

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: **GREENSTONE**
Agreement # **30-106183**

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

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

DNR Northwest Region
919 North Township Street
Sedro-Woolley, WA 98284
(360) 856-3500

Contact person: Laurie Bergvall

4. Date checklist prepared: **03/19/2024**

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

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

a. *Auction Date:*

12/18/2024

b. *Planned contract end date (but may be extended):*

03/31/2028

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:* **VRH harvest units may be treated with herbicides prior to planting. Assessment for treatment will occur after completion of harvest.**

b. *Regeneration Method:* **In the VRH portions of the proposal, conifer seedlings will be hand planted within two years after completion of harvest.**

c. *Vegetation Management:* **Treatment to be assessed in 3-5 years. Competing vegetation may be treated by manual cutting and/or herbicide.**

d. Other:

Road maintenance assessments will be conducted and may include periodic ditch and culvert cleanout, and grading as necessary. Onsite rock may be used for road construction, if rock sources are discovered along haul routes within the sale area.

Roads: The BR-ML, BR-38, BR-3802, BR-3802-05, BR-3802-15, BR-3823, BR-3823-05, BR-50, BR-5008, BR-58, BR-63, BR-6301 and BR-6307 roads will be used for future management activities.

Rock Pits: If built, the West Bear, Mid Bear and Greenstone hardrock pits will be used for future management activities.

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: Pilchuck Creek, Nookachamps Creek

temp

sediment

completed TMDL (total maximum daily load)

Landscape plan:

Watershed analysis:

Interdisciplinary team (ID Team) report:

Road design plan:

Wildlife report:

Geotechnical report:

Other specialist report(s): **Level 1 hydrologic change analysis for proposed timber harvests in sub-basin 9 of Lake Cavanaugh WAU and sub-basin 12 of Nookachamps WAU dated October 05, 2023; Old Growth Assessments dated, September 20, 2022, September 22, 2022, October 16, 2023, October 25, 2023, November 20, 2023, Geologic Memorandum dated June 18, 2024**

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

Rock pit plan:

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).**
 - **Identifying Mature and Old Forests in Western Washington by Robert Van Pelt (2007).**
 - **Silvicultural Rotational Prescriptions**
 - **Land Resource Manager Reports 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)**
- **Spotted Owl Habitat Layer**
- **Marbled Murrelet Habitat Layer**
- **WAU Rain-On-Snow GIS Layer and Reports**
- **Forest Practices Regulations and Compliance**
 - **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)**
 - **Landslide Remote Identification Model (LRIM) tool**
 - **Forest Practices Statewide Landslide Inventory (LSI) screening tool**
- **Supporting Data for Cultural Resources Review**
 - **Historical Aerial Photographs**
 - **USGS and GLO maps**
 - **Department of Archaeology and Historic 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**
 - **Stand Development Stage Assessment form**

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 # _____*
 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:*

This is a variable retention harvest (VRH), comprised of 150.4 net acres, plus 7.2 acres of right-of-way, with an estimated total harvest volume of 5,619 MBF. Approximately 550 acres were considered for this proposal; this has been reduced to 168.3 gross acres due to operational feasibility, newly identified old growth, wildlife habitat, slope stability concerns, and wetland and stream buffers. The resulting timber sale area consists of approximately 157.6 net harvest acres after deducting leave tree areas and existing roads.

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:

- **Stands originate between 1953 and 1960.**
- **Composed primarily of western hemlock, western redcedar, Pacific silver fir, Douglas-fir, and red alder.**
- **The stage of stand development for the harvest areas within this proposal on the stand level scoring using the Van Pelt guide (Van Pelt 2007) includes biomass accumulation/stem exclusion.**

Type of Harvest-

Variable Retention Harvest (VRH): Even-aged harvest with a component of retention structures such as large and old live trees, snags and logs to provide for continuity in structure, function, and composition between forest generations.

Overall Unit Objectives:

- **To support healthy forest ecosystems, protect water quality, maintain site productivity, and maintain wildlife habitat while providing sustainable, economic, ecological and social benefits from these forested trust lands.**
- **To generate revenue for State trust beneficiaries from the production and sale of sustainably produced, climate friendly wood products.**
- **This proposal meets or exceeds all guidelines set forth in the DNR Habitat Conservation Plan (HCP), Riparian Forest Restoration Strategy, Policy for Sustainable Forests, and Forest Practices Rules and Regulations.**

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 (Subgrade) (Estimated)	Fish Barrier Removals (#)
Construction		9,487	4.0	
Reconstruction		7,611		0
Abandonment		1,784	0.75	0
Temporary construction		2,204	1.0	
Prehaul Maintenance		66,167		
Bridge Install/Replace	0	NA		
Culvert Install/Replace (fish)	0			
Culvert Install/Replace (no fish)	35			

****Of the length listed for Construction in the above table, a portion(s) of the length listed may or may not be built as forest road that is constructed and intended for use during the life of an approved forest practices application/notification, then abandoned.**

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:*

Includes harvest units, rock pits, road work and pre-haul maintenance:

Sections 1, 2, 3, 10, 11, 12, 13 and 14 of Township 33 North, Range 05 East, Willamette Meridian

Section 6 of Township 33 North, Range 06 East, Willamette Meridian

Sections 35 and 36 of Township 34 North, Range 05 East, Willamette Meridian

b. *Distance and direction from nearest town:*

This sale is approximately 11 miles southeast of Mount Vernon, WA.

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 may temporarily affect elements of the environment to varying degrees including Geology, Surface water movement/quantity/quality, Soils, Air quality, Noise, Aesthetic, Plants and Animals, and Recreation. However, no cumulative change in the environment is expected from the combination of past and future activities with this proposal.

