

STATE FORESTLAND **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: **BUMPER**
*Agreement #***30-099077**

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

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

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

4. Date checklist prepared: **04/15/2020**

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

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

a. *Auction Date:*
12/15/2020

b. *Planned contract end date (but may be extended):*
10/31/2023

c. *Phasing:*
None

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No, go to question 8. *Yes, identify any plans under A-7-a through A-7-d:*

a. *Site Preparation:*

Site preparation, including a herbicide application, may be used to ensure that planting can be achieved at acceptable stocking levels to meet or exceed Forest Practices standards following harvest. Slash piles may be burned during the fall before planting. Units 10 and 11 consist of road right-of-way that will not include chemical herbicide application.

b. *Regeneration Method:*

Units 1-9 will be hand-planted with native conifer seedlings following harvest. Units 10 and 11 are road right-of-way and will not be replanted.

c. *Vegetation Management:*

Possible treatments for units 1-9, include a herbicide application that could occur following harvest. Treatments will be based on vegetative competition, and will ensure a free-to-grow status that complies with Forest Practices Standards.

Pre-commercial thinning needs will be assessed at approximately 7 years of age for conifer species for units 1-9. 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 may include periodic ditch and culvert cleanout, and grading as necessary. Fire wood permits for the sale are a may be issued to the public after timber harvest activities are completed. Brush picking activities may also occur.

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: **Chehalis River, Cedar Creek, and Rock Creek**

temp

sediment

completed TMDL (total maximum daily load)

Landscape plan:

Watershed analysis:

Interdisciplinary team (ID Team) report:

Road design plan: **Road Plan by Chad Vandehey (01/15/2020), revised by Derwood Duncan III (07/16/2020)**

Wildlife report:

Geotechnical report:

Other specialist report(s):

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

Rock pit plan: **Rock Pit Plan by Chad Vandehey (01/15/2020)**

Other: **Land Resource Manager Special Concerns Report and associated maps, JARPA for project within Shoreline of the State of Cedar Creek, plus communications and reviews by State Lands Geologist-in-Training, Cultural Resource Technicians, 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 #2421865

FPHP

Board of Natural Resources Approval

Burning permit

Shoreline permit

Existing HPA

Other: **HPA, Grays Harbor Shoreline Master Program, Letter of Exception.**

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:

Bumper consists of nine variable retention harvest (VRH) units and two right-of-way (ROW) units in the Capitol State Forest. The area selected for consideration was greater than 285 acres, then was reduced to approximately 266 gross acres and 244 net acres after protection of streams, wetlands, potentially unstable slopes and wildlife trees. Approximately 6,653 MBF of mixed conifer and hardwood logs will be harvested. Approximately 8 trees per acre larger than 10 inches in diameter at breast height will be retained in leave tree clumps distributed throughout the units. Some leave tree clumps were used to protect unique and sensitive areas.

One culvert will be removed from a Type 3 stream adjacent to Cedar Creek on the D-0101 road. There will be an estimated 550 cubic yards of fill material that may be removed from this location and placed within a designated waste area.

Net acres for each unit are as follows:

Unit 1 – 67

Unit 2 – 5

Unit 3 – 15

Unit 4 – 5

Unit 5 – 18

Unit 6 – 64

Unit 7 – 41

Unit 8 – 17

Unit 9 – 11

Unit 10 (ROW) – 1.2

Unit 11 (ROW) – 0.4

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

Pre-harvest Stand Description:

Unit	Origin Date	Major Timber Species	Type of Harvest
1	1944-1971	Douglas-fir, western hemlock, western red cedar, red alder	Variable retention harvest
2	1937-1971	Douglas-fir, western hemlock, western red cedar, red alder	Variable retention harvest
3	1962	Douglas-fir, western hemlock, western red cedar, red alder	Variable retention harvest
4	1962	Douglas-fir, western hemlock, western red cedar, red alder	Variable retention harvest
5	1939-1963	Douglas-fir, western hemlock, western red cedar, red alder	Variable retention harvest
6	1938-1970	Douglas-fir, western hemlock, western red cedar, red alder	Variable retention harvest
7	1931-1970	Douglas-fir, western hemlock, western red cedar, red alder	Variable retention harvest
8	1970	Douglas-fir, western hemlock, western red cedar, red alder	Variable retention harvest
9	1938-1971	Douglas-fir, western hemlock, western red cedar, red alder	Variable retention harvest
10	2000	Douglas-fir, red alder	Right-of-Way
11	2000	Douglas-fir, red alder	Right-of-Way

Overall Unit Objectives:

The overall objective of this proposal is to provide sustainable revenue to the trust beneficiaries through forest management while providing for and creating wildlife habitat as directed under the 1997 Habitat Conservation Plan (HCP), protecting hydrologic function and water quality under forest practices, and retaining visual aesthetics. The desired future condition of the proposal area is a mix of regenerating conifers amidst scattered and grouped large legacy and wildlife trees. Other objectives include reforestation and subsequent management activities consistent with DNR policy, Sustainable Forestry Initiative, DNR's HCP, Policy for Sustainable Forests, and Washington State Forest Practice Rules.

