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: **RAD AGHAST**
   Agreement # **30-105204**

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

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

4. Date checklist prepared: **05/24/2024**

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

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

   b. *Planned contract end date (but may be extended):*
   10/31/2026

   c. Phasing:
   None

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
☐ *No, go to question 8.* ☒ *Yes, identify any plans under A-7-a through A-7-d:*

   a. *Site Preparation:*
   Site preparation, including an herbicide application, may be used to ensure that planting can be achieved at acceptable stocking levels to exceed Forest Practice standards following harvest. Slash piles on landings may be burned during the fall before planting.

   b. *Regeneration Method:*
   All units will be hand-planted with native conifer species following harvest.

   c. *Vegetation Management:*
   Possible treatments including an herbicide application, could occur following harvest. Treatments will be based on vegetative competition and will ensure a free-to-grow status that complies with Forest Practices Standards.

   d. *Other:*
   Road maintenance assessments will be conducted and may include periodic ditch and culvert cleanout, and grading as necessary. Slash may be burned following harvest activities. Firewood

permits for the sale area may be issued to the public after timber harvest activities are completed. Brush picking activities may also occur. Future commercial thinning may occur based on stand density and species composition.

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

☐ *303 (d) – listed water body in WAU*:

☐ *temp*

☐ *sediment*

☐ *completed TMDL (total maximum daily load)*

☐ *Landscape plan:*

☐ *Watershed analysis:*

☐ *Interdisciplinary team (ID Team) report:*

☒ *Road design plan:* **Road Plan by Chris Werner dated 08/08/2024**

☐ *Wildlife report:*

☐ *Geotechnical report:*

☒ *Other specialist report(s):* **Geologic Field Summary by Susie Wisehart, LEG dated 03/04/2024**

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

☒ *Rock pit plan:* **Included in Road Plan by Chris Werner dated 08/08/2024**

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

- **DNR Policies and Implementation**
  - **Policy for Sustainable Forests (PSF; 2006a)**
  - **Final Environmental Impact Statement on the Policy for Sustainable Forests (2006b)**
  - **Alternatives for the Establishment of a Sustainable Harvest Level for Forested State Trust Lands in Western Washington Final Environmental Impact Statement (2019)**
  - **Identifying Stands to Meet Older Forest Targets in Western Washington (Estep and Buffo 2021)**
  - **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 (Can Pelt, R. 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)**
  - **Clarification of projections of forest types and stand structural conditions on Washington DNR State Trust Lands, USFWS; October 27, 2021**
  - **Spotted Owl Habitat GIS Layer**

- **Marbled Murrelet Habitat GIS Layer**
- **WAU Rain-On-Snow GIS Layer**
- **Biological Opinion on the HCP, USFWS; January 27, 1997**
- **Biological Opinion on the HCP, NMFS; January 29, 1997**
- **Biological Opinion on the HCP Marbled Murrelet Long-term Conservation Strategy Amendment, USFWS; November 7, 2019**
- **Reinitiated Biological Opinion on the Incidental Take Permit (PRT-812521), USFWS; March 21, 2024**

• **Forest Practices Regulations and Compliance**
- **Forest Practices Rules (Title 222 WAC)**
- **Forest Practices Board Manual**
- **Forest Practices Activity Maps**
- **Trust Lands HCP Addendum and Checklist**

• **Supporting Data for Unstable Slopes Review**
- **State Lands Geologist Remote Review (SLGRR)**
- **Lidar Data and Derivatives**
- **Draft Landform Remote Identification Model (LRIM) screening tool**
- **Published Landslide Inventories**
- **Historic Aerial Photographs**
- **Published Geologic Mapping**

• **Supporting Data for Cultural Resources Review**
- **Historical Aerial Photographs**
- **USGS and GLO maps**
- **Department of Archaeology and Historical Preservation database for architectural and archaeological resources and reports (WISAARD)**

• **Additional Supporting Data for Policy Compliance**
- **Weighted Old Growth Habitat Index (WOGHI)**
- **State Soil Survey**
- **DNR inventory layers, including RS_FRIS**
- **Stand Origin Assessment form for Rad Aghast Timber Sale**
- **Stand Development Stage form for Rad Aghast Timber Sale**

- **Forest Stewardship Council and Sustainable Forestry Initiative certification standards and audit reports**
- **Reviews by and communications with State Lands Geologist, State Lands Archaeologist, and Region Biologist**

Referenced documents may be obtained at the region office responsible for this proposal.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.
None known.

10. List any government approvals or permits that will be needed for your proposal, if known.

☒ *FPA #* **2424166** ☒ *FPHP* ☒ *Board of Natural Resources Approval*
☒ *Burning permit* ☐ *Shoreline permit* ☐ *Existing HPA*
☐ *Other:*

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

a. *Complete proposal description*:

The Rad Aghast Timber Sale proposal encompasses approximately 171 acres of forested land within the Upper Chehalis/Cedar Creek and Porter Creek* Watershed Administrative Units (WAU) on DNR managed trust land within the Capitol State Forest. The proposal area was evaluated by the unit forester, region biologist, archaeologist, geologist, and engineer. Areas where timber harvest is inconsistent with one or more of the agency's objectives have been excluded from planned harvest and contribute to conservation areas (e.g. potentially unstable slopes, riparian and wetland buffers, old growth stands, or habitat for state or federally listed species needed to meet DNR's Habitat Conservation Plan objectives and other conservation commitments, etc.).

