest resulting in 60 acres (34% of the overall proposal area) designated for conservation and leave tree areas to protect streams, wetlands, potentially unstable slopes, culturally sensitive areas, RMZs and wildlife trees and will contribute to older-forests over time.

The harvest area consists of four variable retention harvest (VRH) units, and three associated right-of-way (ROW) units harvesting approximately 2,250 MBF of merchantable timber.

Unit 1 – 47 net acres
Unit 2 – 10 net acres
Unit 3 – 58 net acres
Unit 4 (ROW) – 0.7 net acres
Unit 5 – 2 net acres
Unit 6 (ROW) – 0.3 net acres

Unit 7 (ROW) No merchantable timber will be removed from this right-of-way unit, therefore this acreage is not included in the total net acres of harvest. This unit, associated with Spur 1, transects areas recently harvested and may include felling of some leave trees from the previous harvest units. These leave trees, if felled, will remain on-site.

Roadwork associated with this timber sale consists of forest road construction, maintenance and abandonment of forest roads. Maintenance will consist of cleaning culverts and catch basins, reconstructing ditches, stream culvert replacement and installation, applying rock, installing drain structures, grading, and other tasks outlined in the road plan for the Serendipity Timber Sale.

b. *Describe the stand of timber pre-harvest (include major timber species and origin date), type of harvest and overall unit objectives.*
The stands within the harvest units are comprised predominantly of naturally regenerated Douglas-fir, with a lesser component of western red cedar, bigleaf maple, western white pine, and western hemlock in the main canopy. The understory vegetation consists of primarily sword fern, Oregon grape, salal, and huckleberry. There is presence of root rot and blowdown in the harvest units. Some individual old-growth remnants were identified in Units 1 and 3. There is minimal presence of shade tolerant species within the lower or mid-canopy. There is also minimal structure within stands with what is present consisting of large old-growth stumps and dispersed cull logs remaining from the previous harvest and smaller

second-growth diameter competitive mortality trees. The stage of stand development from the harvest areas within this proposal on the stand level scoring using the Van Pelt guide (2007) includes Maturation I and Maturation II. The adjacent areas conserved in RMZs and WMZs associated with this proposal are similar stand types as the adjacent harvest areas.

Pre-harvest Stand Description:

Unit	Origin Date	Major Timber Species	Type of Harvest
1	Post-1930	Douglas-fir, western hemlock, western red ceder	Variable Retention Harvest
2	Post-1930	Douglas-fir, western hemlock	Variable Retention Harvest
3	Post-1930	Douglas-fir, bigleaf maple, western hemlock, western red ceder, red alder	Variable Retention Harvest
4 (ROW)	Post-1930	Bigleaf maple, Douglas-fir, red alder	Right Of Way
Unit 5	Post-1930	Douglas-fir, western red cedar	Variable Retention Harvest
Unit 6 (ROW)	Post-1930	Douglas-fir, bigleaf maple	Right Of Way
Unit 7 (ROW)	Post-1930, 2004, 2010	Douglas-fir, western red cedar	Right Of Way

***The origin dates were obtained from DNR's RS-FRIS GIS "Combined Origin Year" layer, LiDAR data, historical photos, and tree core data gathered from forester field sampling.**

Overall Proposal Objectives:

<u>Short Term Objectives</u>

1) **Generate non-tax revenue for the beneficiaries of the underlying trusts through harvest of the existing stand as part of DNR's sustained yield trust obligations and fiduciary requirements as trust managers per RCW 79.10.300-340 and RCW 79.15.**
2) **Protect upland soil productivity and water quality and habitat within the riparian management zones.**
3) **Retain legacy trees within the timber sale for the future stand to maintain biological and structural diversity, preserve native seed source, shade and maintain the productivity of the site and future stand, and protect water quality and wildlife habitat.**
4) **Contribute to conservation areas identified as long-term forest cover through HCP and other regulatory protection and mitigation measures.**
5) **Supply sustainably grown timber to local mills and support jobs and economic activity for local economies.**
6) **Establish a new stand of site-appropriate, native conifers through hand planting (supplemented with natural regeneration) and maintain for long-term forest management.**

Long Term Objectives

1) **Actively manage for long-term site productiveness for intergenerational benefit to the trust, primarily through revenue generation for trust beneficiaries through timber stand management. A series of silviculture activities will be scheduled as needed in the sale area as the new stands develops. The primary objective of each treatment is to ensure growth of a healthy, resilient stand of native tree species to create revenue for the trusts.**
2) **Maintain current and historical uses of the site, including preservation of water quantity and quality, active forest management, and public and tribal use.**
3) **Resource protection and conservation through implementation of the HCP and DNR's regulatory and management framework.**
4) **Balance trust income, environmental protection, and social and cultural benefits according to the DNR trust land management framework.**

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	**5**	**13,751**	**5.1**	**0**
Reconstruction	**0**	**0**		
Maintenance	**0**	**107,224***		
Abandonment	**4**	**6,721**	**2.5**	**0**
Bridge Install/Replace	**0**			
Stream Culvert Install/Replace (fish)	**0**			
Stream Culvert Install/Replace (no fish)	**3**			
Cross-Drain Install/Replace	**38**			

***Pre Haul: 50,097 feet; Post-Haul: 57,127 feet**

Routine maintenance will occur on roads used throughout 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:*
Section 6, Township 23 North, Range 03 West W. M. - Units 1 and 6
Section 1, Township 23 North, Range 04 West W. M. – Units 2, 5 and 7 and Wedge Rock Pit
Section 2, Township 23 North, Range 04 West W. M. – Units 3 and 4
Section 14, Township 23 North, Range 04 West W. M. – Saddle Mountain Rock Pit

b. *Distance and direction from nearest town:*
The sale is located approximately 16 miles by road northwest of Hoodsport, WA. From Hoodsport, travel north on US-101 for 10.3 miles. Turn left onto USFS 24 Road (Jorsted Creek Road). Continue on USFS 24 Road for 3 miles.

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 Lilliwaup WAU. Agriculture and home sites are located in the valleys near the major streams. There appears to be a trend towards increasing conversion of agriculture and forest land to home sites in the low to mid elevation ranges. The uplands are mainly managed for timber production by large industrial forests, small private forests, and Department of Natural Resources (DNR) managed forests. Forested stands within the WAU appear to be primarily second and third growth stands. The Lilliwaup WAU has experienced peak flow impacts and includes areas of potentially unstable slopes, excessive levels of surface water temperature and turbidity and cultural resources.

DNR analyzed carbon sequestration and carbon emissions from projected land management activities within its final environmental impact (FEIS) statement for the 2015-2024 Sustainable Harvest Calculation and the FEIS for the 2019 HCP Long-Term Conservation Strategy for the Marbled Murrelet. At the western Washington scale, land management activities on DNR-managed lands sequester more carbon than emitted. Individual activities, such as this proposal, are likely to emit some greenhouse gases, including CO2; however, at the landscape scale, DNR's sustainable land management activities, including this proposal, sequester more carbon than they emit. Evaluating carbon sequestration at the western Washington scale is appropriate because a determination of net carbon emissions must consider both the carbon sequestered and the carbon emissions from management within the same analysis area (western Washington).

