

*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:* **MISTY**  
*Agreement #* **30-103587**

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

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

**950 Farman Ave. N.**  
**Enumclaw, WA 98022**  
**Contact: Audrey Mainwaring**  
**360-825-1631**

4. Date checklist prepared: **02/26/2024**

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

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

a. *Auction Date:* **02/25/2025**

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 for Units 1 and 2 includes an herbicide application, which may be used to control noxious weeds, help planted trees withstand the effects of drought, and to ensure that planting can be achieved at acceptable stocking levels to exceed Forest Practices Standards following harvest. Slash piles may be burned during the fall before planting. Units 3 and 4 consists of daylighting of existing forest roads that may include roadside herbicide application.**

b. *Regeneration Method:*

**Units 1 and 2 will be planted at a density that meets or exceeds Forest Practices standards per WAC 222-34-010. Plantings will be supplemented by natural regeneration from adjacent conservation areas and leave trees within harvest units. Following planting, DNR will conduct surveys and additional reforestation actions as necessary based on survey results to ensure reforestation standards are met.**

c. *Vegetation Management:*

**Possible treatments for Units 1 and 2 include an herbicide application that could occur following harvest. Treatments will be based on vegetative competition and will ensure a free-**

to-grow status. Pre-commercial thinning needs will be assessed at approximately 7 years of age.

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.**

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**

*temp*

*sediment*

*completed TMDL (total maximum daily load)*

*Landscape plan:*

*Watershed analysis:*

*Interdisciplinary team (ID Team) report:*

**Road design plan: Road design and culvert removal design planned by Jacob Gross, included in the Road Plan, dated 10/31/2023**

*Wildlife report:*

*Geotechnical report:*

**Other specialist report(s): Geologic Field Summary Memo by Susie Wishart, State Lands Licensed Engineering Geologist, dated 10/31/2023, Old Growth Assessment by Sam Lake, dated 8/24/2023**

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

**Rock pit plan: Rock pit plan designed by Jacob Gross, included in the Road Plan, dated 10/31/2023**

*Other:*

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

**• DNR Policies and Implementation**

- **Policy for Sustainable Forests (PSF; 2006a)**
- **Final Environmental Impact Statement on the Policy for Sustainable Forests (2006b)**
- **Alternatives for the Establishment of a Sustainable Harvest Level for Forested State Trust Lands in Western Washington Final Environmental Impact Statement (2019)**
- **Landscape Assessment to Identify and Manage Structurally Complex Stands to Meet Older-Forest Targets in Western Washington, May 2024 (Revised September 2024)**
- **Identifying Mature and Old Forests in western Washington by Robert Van Pelt (2007)**
- **Silvicultural Rotational Prescriptions**
- **Land Resource Manager Reports, including Special Concerns Report, and associated maps**

**• DNR Trust Lands Habitat Conservation Plan and Supplemental Information**

- **Final Habitat Conservation Plan (HCP; 1997)**

- **Final (Merged) Environmental Impact Statement for the Habitat Conservation Plan (1998)**
- **Long-Term Conservation Strategy for the Marbled Murrelet Final Environmental Impact Statement (2019)**
- **Final State Trust Lands Habitat Conservation Plan Amendment: Marbled Murrelet Long-term Conservation Strategy**
- **Riparian Forest Restoration Strategy (RFRS; 2006)**
- **USFWS letter to DNR, signed 10/27/2021 clarifying projections of forest types and stand structural conditions on Washington DNR State Trust Lands**
- **Spotted Owl Habitat GIS Layer**
- **Marbled Murrelet Habitat GIS Layer**
- **WAU Rain-On-Snow GIS Layer**
- **Biological Opinion on the HCP, USFWS; January 27, 1997**
- **Biological Opinion on the HCP, NMFS; January 29, 1997**
- **Biological Opinion on the HCP Marbled Murrelet Long-term Conservation Strategy Amendment, USFWS; November 7, 2019**
- **Reinitiated Biological Opinion on the Incidental Take Permit (PRT-812521), USFWS; March 21, 2024**
- **Forest Practices Regulations and Compliance**
  - **Forest Practices Rules (Title 222 WAC)**
  - **Forest Practices Board Manual**
  - **Forest Practices Activity Maps**
  - **Trust Lands HCP Addendum and Checklist**
- **Supporting Data for Unstable Slopes Review**
  - **State Lands Geologist Remote Review (SLGRR)**
  - **Lidar Data and Derivatives**
  - **Draft Landform Remote Identification Model (LRIM) screening tool**
  - **Published Landslide Inventories**
  - **Historic Aerial Photographs**
  - **Published Geologic Mapping**
- **Supporting Data for Cultural Resources Review**
  - **Historical Aerial Photographs**
  - **USGS and GLO maps**
  - **Department of Archaeology and Historical Preservation database for architectural and archaeological resources and reports (WISAARD)**
- **Additional Supporting Data for Policy Compliance**
  - **Weighted Old Growth Habitat Index (WOGHI)**
  - **State Soil Survey**
  - **DNR inventory layers, including RS\_FRIS**
  - **Stand Origin Assessment form for Misty Timber Sale**
  - **Stand Development Stage Assessment form for Misty Timber Sale**
  - **FY'24 Timber Sales Fish and Wildlife Remote Review for Littlerock Unit, dated April 11, 2022 by wildlife biologist Alan Mainwaring**
- **Sustainable Forestry Initiative certification standards and audit reports**
- **Reviews by and communications with State Lands Geologist, State Lands Archaeologist, and Region Biologist**