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		8,357	3.2	
Reconstruction		442		
Maintenance		48,578		
Abandonment		3,239	1.2	
Bridge Install/Replace	0			
Stream Culvert Install/Replace (fish)	0			1
Stream Culvert Install/Replace (no fish)	2			
Cross-Drain Install/Replace	36			

*Routine maintenance will occur on roads used throughout the duration of the proposal

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist (See "WAU Map(s)" and "Timber Harvest Unit Adjacency Map(s)" as referenced on the DNR website: <http://www.dnr.wa.gov/sepa>. Click on the DNR region of this proposal under the Topic "Current SEPA Project Actions - Timber Sales." Proposal documents also available for review at the DNR Region Office.)

a. Legal description:

T16-0N R4-0W S17	Harvest
T16-0N R4-0W S18	Harvest
T16-0N R4-0W S19	Harvest
T16-0N R4-0W S20	Harvest
T16-0N R5-0W S13	Harvest
T16-0N R5-0W S24	Harvest
T16-0N R4-0W S22	Rock Quarry

b. Distance and direction from nearest town:

The town of Oakville is 2 miles southeast from the closest unit by road.

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).

Upper Chehalis/Rock Creek and Upper Chehalis/Cedar Creek WAUs have experienced peak flow impacts and include areas of potentially unstable slopes. Within these WAUs there appears to be a trend towards increasing conversion of agriculture and forest land to

home sites in the low to mid elevation ranges. Forested stands within the WAU appear to be primarily second and third growth stands.

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

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

- **Retaining Riparian Management Zones (RMZs) to protect water quality, stream bank integrity, stream temperatures, and provide down woody debris.**
- **Wetland Management Zones (WMZs) will protect water quality, sensitive wetland soils, and maintain hydrologic function.**
- **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 within the new plantation and retains very large diameter, structurally unique trees.**

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

- **Generally limiting even-aged harvests to less than 100 acres per unit.**

Current Forest Practice Rules also require that:

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

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

Rule identified landforms according to the Forest Practices Board Manual have been identified and protected. Several inner gorges and one bedrock hollow were identified and excluded from the sale area.

- 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
UPPER CHEHALIS/ROCK CREEK	27245	14419	2516	0	874
UPPER CHEHALIS/CEDAR CREEK	26229	24562	2206	0	291

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: UPPER CHEHALIS/ROCK CREEK

WAU Acres: 27245

Elevation Range: 35 - 1786 ft.

Mean Elevation: 433 ft.

Average Precipitation: 53 in./year

Primary Forest Vegetation Zone: Western Hemlock

WAU: UPPER CHEHALIS/CEDAR CREEK

WAU Acres: 26229

Elevation Range: 35 - 2659 ft.

Mean Elevation: 927 ft.

Average Precipitation: 54 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)?

70%

- c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Note: The following table is created from state soil survey data. It is an overview of general soils information for the soils found in the 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
1008	LOAM
1007	LOAM
5669	CLAY LOAM
0645	SILT LOAM
0644	SILT LOAM

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

No, go to question B-1-e.

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

A DNR State Lands Geologist-in-Training (GIT) remotely reviewed all units of the sale utilizing LiDAR, orthophotos, and other datasets available in the DNR GIS database. A field review was also conducted in and near Units 1, 7, and 9 with the GIT to further evaluate presence of potentially unstable slopes. Three potential deep-seated landslides were identified in remote review. Two deep-seated landslides are bedrock and showed no evidence of activity in the field and are considered relict, thus non-rule identified. One deep-seated landslide did not appear deep-seated due to lack of margins, hummocky body or any other indicators for landslide movement. The forester identified intermittent inner gorge slopes in most RMZs adjacent to Units 1-9 and one bedrock hollow adjacent to Unit 5. All potentially unstable slopes or landforms have been excluded from harvest with non-tradeable leave tree clumps, with a buffer of two tree crown widths, or excluded with Timber Sale Boundary tags.

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

No Yes, describe the proposed activities:

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

- Remote and field reviews were conducted to ensure that 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 were excluded from harvest by Timber Sale Boundary tags and non-tradeable leave tree clumps.
- No tailholds will be allowed within and no timber will be yarded across any identified Forest Practices Rule-Identified Landforms.
- 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.
- Ditch-outs will be utilized to prevent water from roads contributing to relict deep seated landslides.
- Road construction will be restricted during saturated soil conditions.
- Most Type 5 streams and their headwalls have been protected with leave tree clumps.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Approx. acreage new roads: 3.2

Approx. acreage new landings: 1.2

Fill Source: Native material, Vantage Quarry or commercial source.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
Yes. Some erosion could occur as a result of building new roads, installing culverts, and hauling timber. Incidental erosion may occur within the sale boundaries but should be confined to the area of disturbance by vegetation left on-site and erosion control measures.

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.

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

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

- There is no harvest within RMZs and WMZs
- One culvert from a Type 3 stream will be removed. The fill will be placed within a

designated waste area, then straw and seed will be applied.

- One culvert from a Type 4 stream will be replaced. The fill will be placed within a designated waste area, then straw and seed will be applied.
- Non self-leveling ground-based harvesting may only occur on slopes measuring 45 percent and less, and self-leveling shovels may occur on slopes measuring 65 percent and less. Ground based equipment will be suspended when potential for excessive soil disturbance exists.
- Road work was designed to protect streams and wetlands from sediment delivery.
- Roads will be crowned, ditched and cross-drained. Cross-drains may be installed and maintained.
- Leave tree clumps were left around most Type 5 streams and wetlands less than 0.25 acre and seeps; other Type 5 streams and wetlands less than 0.25 acre will be protected with a 30-foot Equipment Limitation Zone.
- Units 1-9 will be replanted with coniferous species.
- Road construction and harvesting operations are restricted during saturated soil conditions.
- Drainage control devices such as rolling drain dips, culverts (including energy dissipaters), and cross drains, and waterbars will be utilized to allow for proper drainage.