Recognizing the climate and carbon benefits of working forests in Washington's Climate Commitment Act (RCW 70A.45.005), the legislature found that Washington should maintain and enhance the state's ability to continue to sequester carbon through natural and working lands and forest products. Further,

"Washington's existing forest products sector, including public and private working forests and the harvesting, transportation, and manufacturing sectors that enable working forests to remain on the land and the state to be a global supplier of forest products, is, according to a University of Washington study analyzing the global warming mitigating role of wood products from Washington's private forests, an industrial sector that currently operates as a significant net sequesterer of carbon. This value, which is only provided through the maintenance of an intact and synergistic industrial sector, is an integral component of the state's contribution to the global climate response and efforts to mitigate carbon emissions." RCW 70A.45.090(1)(a).

The legislature also found that the 2019 Intergovernmental Panel on Climate Change (IPCC) report "identifies several measures where sustainable forest management and forest products may be utilized to maintain and enhance carbon sequestration. These include increasing the carbon sequestration potential of forests and forest products by maintaining and expanding the forestland base, reducing emissions from land conversion to non-forest uses, increasing forest resiliency to reduce the risk of carbon releases from disturbances such as wildfire, pest infestation, and disease, and applying sustainable forest management techniques to maintain or enhance forest carbon stocks and forest carbon sinks, including through the transference of carbon to wood products" (2020 Washington Laws Ch. 120 §1(2)).

DNR is legally required (RCW 79.10.320) to periodically calculate a sustainable harvest level and manages state trust lands sustainably. DNR has also maintained (statewide) a forest management certificate to the Sustainable Forestry Initiative standard since 2006. In managing state trust lands sustainably, DNR sequesters more carbon than it emits while conducting land management activities such as this proposal.

The timber harvested from DNR-managed lands is used to produce climate-smart forest products. The climate impacts of DNR's land management are analyzed in multiple environmental impact statements that have informed the Board of Natural Resources' decisions and are consistent with the IPCC, which states that "[m]eeting society's needs for timber through intensive management of a smaller forest area creates opportunities for enhanced forest protection and conservation in other areas, thus contributing to climate change mitigation."

b. *Briefly describe existing plans and programs (i.e. the HCP, DNR landscape plans, retention tree plans) and current forest practice rules that provide/require mitigation to protect against potential impacts to environmental concerns listed in question A-13-a.*
The Department of Natural Resources has a multi-species Habitat Conservation Plan (HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service concerning threatened and endangered species and their habitats, which requires the Department to manage landscapes to provide and sustain long-term habitat in exchange for an Incidental Take Permit. This agreement

substantially helps the Department to mitigate for cumulative effects related to management activities. The Department follows Forest Practices Rules as applicable to roads and potentially unstable slopes. The Department follows Forest Protections related to fire hazard mitigation.

The General Silviculture Strategy (policy) in the Policy for Sustainable Forests (PSF) emphasized that older-forest targets will be accomplished over time and that DNR intends to actively manage structurally complex forests to achieve older-forest structures (i.e. stands with older-forests identified by structural characteristics) across 10 to 15 percent of each western Washington HCP planning unit in 70 to 100 years from the adoption of the PSF.

In September 2024, the DNR revised a document titled '*Landscape Assessment to Identify and Manage Structurally Complex Stands to Meet Older-Forest Targets in Western Washington, May 2024*' (landscape assessment). This document describes the background, historical analyses regarding attainment of older-forest conditions in western Washington, and updated data and modeling analyses showing when the various HCP planning units across western Washington are expected to attain a level of older-forest conditions through implementation of the HCP and other conservation objectives, and outlined as targets within the PSF.

This landscape assessment identifies the existing structurally complex stands, and additional suitable stands, to be managed for older-forest targets over time. The identified stands are located in conservation areas and deferred stands unavailable for regeneration harvest. These stands include areas identified as 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, old growth, Natural Areas and Natural Resource Conservation Areas, and other conservation areas permanently deferred from regeneration harvest.

Some of these conservation areas are based on specific HCP strategies that are spatially fixed and conserved on the landscape, such as marbled murrelet occupied sites or spotted owl nest patches. However, other conservation areas are modeled and must be field verified based on HCP strategies, such as riparian areas or unstable slopes. There is naturally some adjustment to the location, absence, or presence of conservation areas upon field verification. This timber sale has been field verified for compliance with all conservation objectives and the planned harvest units are determined not to be regeneration harvest deferred and are available for harvest. These harvest areas also do not count towards the attainment of older-forests over time and have been excluded from the calculations and tables included in the landscape assessment. Conversely, when field verification identifies specific areas required for conservation, they will be protected from harvest and included in future conservation area modeling.

The landscape assessment demonstrates that while the Straits HCP Planning Unit

does not currently contain 10 to 15 percent older-forest conditions, the structurally complex and other suitable stands designated to be managed for older-forest targets are projected to develop into older-forest structure that meets or exceeds this threshold by 2090 (STRAITS in Table A) through implementation of the HCP and other policies and laws. Stands identified to be managed toward older-forest targets, including currently older-forests and stands projected to develop older-forest structure in the future, are depicted in associated maps within the landscape assessment document for each western Washington HCP planning unit.

Table A. Percent area western Washington HCP planning units with older-forest stands in conservation areas by decade through 2120. With plot discounts and disturbance factor. Landscape Assessment to Identify and Manage Structurally Complex Stands to Meet Older-Forest Targets in Western Washington, May 2024 (Revised September 2024).

ADJUSTED QUERY OUTPUT (WITH PLOT DISCOUNT & DISTURBANCE FACTOR)											
HCP Planning Unit	**Year**										
	2021	**2030**	**2040**	**2050**	**2060**	**2070**	**2080**	**2090**	**2100**	**2110**	**2120**
COLUMBIA	1.0%	1.2%	1.4%	1.7%	2.4%	3.9%	6.2%	9.4%	**13.3%**	**16.5%**	**18.2%**
N. PUGET	3.2%	3.9%	4.9%	6.2%	7.9%	**10.2%**	**13.2%**	**16.7%**	**20.5%**	**23.9%**	**25.0%**
OESF	**10.2%**	**10.7%**	**11.0%**	**11.7%**	**12.6%**	**13.9%**	**15.9%**	**20.0%**	**24.9%**	**28.3%**	**29.5%**
S. COAST	0.2%	0.3%	0.6%	1.2%	2.1%	3.6%	5.9%	8.8%	**12.2%**	**15.9%**	**18.6%**
S. PUGET	1.7%	2.2%	2.7%	3.6%	4.6%	6.1%	8.4%	**11.3%**	**14.4%**	**17.1%**	**18.7%**
STRAITS	1.9%	2.6%	3.2%	4.3%	5.6%	7.4%	9.9%	**12.6%**	**15.1%**	**18.0%**	**19.5%**

DNR has designated forest stand acreage within regeneration harvest deferred areas in each HCP planning unit to meet or exceed the policy's 10% older-forest target. This identified acreage is designated in DNR's GIS database as the Westside Forest Cover (Conservation Areas) and Older-Forest in Conservation Areas layers.

