

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: **MIDDLE RIDGE VRH**
Agreement # **30-100649**

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

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

Andrew Gorbett
Department of Natural Resources
411 Tillicum Lane
Forks, WA 98331
(360) 374-2800

4. Date checklist prepared: **08/06/2020**

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

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

a. *Auction Date:*

12/16/2020

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

10/31/2023

c. *Phasing:*

None

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

No, go to question 8.

Yes, identify any plans under A-7-a through A-7-d:

a. *Site Preparation:*

For Units 1-4: Assessment for treatment will occur after completion of harvest. Site preparation including a chemical herbicide application, may be used to assure that planting is successful at acceptable levels to meet or exceed Forest Practice standards.

b. *Regeneration Method:*

Units 1-4 will be hand planted with native species seedlings following harvest.

c. *Vegetation Management:*

A continued assessment of units to determine future vegetation management strategy will be required. Treatments will be based on vegetative competition and will ensure a free-to-grow status that complies with Forest Practice standards.

d. *Other:*

Road maintenance assessments will be conducted and may include periodic ditch and culvert cleanout, and grading as necessary.

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)

Please see Summary of Comments
9/4/2020 CD

Landscape plan: **OESF Forest Land Plan (FLP)**

Watershed analysis:

Interdisciplinary team (ID Team) report:

Road design plan: **8/11/2020**

Wildlife report:

Geotechnical report: **8/14/2020**

Other specialist report(s): **WA DNR West Side Old Growth Memo (7/16/2020)**

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

Rock pit plan: **Copper Pit (October 2019), Red Creek Quarry (February 2020)**

Other: **NSO Best 70 Map**

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

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known.

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

FPA # _____

FPHP

Board of Natural Resources Approval

Burning permit

Shoreline permit

Existing HPA

Please see Summary of Comments
9/4/2020 CD

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.)

Please see Summary of Comments
9/4/2020 CD

a. Complete proposal description:

The Middle Ridge VRH timber sale is a 6 unit Variable Retention Harvest (VRH) sale with a cruised volume of 8,158 MBF. It encompasses approximately 496.5 gross proposal acres. Of the 496.5 gross proposal acres, there are 249 acres of Variable Retention Harvest (VRH), 0.5 acres of Right-of-Way (ROW) harvest, 215 acres of unstable slope protection and Riparian Management Zone's (RMZ's), 11 acres of Leave Tree Area's (LTA's), and 21 acres of existing roads. Approximately 34,091 feet of pre-haul maintenance, 2,710 feet of new construction, and 442 feet of reconstruction is proposed to provide access to the sale area. Rock will be obtained from the Copper Pit and Red Creek Quarry. This proposal will

be harvested using ground-based and cable harvesting methods. All areas with moderate or high risk of slope failure and delivery to a public resource have been excluded from harvest. This sale is located in the Lower Clearwater WAU.

Unit	Gross Proposal (Acres)	RMZ/Potentially Unstable Slopes (Acres)	Existing Roads (Acres)	Leave Tree Clump (Acres)	Net Harvest (Acres)
1	93	28	8	2	55
2	79	37	2	2	38
3	185	80	9	4	92
4	139	70	2	3	64
5	0.1	-	-	-	0.1
6	0.4	-	-	-	0.4
Totals	496.5	215	21	11	249.5

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

Pre-harvest Stand Description:

Unit	Origin Date	Major Timber Species	MBF/acre	Slope (%)	Elevation Range (ft)
1	1976	western hemlock, Douglas-fir, red alder	35,729	120	300-700
2	1976	Douglas-fir, western hemlock, red alder	34,723	120	360-680
3	1961-1976	Douglas-fir, western hemlock, red alder	33,060	120	360-1100
4	1977-1982	Douglas-fir, western hemlock, red alder	28,384	120	360-900
5	1961	western hemlock, Douglas-fir	46,000	120	540-580
6	1976	western hemlock, Douglas-fir	27,250	120	540-600

Type of Harvest:

Unit	Harvest Type (VDT/VRH/ROW)	Volume to be Harvested (mbf)	Volume to be Harvested (%)	Individual Leave Trees	Clumped Leave Trees	Total Leave Trees
1	VRH	1,965.1	99%	41	399	440
2	VRH	1,319.5	99%	24	280	304
3	VRH	3,041.5	99%	55	681	736

4	VRH	1,816.6	99%	38	474	512
5	ROW	4.6	100%	-	-	=
6	ROW	10.9	100%	-	=	-

Overall Unit Objectives:

The overall objectives for this sale includes the production of saw logs and pulp material for trusts while expediting the development of a more diverse multi-storied canopy layer in the future stand. This will be accomplished through the retention of wildlife trees, legacy trees and riparian management zones (RMZ). Approximately 226 acres (46 %) have been set aside for unstable slopes, RMZs and LTAs. In addition, these stands will be managed to protect site productivity and maintain the integrity and water quality of adjacent streams.