Having identified areas to be reserved for conservation, the final proposal design includes 90 net acres of timber harvest and 81 acres (47% of the overall proposal area) designated for conservation and leave tree areas to protect streams, wetland, potentially unstable slopes, channel migration zones, leave trees for biodiversity and wildlife habitat, and inoperable areas that will contribute to older-forests over time.

The harvest area consists of three variable retention harvest (VRH) units, harvesting approximately 5,442 MBF of merchantable timber.

Each unit's net acreage is as follows:
Unit 1 – 31 acres
Unit 2 – 39 acres
Unit 3 – 20 acres

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

***The only portion of the proposal within the Porter Creek WAU is the Upper Lytle Quarry and part of the haul route between the harvest units and quarry. Since there will be no timber removed or road work within the Porter Creek WAU, only the Upper Chehalis/Cedar Creek WAU will be addressed throughout the checklist.**

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

The stands within the harvest units are comprised predominately of naturally regenerated Douglas-fir with a lesser component of western hemlock, western redcedar, red alder, and bigleaf maple in the main canopy. The understory vegetation is sparse to well-established, consisting primarily of sword fern, Oregon grape, salal, vine maple and huckleberry. Shade

tolerant species are present within the lower or mid-canopy, especially within canopy gaps. There is also minimal coarse woody debris within stands, with what is present consisting of large old-growth stumps and dispersed cull logs remaining from the previous harvest and smaller second-growth diameter competitive mortality trees. The stage of stand development for the harvest areas within this proposal on the stand level scoring using the Van Pelt guide (2007) includes Maturation I, and Maturation II. The adjacent areas conserved in RMZs and WMZ associated with this proposal are similar stand types as the adjacent harvest areas.

Pre-harvest Stand Description:

Unit	Origin Date	Major Timber Species	Type of Harvest
1	1910s-1930s*	Douglas-fir, western hemlock, western redcedar, red alder, bigleaf maple	Variable Retention Harvest
2	1900s-1930s*	Douglas-fir, western hemlock, western redcedar, red alder, bigleaf maple	Variable Retention Harvest
3	1900s-1930s*	Douglas-fir, western hemlock, western redcedar, red alder, bigleaf maple	Variable Retention Harvest

**Origin dates were determined by sampling trees with an increment borer. Additional screening methods used include GIS Combined Origin Year, LiDAR Vegetation Height, and a 1958 orthophoto. Origin years are listed as a range, which reflects the natural regeneration process and that is currently represented in the main canopy cohort.*

Proposal Objectives:

Short Term Objectives

1) **Generate non-tax revenue for the beneficiaries of the underlying trusts through harvest of the existing stand as part of DNR's sustained yield trust obligations and fiduciary requirements as trust managers per RCW 79.10.300-340 and RCW 79.15.**
2) **Protect upland soil productivity and water quality and habitat within the riparian management zones.**
3) **Retain legacy trees within the timber sale for the future stand to maintain biological and structural diversity, preserve native seed source, shade and maintain the productivity of the site and future stand, and protect water quality and wildlife habitat.**
4) **Contribute to conservation areas identified as long-term forest cover through HCP and other regulatory protection and mitigation measures.**
5) **Maintain hydrologic maturity across DNR managed landscapes according to DNR procedure PR 14-004-060.**
6) **Supply sustainably grown timber to local mills and support jobs and economic activity for local economies.**
7) **Establish a new stand of site-appropriate, native conifers through hand planting (supplemented with natural regeneration) and maintain for productive long-term forest management, incorporating site specific prescriptions.**

Long Term Objectives

1) **Actively manage for long-term site productiveness for intergenerational benefit to the trust, primarily through revenue generation for trust beneficiaries through timber stand management. A series of silviculture activities will be scheduled as needed in the sale area as the new stands develops. The primary objective of each treatment is to ensure growth of a healthy, resilient stand of native tree species to create revenue for the trusts.**
2) **Maintain current and historical uses of the site, including preservation of water quantity and quality, active forest management, and public and tribal use.**
3) **Resource protection and conservation through implementation of the HCP and DNR's regulatory and management framework.**
4) **Maintain hydrologic maturity across DNR managed landscapes according to DNR procedure PR 14-004-060.**
5) **Balance trust income, environmental protection, and social and cultural benefits according to the DNR trust land management framework.**

c. *Describe planned road activity. Include information on any rock pits that will be used in this proposal. See associated forest practice application (FPA) for maps and more details.*

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		**1,550**	**<1**	**0**
Reconstruction		**0**		**0**
Maintenance		**117,970**		**0**
Abandonment		**1,550**	**<1**	**0**
Bridge Install/Replace	**0**			**0**
Stream Culvert Install/Replace (fish)	**0**			**0**
Stream Culvert Install/Replace (no fish)	**3**			
Cross-Drain Install/Replace	**8**			

Routine maintenance will occur on roads used throughout the life of this proposal.

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

a. *Legal description:*
Unit 1 is located in sections 22, 23, 26, and 27 of T17N R04W
Unit 2 is located in section 26 of T17N R04W
Unit 3 is located in section 35 of T17N R04W
Upper Lytle Quarry is located in section 24 of T17N R05W

There are two stream crossing replacements located in section 34 of T17N R04W

b. Distance and direction from nearest town:

This proposal is located approximately 15 Miles by road southeast of Elma, Washington

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).

The Upper Chehalis/Cedar Creek WAU has experienced peak flow impacts and include areas of potentially unstable slopes. Within these WAU 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 this WAU appear to be primarily second and third growth stands.