The Serendipity Timber Sale is not identified as one of those stands designated to meet older-forest targets over time. Following the timber sale, the variable retention harvest units will be replanted with native, conifer tree species that will be supplemented by natural regeneration expected to occur as a result of the conservation areas in and around the harvest units.

c. *Briefly describe any specific mitigation measures proposed, in addition to the mitigation provided by plans and programs listed under question A-13-b.*
Rule identified landforms according to the Forest Practices Board Manual have been identified and protected. Inner gorges and bedrock hollows were found along streams within and adjacent to Units 1, 2, and 3. These landforms were excluded from the sale area. A plan was developed for the enhancement of a bald in Unit 3 to mitigate for road construction through a different bald.

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?
It is not anticipated that this proposal will contribute to any environmental concerns.

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
LILLIWAUP	36587	18498	1475	0	1701

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: **Hilly to steep slopes**

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

WAU:	LILLIWAUP
WAU Acres:	36587
Elevation Range:	0 - 4010 ft.
Mean Elevation:	680 ft.
Average Precipitation:	73 in./year
Primary Forest Vegetation Zone:	Western Hemlock

2. *Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).*
This proposal is a representative example of the WAU at the same elevation and aspect.

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

The estimated steepest slope on the net harvest acres is 120% for 1% of the sale.

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
6788	V.GRAVELLY SILT LOAM
8223	V.GRAVELLY LOAMY SAND
2973	GRAVELLY SANDY LOAM
2976	STONY LOAM
2975	GRAVELLY SANDY 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.*
The unstable slopes review included published landslide inventories as screening tools. Landslide inventories come from many different projects including published geologic mapping, watershed analyses, landscape planning, landslide hazard zonation, and other case studies and mapping efforts. Other than the Washington Geology Survey landslide inventory, most of these landslide data sources predate lidar availability. A large majority of remotely identified landslides have not been verified in the field and were mapped with various levels of certainty. Dormant and relict deep-seated landslides are included in many databases. Field verification is a necessary step in confirming the absence, presence, and extent of mapped features, as well as their actual level of activity/instability. These datasets are not intended as substitutes for a detailed investigation of potential slope instability by slope stability trained field staff. Available landslide inventories and other remote screening tools were reviewed for this proposal by foresters and state lands geologists. Site-specific analysis may result in conclusions that are different from the information available in the screening tools.

Potentially unstable rule identified landforms (RILs) around the harvest were identified by slope stability trained field staff and/or a licensed geologist through office and field review in accordance with the Washington State Forest Practices rules.

A DNR State Lands Licensed Engineering Geologist (LEG) remotely reviewed all units of the sale utilizing LiDAR, orthophotos, and other datasets available in the DNR GIS database. A field review of the units was conducted by a State Lands Forester and a State Lands LEG to further evaluate the presence of potentially unstable slopes.

Rule identified landforms were found in and around the proposal site. A DNR State Lands Engineering Geologist and Qualified Expert remotely reviewed all units of the sale utilizing orthophotographs, Forest Practices Landslide Inventory data, LiDAR, and field reconnaissance. Bedrock hollows and inner gorges were located. Two bedrock hollows in Unit 3 have been excluded from harvest with non-tradeable leave tree areas. Inner gorges were identified around the harvest units. These are captured within the riparian management zone buffers or bound out of the proposed harvest area. See Geologic field summary by Susie Wisehart, LEG, dated June 24, 2024.

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

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

2) *Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.*
   Following a review by a licensed Engineering Geologist and slope-stability trained foresters, potentially unstable slopes were excluded from the harvest boundaries for this proposal using "Timber Sale Boundary" and "Leave Tree Area" tags. The State Lands Engineering Geologist reviewed the site and concurred that the harvest area and other management activities excluded potentially unstable slopes.

   The road plan in Unit 3 includes a cross drain for an existing, disconnected Type 5 stream and a cross drain upgrade to avoid adding additional water into the bedrock hollow. No side cast will be placed into either bedrock hollow.

   Location of new road construction was designed to avoid potentially unstable slopes.

   Skid trail and cable corridors will be closed and water barred after use.

   Most Type 5 headwalls have leave trees protecting them.

Lead-end suspension will be required on all yarding activities in Units 1, 2, 3, 4, 5 and 7. No yarding will take place over rule identified landforms and leave tree areas. Full suspension will be required on all yarding activities in Unit 2 that cross typed waters and the USFS 24 Road.

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.

Purpose: **Removal of forest products**
Approx. acreage new roads: **5.1 acres**
Approx. acreage new landings: **1.0 acre**
Fill Source: **Native material and Wedge pit and Saddle Mountain pit material**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
Yes. Some erosion could occur due to yarding over/across Type 5 streams, building new roads, installing culverts, and hauling timber.

g. About what percent of the site will be covered with impervious surfaces after project
construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*
Approximately 2% of the site will remain as gravel roads and landings.

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

- **Roads were located on ridge tops where possible.**
- **Roads will be constructed during dry weather conditions.**
- **Most areas of soil exposed through road construction will be re-vegetated.**
- **Sediment control measures will be used as necessary during active haul to prevent sediment delivery into typed waters.**
- **Timing restrictions or temporary shutdowns will be used as necessary during active haul to prevent sediment delivery to typed water.**
- **Closure of landings will be used as necessary to prevent sediment delivery to typed water.**
- **Cross-drains and ditch-outs will be utilized to minimize the potential for mass wasting and slope failures associated with poor drainage.**
- **Drainage control devices such as rolling drain dips, culverts (including energy dissipaters), and cross drains, and water bars may be utilized to allow for proper drainage.**

Protection measures to reduce erosion associated with harvest operations:

- **Harvested areas will be replanted with native conifer tree species to reestablish root bound soils.**
- **This proposal will be harvested using lead-end and full suspension to minimize soil disturbance.**
- **Leave trees were strategically placed around the headwalls of most Type 5 streams to minimize disturbance.**
- **Leave trees were left around all wetlands less than 0.25 acre in size.**
- **Closure of skid trails to reduce erosion and channeling of overland water toward streams.**
- **Skid trails will be revegetated post-harvest, as necessary.**
- **Skid trails will be water barred post-harvest, as necessary.**

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.

Harvest operations and the removal of timber will result in minor amounts of CO2 emissions from the direct proposal site. See A.13.a for details regarding completed analyses of carbon emissions and sequestration on DNR managed lands in western Washington.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so,
generally describe.
Carbon dioxide emissions associated with harvested wood products are analyzed in Alternatives for the Establishment of a Sustainable Harvest Level Final Environmental Impact Statement (2019) and the Long-Term Conservation Strategy for the Marbled Murrelet Final Environmental Impact Statement (2019).