Ecological- VRH to promote diverse forest structure across the landscape while preserving ecological integrity and function.

Economic- Generate revenue for Common School and Indemnity (03) Trusts.

Statute- Comply with the DNR's HCP, OESF FLP, the Policy for Sustainable Forests, and Forest Practice Rules and Regulations.

Social- Accommodate dispersed informal recreational activities on DNR managed lands and identify and protect historical and archaeological sites consistent with state/federal law.

Specific objectives are to provide riparian protection, protection of moderate or high risk of slope failure and delivery to a public resource, and protection of soils and habitat conservation for threatened and endangered species. Riparian protection measures were designed for all waters in and adjacent to this proposal in accordance with DNR's OESF Riparian strategy.

- 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		2,710	2	-
Reconstruction		442		-
Maintenance		34,091		-
Abandonment		-	-	-
Decommission		-		
Bridge Install/Replace	-			
Stream Culvert Install/Replace (fish)	-			-
Stream Culvert Install/Replace (no fish)	4			
Cross-Drain Install/Replace	22			

Rock Pits:

The designated rock source will be the Copper Pit and Red Creek Quarry.

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: **T25-0N R12-0W S21, T25-0N R12-0W S22, T25-0N R12-0W S09, T25-0N R12-0W S16, T25-0N R12-0W S15**

**T25-0N R12-0W S13, T25-0N R11-0W S18 (Copper Pit)
T27-0N R11-0W S34 (Red Creek Quarry)**

*Please see Summary of
Comments*
9/4/2020 CD

- b. Distance and direction from nearest town:

Units 1-6 are located approximately 35 miles south from Forks, WA on the C-2200 road system.

13. Cumulative Effects

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

This proposal is located within the Lower Clearwater Administrative Units (WAU). The uplands are mainly managed for timber production. Ownership includes large industrial forests, federal lands, and Department of Natural Resources managed forests. Forested stands within the WAU appear to be primarily second and third growth stands with some old growth stands located on state and federal land. The numbers of forest practice activities shown on the WAU maps, along with observations within the WAU indicate that the WAU is intensively managed for timber production.

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.

This proposal and all future management activities on DNR lands will be conducted in accordance with the State's Habitat Conservation Plan (HCP, 1997), Policy for Sustainable Forests (2006), OESF Forest Land Plan and Forest Practices Rules. The HCP is an agreement with the federal government that requires the DNR to manage landscapes in accordance with its terms that include the following applicable strategies that were found to provide a conservation benefit for multiple species:

- **Deferring harvest on unstable slopes with moderate to high risk of failure.**
- **Retaining Riparian Management Zones (RMZ's) on typed waters. This includes a variable width interior core buffer on type 2, 3, 4, and unstable type 5 streams. Equipment limitation zones (ELZs) are required on all streams.**
- **Retaining a minimum of 8 leave trees per acre dispersed and clumped throughout the VRH unit.**
- **Designing, constructing, and maintaining a road system to minimize potential adverse effects on the environment.**
- **Implementing procedures pertaining to threatened and endangered species.**

In concert, the HCP strategies for Northern Spotted Owl, Marbled Murrelet, and riparian conservation will contribute to the retention and development of older forests, while the leave tree procedure will enhance the structural diversity of forests across the landscape. In addition, road construction and maintenance standards will improve the quality of the existing road network and reduce impacts on the environment.

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

None.

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

It is not likely potential impacts from this proposal will contribute to the environmental concerns listed in question A-13-a. DNR's HCP, the Policy for Sustainable Forests, and the forest practices rules and HCP substantially helps the Department to mitigate for cumulative effects related to management activities. These strategies have been incorporated in this proposal.

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
LOWER CLEARWATER	39674	21196	2261	263	875

Other management activities, such as stand and road maintenance, will likely occur within the associated WAU(s).