2. Air

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Minor amounts of engine exhaust from logging and road construction equipment and dust from vehicle traffic on roads will be emitted during proposed activities. If landing debris is burned after harvest is completed, smoke will be generated. There will be no emissions once the proposal is complete.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
- None known.**

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:
- If slash debris is burned, it will be in accordance with Washington State's Smoke Management Plan. A burn permit will be obtained before burning occurs.**

3. Water

- a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. (See "WAU Map(s)" and "Timber Harvest Unit Adjacency Map(s)" as

referenced on the DNR website: <http://www.dnr.wa.gov/sepa>. Click on the DNR region of this proposal under the Topic “Current SEPA Project Actions - Timber Sales.” Proposal documents also available for review at the DNR Region Office.)

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

a. Downstream water bodies:

Downstream water bodies include Cedar Creek and the Chehalis River

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)
Cedar Creek	1	1	195 ft
Stream	3	7	195 ft
Stream	3	4	192 ft
Stream	3	1	189 ft
Stream	3	1	165 ft
Stream	4	3	Minimum 100 ft
Wetland	>1.0	2	195 ft
Wetland	>1.0	1	189 ft

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.

Seasonal timing restrictions will restrict hauling from November 1 through April 30 to reduce activities during wet weather conditions, unless otherwise authorized by the Contract Administrator due to dry weather.

Twelve small forested wetlands less than 0.25 acre in size are protected within RMZs, leave tree clumps, or a 30 foot Equipment Limitation Zone (ELZ).

Forty-eight Type 5 streams are protected within RMZs, with a 30 foot Equipment Limitation Zone (ELZ) or within leave tree clumps.

RMZ/WMZs for this proposal are designed in accordance with the Department’s HCP procedures and their stream type identified by the stream’s physical characteristics per the water typing system for Forested State Trust HCP lands. All RMZ/WMZs are measured horizontally from the edge of the 100-year floodplain, channel migration zone or from the outer extent of the wetland.

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

- 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 the streams, but outside the buffer distances listed above. Trees may be cut within RMZs and WMZs for safety or operational needs, but will be left in place to provide large woody debris functions.

Cables may be suspended over streams for yarding operations, but no logging will occur over streams with the exception of Type 5 streams, which may be crossed at approved locations. Other than at crossings, Type 5 streams will be protected with 30 foot equipment limitation zones or are located within leave tree clumps.

One culvert will be removed from a Type 3 stream, one culvert will be replaced in a Type 4 stream, and one will be installed in a Type 5 stream. Equipment crossings associated with culvert installation, replacement, and removal will be minimized and performed while the stream is dry, or if water is present, the stream will be pumped around the crossing site.

- 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.

One culvert will be removed from a Type 3 stream on the D-0101 road. There will be an estimated 550 cubic yards of fill material may be removed from this location and placed within a designated waste area.

One culvert will be replaced in a Type 4 stream on the E-0010 road. There will be an estimated 800 cubic yards of fill material may be removed from this location and placed within a designated waste area.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. (Include diversions for fish-passage culvert installation.)

No

Yes, description:

Temporary diversion or pumping may be necessary for the culvert install, replacement, and removal on typed streams if water is present. Water will be returned to the original stream channel at the best possible location.

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

No

Yes, describe activity and location:

One culvert will be removed from a Type 3 stream, one culvert will be replaced in a Type 4 stream, and one will be installed in Type 5 stream.

- 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)?*
**UPPER CHEHALIS/ROCK CREEK = 4.7 (mi./sq. mi.),
 UPPER CHEHALIS/CEDAR CREEK = 5.1 (mi./sq. mi.)**
- 9) *Are there forest roads or ditches within the associated WAU(s) that deliver surface water to streams, rather than back to the forest floor?*
- No Yes, describe:
It is likely some roads or road ditches within the WAU intercept sub-surface flow and deliver surface water to streams, however current road construction, reconstruction, and/or maintenance standards will be applied that address this issue by installing cross-drains to deliver ditch water to stable forest floors.
- 10) *Is there evidence of changes to channels associated with peak flows in the proposal area (accelerated aggradations, surface erosion, mass wasting, decrease in large organic debris (LOD), change in channel dimensions)?*
- No Yes, describe observations:
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.*
The current proposal may temporarily change the timing, duration, and/or magnitude of peak flows due to decreased evapotranspiration and canopy interception, but measurable impacts are not anticipated.
- 12) *Is there a water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity?*

No Yes, describe the water resource(s):

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

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

No Yes, describe possible impacts:

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

See B.1.h.

b. Ground Water:

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

No water will be withdrawn or discharged.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Minor amounts of oil, fuel, and other lubricants may inadvertently be discharged to the ground as a result of heavy equipment use or mechanical failure. No lubricants will be disposed of on-site. All spills are required to be contained and cleaned-up. This proposal is expected to have no impact on ground water.