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 sustainably managed lands sequester more carbon than emit, including this proposal. 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 further finds 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. Thus, managing state trust lands sustainably, DNR sequesters more carbon than emits while conducting land management activities such as this proposal.

DNR manages state trust lands for numerous objectives including a trust fiduciary – revenue producing objective. The timber that DNR harvests, is used to produce climate smart forest products. This objective is documented in multiple environmental impact statements that have informed the Board of Natural Resources’ decisions and is consistent with the IPCC which states that “Meeting 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 Practice 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.

In May 2024, the DNR produced a document titled ‘*Landscape Assessment to Identify and Manage Structurally Complex Stands to Meet Older-Forest Targets in Western Washington*’. 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 stands suitable 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 deferred from regeneration harvest.

The results from the May 2024 landscape assessment, and included in the above-referenced memorandum, show that while the North Puget HCP Planning Unit does not currently contain 10 to 15 percent older forest conditions, it demonstrates that through implementation of the HCP and other Policies and laws, stands containing structurally complex forests or managed for older forest targets in conservation areas is projected to exceed 10 percent in the North Puget HCP Planning Unit by 2070 (See table below). Stands currently identified to meet older forest targets and stands projected to meet older forest targets are depicted in associated maps within the assessment document for each western Washington HCP planning unit.

Percent area western Washington HCP planning units with older-forest stands in conservation areas by decade through 2120. With plot discounts and disturbance factor.

ADJUSTED QUERY OUTPUT (WITH PLOT DISCOUNT & DISTURBANCE FACTOR)											
HCP Planning Unit	Year										
	2021	2030	2040	2050	2060	2070	2080	2090	2100	2110	2120
COLUMBIA	1.1%	1.2%	1.4%	1.8%	2.6%	4.3%	6.8%	10.1%	14.0%	17.3%	18.9%
N. PUGET	3.2%	3.9%	4.9%	6.2%	7.9%	10.2%	13.2%	16.7%	20.6%	23.9%	25.0%
OESF	10.2%	10.7%	11.0%	11.7%	12.6%	13.9%	16.0%	20.1%	25.0%	28.4%	29.6%
S. COAST	0.2%	0.3%	0.6%	1.2%	2.2%	3.6%	6.0%	8.8%	12.3%	16.0%	18.7%
S. PUGET	1.7%	2.1%	2.7%	3.6%	4.6%	6.1%	8.4%	11.3%	14.4%	17.2%	18.7%
STRAITS	1.8%	2.5%	3.2%	4.3%	5.6%	7.4%	9.9%	12.6%	15.0%	17.9%	19.3%

Additionally, DNR has designated forest stand acreage in each HCP planning unit to meet or exceed the policy's 10% older forest target.

The Greenstone Timber Sale is not identified as one of those stands designated to meet older-forest targets over time. In the Greenstone Timber Sale 157.6 net acres are being harvested, while 392.4 acres are being conserved from the overall area considered for harvest (71% of the proposal area) for potentially unstable slopes, riparian and wetland management zones plus leave tree areas that will contribute to older forests 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.

This proposal meets all requirements of the Marbled Murrelet Long-Term Conservation Strategy.

Green Tree Retention Plan: An average of 8 trees per acre will be left in clumped and scattered arrangement that are distributed across the proposal area. These leave trees include all tree species currently found in the proposal area. The clumps were located around features that will contribute to the maintenance of biological diversity such as snags, down logs, large wind firm conifer trees, and wildlife trees.

Regeneration methods described in A.7.b.

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

- **Retaining Riparian Management Zones (RMZs) and Wetland Management Zones to protect water quality, stream bank and wetland integrity, stream temperatures, and provide down woody debris. RMZs and WMZs will develop older riparian forest characteristics that, in combination with other strategies, will help support older riparian forest dependent wildlife and aquatic species. Wetland mitigation is included with this proposal.**
- **Reconstruction of existing non-drivable roads will occur within wetland management zones. No change in water flow patterns will occur with reconstruction, so this work is not expected to impact the hydraulic function of the area. The right of way acres within the wetland management zones has been mitigated at a 1:1 ratio. The mitigated acres have been removed from harvestable acres and are within the contributing basin of the wetland.**
- **New road construction will occur through a talus buffer. The right of way acres within the talus buffer has been mitigated at a 1:1 ratio. The mitigated acres have been removed from harvestable acres and have been added to the same talus buffer.**
- **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 stand.**
- **Analyzing, designing, and constructing roads to minimize effects on the environment.**
- **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.

- **Equipment trails may be water barred post harvesting activities, if necessary to avoid concentrating surface water runoff.**
- **Remote and field reviews were conducted to ensure that all identified potentially unstable slopes that were interpreted as having potential to adversely impact public resources or public safety, were excluded from the harvest areas.**
- **Rule-identified landforms with interpreted delivery potential, were excluded from harvest.**
- **No tailholds will be allowed within and no timber will be yarded across any identified Forest Practice rule-identified landforms.**

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
LAKE CAVANAUGH	29,882	18,060	681	630	526
NOOKACHAMPS	46,461	14,614	817	925	978

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>LAKE CAVANAUGH</u>
WAU Acres:	<u>29,882</u>
Elevation Range:	<u>410 – 3,936 ft.</u>
Mean Elevation:	<u>1,602 ft.</u>

Average Precipitation:	60 in./year
Primary Forest Vegetation Zone:	Western Hemlock
WAU:	NOOKACHAMPS
WAU Acres:	46,461
Elevation Range:	16 – 4,084 ft.
Mean Elevation:	812 ft.
Average Precipitation:	44 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 WAUs at the same elevation and aspect.