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

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

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

- FPA # **2423850***       *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 Misty Timber Sale proposal encompasses approximately 180 acres of forested land spanning the Gibson Creek and Upper Chehalis/Cedar Creek Watershed Administrative Units on DNR managed trust land within the Capitol State Forest. The proposal area was evaluated by the unit forester, region biologist, archaeologist, geologist, engineer, old-growth designee. 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 116 net acres of timber harvest and 61 acres (34% of the overall proposal area) designated for conservation and leave tree areas to protect streams, wetlands, potentially unstable slopes, culturally sensitive areas, RMZs and wildlife trees and will contribute to older-forests over time.**

**The harvest area consists of two variable retention harvest (VRH) units, and two associated daylighting units harvesting approximately 5,499 MBF of merchantable timber.**

**Net Unit Acres**

**Unit 1 (VRH) 91**

**Unit 2 (VRH) 21**

**Unit 3 (Daylighting) 3.8**

**Unit 4 (Daylighting) 0.2**

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

the road plan for the Misty Timber Sale. Road abandonment includes removal of a fish barrier and restore access to upstream fish habitat.

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:***

The stand within Unit 1 is comprised predominately of naturally regenerated Douglas-fir with western hemlock, western red cedar, red alder and big leaf maple present to a lesser component in the overstory. The understory vegetation is sparse, consisting primarily of sword fern, Oregon grape, salal, vine maple and huckleberry. Multiple stand origins created different cohorts of trees within the stand. The size of the dominant Douglas-fir varies throughout the unit, with the northern and southern ends containing larger Douglas-fir, which is not present in the interior. There is some presence of shade tolerant species within the lower or mid-canopy. There is minimal structure within stands with what is presently consisting of large cut stumps, and dispersed cull logs remaining from the previous harvest and smaller second-growth diameter competitive mortality trees. Unit 2 is a planted stand consisting primarily of Douglas-fir. The understory is comprised predominantly of sword fern. Some down woody debris from competition-based mortality is present throughout the stand. 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 II and Biomass Accumulation/Competitive Exclusion for Units 1 and 2, respectively. The adjacent areas conserved in RMZs associated with this proposal are similar stand types as the adjacent harvest areas.

Unit	Origin Date	Major Timber Species	Type of Harvest
1	Post- 1870, 1920, 1999	Douglas-fir, bigleaf maple, western hemlock, red alder, western red cedar.	Variable retention harvest
2	Post- 1983, 1997	Douglas-fir, red alder	Variable retention harvest
3	1986	Douglas-fir, western hemlock, red alder, western red cedar, bigleaf maple.	Daylighting
4	1998	Douglas-fir, western hemlock, red alder, western red cedar, bigleaf maple.	Daylighting

\*The origin dates were obtained from DNR’s RS-FRIS GIS “Combined Origin Year” layer and tree core data gathered from forester field sampling.

***Overall 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) Supply sustainably grown timber to local mills and support jobs and economic activity for local economies.
- 6) Establish a new stand of site-appropriate, native conifers through hand planting (supplemented with natural regeneration) and maintain for long-term forest management.

**Long Term Objectives**

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

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

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		1,799	0.6	0
Reconstruction		0		0
Maintenance		80,395		0
Abandonment		2,419	0.6	1
Bridge Install/Replace	0			0
Stream Culvert Install/Replace (fish)	0			0
Stream Culvert Install/Replace (no fish)	1			
Cross-Drain Install/Replace	6			

**Routine maintenance will occur on roads used throughout the life 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 R5-0W S1	Harvest
T16-0N R5-0W S2	Harvest
T16-0N R5-0W S11	Harvest
T16-0N R5-0W S12	Harvest, and Fish Barrier Culvert Removal
T17-0N R4-0W S15	Low Bank Quarry
T17-0N R5-0W S24	Upper Lytle Quarry

b. *Distance and direction from nearest town:*

The harvest Proposal is located approximately 6 miles north of Oakville. Low Bank Quarry is 14 miles north of Oakville.

The route from Oakville to the units is via Highway 12 to the north, to the DC-Line. Thereon east to DC-2100 Road. To Low Bank Quarry you continue the DC-Line north to the C-2700 Road, then head east on the C-Line. From the junction of C-Line and C-2700 Road head west to Upper Lytle Quarry.

13. *Cumulative Effects*

a. *Briefly describe any known environmental concerns that exist regarding elements of the environment in the associated WAU(s). (See WAC 197-11-444 for what is considered an element of the environment).*

Upper Chehalis/Cedar Creek and Gibson 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 WAUs 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 CO<sub>2</sub>; 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).