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

No Yes, describe:

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

a. Is it likely a water resource or an area of slope instability listed in B-3-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:

See B-1-d-2, B-1-h, B-3-a-2, and B-3-a-13

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: **Bitter cherry**

Evergreen tree:

Douglas-Fir Engelmann Spruce Grand Fir Lodgepole Pine

Mountain Hemlock Noble Fir Pacific Silver Fir Ponderosa Pine

Sitka Spruce Western Hemlock Western Redcedar Yellow Cedar

Other: **Pacific Yew**

Shrubs:

Huckleberry Rhododendron Salmonberry Salal

Other: **Vine maple, Oregon grape, oceanspray, beaked hazelnut, English holly.**

- Ferns: Sword fern, deer fern, maidenhair fern, lady fern**
- Grass
- Pasture
- Crop or Grain
 - Orchards Vineyard Other Permanent Crops
- Wet Soil Plants:
 - Bullrush Buttercup Cattail Devil's Club Skunk Cabbage
 - Other: **Water parsley and slough sedge**
- Water plants:
 - Eelgrass Milfoil Water Lily
 - Other:
- Other types of vegetation:
- Plant communities of concern:*

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

- 1) *Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See "WAU Map(s)" and "Timber Harvest Unit Adjacency Map(s)" on the DNR website: <http://www.dnr.wa.gov/sepa>. Click on the DNR region of this proposal under the Topic "Current SEPA Project Actions - Timber Sales." Proposal documents also available for review at the DNR Region Office.)*

Unit 1: To the North is a WMZ and private property, to the East is a RMZ, To the South is a 16 year-old Douglas-fir regeneration stand, and to the West is a 49 year-old Douglas-fir regeneration stand.

Unit 2: To the North is a RMZ, to the East is a 20 year-old Douglas-fir regeneration stand and Unit 10, to the South is a 20 year-old Douglas-fir regeneration stand, and to the West is a RMZ and Highway 12.

Unit 3: To the North is a 14 year-old Douglas-fir regeneration stand, to the East is a 14 year-old Douglas-fir regeneration stand, to the south is a RMZ and to the West is private property.

Unit 4: To the North is a 14 year-old Douglas-fir regeneration stand, to the East is a 14 year-old Douglas-fir regeneration stand, to the South is a 40 year old mixed stand, and to the West is private property.

Unit 5: To the North is a 14 year-old Douglas-fir regeneration stand, to the East is private property and a RMZ, to the South is a RMZ, and to the west is a 40 year-old mixed stand and a 14 year-old Douglas-fir regeneration stand.

Unit 6: To the North is a 22 year-old Douglas-fir regeneration stand and an 82 year-old mixed stand, to the East is a RMZ and WMZ, to the South is a 22 year-old Douglas-fir regeneration stand, to the East is private property.

Unit 7: To the North is a 13 year old Douglas-fir regeneration stand and a RMZ, to the East is a RMZ and WMZ, to the South is a 50 year-old Douglas-fir regeneration stand, and to the west is a 13 year-old Douglas-fir regeneration stand.

Unit 8: To the North is a 50 year-old Douglas-fir regeneration stand and a RMZ, to the East is a 50 year-old Douglas-fir regeneration stand, to the South is private property, and to the West is a 22 year-old Douglas-fir regeneration stand and RMZ.

Unit 9: To the North is a 76 year-old mixed stand and RMZ, to the East is a 49 year-old Douglas-fir regeneration stand, to the South is a 49 year-old Douglas-fir regeneration stand, and to the West is a RMZ.

Unit 10: To the North, East, and South is a 20 year-old Douglas-fir regeneration stand, and to the west is a 49 year-old Douglas-fir regeneration stand and Unit 2.

Unit 11: To the North, East, and West is a 20 year-old Douglas-fir regeneration stand, and to the South is a 14 year-old Douglas-fir regeneration stand.

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

None found in corporate database

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

Retaining existing stands within RMZs and WMZs, leave trees within the harvest units, and replanting with native conifer in the VRH units following harvest.

Retention tree clumps are identified across the harvest area. A combination of Douglas-fir, western hemlock, western red cedar, and red alder were left for green tree retention and snag recruitment. Retention tree numbers were based on leaving eight trees per acre. Trees were mostly left in clumps. This type of leave tree pattern is conducive to a safe harvest operation and allows the distribution of wildlife trees throughout the proposal. Whenever possible, leave tree clumps were used to protect Type 5 streams, wetlands less than 0.25 acres, and sensitive areas. Wind firm trees with defects such as split or broken tops, dominant crowns, large diameters and large limbs were favored as leave trees to enhance wildlife potential.

The older stands and the mature RMZ stands adjacent to the units have multi-layered canopies with scattered small to large snags and a moderate component of large down woody debris. The adjacent plantations (14 to 50 years-old) have few snags and most of the down woody debris is scattered logs and slash from the previous harvest. Within some of the larger leave tree clumps, there are some components of older large down woody debris within the undisturbed vegetation.

- e. List all noxious weeds and invasive species known to be on or near the site.
Scotch broom, English holly, Himalayan blackberry, evergreen blackberry, tansy ragwort, herb Robert and foxglove.

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: **Grouse**

mammals:

bear beaver coyote cougar deer elk

other:

fish:

bass herring salmon shellfish trout

other:

amphibians/reptiles:

frog lizard salamander snake turtle

other:

unique habitats:

balds caves cliffs mineral springs oak woodlands talus slopes

other:

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

None found in corporate database.