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

102%

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
9164	GRAVELLY SILT LOAM/V.GRAVELLY LOAM
9163	GRAVELLY SILT LOAM/V.GRAVELLY LOAM
3897	GRAVELLY SILT LOAM
3305	V.GRAVELLY LOAM
0126	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.

The statewide landslide inventory (LSI) screening tool indicates polygons mapped as landslides within the proposed harvest unit boundaries. Those LSI polygons mapped within the proposed harvest unit boundaries have been evaluated by a State Lands, licensed engineering geologist. This landslide database is maintained by the Washington

State Department of Natural Resources, Forest Practices Division. The LSI includes landslides mapped during many different projects including large-scale geologic mapping, watershed analyses, landscape planning, and landslide hazard zonation, in addition to other case studies and mapping efforts. A large majority of landslides identified by these projects are mapped by remote review with minimal field verification. In addition, dormant and ancient deep-seated landslides are mapped in many projects included in the LSI. A large number of the remotely identified landslides and deep-seated features have been mapped with a questionable, probable, or unknown certainty. As a result, the LSI database is meant to be used as a screening tool and 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.

Potentially unstable landforms around the proposed harvest includes inner gorges, bedrock hollows, toes of deep-seated landslides with slopes greater than or equal to 65 percent as well as active bedrock landslides. All of these features are excluded from harvest with timber sale boundary tags.

These features were identified through office and field review by a State Lands, licensed engineering geologist.

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.*

A state lands licensed engineering geologist conducted office and field reviews of this proposal and the surrounding areas. Any known areas of potentially unstable slopes with potential to deliver to a public resource have been excluded from the proposed management area. In addition, roads are located on gentle terrain and utilize existing orphaned and abandoned grades where possible.

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: 7.0

Approx. acreage new landings: 2.0

Fill Source: Native fill or rock

Road construction will utilize standard cut and fill methodology, full bench construction with end haul to obtain grade and alignment. Native soil and rock will be excavated from the road prism and used for fill in the sub-grade and over cross drains and stream crossings.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
Road construction will expose bare soil. Road plan requirements include the use of grass seed or other revegetation methods to protect exposed soils from erosion.
- 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 4 percent of the site will be covered with permanent new rock covered (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.)
All roads will be constructed to meet or exceed Forest Practices standards and the Habitat Conservation Plan guidelines. Appropriate drainage devices including proper culvert size and placement, drain dips, water bars and ditching, will be used as necessary to reduce surface erosion. In areas adjacent to constructed roads where soil disturbances have occurred, straw mulch, grass seed or some other appropriate measure will be used to prevent sediments from being transported.

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. 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:

Pilchuck Creek, Nookachamps Creek

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

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in feet (per side for streams)
Bear Creek	3	1	133
Unnamed stream	4	34	100
Unnamed stream	5	58	N/A
Forested Wetland	Greater than 1 acre	4	140
Forested Wetland	Greater than 0.25 acres, less than 1 acre	18	100

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

Ditchwater will be diverted through relief culverts prior to stream crossing to keep sediment out of stream. Exposed soils will be grass seeded.

A small portion of WMZ buffer will be removed for road right-of-way in two locations. These WMZ acres will be replaced by buffer averaging the same area to the impacted WMZ, thereby removing harvestable acres from the proposed harvest area.

No wind buffers were applied to the type 3 stream, due to lack of evidence of windthrow in nearby harvest with similar soil conditions and aspect.

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.)

Note: Timber Sale maps are DRAFT at the point of submission of this SEPA.

Description (include culverts): **Ditchwater will be diverted through relief culverts prior to stream crossing to keep sediment out of stream. Exposed soils will be grass seeded.**

- 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:* **When necessary to protect water quality, or as required by permit, stream flow may be temporarily diverted around construction area during culvert installations.**

- 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)?*

LAKE CAVANAUGH = 3.9 (mi./sq. mi.), NOOKACHAMPS = 4.8 (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 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 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 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.*

A hydrologic change analysis was conducted for this proposal. The analysis showed low sensitivity to changes in peak flows associated with this proposal.

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 streams adjacent to the proposal area are tributary to the Pilchuck Creek and Nookachamps Creek. Because of the protective measures cited in B.3.a.1.c and B.3.a.2., significant changes in water amount, quality, or movement should not occur.**

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. *

As stated in B.3.a.12, this proposal is not expected to cause significant increase in

peak flows. In order to minimize the risk of road failures during peak flow events, culverts and ditches will be maintained so that they remain functional. Storm patrols will be conducted as necessary on existing and newly constructed roads to identify and address potential erosion problems.

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:* **Pilchuck Creek and Nookachamps Creek are located downstream from the proposal. No information was discovered to indicate that this stream is used as a water resource, other than recreation.**

There are Forest Practices LSI polygons mapped within, down-slope or down stream of this proposal. Areas of slope instability with delivery potential identified in the field by a licensed engineering geologist have been excluded from the proposal.

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: **All areas of slope instability have been excluded from the harvest area.**

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:

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.*)

As described in A.11, the overstory vegetation in the VRH portions of the proposal will be removed with the exception of an average of eight trees per acre of 10 inches DBH or greater. This will ensure that a portion of the live trees that are best suited to the site, and/or exhibit desirable wildlife habitat characteristics will be left on site. Most of the current shrubs and herbaceous plants will be disturbed to varying degrees during the timber removal process of this proposal. Large snags will also remain on the landscape where operationally feasible.