<b>ADJUSTED QUERY OUTPUT (WITH PLOT DISCOUNT &amp; DISTURBANCE FACTOR)</b>											
<b>HCP Planning Unit</b>	<b>Year</b>										
	<b>2021</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>	<b>2060</b>	<b>2070</b>	<b>2080</b>	<b>2090</b>	<b>2100</b>	<b>2110</b>	<b>2120</b>
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 Misty 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 gorges, one deep seated landslide toe >65%, and one bedrock hollow were identified and excluded from the sale area or protected by a non-tradeable leave tree area as recommended by the State Lands Engineering Geologist.**

**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.**

- d. Based on the answers in questions A-13-a through A-13-c, is it likely potential impacts from this proposal could contribute to any environmental concerns listed in question A-13-a?*

**No, 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
GIBSON CREEK	12264	7589	898	0	63
UPPER CHEHALIS/ CEDAR CREEK	26228	24560	1669	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:

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

<b>WAU:</b>	UPPER CHEHALIS/CEDAR CREEK
<b>WAU Acres:</b>	26228
<b>Elevation Range:</b>	35 - 2659 ft.
<b>Mean Elevation:</b>	927 ft.
<b>Average Precipitation:</b>	54 in./year
<b>Primary Forest Vegetation Zone:</b>	Western Hemlock
<b>WAU:</b>	GIBSON CREEK
<b>WAU Acres:</b>	12264
<b>Elevation Range:</b>	25 - 1744 ft.
<b>Mean Elevation:</b>	457 ft.
<b>Average Precipitation:</b>	50 in./year
<b>Primary Forest Vegetation Zone:</b>	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)?  
**93%**
- 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
0645	SILT LOAM
0644	SILT LOAM
7385	SILT LOAM
0646	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 screening tools. Landslide inventories come from many different projects including published geologic mapping, watershed analyses, landscape planning, landslide hazard zonation, and other case studies and mapping efforts. Other than the Washington Geology Survey landslide inventory, most of these landslide data sources predate lidar availability. A large majority of remotely identified landslides have not been verified in the field and were mapped with various levels of certainty. Dormant and relict deep-seated landslides are included in many databases. Field verification is a necessary step in confirming the absence, presence, and extent of mapped features, as well as their actual level of activity/instability. These datasets are not intended as substitutes for a detailed investigation of potential slope instability by slope stability trained field staff. Available landslide inventories and other remote screening tools were reviewed for this proposal by foresters and state lands geologists. Site-specific analysis may result in conclusions that are different from the information available in the screening tools.**

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

A DNR State Lands Licensed Engineering Geologist (LEG) remotely reviewed all units of the sale utilizing LiDAR, orthophotos, and other datasets available in the DNR GIS database. A field review was conducted in Units 1, 2, 3 and 4 by a State Lands Forester. A field review was also conducted in Units 1 and 2 by the State Lands LEG to further evaluate the presence of potentially unstable slopes.

**Unit 1-** Seven inner gorge areas were identified in or around the unit. One deep-seated landslide toe >65% was identified outside the harvest unit. Additionally, within Unit 1 there was a bedrock hollow identified. All potentially unstable slopes are excluded from the harvest proposal or are protected by a non-tradeable leave tree clump.

**Unit 2-** Five inner gorge areas were identified, all were excluded from the harvest and are located within no-harvest RMZs.

**Unit 3** contained no potentially unstable slopes or landforms in or around the unit.

**Unit 4** contained no potentially unstable slopes or landforms in or around the unit.

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

No  Yes, describe the proposed activities:

**Suspending cables may occur over the toe of a deep-seated landslide with slopes >65%, a bedrock hollow, or inner gorges.**

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 and landforms that were interpreted as having potential to adversely impact public resources or public safety, were excluded from the harvest areas.**
- **Rule-identified landforms with potential to deliver sediment were excluded from harvest by the sale boundary or 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.**
- **No new road construction will occur on potentially unstable slopes.**
- **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 the stable forest floor.**
- **Roads will not be constructed during saturated soil conditions.**
- **Most Type 5 streams and their headwalls have been protected with leave tree clumps.**
- **Skid trails may be water barred post-harvest activities, if necessary, to avoid concentrating surface water runoff.**

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

*Approx. acreage new roads: 0.6*

*Approx. acreage new landings: <1*

*Fill Source: Low Bank Quarry, Upper Lytle Quarry*

- 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):*  
**Approximately <1% of the site will remain as gravel roads.**
- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: *(Include protection measures for minimizing compaction or rutting.)*
- **There is no harvest within RMZs.**
  - **Non-self-leveling ground-based harvesting may only be utilized on slopes measuring 45 percent and less, and self-leveling shovels may be utilized on slopes measuring 65 percent and less. Ground based equipment will be suspended when potential for excessive soil disturbance, such as compaction or rutting, exists.**
  - **Road work, culvert replacement and culvert removal were designed to protect streams and wetlands from sediment delivery. This includes increased seasonal restrictions on culvert removal, layering straw and revegetating exposed soil, and armoring of catch basins and headwalls.**
  - **Roads will be crowned, ditched and cross-drained, and existing cross-drains will be maintained.**
  - **Leave tree clumps were left around the majority of Type 5 streams and wetlands less than 0.25 acre.**
  - **Units 1 and 2 will be replanted with a native conifer tree species.**
  - **Road construction and harvesting operations are restricted during saturated soil conditions.**
  - **Drainage control devices such as rolling drain dips, culverts (including energy dissipaters), cross drains, and waterbars will be utilized to allow for proper drainage.**
  - **Skid trails may be water barred post-harvest activities, if necessary, to avoid concentrating surface water runoff.**
  - **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.**