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

Recognizing the climate and carbon benefits of working forests in Washington's Climate Commitment Act (RCW 70A.45.005), the legislature found that Washington should maintain and enhance the state's ability to continue to sequester carbon through natural and working lands and forest products. Further, "Washington's existing forest products sector, including public and private working forests and the harvesting, transportation, and manufacturing sectors that enable working forests to remain on the land and the state to be a global supplier of forest products, is, according to a University of Washington study analyzing the global warming mitigating role of wood products from Washington's private forests, an industrial sector that currently operates as a significant net sequesterer of carbon. This value, which is only provided through the maintenance of an intact and synergistic industrial sector, is an integral component of the state's contribution to the global climate response and efforts to mitigate carbon emissions." RCW 70A.45.090(1)(a).

The legislature also found that the 2019 Intergovernmental Panel on Climate Change (IPCC) report "identifies several measures where sustainable forest management and forest products may be utilized to maintain and enhance carbon sequestration. These include increasing the carbon sequestration potential of forests and forest products by maintaining and expanding the forestland base, reducing emissions from land conversion to non-forest uses, increasing forest resiliency to reduce the risk of carbon releases from disturbances such as wildfire, pest

infestation, and disease, and applying sustainable forest management techniques to maintain or enhance forest carbon stocks and forest carbon sinks, including through the transference of carbon to wood products" (2020 Washington Laws Ch. 120 §1(2)).

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

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

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

The Department of Natural Resources has a multi-species Habitat Conservation Plan (HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service concerning threatened and endangered species and their habitats, which requires the Department to manage landscapes to provide and sustain long-term habitat in exchange for an Incidental Take Permit. This agreement substantially helps the Department to mitigate for cumulative effects related to management activities. The Department follows Forest Practices Rules as applicable to roads and potentially unstable slopes. The Department follows Forest Protections related to fire hazard mitigation.

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

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

This landscape assessment identifies the existing structurally complex stands, and additional suitable stands, to be managed for older-forest targets over time. The identified stands are located in conservation areas and deferred stands unavailable for regeneration harvest. These

stands include areas identified as long-term forest cover under the marbled murrelet long-term conservation strategy, riparian areas, areas conserved under the multispecies conservation strategy, potentially unstable slopes, spotted owl nest patches, old growth, Natural Areas and Natural Resource Conservation Areas, and other conservation areas permanently deferred from regeneration harvest.

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

The landscape assessment demonstrates that while the South Coast HCP Planning Unit does not currently contain 10 to 15 percent older-forest conditions, the structurally complex and other suitable stands designated to be managed for older-forest targets are projected to develop into older-forest structure that meets or exceeds this threshold by 2100 (S. COAST in Table A) through implementation of the HCP and other policies and laws. Stands identified to be managed toward older-forest targets, including currently older-forests and stands projected to develop older-forest structure in the future, are depicted in associated maps within the landscape assessment document for each western Washington HCP planning unit.

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

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

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

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

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

Rule identified landforms, according to the Forest Practices Board Manual, with potential to deliver to public resources have been identified and protected. Several inner gorge areas >70 percent slope have been excluded from the sale located within RMZs. One bedrock hollow was verified within the RMZ around Unit 2 and is excluded from the harvest area. One inner gorge >70 percent slope and one toe of a deep-seated landslide (DSL) >65% slope have been excluded from the sale area with non-tradable leave trees consistent with State Lands Geologist recommendations (See Field Summary Memo and associated maps).

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?
None anticipated with implemented mitigation measures both at the landscape and proposal level.

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/ CEDAR CREEK	26228	24560	1540	14	145

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: **The**

proposal varies from flat terrain to relatively steep slopes. The majority of steep slopes are encompassed in leave tree areas.

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/CEDAR CREEK
WAU Acres:	26228
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 WAU 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
5689	SILT LOAM
5685	SILT LOAM
0657	GRAVELLY SILT LOAM
6638	SILT LOAM
0664	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.*

The unstable slopes review included published landslide inventories as a screening tool. Landslide inventories come from many different projects including published geologic mapping, watershed analyses, landscape planning, landslide hazard zonation, and other case studies and mapping efforts. Other than the Washington Geology Survey landslide inventory, most of these landslide data sources predate lidar availability. A large majority of remotely identified landslides have not been verified in the field and were mapped with various levels of certainty. Dormant and relict deep-seated landslides are included in many databases. Landslide inventories are used as screening tools. Field verification is a necessary step in confirming the absence, presence, and extent of mapped features, as well as their actual level of activity/instability. These datasets are not intended as substitutes for a detailed investigation of potential slope instability by qualified practitioners. Site-specific analysis by a qualified practitioner may result in conclusions that are different from the information available in the screening tools.

Available landslide inventories and other remote screening tools were reviewed for this proposal by slope stability trained foresters and state lands geologists. Potentially unstable, rule identified landforms (RILs) around the harvest area were identified by slope stability trained foresters and a licensed engineering geologist (LEG) and qualified expert (QE) through office and field review in accordance with the Washington State Forest Practices rules. Based on the State Lands LEG and QE and foresters' field reviews, there are potentially unstable landforms defined by Forest Practices as rule-identified landforms (RILs) in the proposed sale area.

There is one deep-seated landslide toe slope > 65% in Unit 2. This slope has been excluded from the sale area with a non-tradable leave tree area using a buffer of 1.5-2 crown widths.

One bedrock hollow was verified within the riparian management zone around Unit 2 and is excluded from the harvest area.