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.)*

The adjacent areas' timber types range from young, uniform conifer stands, to mature timber similar to the proposed removal area as described in A.11.b.

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

None found in corporate database.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

The proposal area will be revegetated after harvest. See green tree retention plan in A.13.b., and regeneration method in A.7.b.

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

The corporate database indicates no known noxious weeds or invasive species. However, Himalayan blackberry, Scot’s broom, bull thistle, or Canadian thistle may be found on or 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:

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*).

TSU Number	Common Name	Federal Listing Status	State Listing Status
GREENSTONE ROW	Marbled murrelet	Threatened	Endangered

Marbled murrelets were detected approximately 0.7 miles from the nearest harvest boundary during surveys conducted by DNR contracted biologists in the early 2000s. The suitable habitat around this area was subsequently delineated as an “occupied site” and has been deferred from harvest for the DNR State Lands Habitat Conservation Plan.

- 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:

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

Species /Habitat: **Marbled murrelet**

Protection Measures: **In addition to deferring harvest within the 168 acre occupied site mentioned in Section B.5.b above, this area is also protected by 100-meter buffer that cannot be harvested and is largely treated as a “no entry zone”. Old growth stands, talus fields, and buffers identified and delineated as part of this proposal will not be harvested and, along with riparian areas, will be recruited/retained as long-term forest cover to support marbled murrelet habitat conservation objectives.**

The sale overlaps areas that our predictive model indicates are “possible” Long-term Forest Cover (LTFC) in the Marbled Murrelet Longterm Conservation Strategy (LTCS). LTFC are the combination of lands that provide marbled Murrelet conservation throughout the landscape through other forest retention

measures associated with the 1997 HCP (e.g. riparian management, unstable slopes, old-growth, northern spotted owl), as well as natural areas, gene pool reserves, and marbled Murrelet specific conservation as outlined in the MM LTCS. “Possible” suggests that some feature which would require retention of forest cover (e.g. stream, unstable slope) may exist in those areas, but requires field verification to confirm the actual existence and map the specific location of such features. Following “verification,” LTFC is maintained as applicable. This proposal excludes all verified LTFC and associated habitat and is consistent with the requirements of the MM LTCS.

Species /Habitat: **Mature Forest Components**

Protection Measures: **Green Tree Retention plan described in A.13.b.**

Species /Habitat: **Older Forest Conditions/Old Growth**

Protection Measures: **Old growth assessment work for this proposal and the recent Bald Balcony Timber Sale resulted in the identification of 143.6 acres of old growth that will be deferred from harvest. Additionally, the leave tree strategy for this sale prioritizes the retention of the oldest forest elements within the harvest area, which includes scattered legacy trees and snags.**

Species /Habitat: **Uncommon habitats (talus and cliffs)**

Protection Measures:

Talus - of the seven talus fields reviewed for this sale, six of these (totaling 45.9 acres) are greater than one acre in size and will be protected from disturbance by 100-foot buffers. One of these buffer areas will have new road construction within the buffer area. Those acres impacted have been mitigated 1:1, added to the same talus field’s buffer and removing otherwise harvestable acres from the sale area.

Cliffs – cliffs are present within multiple talus buffers. Because these features are within these protected areas and will not be disturbed, the conservation measures for cliff protections are being met and they are therefore not called out separately in any environmental review documents.

Species /Habitat: **Aquatic Species / Riparian Habitat**

Protection Measures: **Stream protection measures listed in B.3.a.1.b., B.3.a.2., and c; soil protection measures in B.1.h.; slope stability protection in B.1.d.2; and peak flows protection in B.3.a.13. Riparian buffers are designed to maintain the functions of riparian ecosystem processes that influence the quality of salmonid freshwater habitat. Water temperature, stream bank integrity, sediment load, detrital nutrient load, and the delivery of large woody debris were the principle considerations used for designing the riparian buffer widths.**

- e. List any invasive animal species known to be on or near the site.

No invasive animal species are known to be 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.
 - 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: Site and adjacent property is used for forest management.

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?
Industrial forestry.
- f. What is the current comprehensive plan designation of the site?
Industrial forestry.
- 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:

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

This proposal is consistent with the management of the area. See B.10.c. below.

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

Retention trees as described in A.13.b will reduce the aesthetic impacts of the harvest. Timber harvesting is a normal occurrence in the vicinity of the proposal, and recent timber harvests are visible throughout the area. Within and around the proposal area, un-harvested stands, RMZs, WMZs and leave tree clumps will remain to reduce the visual impact. These residual stands will break up the view of the harvested area considerably, and will help maintain the aesthetic quality of the area. Additionally, the proposal area will be revegetated.

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?

Designated off road vehicle trails are in the immediate vicinity within the Walker Valley recreation area. Informal recreational opportunities include hiking, mountain biking, hunting, berry picking, and mushroom picking.

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

There may be some disruptions to recreational use during periods of harvesting and hauling.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
None.

13. Historic and cultural preservation

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.
No.
- 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.
There are known sites within a mile of the proposal area. However, there are no known sites within the proposal that require protection. Additionally, no adjacent known sites, will be impacted by this proposal.
- 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 DNR cultural resource technician conducted an office and field review of the proposed sale area.

The following tribes were contacted on 4/24/2024: The Tulalip Tribes, Swinomish Indian Tribal Community, Stillaguamish Tribe of Indians and the Lummi Nation. As of the date of submission for this document, no concerns about the proposal have been raised from these contacts.
- 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.
The site is served by Lake Cavanaugh road in rural Skagit County. There will be no addition of public roads to access the site as a result of this proposal. Please see WAU and adjacency maps on the DNR website under "SEPA".
- 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 16 miles away.