## 2. Air

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

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

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

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

**Carbon dioxide emissions associated with harvested wood products are analyzed in Alternatives for the Establishment of a Sustainable Harvest Level Final Environmental Impact Statement (2019) and the Long-Term Conservation Strategy for the Marbled Murrelet Final Environmental Impact Statement (2019).**

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:  
**Within three years following harvest, the project area will be reforested with native tree species at a stocking level higher than existed prior to harvest. Tree planting, along with natural seeding, will result in regeneration of the forest stand, initiating carbon sequestration through forest stand growth. DNR will conduct seedling survival surveys at the project site following planting to assure survival of the next stand to meet regulatory standards (RCW 76.09.070; WAC 222-34-010) and protect the value of this working forest for future generations.**

### 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:

**Gibson Creek, Cedar Creek, Chehalis River, and Grays Harbor.**



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)
Stream	3	1	195
Stream	3	9	192
Stream	4	8	Minimum 100

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

**Local knowledge of prevailing wind direction and observation of standing trees in RMZs in recently harvested units determined no wind buffers were necessary.**

**The streams within the vicinity of the proposal were identified during the initial field reconnaissance. Stream typing was determined based on physical criteria per the water typing system for Forested State Trust Lands and/or electrofishing protocol survey. RMZs for this proposal are designed in accordance with the Department’s HCP procedures. All RMZs are measured horizontally from the edge of the 100-year floodplain or from the outer extent of the wetland.**

**During road construction organic debris will not be wasted within 100 feet of streams, except where it is placed within the existing road prism as called for in the road plan.**

- 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 may occur within 200 feet, but beyond the buffer distances listed above, of streams. Cables will be suspended over streams for yarding operations, but no logging will occur over streams with the exceptions 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. Forested wetlands less than 0.25 acre in size are protected within RMZs or leave tree clumps.**

**Work will be done within a Type 3 stream to remove an undersized culvert and return the stream grade to its natural flow. This could include damming or diverting the water temporarily. This work will be seasonally restricted to minimize potential for resource impacts and sediment delivery.**

**An undersized culvert on a Type 4 crossing will be replaced with a 36”x60’ culvert.**

**This could include damming or diverting the water temporarily. Water will be restored as close to its natural flow as possible.**

- 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.  
**Work will be done within a Type 3 stream to remove an undersized culvert. Work will also be done within a Type 4 stream to install a larger culvert. This will include the removal of up to 500 cubic yards. Fill from Upper Lytle Quarry or Low Bank Quarry will be used.**
- 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 of the stream water may be necessary during culvert 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:*  
**An undersized culvert will be removed from a Type 3 stream on the DC-2100. An undersized culvert will be replaced by a 36"x60' culvert on the DC-2120.**
- 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/CEDAR CREEK = 5.1 (mi./sq. mi.)  
GIBSON CREEK = 4.3 (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 WAUs 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 possible 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 is a private surface water intake downstream (approximately 3 miles west) from the proposal. There are also areas of potential slope instability downslope of the proposed activity.**

*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.*

**This proposal limits harvest unit size and proximity to other recent harvests, retains hydrologic mature thresholds in sub-basins per DNR procedure PR14-004-060, minimizes the extent of the road network, incorporates road drainage disconnected from stream networks, and implements no-entry riparian buffers that exceed Forest Practices minimum requirements, all which have mitigating effects on the potential for this proposal to increase peak flows that could impact areas downstream or downslope of the proposal area. DNR staff will monitor roads, streams, and harvest area throughout the project. See also B.1.d.2 and 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 is a private surface water intake downstream (approximately 3 miles west) from the proposal. There are also areas of potential slope instability downslope of the proposed activity.**

*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, cascara, Oregon ash**

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: **Mock azalea, vine maple, Oregon grape, oceanspray.**

Ferns: **Sword fern, deer fern, maidenhair fern, lady fern, licorice 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, snakewort, piggyback, golden saxifrage, marsh violet**

Water plants:

Eelgrass  Milfoil  Water Lily

Other:

Other types of vegetation: **Rattlesnake plantain, Oxalis**

*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:**

**The northern portion of Unit 1 borders are Type 3 and 4 RMZs consisting of a 24-year-old Douglas-fir stand and a stand similar to the harvest unit with an approximate age of 103. To the northeast there is a 35-year-old Douglas-fir stand. On the east side there is a stand similar to Unit 1 with an approximate age of 103. Below this stand, still on the eastside is a 30-year-old Douglas-fir stand. On the southeast side there is a 16-year-old Douglas-fir stand. To the south of Unit 1 there is a 30-year-old Douglas-fir stand. The southwest side is a Type 3 and 4 RMZ with a similar stand composition to the harvest unit with an approximate age of 103. The west side there is a 25-year-old Douglas-fir stand.**