There are inner gorge slopes >70% around the proposed harvest units. All but one of these are captured within riparian management zone buffers and therefore not included in the harvest area. The one inner gorge slope >70% within the boundary of Unit 2 has been excluded from the harvest with a non-tradable leave tree area.

There are four bedrock deep-seated landslides in and around all units. These were interpreted as relict and are not considered rule-identified landforms.

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

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

All potentially unstable slopes and landforms have been excluded from the harvest area by either RMZs or non-tradable leave tree areas. As this sale is planned to be harvested using ground-based methods, there is no need to operate within or suspend cables over any identified RILs.

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 identify potentially unstable slopes and design the harvest units to exclude them from the sale area.**
- **Rule-identified landforms were excluded with RMZs marked by blue paint, pink flagging and white "Timber Sale Boundary" tags, or non-tradable leave tree areas marked by blue paint, pink flagging and yellow "Leave Tree Area" tags.**
- **Stream culverts on haul routes will be replaced as needed with larger culverts to reduce flow impediment.**
- **Cross-drains and ditch-outs will be utilized to minimize the potential for mass wasting and slope failures associated with poor drainage by dispersing water onto stable forest floor.**
- **Skid trails may be water barred post harvesting activities, if necessary to avoid concentrating surface water runoff.**
- **Road construction will be restricted during periods of saturated soil conditions.**
- **Most Type 5 streams and their headwalls have been protected with leave tree clumps, RMZs, or otherwise excluded from the sale area.**

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: **< 1**
Approx. acreage new landings: **0.1 acres**
Fill Source: **Upper Lytle 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.

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 1% of the site constitute existing forest roads and 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.)

- **The no harvest WMZ and RMZs will function to protect streams and the wetland from sediment delivery.**
- **Ditches and culverts will be utilized and placed so as not to concentrate runoff directly above potentially unstable slopes or areas identified as bedrock deep-seated landslides.**
- **Non self-leveling ground-based harvesting will only occur on slopes measuring 45 percent and less, and self-leveling shovels may occur on slopes measuring 55 percent and less. Ground based equipment will be restricted when potential for excessive soil disturbance exists.**
- **New road construction 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.**
- **Seasonal timing restrictions will prohibit road construction during wet weather conditions.**
- **Leave tree clumps were left around the headwalls of most Type 5 streams and seeps; other Type 5 streams will be protected with a 30-foot Equipment Limitation Zone or excluded from the sale area.**
- **Harvested areas will be replanted with native conifer species.**
- **Road construction and harvesting operations may be restricted during saturated soil conditions.**
- **Skid trails are to be water barred post harvesting activities, if necessary.**
- **Drainage control devices such as culverts (including energy dissipaters), cross drains, and waterbars will be utilized to allow for proper drainage.**

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.
Minor amounts of engine exhaust from logging and road construction equipment and dust from vehicle traffic on roads will be emitted during proposed activities. If landing debris is burned after harvest is completed, smoke will be generated. There will be no emissions once the proposal is complete.

Harvest operations and the removal of timber will result in minor amounts of CO_2 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:
Sherman Creek, Monroe Creek, 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)
Sherman Creek	**3**	**1**	**189**
Unnamed Stream	**3**	**2**	**189**
Unnamed Stream	**3**	**5**	**192**
Unnamed Stream	**3**	**3**	**178**
Unnamed Stream	**4**	**12**	**Minimum 100**
Wetland	**0.25 acre to <1 acre**	**1**	**Minimum 100**

c. List any additional RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures and wind buffers.
RMZs and the WMZ for this proposal are designed in accordance with the Department's HCP procedures and stream types identified by the stream's physical characteristics per the water typing system for Forested State Trust HCP lands. All RMZs are measured horizontally from the edge of the 100-year floodplain or CMZ. The WMZ is measured horizontally from the edge of the wetland.

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

Local knowledge of prevailing wind direction determined no wind buffers were necessary.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

☐ *No*
☒ *Yes (See RMZ/WMZ table above and timber sale maps which are available on the DNR website: http://www.dnr.wa.gov/sepa. Timber sale maps are also available at the DNR region office.)*

Description (include culverts):
Harvest will occur within 200 feet of streams, but beyond the buffer distances listed above. Type 5 streams and wetlands under 0.25 acres in size are protected within RMZs, WMZ, leave tree clumps, or otherwise excluded from the harvest units.

RMZs are no-harvest riparian buffers. Trees within RMZs may be cut for safety or operational needs, any trees cut will be left in placed adding to down woody debris within riparian zones.

Buffers on all streams and wetlands in the vicinity of this proposal meet the requirements of the DNR Habitat Conservation Plan.

A total of 3 stream culverts will be replaced with this proposal. They will be located on Type 4 streams on the D-1500 road at STA 65+00; on the D-3200 road at STA 64+00; and on the D-3230 at STA 9+00.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.
None.

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

☒ *No* ☐ *Yes, description:*

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

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

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
It is not likely that any waste materials will be discharged into the surface water(s). However, minor amounts of oil, fuel, and other lubricants may inadvertently be discharged to the adjacent surface water(s) as a result of heavy equipment use or mechanical failure. No lubricants will be disposed of on-site.

7) Is there a potential for eroded material to enter surface water as a result of the proposal considering the protection measures incorporated into the proposal's design?

☐ *No* ☒ *Yes, describe:*
Soils and terrain susceptible to surface erosion are generally located on slopes steeper than 70%. The potential for eroded material to enter surface water is unlikely 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/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 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.