- 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.

- 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:

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: 

Name of signee Jack Armstrong

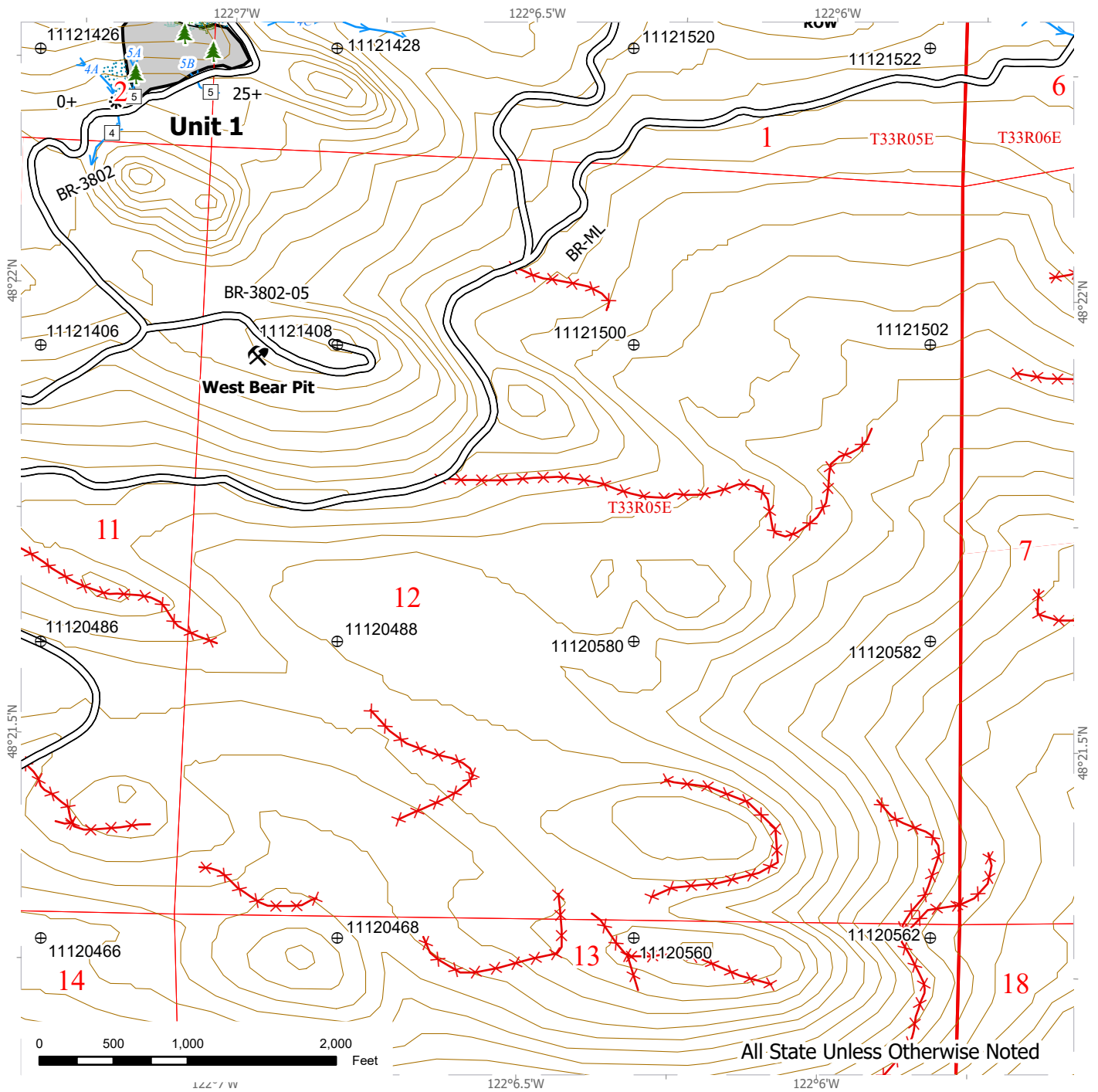
Position and Agency/Organization Forester - WADNR