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

Pacific flyway Other migration route:

Explain:

This proposal is located in the Pacific Flyway. While migrating through Pacific Northwest forests, many Neotropical migratory birds are closely associated with riparian areas, cliffs, snags, and structurally unique trees. Riparian areas and special habitats are protected through implementation of the Department's Habitat Conservation Plan.

- d. Proposed measures to preserve or enhance wildlife, if any:

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

Species /Habitat: **Aquatic Habitat**

Protection Measures: **No-harvest RMZs on Type 1, Type 3 and Type 4 streams; no-harvest in WMZs on wetlands greater than 0.25 acre.**

Species /Habitat: **Upland Habitat**

Protection Measures: **A minimum of 8 leave trees per acre were left clumped and scattered in Units 1-9. Snags will be left where operationally feasible. Scattered and clumped leave trees provide nesting, roosting and foraging areas for avian species as well as protect unique features such as wet areas. Large diameter leave trees, and leave trees with unique structure, will remain post-harvest to enhance the wildlife habitat value of the future stand.**

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

Invasive animal species known to be in the geographic area include:

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

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

6. Energy and natural resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Petroleum fuel (diesel or gasoline) will be used for heavy equipment during active road building, timber harvest operations, and for transportation. No energy sources will be needed following project completion.

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

None.

7. Environmental health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

Minimal hazards incident to operation of heavy machinery such as the risk of fire or small amounts of oil and other lubricants may be accidentally discharged as a result of heavy equipment use.

- 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:
Units 3-5 will have restrictions of falling, hauling, yarding on weekends and state recognized holidays, and weekdays from 7 p.m. – 7 a.m., unless authorized by the Contract Administrator in writing.

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, informal recreation, residential, and private forest properties border this landscape. 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?

All areas of this proposal are zoned Long-Term Forestry (LTF)

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

The comprehensive plan designation is resource lands, forest of long-term significance.

- g. If applicable, what is the current shoreline master program designation of the site?

The adjacent stretch of Cedar Creek is shoreline of the state under the Grays Harbor Shoreline Master Program. The proposed Type 3 culvert removal is located within 200 feet of the ordinary high water mark, and within the 100 year floodplain of an adjacent Type 3 Stream. The culvert removal is a habitat restoration project and therefore exempt from the Shoreline Master Program permit requirements.

- h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

Grays Harbor County utilizes State Department of Fish and Wildlife's "Priority Habitats and Species (PHS)" in determining the need for protection measures for fish and wildlife habitat conservation areas. Units 1, 2, and 10 are within the South Bank Crucial Winter Range for Roosevelt elk and Chehalis River Valley Trumpeter Swans Overwintering Area. The majority of this proposal is timbered uplands, and do not provide habitat for waterfowl species. There is no evidence of elk in or around this proposal.

- i. Approximately how many people would reside or work in the completed project?
None.
- j. Approximately how many people would the completed project displace?
None.
- k. Proposed measures to avoid or reduce displacement impacts, if any:
Does not apply.
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
This project is consistent with current comprehensive plans and zoning classifications.
- m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:
None.

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
Does not apply.
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
Does not apply.
- c. Proposed measures to reduce or control housing impacts, if any:
None.

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?
Does not apply.
- b. What views in the immediate vicinity would be altered or obstructed?
 - 1) *Is this proposal visible from a residential area, town, city, recreation site, major transportation route or designated scenic corridor (e.g., county road, state or interstate highway, US route, river or Columbia Gorge SMA)?*
 - No
 - Yes, name of the location, transportation route or scenic corridor:
Portions of this proposal will be visible from US Highway 12, residents off of Lonborg road, Cedar Creek Road and Downey Lane.

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

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

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

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

11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

c. What existing off-site sources of light or glare may affect your proposal?

None.

d. Proposed measures to reduce or control light and glare impacts, if any:

None.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

Informal recreational activities including target shooting, hunting, berry picking, sightseeing, and other informal outdoor recreation activities may occur within the proposal area.

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

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

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

The haul route will be posted with signs to inform recreationalists of logging traffic.

13. Historic and cultural preservation

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.

Yes, site GH00190 is potentially eligible and located within the proposal. In addition, there are multiple old railroad grades that exist near the harvest units. The railroad grade within this proposal is not eligible for national, state and/or local preservation

registries.

- 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.
This proposal was reviewed for archeological/historic resources using USGS and GLO maps. Site inventories were conducted by a DNR Cultural Resource Technician/DNR Archaeologist. A copy of these inventories have been sent to Department of Archaeology and Historic Preservation.
- 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.
Site GH00190 is within the road prism of the haul route. Pre haul maintainance within this area includes ditch reconstruction, culvert installation, grading and rock application will occur within the site of this resource. A Cultural Resource Technician (CRT) and Contract Administrator will be required to be onsite during pre-haul maintainance to oversee the work on this road. In the event that cultural resources are discovered during project operations, DNR will comply with the March 2010 Cultural Resources Inadvertent Discovery Guidance.

14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.
Highway 12 and Lonborg Road are used to access the harvest units.
- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?
No. Nearest transit stop is approximately 2.5 miles away.
- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?
None.
- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).
Yes, DNR managed forest roads will requires some improvements, see A-11-c.
 - 1) *How does this proposal impact the overall transportation system/circulation in the surrounding area and any existing safety problem(s), if at all?*

This project will have minimal to no additional impacts on the overall transportation system in the area.

- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non-passenger vehicles). What data or transportation models were used to make these estimates?