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 several inner gorge areas downstream and downslope from the proposed activity. Based on the protection measures outlined in B.1.d.2, B.1.h, and B.3.a.2., 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:*

There are several inner gorge areas downstream and downslope from the proposed activity. Based on the protection measures outlined in B.1.d.2, B.1.h, and B.3.a.2., no measurable impacts are anticipated.

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. and B.1.d.2, and B.3.a.2.

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 several inner gorge areas downstream and downslope from the proposed activity. Based on the protection measures outlined in B.1.d.2, B.1.h, and B.3.a.2., 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 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.

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: **Cascara**
☒ 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:* **Oregongrape, vine maple**
☒ *Ferns:* **Sword fern, deer fern**
☐ Grass
☐ Pasture
☐ Crop or Grain
☐ *Orchards* ☐ *Vineyard* ☐ *Other Permanent Crops*

☒ Wet Soil Plants:
☐ Bullrush ☐ Buttercup ☐ Cattail ☒ *Devil's Club* ☒ Skunk Cabbage
☒ Other: **Pacific water parsley, piggyback plant**
☐ 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 an approximately 80-100 year old* second growth conifer stand which makes up RMZ buffers. To the east and west are similar stands of approximately 100 year old* conifers. The stand to the east contains a small section of RMZ buffer. To the south is a 21 year old conifer planted stand which was part of the Last Trip timber sale.

Unit 2: To the north is a stand of approximately 100-year-old* conifers (this is the same stand that is east of Unit 1). Directly to the east is a 80-100 year old* RMZ buffer. Further east across the type-3 stream is a 23-year-old conifer planted stand that was a part of the Wavey timber sale. To the west across the D-1500 road is another Wavey unit that is now a 24-year-old conifer planted stand. To the South is a 38-year-old conifer planted stand which was part of the Lower Basin timber sale.

Unit 3: To the north is a 12-year-old planted stand of conifers which was part of the Touch timber sale. To the east is a 25-year-old planted stand of conifers which was part of the Four Spikes timber sale. To the south is an approximately 70–90-year-old* stand of conifers that make up an RMZ buffer. To the west is a 36-year-old planted stand of conifers which was part of the RU timber sale.

****The origin dates were obtained from DNR's RS-FRIS GIS "Combined Origin Year" layer.***

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

None observed and none found in DNR's database and DNR's Special Concerns Report, which includes data from Washington Department of Ecology, Washington Fish and Wildlife and Washington Natural Heritage Program.

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

The HCP strategy for riparian conservation (in concert with other conservation areas throughout the HCP Planning Unit) will contribute to the retention and development of older forest, while the leave tree procedure will enhance the structural diversity of forests across the landscape over time. Leave trees were selected in accordance with HCP and agency directives concerning stand representation, wildlife potential, proximity, and distribution. Both the leave tree design and silvicultural prescriptions have been tailored to the unique circumstances of each site to capture microsite variation and ensure enduring species diversity.

Leave trees are located across the harvest area at rate of eight trees per acre in each unit according to DNR's procedure PR14-006-090. Trees were mostly left in clumps. A combination of Douglas-fir, western hemlock, western redcedar and red alder left for green tree retention and snag recruitment that will provide a legacy component of the current stand. 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. Many retention tree clumps provide an additional benefit to protect potentially unstable slopes or extra riparian protection. All trees with a diameter at breast height (DBH) of 60" or greater were retained as leave trees. See B.1.h. and B.1.d.2, and B.3.a.2 for additional rationale for leave tree location. This type of leave tree pattern is conducive to a safe harvest operation and allows the distribution of wildlife trees throughout the proposal.

Adjacent RMZ and WMZ stands also contribute to retention of small and large snags, downed woody debris, large diameter trees and trees with wildlife value. Within some of the larger leave tree clumps, there are some components of older large down woody debris within the undisturbed vegetation.

Following harvest, the variable retention harvest units will be replanted with native conifer species that will be supplemented by natural regeneration which is expected to occur as a result of the conservation areas in and around the harvest units. Species, stocking type, and density for plantings are prescribed to be suitable for the unique site conditions and to treat pathogens present in much of the harvest units. After planting, the need for noxious weed treatments will be assessed and occur if necessary.

e. List all noxious weeds and invasive species known to be on or near the site.
Himalayan blackberry, oxeye daisy, foxglove, St. John's wort, tansy ragwort, thistle, and Scotch broom are known noxious or invasive species found onsite. A

comprehensive list of plants found throughout Grays Harbor and Thurston Counties can be found on the county's website.

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: woodpeckers
mammals:
☒ bear ☒ beaver ☒ *coyote* ☒ *cougar* ☒ deer ☐ elk
☒ other: **Douglas squirrel, mountain beaver, Townsend's chipmunk, bobcat, northern flying squirrel**
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 DNR's database and DNR's Special Concerns Report, which includes data from Washington Fish and Wildlife.

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. While migrating through Pacific Northwest forests, many Neotropical migratory birds are closely associated with riparian areas, snags, and structurally unique trees. Riparian areas and special habitats are protected through implementation of the Department's Habitat Conservation Plan. No impacts are anticipated as a result of this proposal.

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

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 3 and 4 streams. 100 foot no-harvest buffers on WMZ for the wetland great than ¼ acre in size but less than 1 acre.**

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

e. List any invasive animal species known to be on or near the site.
Invasive animal species known to be in the geographic area include:

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

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

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.
Petroleum fuel (diesel or gasoline) will be used for heavy equipment during active road building, timber harvest operations, and for transportation. No energy sources will be needed following project completion.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:
None.