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. Areas of burned slash will be replanted.

Following harvest, native tree species will be planted on site at a level higher than existed prior to harvest resulting in regeneration of the forest stand and initiating carbon sequestration through forest stand growth.

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:*
Tenas Lake, Liliwaup Swamp, Jorstad Creek, Eagle Creek, Hood Canal

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)
Jorstad Creek	**4**	**1**	**100**
Eagle Creek	**3**	**1**	**166**
Unnamed Stream	**3**	**1**	**166**
Unnamed Stream	**4**	**2**	**100**
Wetland	**1.0+ ac**	**2**	**172**
Wetland	**0.25 to 1.0 ac**	**2**	**100**

c. List any additional RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures and wind buffers.
Local knowledge of prevailing wind direction and observation of standing trees in nearby RMZs and WMZs in recently harvested units determined no wind buffers were necessary.

Roads were designed to minimize stream crossings or entering RMZs/WMZs where possible.

A portion of the right-of-way unit is located within a Type 3 RMZ. The width of this right-of-way was minimized to reduce impact to the RMZ. Right-of-way debris and organic matter waste areas are prohibited within 50 feet of streams and wetlands. Disposal areas during road construction for organic debris will not be placed within 100 feet of live water or 25 feet from a cross

drain.

RMZs and the WMZs for this proposal are designed in accordance with the Departments' HCP procedures. Stream types were identified by physical characteristics per the water typing system for State Trust HCP lands. RMZs and WMZs were measured horizontally from the edge of the 100-year floodplain or from the outer extent of the wetland.

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 distances listed in the table in B-3-a-1-b above except for Unit 4 ROW clearing within a portion of a Type 3 RMZ associated with construction of the 1800 Road and yarding from Unit 2 through a Type 4 RMZ. The Type 4 RMZ adjacent to Unit 2 will have cable yarding corridors through it. These corridors will be at select locations approved by the Contract Administrator to minimize impacts to the RMZ. Trees within the 100-foot RMZ may be cut within the yarding corridors, if necessary, but any trees cut will remain on-site. No trees will be cut within 30 feet of the stream. Full suspension of logs is required over the stream and within 30 feet of the stream.

Type 4 and 5 streams may have cables strung over them. Trees within RMZs may be cut for safety or operational needs. Any trees cut will be left in place, adding to down woody debris within riparian zones.

Several Type 5 streams are excluded from the harvest areas. Type 5 streams within the harvest units are protected with 30-foot equipment limitation zones or leave trees. Leave trees were concentrated around most Type 5 streams within harvest units. If equipment crossings are needed over Type 5 streams, they will be limited to locations approved by the Contract Administration and include stream bank and sedimentation prevention measures. Wetlands smaller than 0.25 acre are protected with leave trees.

Two Type 5 streams will be crossed during the forest road construction associated with this proposal. One of the Type 5 crossings will be temporary. of Spur 1, a temporary road.

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:*
If water is present during culvert installation at stream crossings associated with road construction, the stream water will be diverted to avoid sediment delivery.

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

☒ *No* ☐ *Yes, describe activity and location:*

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
No.

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)?*
LILLIWAUP = 5.0 (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 possible some roads or road ditches within the WAU intercept sub-surface flow and deliver surface water to streams, however current road work 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(s). 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(s); 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 utilizes mitigation measures designed to minimize changes in peak flows, including limits on harvest unit size and proximity to other recent harvests, minimizing the extent of the road network, incorporating road drainage disconnected from stream networks, and implementing wide riparian buffers which all 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):*
The Liliwaup Hatchery is located approximately 5 miles downstream.

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.*
None beyond what is required by Forest Practices Rules and the HCP.
See B-1-h for additional protections in place for this proposal.

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:*
The Liliwaup Hatchery is located approximately 5 miles downstream.

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. Sediment is not permitted to 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 significant 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: **Western white pine**
☒ Shrubs:
☒ *Huckleberry* ☒ *Rhododendron* ☒ *Salmonberry* ☒ *Salal*
☒ *Other:* **Dogwood**
☒ *Ferns*
☒ Grass
☐ Pasture
☐ Crop or Grain
☐ *Orchards* ☐ *Vineyard* ☐ *Other Permanent Crops*
☒ Wet Soil Plants:
☐ Bullrush ☐ Buttercup ☐ Cattail ☒ *Devil's Club* ☒ Skunk Cabbage
☒ Other: **Piggyback plant, sedge**
☒ Water plants:
☐ Eelgrass ☐ Milfoil ☐ Water Lily
☒ Other: **water parsley**
☐ 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).*
All conifer and hardwood trees will be removed as part of this proposal, except for wildlife leave trees, green recruitment trees and the vegetation within RMZs/WMZs. Understory vegetation will be disturbed and/or reduced within the proposed harvest area as a result of timber felling,

bucking, yarding and site preparation activities.

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 are 17-year-old conifer stands. To the northwest, across the RMZ, are 13-year-old conifer planted stands. To the east are 9-year-old conifer planted stands. To the south and southwest, across the RMZ, there are 1-year-old conifer planted stands.

Unit 2: To the southwest, across the RMZ, are 4-year-old conifer planted stands. To the southwest, across the RMZ, are 19-year-old conifer stands. To the north is U.S. Forest Service land, with 90-year-old conifer stands.

Unit 3: To the north, across the RMZ, are 85-year-old conifer stands. To the east, across the RMZ, are 3-year-old conifer planted stands. To the west are 85-year-old conifer stands.

Unit 4: To the east, across the RMZ, are 3-year-old conifer planted stands.

Unit 5: To the north, across the RMZ, are 90-year-old conifer stands. To the southeast are 9-year-old conifer planted stands. To the southwest are 19-year-old conifer stands.

Unit 6: To the east are 9-year-old conifer planted stands.

Unit 7: To the south are 90-year-old conifer stands. To the north are 13-year-old conifer planted stands.

c. List threatened and endangered *plant* species known to be on or near the site.
None observed and none found in DNR's database and DNR's Special Concerns Report, which includes data from Washington Department of Ecology, Washington Fish and Wildlife and Washington Natural Heritage Program.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
This proposal includes protection of existing stands within RMZs and WMZs and leave tree areas within the harvest units that include remnant trees from the previous stand. Following harvest, the variable retention harvest units will be replanted with native conifer species that will be supplemented by natural regeneration expected to occur as a result of the conservation areas in and around the harvest units.

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 forest, while the leave tree procedure will enhance the structural diversity of forests across the landscape over time. Leave trees were selected in accordance with HCP and agency directives concerning stand representation, wildlife potential, proximity, and distribution. Both the leave tree design and silvicultural prescriptions have been tailored to the unique circumstances of each site to capture microsite variation and ensure enduring species diversity.

Leave tree areas are identified across the variable retention harvest units at a rate of 8 trees per acre. Some areas were selected for their species diversity to retain a legacy of the native flora. Areas were also selected to protect potentially unstable slopes, areas of unique ecological features, unique habitats, and remnant trees. All identified individual remnant old-growth trees are marked as non-tradeable leave trees. One remnant old-growth is located within ROW Unit 7. This tree is identified to be left on-site if it must be felled to facilitate construction of Spur 1, which is optional.