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

- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

- h. Proposed measures to reduce or control transportation impacts, if any:

None.

15. Public services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No.

- b. Proposed measures to reduce or control direct impacts on public services, if any.

None.

16. Utilities

- a. Check utilities currently available at the site:

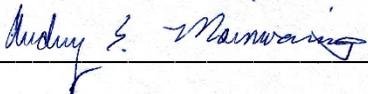
electricity natural gas water refuse service telephone sanitary sewer
 septic system other:

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

None.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: 

Name of signee **Audrey E. Mainwaring**

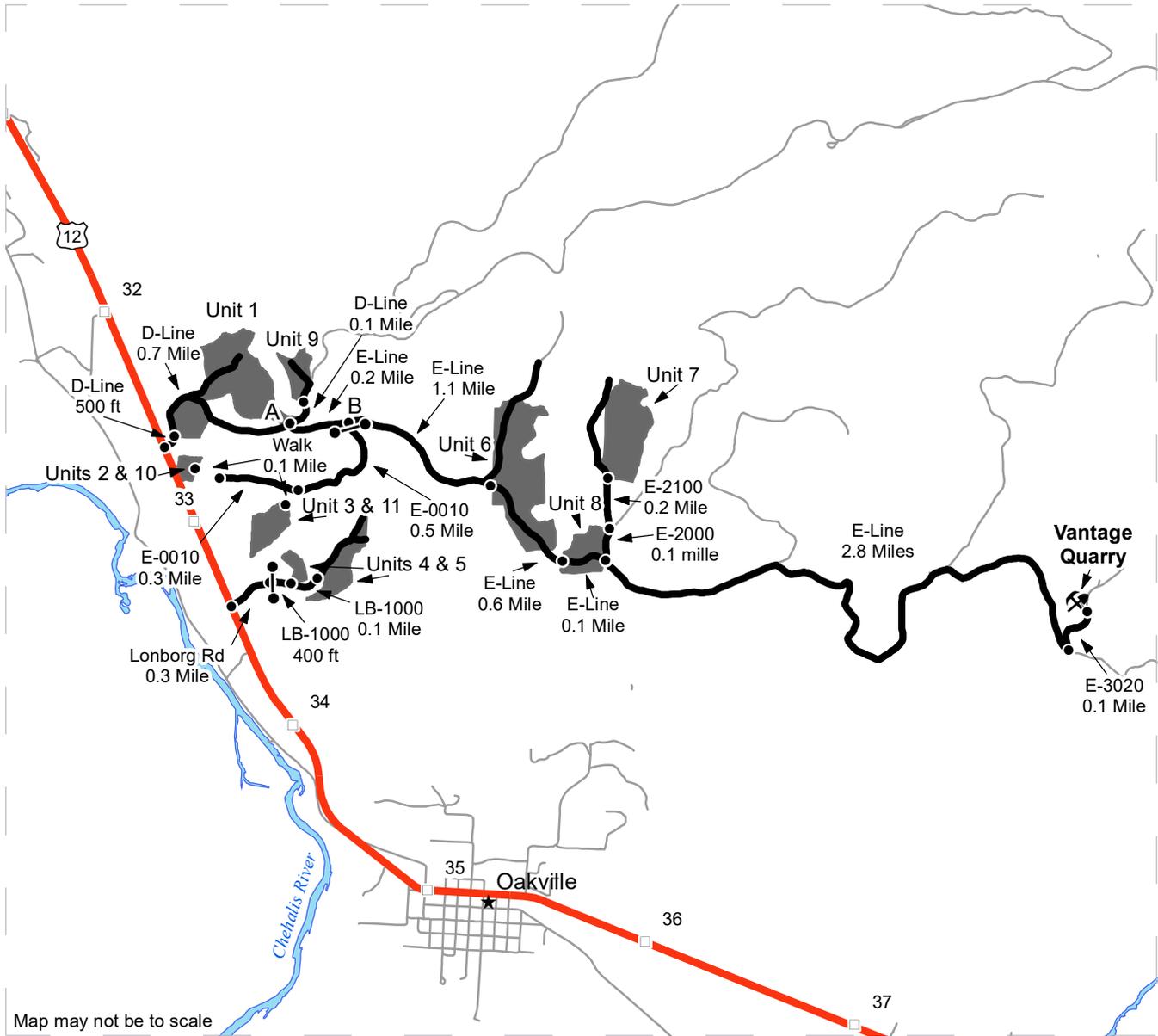
Position and Agency/Organization **Management Forester, SPS Region DNR**

Date Submitted: **9/28/20**

DRIVING MAP

SALE NAME: Bumper
AGREEMENT#: 30-099077
TOWNSHIP(S): T16R4W, T16R5W
TRUST(S): Agricultural School (4), Capitol Grant (7), Common School and Indemnity (3), Escheat (9), Scientific School (10)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 80-640