7. Environmental health

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

If so, describe.

1) Describe any known or possible contamination at the site from present or past uses.
Minimal hazards incident to operation of heavy machinery such as the risk of fire or small amounts of oil and other lubricants may be accidently discharged as a result of heavy equipment use.

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:

The land surrounding this proposal is managed for timber production by the DNR.

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?
Not applicable.

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 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 planted stand after seedlings are planted and the planted trees continue to grow.

c. Proposed measures to reduce or control aesthetic impacts, if any:
Clumps of mature leave trees were scattered across all units and mature stands will remain around streams and wetlands. This will 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?
Recreation activities in the immediate vicinity include designated recreation trails (Fuzzy Top and Lost Valley), target shooting, hunting, berry picking, and sightseeing. The closest recreation trail is 1,000 feet away from the unit boundary. Minimal impacts to recreation are expected. Hauling traffic will likely be the most significant impact.

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 recreationalists of logging traffic. Trail closure signs will be posted during active operations. There are no trails inside harvest units that will be impacted.

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.

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.
Historical maps and aerial images were reviewed as well as the Department of Archaeology and Historic Preservation's database for previously recorded sites. A DNR cultural resource technician and archaeologist were consulted. Field reconnaissance was also conducted by an Agency archaeologist to investigate potential resources.

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.
Timber harvest units were designed to avoid entering recorded archaeological sites.

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.
Highway 12 is used to access the forest roads, which lead to 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. The nearest transit spot is approximately 10-14 miles away in Oakville or 15 miles away in Elma.

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.
If a fire occurs during or after operations, fire protection response would be from DNR and/or rural fire districts. Medical response by emergency services could be necessary if injury or accidents occur to personnel during active operations.

b. Proposed measures to reduce or control direct impacts on public services, if any.
None.

16. **Utilities**

a. Check utilities currently available at the site:
☐ electricity ☐ natural gas ☐ water ☐ refuse service ☐ telephone ☐ sanitary sewer
☐ septic system ☐ other**:**

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.
None.