Wildlife trees were left in areas to protect snags, large down logs, unique habitats, and potentially unstable slopes. Trees with defects such as split or broken tops, dominant crowns, large diameters, and large limbs were favored as leave trees to enhance wildlife potential.

e. List all noxious weeds and invasive species known to be on or near the site.
Scotch broom, Himalayan blackberry, tansy ragwort, St. Johns wort, oxeye daisy, false dandelion, and woodland groundsel have been observed on and near the site.

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: **Osprey, woodpeckers, grouse**
mammals:
☒ bear ☐beaver ☒ *coyote* ☒ *cougar* ☒ deer ☒ elk
☒ other: **Douglas squirrel, Townsend's chipmunk**
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)*.

TSU Number	Common Name	Federal Listing Status	State Listing Status
SERENDIPITY U2	Northern Spotted Owl	Threatened	Endangered
SERENDIPITY U2-U4 & U7	Marbled murrelet	Threatened	Endangered

This proposal is not within any northern spotted owl (NSO) circles. The nearest northern spotted work circle is Washington Creek Stat 1R NSO circle which extends to the north of Units 2 and 3. There is a recorded detection of a single NSO observed in 1998 approximately one mile north of Unit 2.

The Serendipity Timber Sale proposal is within 0.25 miles of, but outside, an occupied Marbled Murrelet site buffer. There are no timing restrictions that apply to this proposal as this is not a Special Habitat Area. This proposal is compliant with the DNR's Marbled Murrelet Long-Term Conservation Strategy and policy PO14-025.

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. Large open water bodies that are likely to be used by migrating waterfowl are near this proposal. No significant impacts are anticipated as a result of this proposal.

d. Proposed measures to preserve or enhance wildlife, if any:
This sale has been designed to comply with the Department's State Lands 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. This sale is within the Liliwaup Elk winter range. Well-engineered and constructed roads reduce the potential water quality impacts for downstream fish populations. Revegetating exposed soils 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.

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

Species /Habitat: **Upland Strategy**
Protection Measures: **Older large woody debris will be left on site. This proposal conforms to all commitments under the 1997 DNR Habitat Conservation Plan (HCP). The HCP includes several strategies to enhance and preserve wildlife over time. Specific to this proposal is quality leave tree retention which may provide critical elements for upland species and preserve long term site productivity through the maintenance of forest processes. A minimum of eight leave trees per acre were left clumped and scattered. Retained trees are wind firm and well-formed dominant and co-dominant trees representing the original diversity of species. Non-tradeable leave tree areas in Units 1 and 3 protect individual remnant old-growth trees.**

Species /Habitat: **Riparian & Wetland**
Protection Measures: **HCP buffers provide stream and wetland habitat protection and include 166 and 172-foot average width buffers on Type 3 streams and wetlands over 1 acre, respectively. These buffer widths are based on the average height an adjoining conifer stand would be expected to reach at 100 years of age using the site index. Type 4 streams and wetlands between 0.25 and 1.0 acre are protected with 100-foot minimum no-entry buffers.**

These buffers, while protecting the water quality of the streams, will provide shelter and foraging areas for the riparian species that are indigenous to the area. Sale boundary locations will prevent fine sediment generated from the logging operation from entering streams. There are many large trees within the RMZs and WMZs that will help maintain high shade levels, maintain cooler water, and air temperatures, and provide for down and dead trees needed for quality wildlife habitat.

Species/Habitat: **Bald**
Protection Measures: **Balds were protected by inclusion in non-harvestable leave tree areas to protect from equipment impacts and silvicultural activities including herbicide release spray and replanting. A mitigation plan was developed for road construction through a portion of one bald. This plan includes the enhancement of another bald by removing encroaching immature timber and excluding the area from replanting and herbicide release spray.**

e. List any invasive animal species known to be on or near the site.
European Starlings were observed 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.
None.

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.)*
Current use of site and adjacent land types: long term forest management, and private residential areas. Adjacent USFS land includes recreation use.

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

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?
Forest Resource Zone.

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

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:
The proposal adheres to the DNR's HCP and Policy for Sustainable Forests. It is located within the Rural Lands area of Mason County and is compatible with that designation since it will remain as forestland.

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?
This proposal will resemble previous timber harvests in the area. Background views will change from a stand of mature timber to a view of a recent harvest consisting of mature trees remaining around streams and wetlands. Clumps of leave trees will be scattered throughout. This view will change to that of a young plantation after seedlings are planted and the planted trees continue to grow.

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:*
Harvested areas will be visible from residences on private property adjacent to Units 3 and 4, as well as from USFS 24 road.

2) *How will this proposal affect any views described above?*
Since much of the landscape in this area is used for timber production (public and private), this proposal will generally blend in with the surrounding landscape. In addition, the HCP retention tree plan will aid in mitigating the visual effects of the regeneration harvest. There will be no-harvest RMZs and WMZs. The RMZ adjacent to Unit 2 will have yarding

corridors through it that will be visible from the USFS 24 Road. Timber within these corridors must be left on site if felled to facilitate yarding. No timber within 30 feet of typed waters will be harvested.

c. Proposed measures to reduce or control aesthetic impacts, if any:
Single and clumped mature leave trees were scattered across all VRH units, and mature stands of trees remaining around streams and wetlands will help reduce the aesthetic impacts. A minimum of eight leave trees per acre were clumped and scattered throughout the stand to maintain structural diversity.

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 recreation facilities within the proposal area. However, walk-in hunting, hiking, horseback riding, mountain biking, mushroom and berry picking, and other dispersed outdoor recreation activities may occur within the proposal area. The USFS 24 Road is used to access a variety of recreational activities in the vicinity of the proposal.

b. Would the proposed project displace any existing recreational uses? If so, describe.
There may be some disruptions to recreational use during periods of road building, harvesting, and hauling. During yarding and hauling activities in Unit 2, the USFS 24 Road will be temporarily closed to traffic. A traffic control plan is required, and caution signs will be posted on site during operations. Weekend and holiday restrictions are in place to limit impacts to traffic.

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

There will be restrictions on the timing of operations to reduce noise and activity on weekends and state recognized holidays unless authorized by the Contract Administrator. A traffic control plan is required. The haul route will be posted with signs to inform recreationists of logging traffic and harvest operations. The U.S. Forest Service will be contacted prior to yarding and hauling activities that will impact USFS 24 Road.

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.
Site MS00269 is adjacent to the proposal but has been determined to be ineligible for listing in state or national registers.

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.
No.

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 special concerns report was generated by DNR's database, which accesses the DAHP database to identify any recorded historic or cultural sites. The area was assessed by a DNR Cultural Resource Technician, reviewing historic maps, and recorded cultural resources. Timber Sale layout was conducted with a forester trained in Cultural Resource Identification.