Date Submitted: _____

FOREST PRACTICES MAP

SALE NAME: GREENSTONE
APPLICATION #: TBD by FP Staff

COUNTY(S): Skagit
TOWNSHIP(S): T33R5E, T33R6E, T34R5E



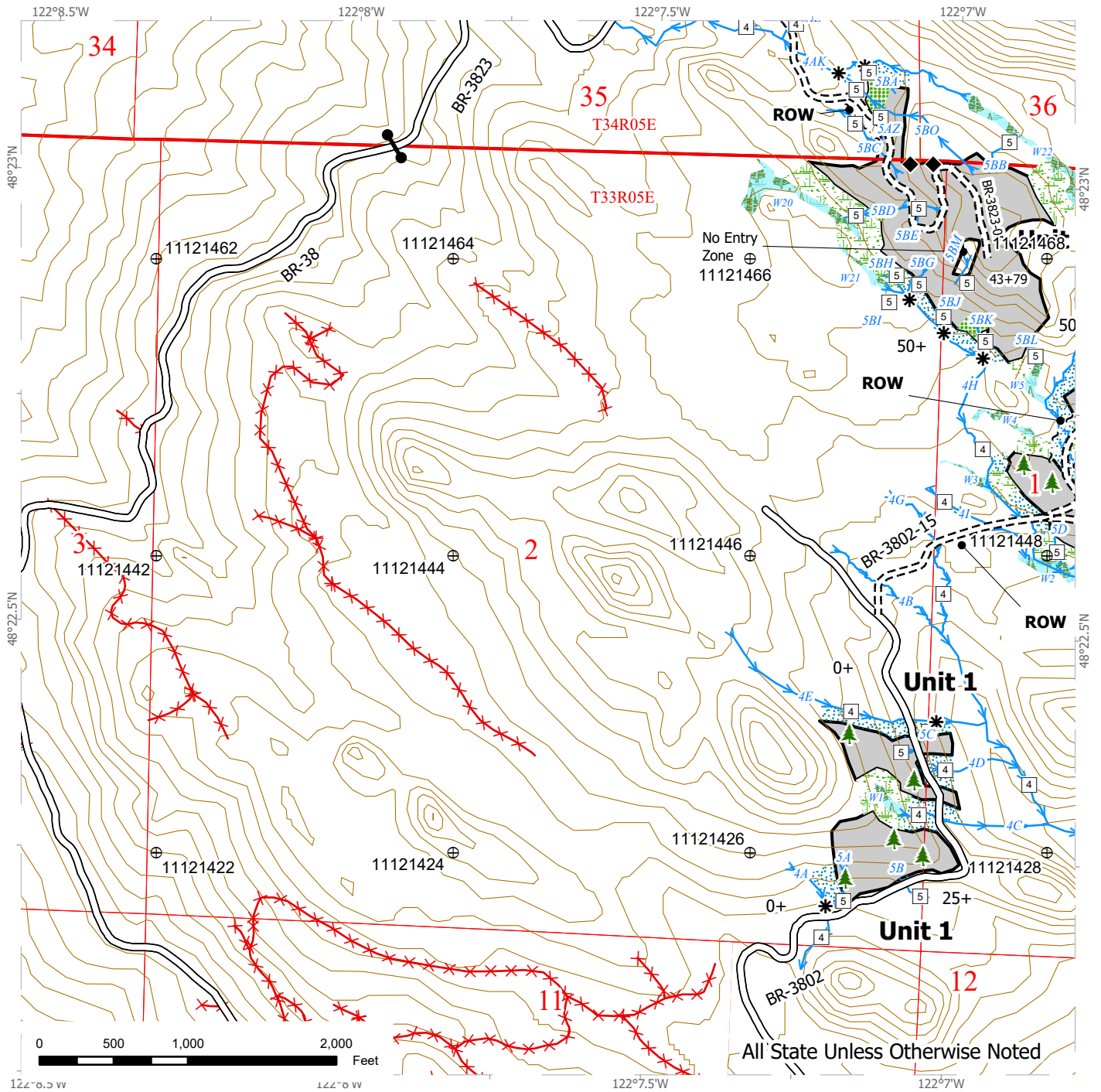
Harvest Units	Existing Roads	Stream Type
Forested Wetland	New Construction	Stream Break
Wetland Mgt Zone	Right of Way Tags	Leave Tree Area <1/4-acre
Riparian Mgt Zone	Streams	Rock Pit