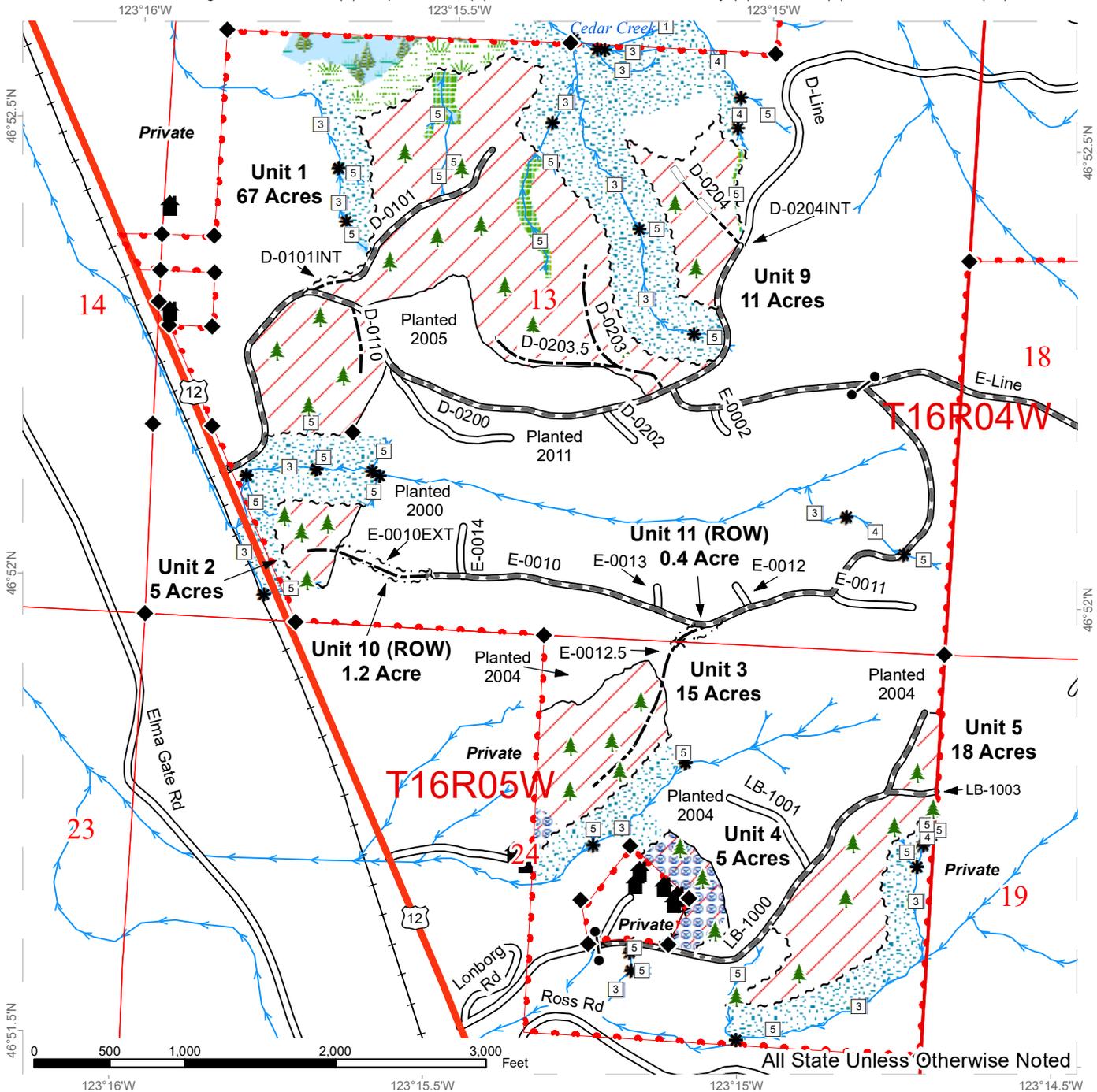
Map may not be to scale

<ul style="list-style-type: none"> Timber Sale Unit Haul Route Other Road Milepost Markers Distance Indicator Gate (H957) Rock Pit 	<p><u>Driving Directions:</u> Unit 1, 2, 3, 6-11 From US Highway 12, between mile post 32 and 33, turn east onto the D-Line road and follow for 500 ft to arrive at Unit 1 on right. From Unit 1 follow D-Line for 0.7 mile to Indicator A. From Indicator A, follow the D-Line East for 0.2 mile to arrive at Unit 9. From indicator A, turn east on the E-Line and follow for 0.2 mile to the E-0010 and DNR gate 1335 on right (Indicator B), follow for 0.5 mile to arrive at Unit 11 on left. From Unit 11, walk southeast on proposed E-0012.5 road for 0.1 mile to arrive at Unit 3. From Unit 11, follow the E-0010 road west for 0.3 mile to arrive at Unit 10. From Unit 10 walk proposed E-0010EXT road for 0.1 mile to arrive at Unit 2. From indicator B, turn East on E-Line and follow for 1.1 miles to arrive at Unit 6. From Unit 6, follow the E-Line East for 0.5 mile to arrive at Unit 8. From Unit 8, follow E-Line for 0.1 mile and turn north on the E-2000 and follow for 0.1 mile, then turn on E-2100 and follow for 0.2 mile to arrive at Unit 7.</p> <p>Units 4 & 5 From US Highway 12 between mile post 33 and 34, turn east on Lonborg road and follow for 0.3 mile to arrive at DNR gate 1370. Follow LB-1000 for 400 feet to arrive at Unit 4, from Unit 4 follow LB-1000 for 0.1 mile to arrive at Unit 5.</p> <p>Vantage Quarry From Unit 8, follow E-Line east for 2.9 miles, then turn North on E-3020 road and follow for 0.1 mile to arrive at Vantage Quarry.</p>
---	---