**Unit 2:**

**The northern border of Unit 2 is like the harvest unit with a Douglas-fir stand with an age of 40 years. To the east there is a 26-year-old Douglas-fir stand. To the south and west there is an RMZ consisting of timber like the harvest unit with ages of 26 and 40.**

**Unit 3:**

**The north side of this unit is 25-year-old Douglas-fir stand. The south side is a 37-year-old Douglas-fir stand. On the west side, a small portion of this unit is bordered by a 24-year-old Douglas-fir stand.**

**Unit 4:**

**To the north of Unit 4 there is a 36-year-old Douglas-fir stand. To the south there is a 25-year-old Douglas-fir stand.**

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

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

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

**This proposal includes protection of existing stands within RMZs and leave tree**

areas within the harvest units that include remnant trees from the previous stand. Following harvest, the variable retention harvest units will be replanted with native conifer species that will be supplemented by natural regeneration expected to occur as a result of the conservation areas in and around the harvest units.

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

Retention tree clumps are identified across the harvest area. A combination of Douglas-fir, western hemlock, western red cedar, bigleaf maple, cottonwood and red alder, representative of the current species diversity, were marked as leave trees. In areas with older or legacy trees, a high concentration of leave trees were marked, retaining trees with an origin in the late 1800s. Retention tree numbers were based on eight trees per acre across each VRH unit. The majority of the largest two trees per acres and the remaining leave trees were left in leave tree 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, and wetlands less than 0.25 acres. 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.

- e. List all noxious weeds and invasive species known to be on or near the site.  
**Oxeye daisy, Tansy ragwort, Woodland groundsel, Scotch broom, English holly, Himalayan blackberry, and Evergreen blackberry.**

## 5. Animals

- a. List any birds and other animals *or unique habitats* which have been observed on or near the site or are known to be on or near the site. Examples include:

birds:

eagle  hawk  heron  owls  songbirds

other:

mammals:

bear  beaver  coyote  cougar  deer  elk

other: **Townsend's chipmunk, deer mice, squirrel, mountain beaver**

fish:

bass  herring  salmon  shellfish  trout

other:

amphibians/reptiles:

frog  lizard  salamander  snake  turtle

other:

unique habitats:

- balds  caves  cliffs  mineral springs  oak woodlands  talus slopes
- other:

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

TSU Number	Common Name	Federal Listing Status	State Listing Status
MISTY U2	Marbled murrelet	Threatened	Endangered

**A Marbled Murrelet biotic detection recorded in 1992 is approximately 4,000 feet southeast of Unit 2. Prior to DNR’s current Marbled Murrelet Long-term Conservation strategy, areas within Unit 1 received a full two-year Pacific Seabird Group protocol audio visual survey to determine use by marbled murrelets. No marbled murrelets were heard nor seen during the survey effort.**

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

Pacific flyway  Other migration route:

*Explain:*

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

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

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

Species /Habitat: **Upland Habitat and Leave Trees**

Protection Measures: **A minimum of 8 leave trees per acre were left clumped and scattered. 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, trees with an identified late 1800s origin, and leave trees with unique structure, will remain post-harvest to enhance the wildlife habitat value of the future stand.**

**There were low to high weighted old-growth index (WOGHI) points in and adjacent to the harvest unit 1. These sites were evaluated by a trained old-growth designee and determined not to be old-growth according to DNR’s old-growth stands in western Washington policy PO14-008. Leave trees were concentrated in areas with older or remnant trees.**

Species /Habitat: **Aquatic Habitat**

Protection Measures: **Per the HCP, DNR’s riparian buffers are based on the average height an adjoining conifer stand would be expected to reach at 100 years of age using the site index. Site height (192-195 foot) average RMZs protect Type 3 streams. 100-foot minimum RMZs protect Type 4 streams. protect forested wetlands less than 0.25 acre in size are protected within RMZs or leave tree areas.**

- 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 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:  
**None.**

**8. Land and shoreline use**

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. *(Site includes the complete proposal, e.g. rock pits and access roads.)*  
**Current use of site and adjacent land types: long term forest management and formal recreation.**  
**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?