FOREST PRACTICES MAP

SALE NAME: GREENSTONE
APPLICATION #: TBD by FP Staff

COUNTY(S): Skagit
TOWNSHIP(S): T33R5E, T33R6E, T34R5E



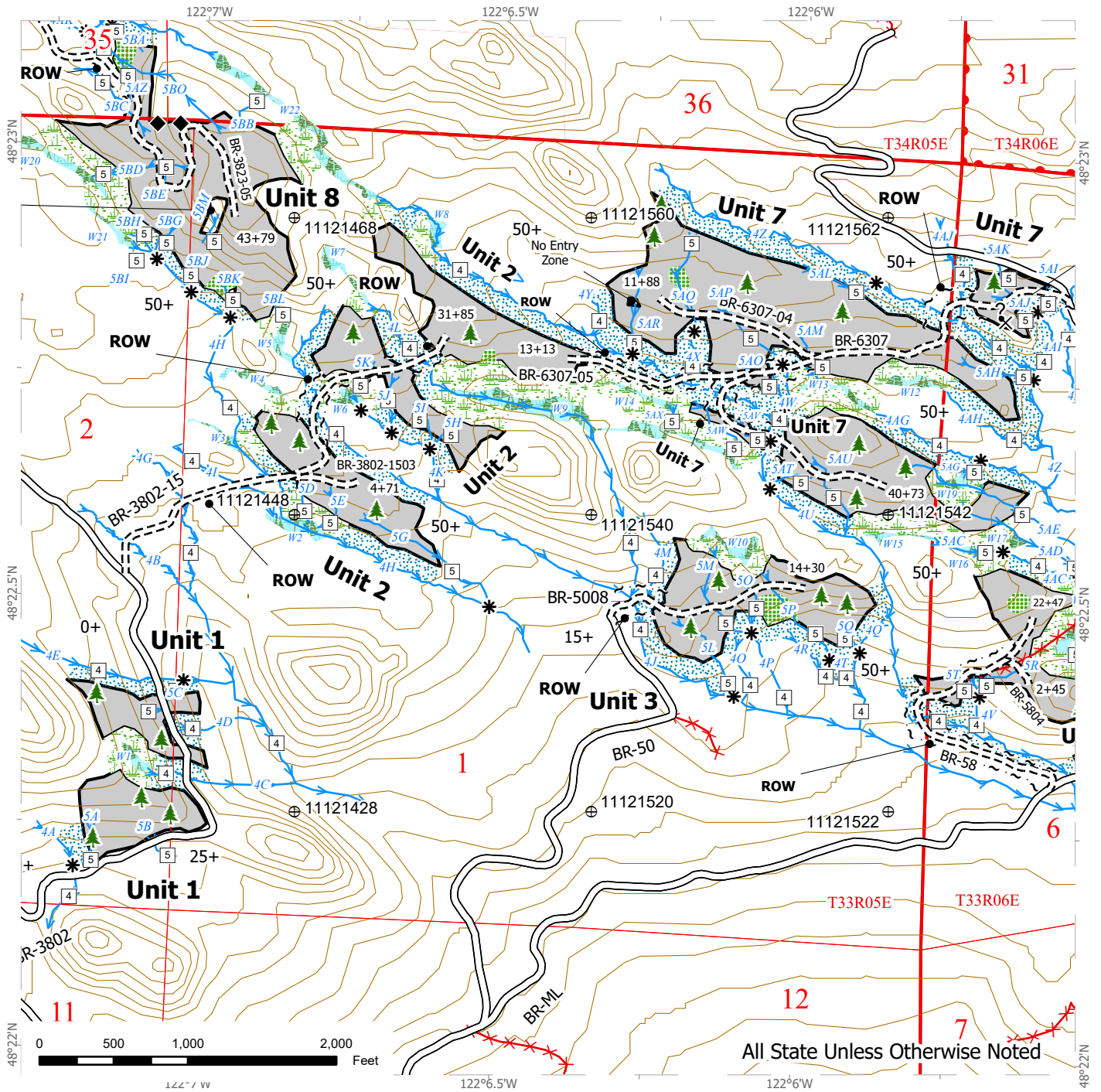
All State Unless Otherwise Noted

Harvest Units	Existing Roads	Stream Type
Leave Tree Area	New Construction	Stream Break
Forested Wetland	Right of Way Tags	Leave Tree Area <1/4-acre
Wetland Mgt Zone	Streams	Gate (F1-3)
Riparian Mgt Zone		Survey Monument

FOREST PRACTICES MAP

SALE NAME: GREENSTONE
APPLICATION #: TBD by FP Staff

COUNTY(S): Skagit
TOWNSHIP(S): T33R5E, T33R6E, T34R5E



- Harvest Units
- Leave Tree Area
- Forested Wetland
- Wetland Mgt Zone
- Riparian Mgt Zone

- Existing Roads
- New Construction
- Right of Way Tags
- Streams

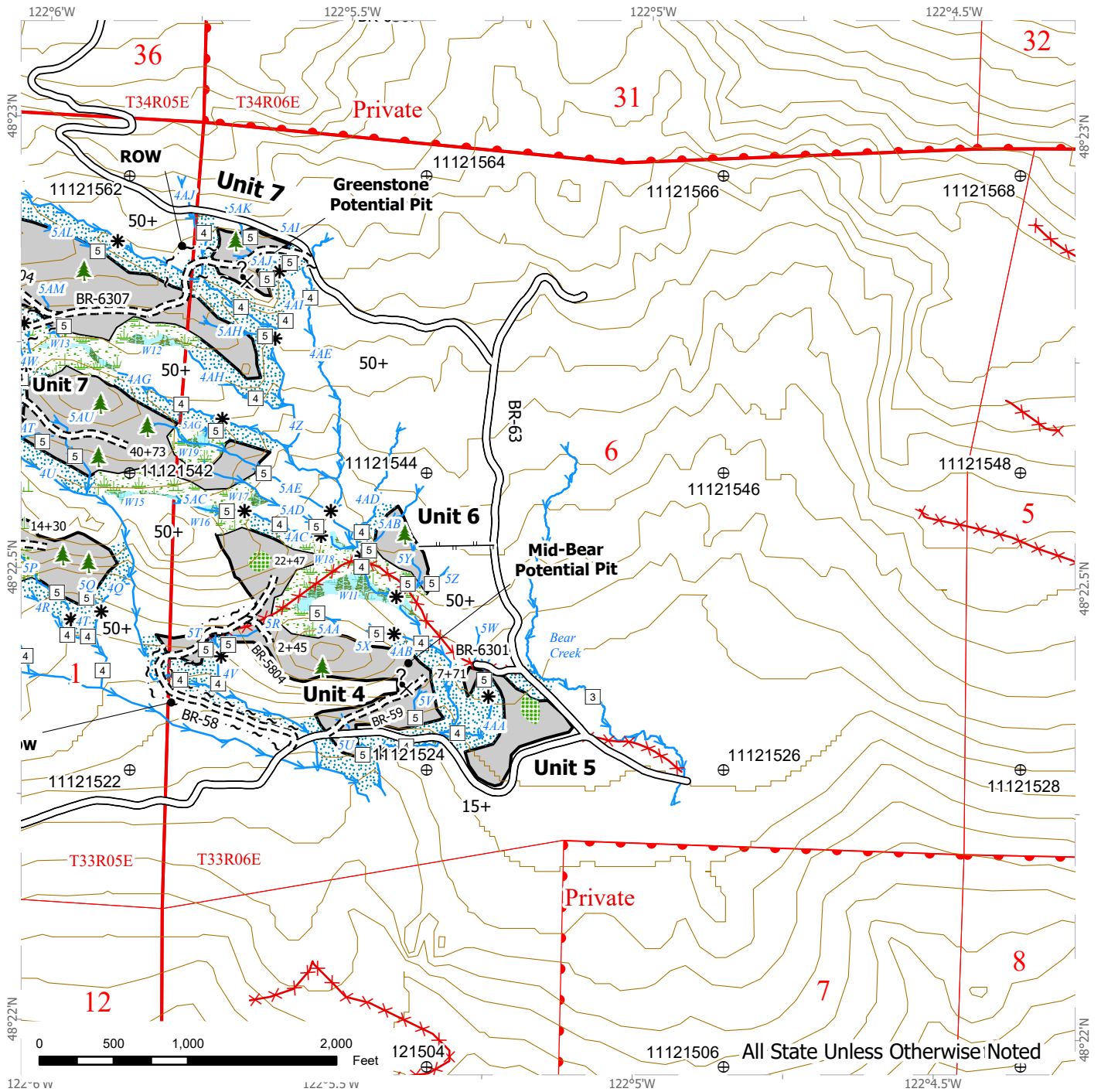
- Stream Type
- Stream Break
- Leave Tree Area <1/4-acre
- Potential Rock Source
- Survey Monument