C. SIGNATURE

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

Signature: Brandon Mohler

Name of signee Brandon Mohler

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

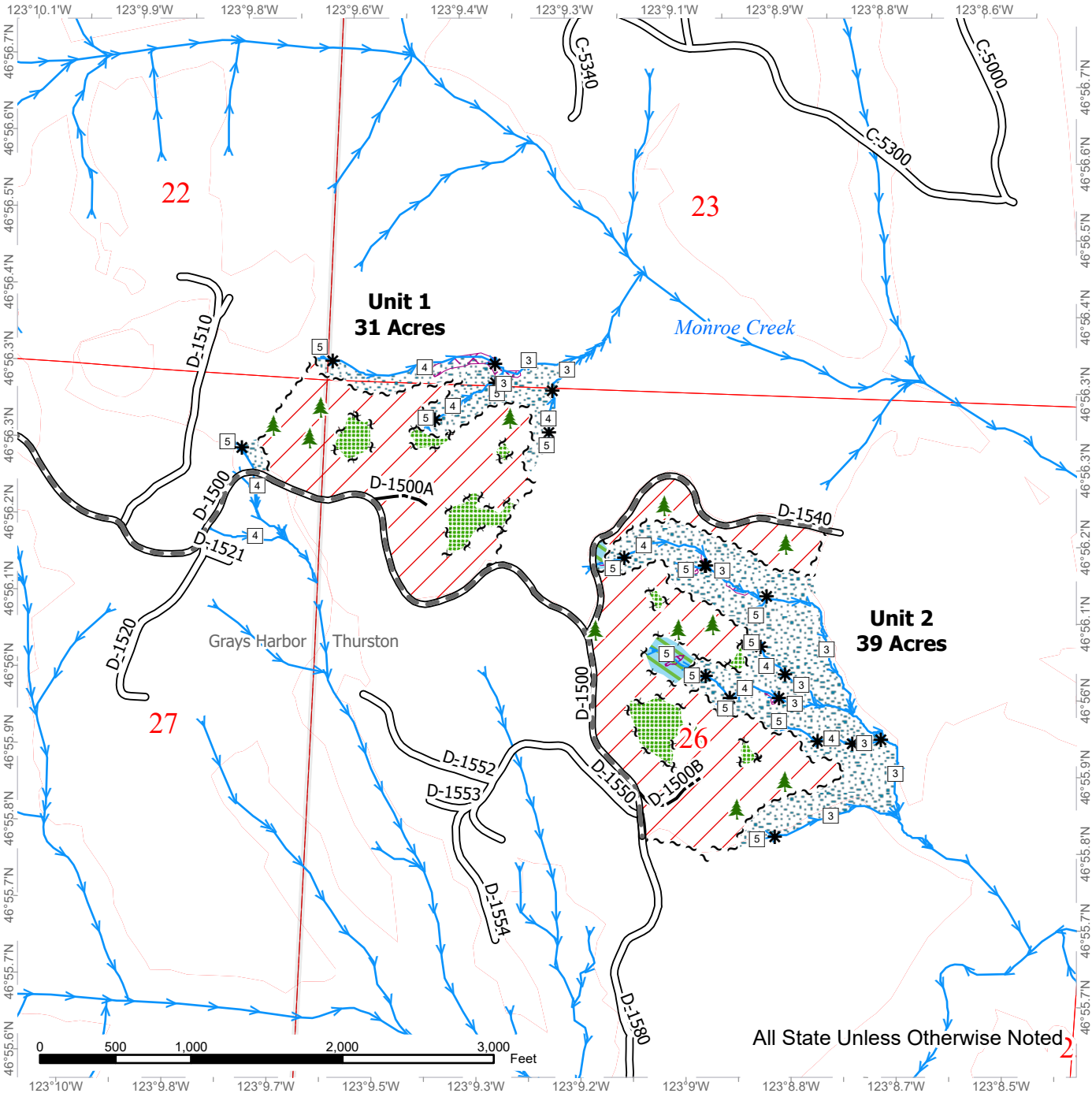
Date Submitted: 11/6/2024

A M 11/4/2024

TIMBER SALE MAP

SALE NAME: RAD AGHAST
AGREEMENT #: 30-105204
TOWNSHIP(S): T17R4W
TRUST(S): Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor, Thurston
ELEVATION RGE: 520-1400



- Sale Area
- Tailhold Restriction Area
- Non-Tradeable Leave Tree Area
- Leave Tree Area
- Riparian Mgt Zone
- County Boundary
- Existing Roads
- Required Pre-Haul Maintenance
- Optional Construction
- Sale Boundary Tags
- Leave Tree Tags
- Streams
- Stream Type
- Stream Type Break
- Leave Tree Area <1/4-acre

N

Prepared By: jgeh490

Modification Date: bdie490 7/19/2024

TIMBER SALE MAP

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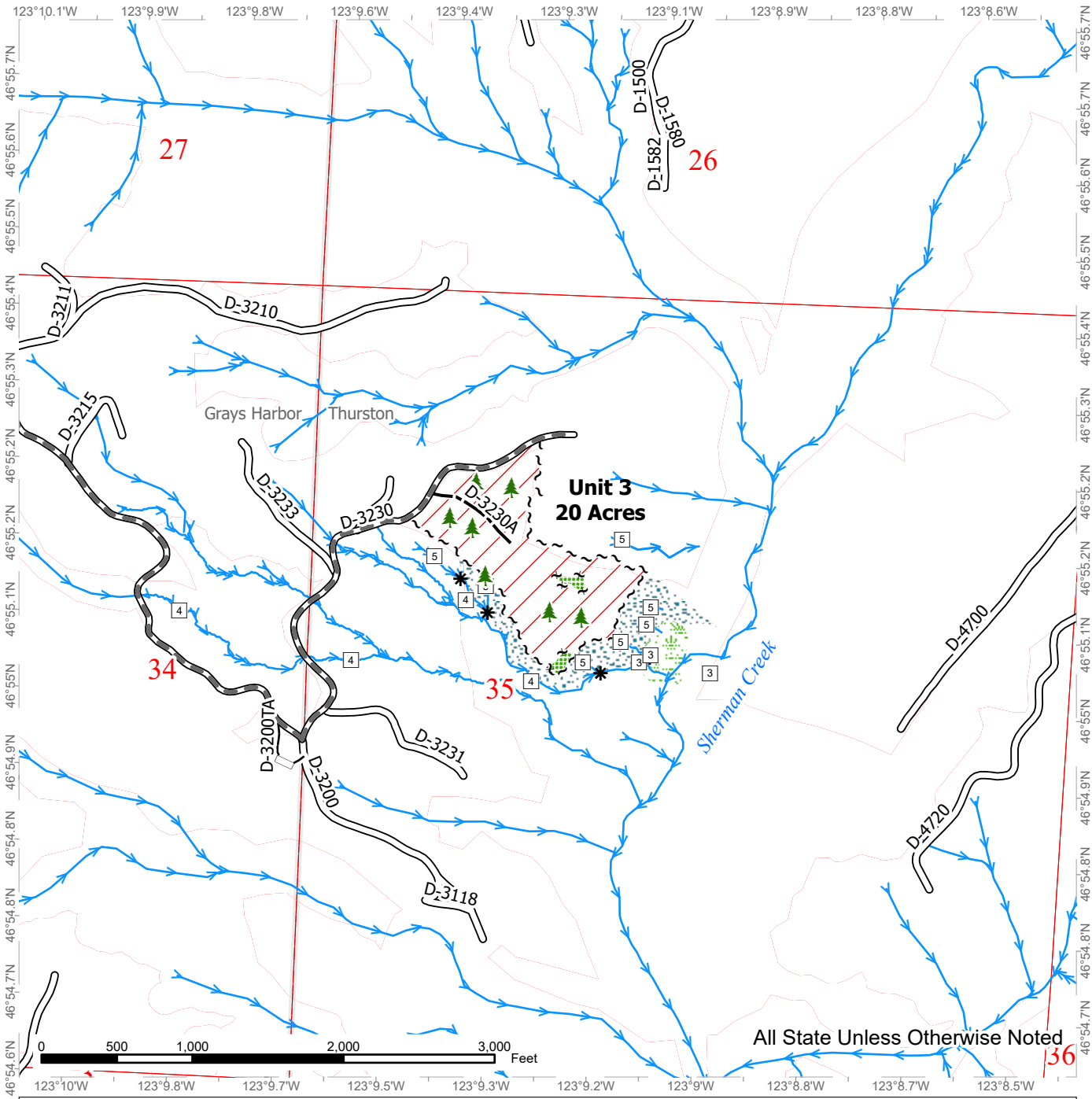