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.
If presently unknown skeletal remains, cultural resources, or both become known during project operations, DNR will comply with the Discovery of Skeletal Remains or Cultural Resources 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.
Haul routes will use state forest roads and the public roads U.S. Highway 101, State Route 119, and USFS 24 Road (Jorsted Creek Road). See the associated

timber sale driving map.

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 in the Lake Cushman community.

c. 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. There will be temporary, short-term impacts to the USFS 24 Road during periods of active yarding and hauling of Unit 2 only.

d. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
No.

e. 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.

f. 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.

g. Proposed measures to reduce or control transportation impacts, if any:
Caution signs will be installed along the haul route. There will be restrictions on the timing of operations and hauling activity on weekends and state recognized holidays unless authorized by the Contract Administrator. A traffic control plan will be required for operations in Unit 2 that will require the blocking of the USFS 24 Road. The U.S. Forest Service will be notified 3

weeks in advanced of operations in order to inform recreationalists of the impacts to traffic.

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**

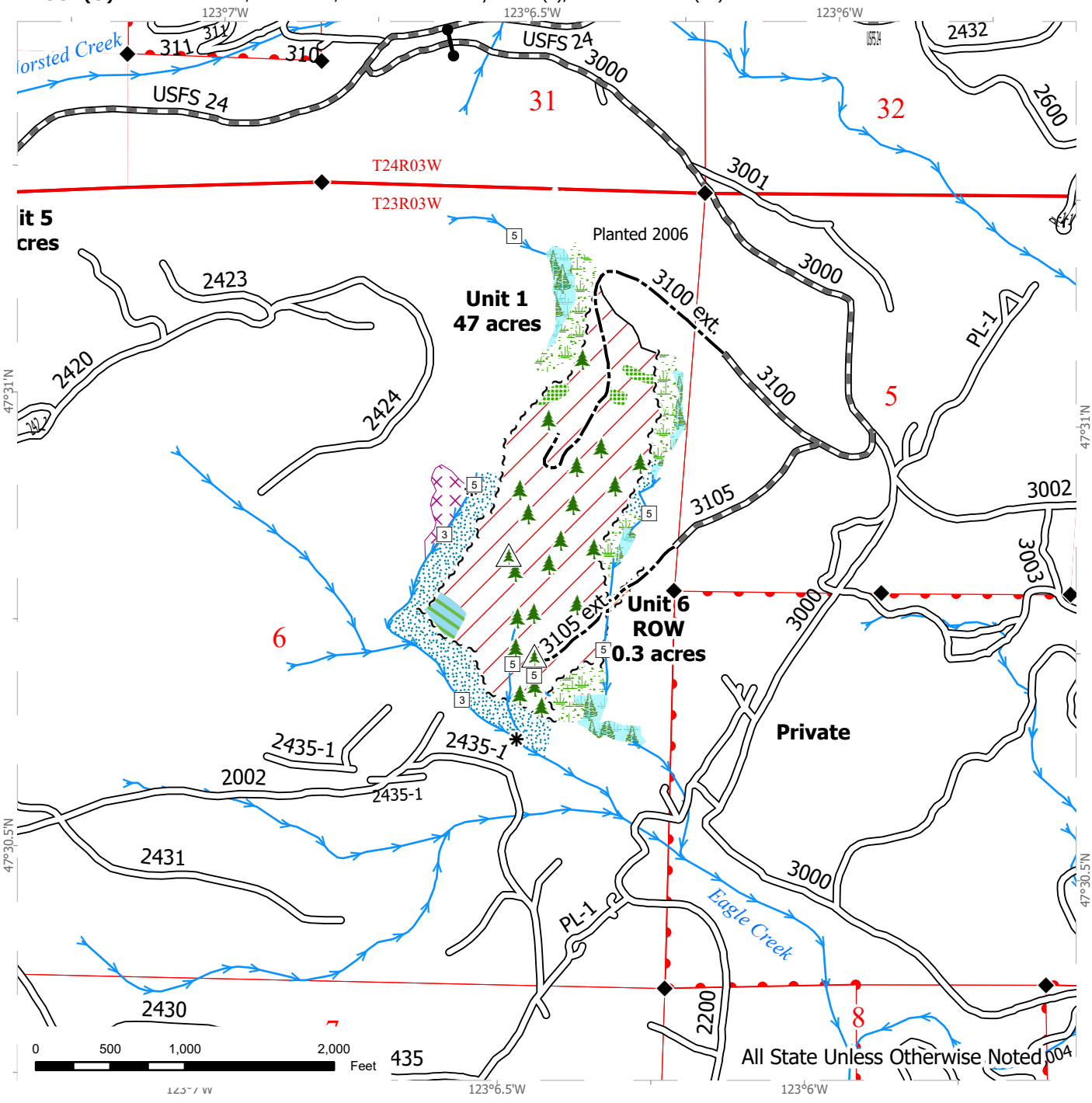
Date Submitted: 10/11/2024

AEM 10/10/2024

TIMBER SALE MAP

SALE NAME: SERENDIPITY
AGREEMENT#: 30-105259
TOWNSHIP(S): T23R3W, T23R4W
TRUST(S): Charitable/Educational/Penal & Reformatory Instit. (6), Scientific School (10)

REGION: South Puget Sound Region
COUNTY(S): Mason
ELEVATION RGE: 680-2120



Sale Area	Sale Boundary Tags	Property Line
Right-of-Way Harvest	Right of Way Tags	Streams
Leave Tree Area	Timber Type Change	Stream Type
Non-Tradeable Leave Clump	Existing Roads	Stream Break
Forested Wetland	Required Pre-Haul Maintenance	Leave Tree Area <1/4-acre
Wetland Mgt Zone	Optional Construction	Non-Tradeable Leave Trees
Riparian Mgt Zone	Public Land Survey Townships	Gate
Tailhold Restriction Area	Public Land Survey Sections	Survey Monument