**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:

**Parts of the sale will be visible from Highway 12.**

- 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 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 both Units 1 and 2, and mature stands of trees remaining around streams and wetlands 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 target shooting, hunting, mountain biking, berry picking, and sightseeing.**
- b. Would the proposed project displace any existing recreational uses? If so, describe.  
**There may be some disruptions to recreational use during periods of harvesting and hauling.**
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:  
**None.**

## 13. Historic and cultural preservation

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.  
**No.**
- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.  
**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 by a DNR cultural resource technician for archeological and historic resources using the Department of Archaeology and Historic Preservation's WISAARD database of known sites, as well as historical maps including USGS and GLO maps.**
- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.  
**If presently-unknown skeletal remains, cultural resources, or both become known during project operations, DNR will comply with the Discovery of Skeletal Remains or Cultural Resources procedure.**

## 14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

**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. Nearest transit spot is approximately 3 miles away.**

- c. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

**Yes, see A-11-c.**

- 1) *How does this proposal impact the overall transportation system/circulation in the surrounding area and any existing safety problem(s), if at all?*

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

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

**No.**

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

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

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

**No.**

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

**None.**

## **15. Public services**

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

**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: 10/9/2024

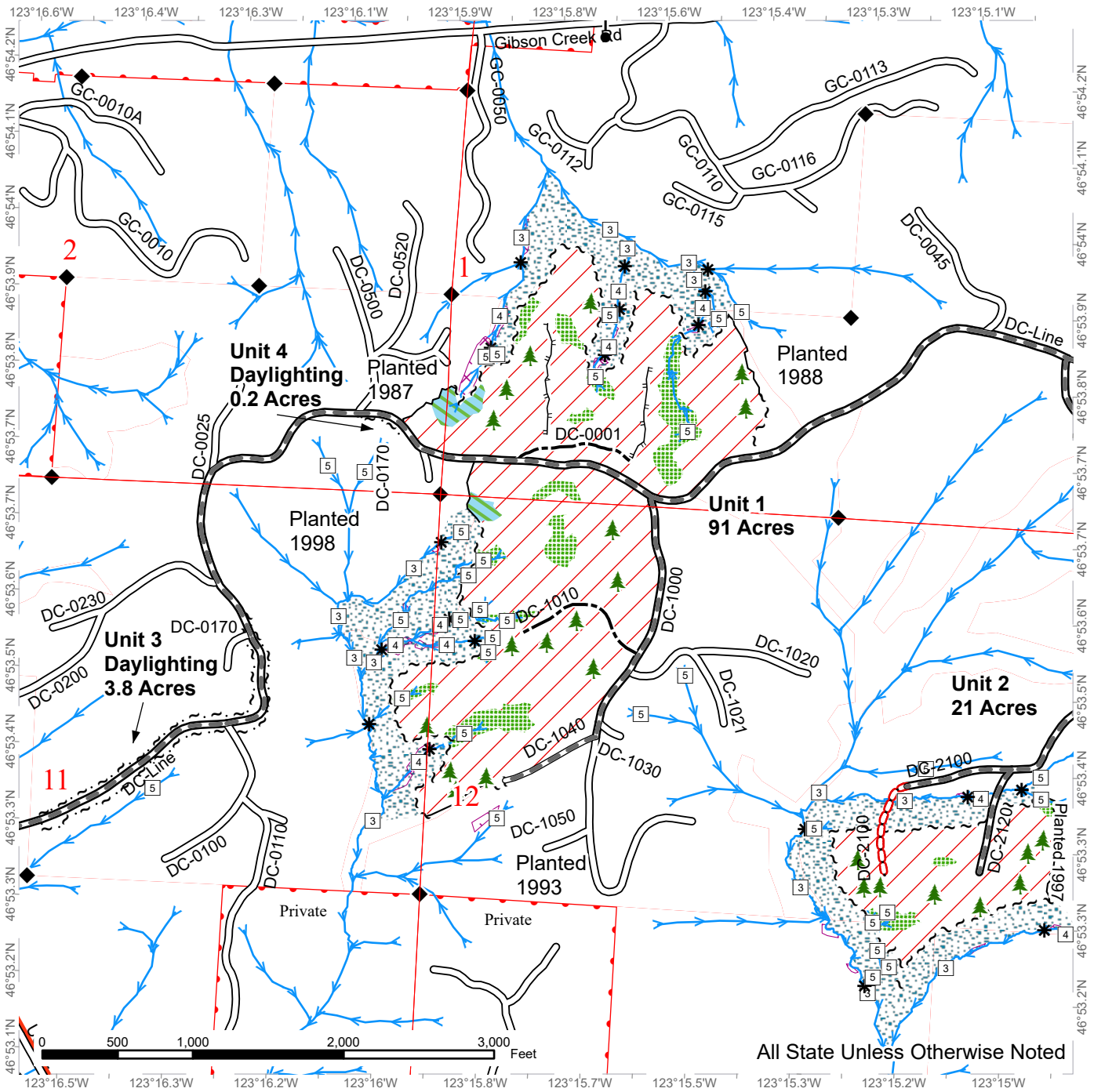
AEM 10/9/2024



# TIMBER SALE MAP

**SALE NAME:** MISTY  
**AGREEMENT #:** 30-103587  
**TOWNSHIP(S):** T16R5W  
**TRUST(S):** Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