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

Flat, Rolling, Hilly, Steep Slopes, Mountainous, Other:

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

WAU:	LOWER CLEARWATER
WAU Acres:	39674
Elevation Range:	39 - 1896 ft.
Mean Elevation:	599 ft.
Average Precipitation:	112 in./year
Primary Forest Vegetation Zone:	Sitka Spruce

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)? **120%** *Please see Summary of Comments*
9/4/2020 CD

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
5224	SILT LOAM
5225	SILT LOAM
3311	SILT LOAM
3971	V.GRAVELLY LOAM

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

**Please see Summary of Comments*
9/4/2020 CD*

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.

Two relict glacial deep-seated landslides, one dormant-distinct glacial deep-seated landslide, and their associated topographic groundwater recharge areas were remotely identified and field verified by a State Lands Geologist around Unit 2 of the proposed harvest. Harvest is proposed on the associated topographic groundwater recharge area of one relict glacial deep-seated landslide, and one dormant-distinct glacial deep-seated landslide within Unit 2. No harvest will occur within these landslides.

Two active bedrock deep-seated landslides were remotely identified and field verified by a State Lands Geologist around Unit 3 and Unit 4 of the proposed harvest. These landslides have been excluded from harvest.

One dormant-distinct bedrock deep-seated landslides was remotely identified and field verified by a State Lands Geologist partially within Unit 1. Harvest is proposed within this landslide. One dormant-distinct bedrock deep-seated landslide was remotely identified and field verified by a State Lands Geologist around Unit 2. This landslide has been excluded from harvest.

Indicators of small shallow slope failures are evident in harvested areas in the immediate vicinity. Slope failures within stream channels are more common in timber sales cut prior to the implementation of the HCP riparian forest strategy and current forest practices rules.

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

No Yes, describe the proposed activities:

Harvest is proposed on the topographic groundwater recharge of one relict glacial deep-seated landslide, and one dormant-distinct glacial deep-seated landslide. The proposed timber harvest has a low likelihood of causing or contributing to the movement of these DSLs, as the calculated post-harvest increase in groundwater recharge is insignificant. There was no evidence of deep-seated landslide movement per aerial photo and orthophoto observations.

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

All areas with moderate or high risk of slope failure and delivery to a public resource have been excluded from harvest. A review of the statewide landslide inventory (LSI) screening tool indicates that there is one questionable LSI polygon (Unique ID 42919) mapped within the northern part of Unit 3, however a portion of the LSI polygon was identified by a State Lands Geologist as a relict bedrock deep-seated landslide.

- 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: 2

Approx. acreage new landings: <1

Fill Source: Copper Pit, Red Creek 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.)

Harvesting and road construction will be restricted during periods of heavy rainfall when rutting and surface erosion may occur. Roads will be constructed with properly located ditches, ditch outs and cross drains to divert water onto stable forest floor and/or into stable natural drainages. Ground based operations may be suspended during periods of wet weather or wet soil conditions when rutting of skid or shovel roads begins.

2. Air

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.
Minor amounts of engine exhaust from logging and road construction equipment and dust from vehicle traffic on roads will be emitted during proposed activities. If landing debris is burned after harvest is completed, smoke will be generated. There will be no emissions once the proposal is complete.
- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
None known.
- c. Proposed measures to reduce or control emissions or other impacts to air, if any:
If 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.

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: **Unnamed perennial streams, East Fork Miller Creek, Miller Creek, Clearwater River, Queets River, Pacific Ocean.**

Please see Summary of Comments
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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	1	2	Variable width interior core buffer 150'-175' and a 30' equipment limitation zone
Stream	2	1	Variable width interior core buffer of 150-200' and a 30' equipment limitation zone
Stream	3	15	Variable width interior core buffer of 100-140' and a 30' equipment limitation zone
Stream	4	68	Variable width interior core buffer of 100-140' and a 30' equipment limitation zone
Stream	5	255	Variable width interior core buffer around unstable slopes of 15-40' and a 30' equipment limitation zone

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

In accordance with the Habitat Conservation Plan, on typed waters, all floodplains and unstable slopes are protected with variable width interior core buffers based on site specific conditions. Additionally, no harvest will occur in areas of moderate or high risk of slope failure or delivery to a public resource.

Type 1 streams are protected with a variable width interior core buffer of 150'-175' from the floodplain.

Type 2 streams are protected with a variable width interior core buffer of 150'-200' from the floodplain.

Type 3 streams are protected with a variable width interior core buffer of 100'-140' from the floodplain.

Type 4 streams are protected with a variable width interior core buffer of 100'-140' from the floodplain.