N

Prepared By: kfry490

Modification Date: kfry490 10/14/2024

TIMBER SALE MAP

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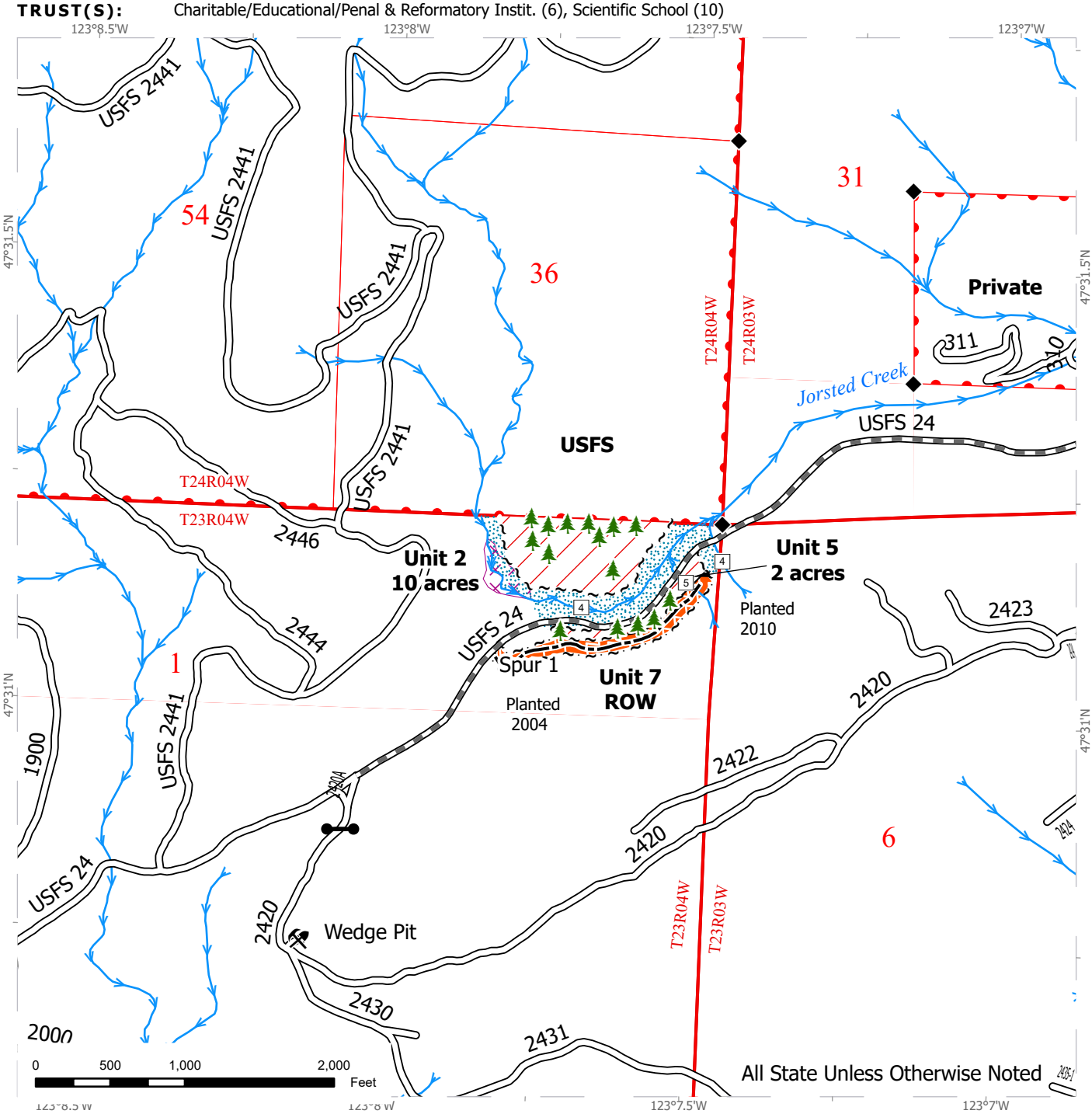

- Sale Area
- Right-of-Way Harvest
- Riparian Mgt Zone
- Tailhold Restriction Area
- Sale Boundary Tags
- Right of Way Tags
- Timber Type Change
- Existing Roads
- Required Pre-Haul Maintenance
- Optional Construction
- Public Land Survey Townships
- Public Land Survey Sections
- Property Line
- Streams
- Stream Type
- Stream Break
- Leave Tree Area <1/4-acre
- Rock Pit
- Gate
- Survey Monument

N

Prepared By: kfry490

Modification Date: kfry490 10/14/2024

TIMBER SALE MAP

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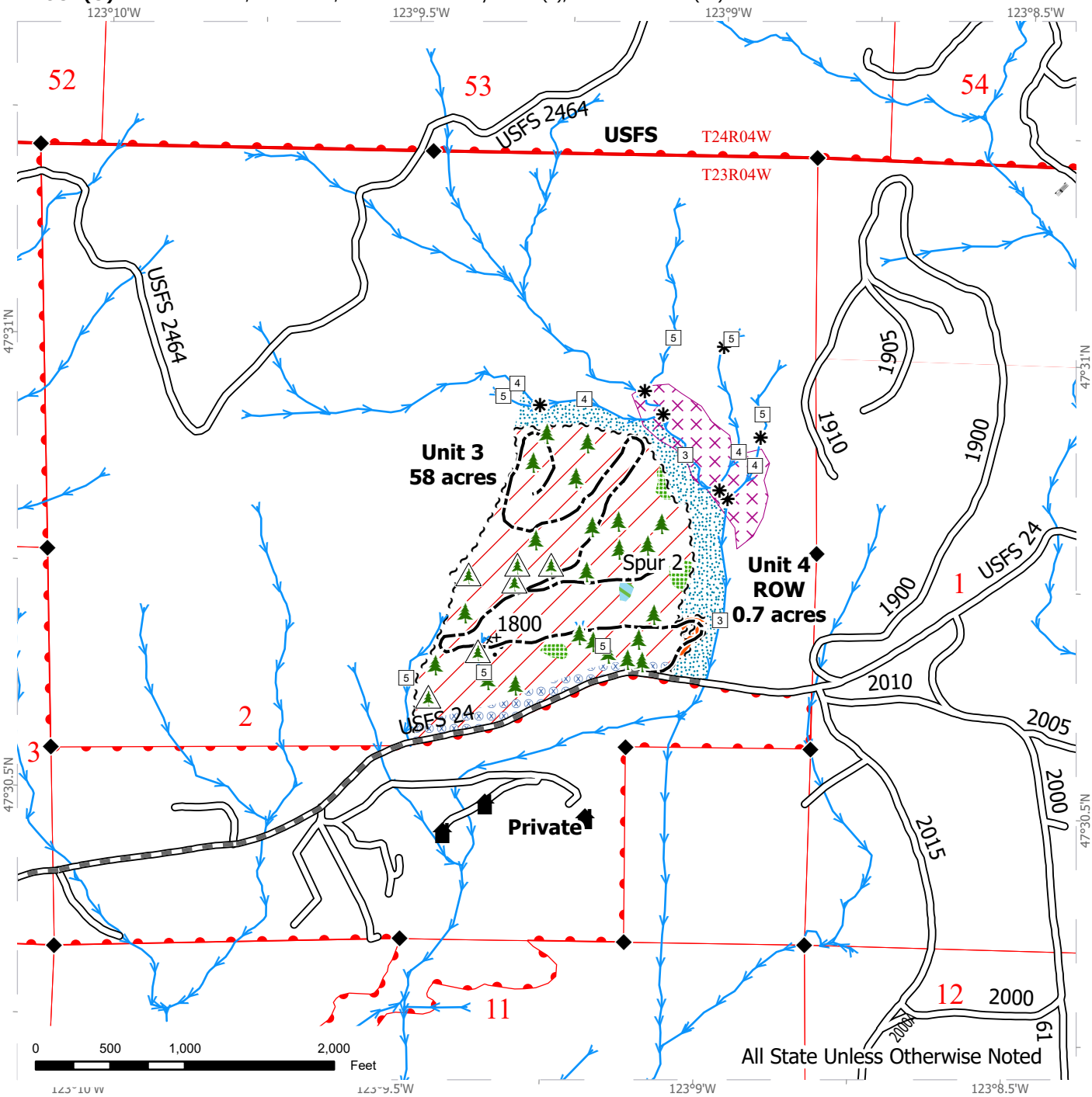