**REGION:** South Puget Sound Region  
**COUNTY(S):** Grays Harbor  
**ELEVATION RGE:** 160-560



All State Unless Otherwise Noted

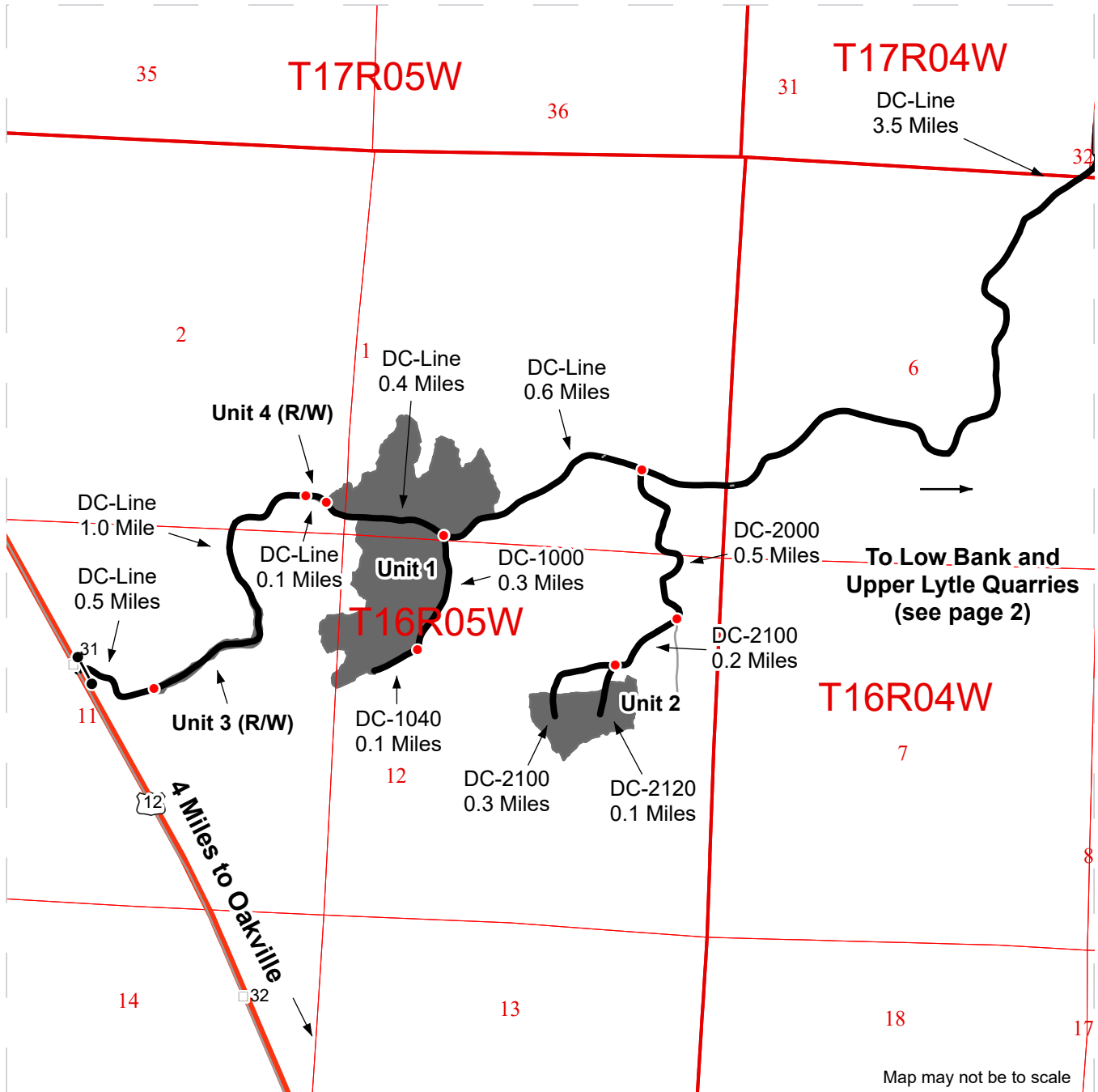
Sale Area	Required Pre-Haul Maintenance	Timber Type Change
Non-Tradeable Leave Tree Area	Optional Construction	Leave Tree Area <1/4-acre
Leave Tree Area	Required Abandonment	Stream Type
Riparian Mgt Zone	Pre-Approved Skid Trails	Stream Type Break
Forested Wetland	Streams	Survey Monument
Tailhold Restriction Area	Sale Boundary Tags	Property Line
Existing Roads	Right of Way Tags	



# DRIVING MAP

**SALE NAME:** MISTY  
**AGREEMENT#:** 30-103587  
**TOWNSHIP(S):** T16R5W  
**TRUST(S):** Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