All State Unless Otherwise Noted

- Sale Area
- Wetland Mgt Zone
- Leave Tree Area
- Riparian Mgt Zone
- County Boundary
- Existing Roads
- Required Pre-Haul Maintenance
- Optional Construction
- Optional Reconstruction
- Sale Boundary Tags
- Leave Tree Tags
- Streams
- Stream Type
- Stream Type Break
- Leave Tree Area <1/4-acre

N

Prepared By: jgeh490

Modification Date: bdie490 7/19/2024

DRIVING MAP

SALE NAME: RAD AGHAST
AGREEMENT#: 30-105204
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TRUST(S): Forest Board Repayment (42), State Forest Purchase (2)

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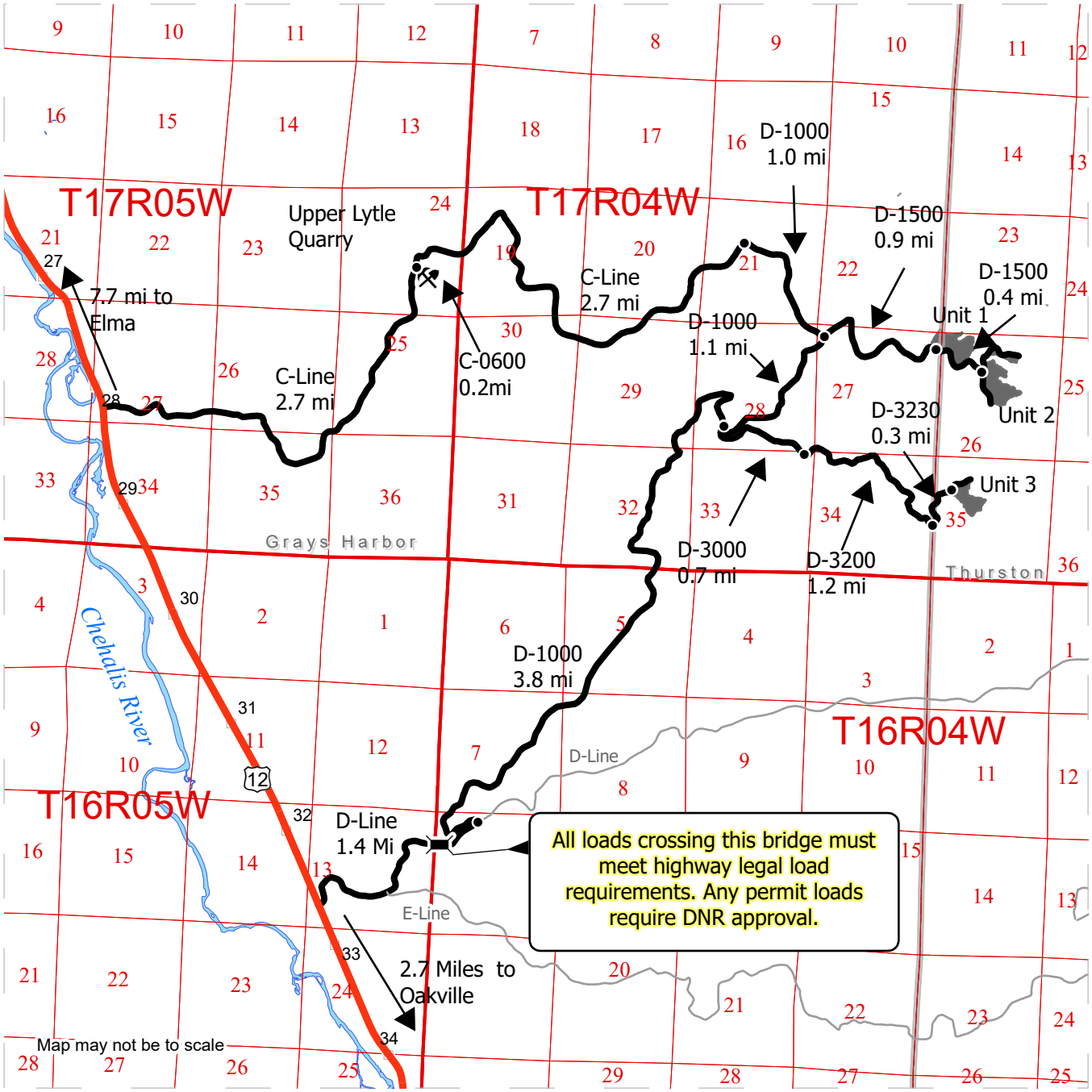

- Timber Sale Unit
- Haul Route
- Other Road
- Bridge
- Distance Indicator
- Upper Lytle Quarry
- Highway 12
- Milepost Markers

DRIVING DIRECTIONS:

Units 1 & 2: From State Rt 12 mile marker 28, turn onto C-line. Continue 5.4 miles. Turn right onto the D-1000. Continue 1 mile. Turn left onto the D-1500. Continue 0.9 miles to Unit 1. Continue 0.4 miles to Unit 2.

Unit 3: From the intersection of D-1000 and D-1500 roads, continue on the D-1000 for 1.1 miles. Turn left onto the D-3000. Continue 0.7 miles. Turn left onto the D-3200. Continue for 1.2 miles. Turn left onto the D-3230. Continue 0.3 miles to Unit 3.

Upper Lytle Quarry: From State Rt 12 mile marker 28, turn left onto the C-line. Continue 2.7 miles. Turn right on the C-0600. Continue 0.2 miles to Upper Lytle Quarry.

N

Prepared By: jgeh490

Modification Date: amac490 8/15/2024