- Sale Area
- Right-of-Way Harvest
- Leave Tree Area
- Non-Tradeable Leave Clump
- Riparian Mgt Zone
- Tailhold Restriction Area
- Hazard Abatement Area
- Sale Boundary Tags
- Special Mgmt Area
- Right of Way Tags
- Existing Roads
- Required Pre-Haul Maintenance
- Optional Construction
- Public Land Survey Townships
- Public Land Survey Sections
- Property Line
- Streams
- Stream Type
- Stream Break
- Leave Tree Area <1/4-acre
- Non-Tradeable Leave Trees
- Structure
- Survey Monument

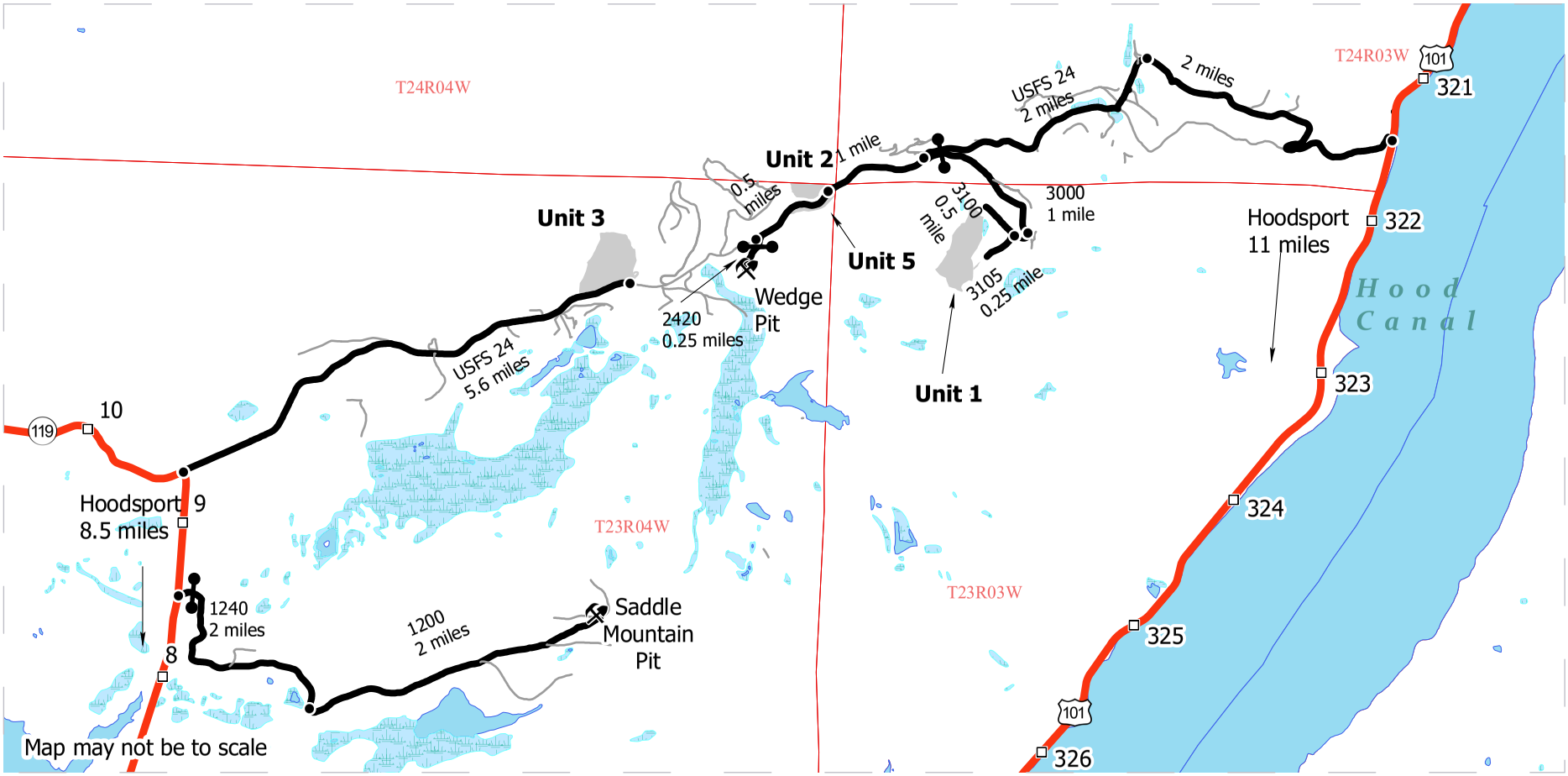
Prepared By: kfry490

Modification Date: kfry490 10/14/2024

DRIVING MAP

SALE NAME: SERENDIPITY
AGREEMENT#: 30-105259
TOWNSHIP(S): T23R3W, T23R4W
TRUST(S): Charitable/Educational/Penal & Reformatory Instit. (6), Scientific School (10)

REGION: South Puget Sound Region
COUNTY(S): Mason
ELEVATION RGE: 680-2120



- Harvest Unit
- Open Water
- Wet Area
- Highway
- Haul Route
- Other Route
- Milepost Marker
- Distance Indicator
- Gate (383 Masterlock)
- Rock Pit

DRIVING DIRECTIONS:

Unit 1: From Hoodsport, drive 11 miles north on Highway 101. Turn left onto USFS 24 (Jorsted Creek Road). Continue for 2 miles. At the USFS 24/USFS 2480 junction, continue left onto USFS 24 Road for 2 miles. Turn left onto 3000 Road and go through Gate 32 (383 Masterlock). Continue for 1 mile. For upper portion of Unit 1, continue onto 3100 Road for 0.5 miles. Unit 1 will be on the left. For lower portion of Unit 1, turn left onto 3105 Road for 0.25 miles.
Unit 2 and 5: From USFS 24/3000 Road junction, continue for 1 mile on USFS 24 Road. Unit 2 will be on the right. Unit 5 will be on the left.
Unit 3: From Hoodsport, take SR 119 north for 8.5 miles. Turn right onto USFS 24 Road. Continue for 5.6 miles. Unit 3 will be on the left.
Rock Pits
Wedge Pit: From Unit 2, continue on USFS 24 Road for 0.5 miles. Turn left onto 2420 Road and go through Gate 8 (383 Masterlock).
Saddle Mountain Pit: From Hoodsport, drive 8.5 miles north on SR119. Turn right onto 1240 Road and go through Gate 18 (383 Masterlock). Continue for 2 miles. Turn left onto the 1200 Road. Continue for 2 miles.

N

Prepared By: kfry490

Modification Date: kfry490 9/5/2024