**REGION:** South Puget Sound Region  
**COUNTY(S):** Grays Harbor  
**ELEVATION RGE:** 160-560



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

**DRIVING DIRECTIONS:**

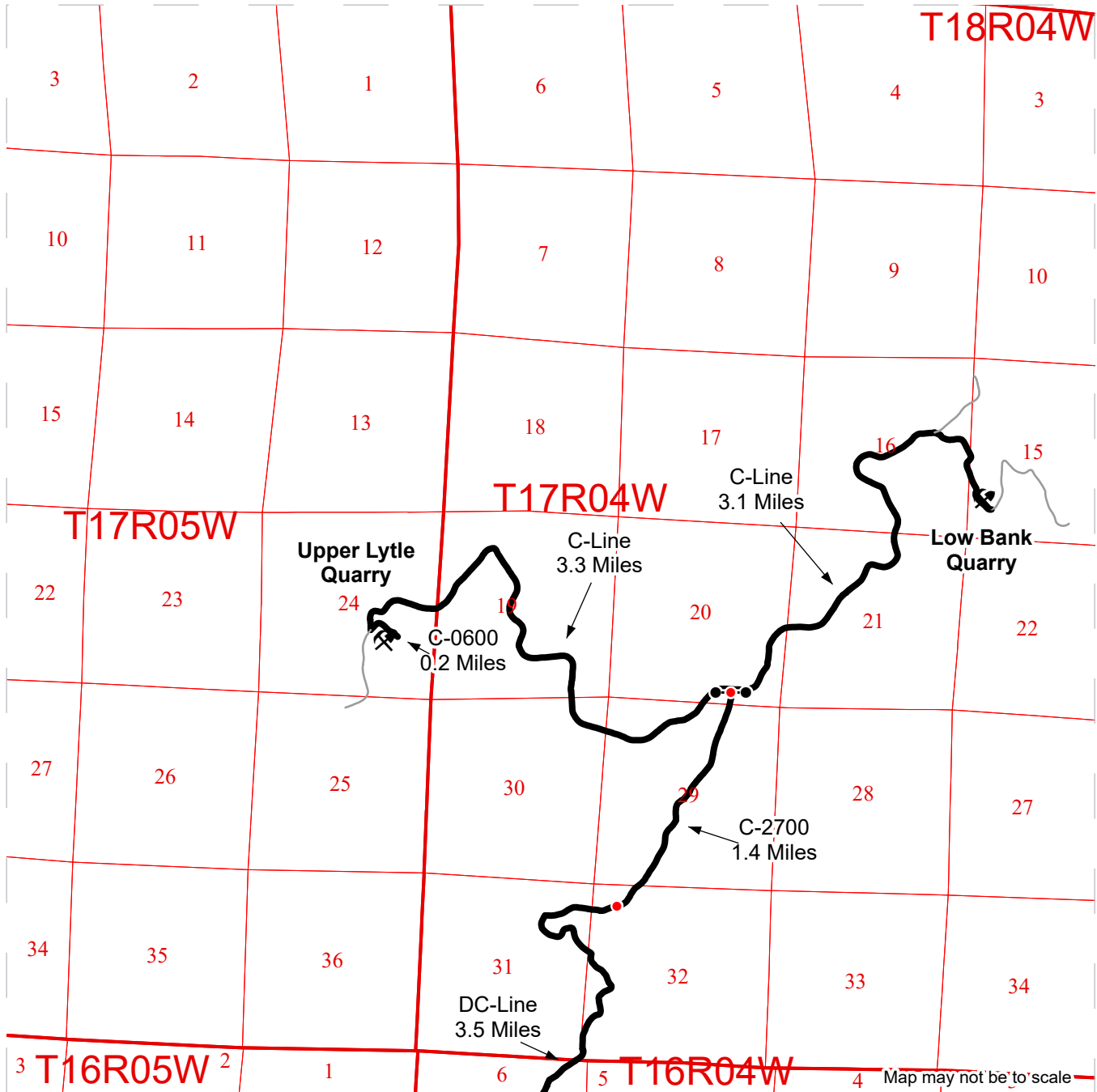
See attached driving directions.



# DRIVING MAP

**SALE NAME:** MISTY  
**AGREEMENT#:** 30-103587  
**TOWNSHIP(S):** T16R5W  
**TRUST(S):** Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

**REGION:** South Puget Sound Region  
**COUNTY(S):** Grays Harbor  
**ELEVATION RGE:** 160-560



- Haul Route
- Other Road
- Distance Indicator
- Gate (Master H-957)
- Rock Pit

**DRIVING DIRECTIONS:**  
See attached driving directions.



**DRIVING DIRECTIONS:**

From Milepost 31 on Highway 12:

Turn east onto the DC-Line. Travel 0.5 miles to reach Unit 3 (R/W).

Continue 1.0 mile on the DC-Line to reach Unit 4 (R/W).

Continue another 0.1 miles on the DC-Line for Unit 1.

For Unit 2, continue 1.0 mile on the DC-Line, then turn right (south) onto the DC-2000. Travel 0.5 miles, then continue onto the DC-2100. Travel 0.2 miles on the DC-2100 to reach Unit 2.

For Low Bank and Upper Lytle Quarries, continue 3.5 miles west on the DC-Line from the DC-Line/DC-2000 junction. Continue onto the C-2700 and travel 1.4 miles to reach the C-Line. Once at the C-Line/C-2700 junction, head 3.1 miles east on the C-Line to reach Low Bank Quarry. For Upper Lytle Quarry, travel 3.3 miles west on the C-Line from the C-Line/C-2700 junction. Then turn left (east) onto the C-0600 and continue 0.2 miles to reach Upper Lytle Quarry.