TIMBER SALE MAP

SALE NAME: BUMPER
AGREEMENT #: 30-099077
TOWNSHIP(S): T16R4W, T16R5W
TRUST(S): Agricultural School (4), Capitol Grant (7), Common School and Indemnity (3), Escheat (9), Scientific School (10)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 80-640



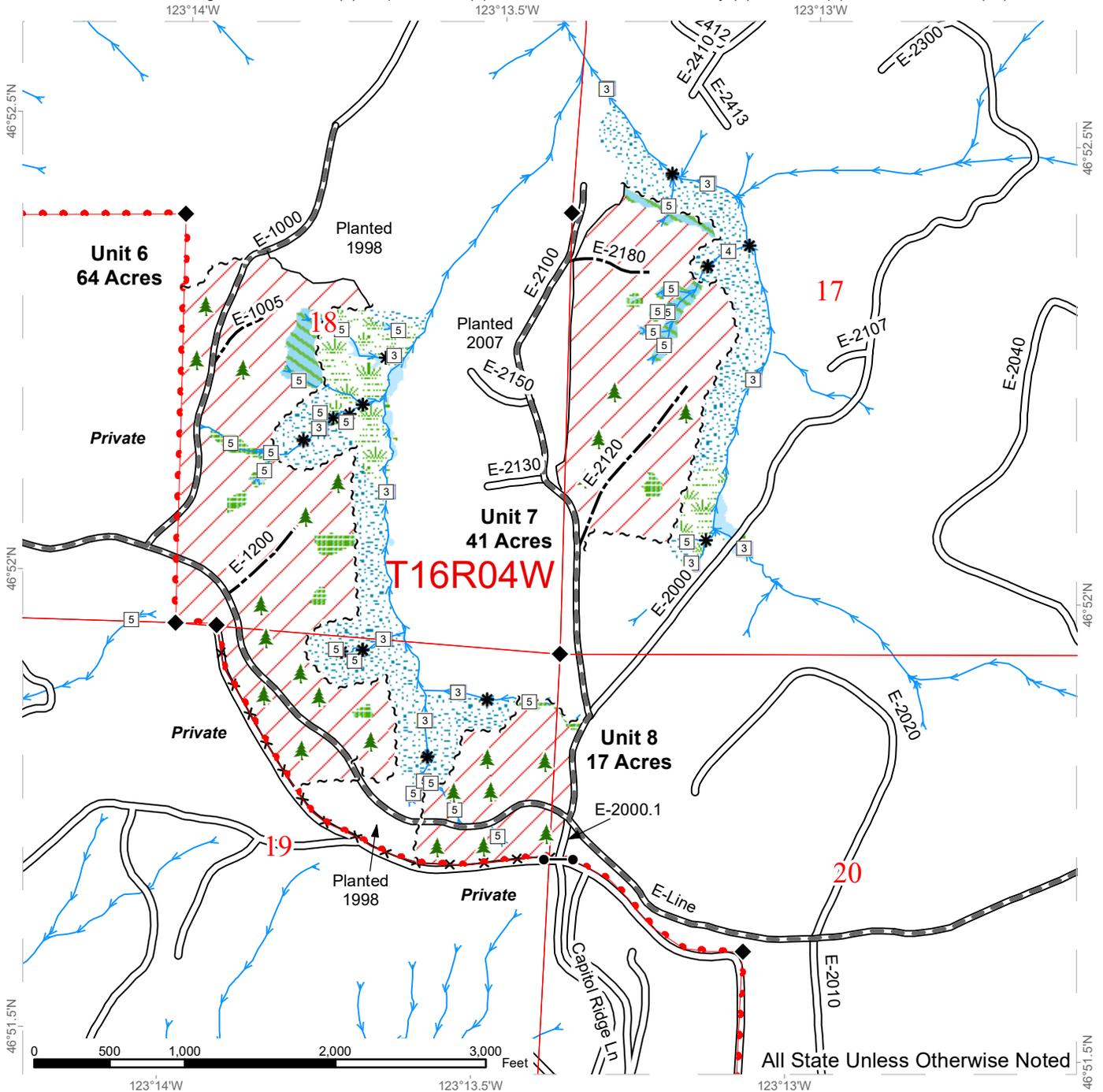
Sale Area	Highway	Sale Boundary Tags	Streams
Leave Tree Area	Existing Roads	Right of Way Tags	Stream Type
Forested Wetland	Required Pre-Haul Maintenance	Timber Type Change	Stream Type Break
Riparian Mgt Zone	Optional Construction	Property Line	Gate (H957)
Wetland Mgt Zone	Optional Reconstruction	Fence	Leave Tree Area <1/4-acre
Hazard Abatement Area	Railroad		Structure
			Survey Monument



TIMBER SALE MAP

SALE NAME: BUMPER
AGREEMENT #: 30-099077
TOWNSHIP(S): T16R4W, T16R5W
TRUST(S): Agricultural School (4), Capitol Grant (7), Common School and Indemnity (3), Escheat (9), Scientific School (10)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 80-640



Sale Area	Existing Roads	Sale Boundary Tags	Streams
Non-tradeable Leave Tree Area	Required Pre-Haul Maintenance	Timber Type Change	Stream Type
Leave Tree Area	Optional Construction	Property Line	Stream Type Break
Forested Wetland	Fence	Gate (H957)	Leave Tree Area <1/4-acre
Wetlands - Non-forested		Survey Monument	
Riparian Mgt Zone			
Wetland Mgt Zone			