FOREST PRACTICES MAP

SALE NAME: GREENSTONE
APPLICATION #: TBD by FP Staff

COUNTY(S): Skagit
TOWNSHIP(S): T33R5E, T33R6E, T34R5E



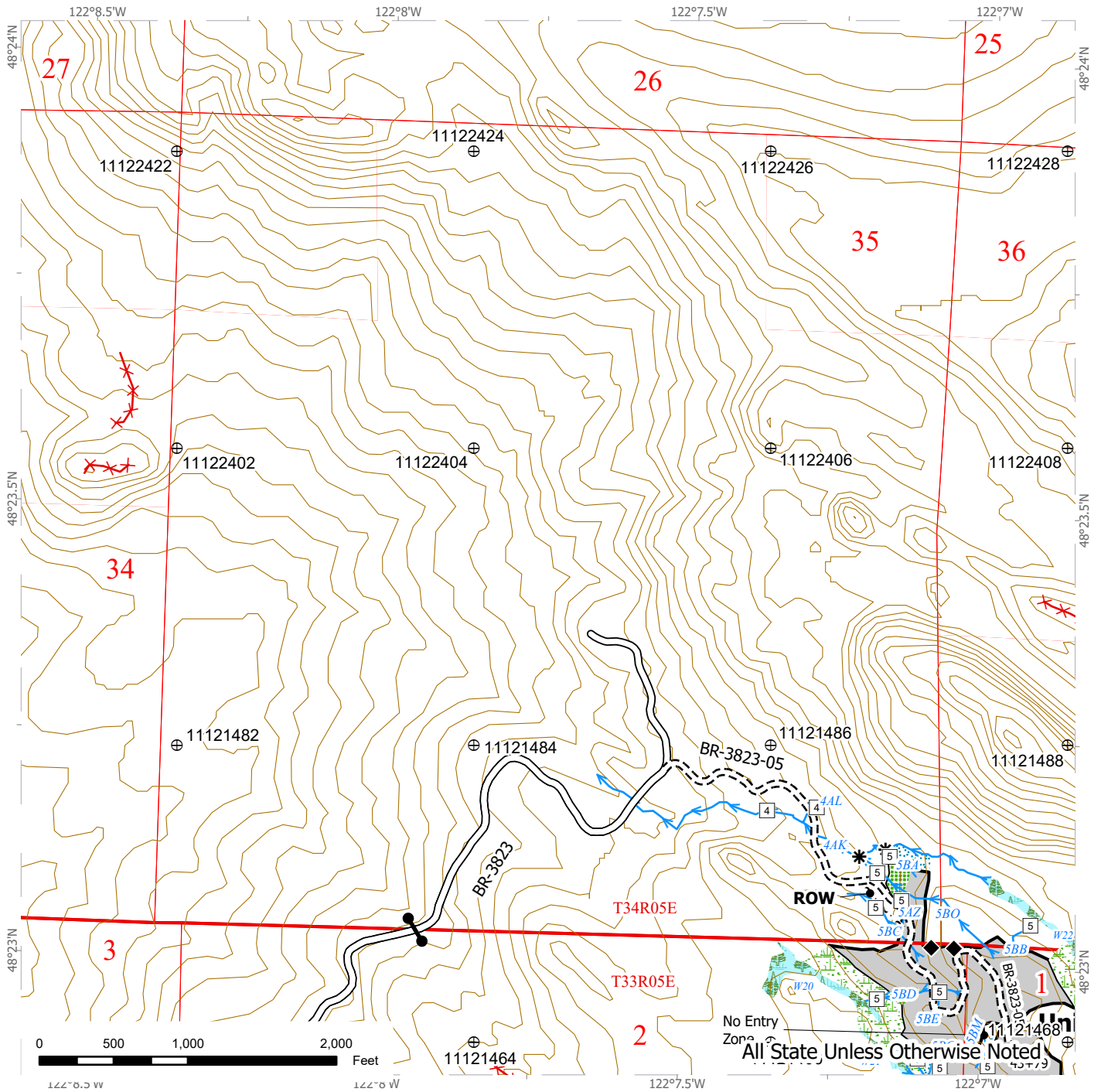
Harvest Units	Existing Roads	Stream Type
Leave Tree Area	New Construction	Stream Break
Forested Wetland	Designated Skid Trail	Leave Tree Area <1/4-acre
Wetland Mgt Zone	Right of Way Tags	Potential Rock Source
Riparian Mgt Zone	Streams	



FOREST PRACTICES MAP

SALE NAME: GREENSTONE
APPLICATION #: TBD by FP Staff

COUNTY(S): Skagit
TOWNSHIP(S): T33R5E, T33R6E, T34R5E



- | | | |
|-------------------|-------------------|-----------------|
| Harvest Units | Existing Roads | Stream Type |
| Leave Tree Area | New Construction | Stream Break |
| Forested Wetland | Right of Way Tags | Gate (F1-3) |
| Wetland Mgt Zone | Streams | Survey Monument |
| Riparian Mgt Zone | | |