Type 5 streams are protected with variable width interior core buffers (15-40') encompassing stream associated unstable slopes. Additionally, all typed waters have a 30-foot equipment limitation zone.

The OESF Windthrow Probability Model did not identify high risk of severe endemic windthrow in any of the units, thus no exterior wind buffers were applied.

The work detailed in the road plan has been designed to improve surfacing on the haul roads, and provide for better drainage by installing additional, and replacing inadequate culverts that will divert storm water onto stable forest floor. These actions will minimize the potential for delivery of sediment to streams.

- 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):

Timber felling, bucking, road construction, and road maintenance will occur within 200 feet of all the described waters above. Equipment crossings may occur over Type 5 waters listed above. All activities will be done in accordance with the DNR's HCP and Forest Practice rules. Timber harvest will occur within 200' of typed waters, but no closer than described above in questions B.3.a.1.b and B.3.a.1.c. Culvert work listed in A.11.C will occur within 200 feet of the described waters above. All activities will be done in accordance with the HCP and Forest Practice Rules.

- 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 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)?*

LOWER CLEARWATER = 5.0 (mi./sq. mi.)

9) *Are there forest roads or ditches within the associated WAU(s) that deliver surface water to streams, rather than back to the forest floor?*

No *Yes, describe:*

It is likely some roads or road ditches within the WAU intercept sub-surface flow and deliver surface water to streams, however current road construction, reconstruction, and/or maintenance standards will be applied that address this issue by installing cross-drains to deliver ditch water to stable forest floors.

10) *Is there evidence of changes to channels associated with peak flows in the proposal area (accelerated aggradations, surface erosion, mass wasting, decrease in large organic debris (LOD), change in channel dimensions)?*

No *Yes, describe observations:*

Yes, areas show evidence of changes to stream channels. Some steep drainages show evidence of debris torrent events which have increased the dimensions of affected drainage channels, exposed native bedrock which now forms the floor along segments of channels, and decreased the overall amount of large woody debris in the streams. These events may be attributed to past road construction techniques, inherently unstable slopes, soil composition or significant amounts of precipitation in short time periods.

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):*

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.

Restricting timber harvest and road maintenance activities during peak rain events will allow for increased resource protection. Road development and maintenance standards will minimize impacts by using cross drains to release ditch water onto stable forest floors where flow energy can dissipate prior to reaching stream channels. Maintaining RMZ's on streams will aid bank stability, hydrologic functions and provides recruitment of LWD.

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:

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

No Yes, describe possible impacts:

Note protection measures, if any:

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Water runoff, including storm water, from road surfaces will be collected by roadside ditches and diverted onto the forest floor via ditch-outs and cross drain culverts.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

No Yes, describe:

Waste materials, such as sediment or slash, may enter surface water.

Note protection measures, if any:

No additional protection measures will be necessary to protect these resources beyond those described in B-1-d-2, B-1-h, B-3-a-2, and B-3-a-13.

- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No changes to drainage patterns are expected.

- d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-13, B-3-b-3, and B-3-c-2.

4. Plants

- a. Check the types of vegetation found on the site:

Deciduous tree:

Alder Aspen Birch Cottonwood Maple Western Larch

Other:

Evergreen tree:

Douglas-Fir Engelmann Spruce Grand Fir Lodgepole Pine

Mountain Hemlock Noble Fir Pacific Silver Fir Ponderosa Pine

Sitka Spruce Western Hemlock Western Redcedar Yellow Cedar

Other:

Shrubs:

Huckleberry Rhododendron Salmonberry Salal

Other: Blackberry

Ferns

Grass

Pasture

Crop or Grain

Orchards Vineyard Other Permanent Crops

Wet Soil Plants:

- Bullrush Buttercup Cattail *Devil's Club* Skunk Cabbage
 Other:
 Water plants:
 Eelgrass Milfoil Water Lily
 Other:
 Other types of vegetation:
 Plant communities of concern:

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

*Please see
Summary of
Comments*
9/4/2020 CD

Approximately 8,158 MBF of 38-59 year old timber will be harvested with this proposal.

- 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 is bordered to the north by 44 year old state timber, the east by 44 year old timber and private regeneration, to the south by 94 year old state timber, and to the west by 94 year old state timber.

Unit 2 is bordered to the north by 26 year old state timber, the east by 37 year old state timber, the south by 37 year old state timber, and to the west by 44 year old state timber.

Unit 3 is bordered to the north by east by 44-59 year old state timber, the south by 59 year old state timber, and to the west by 27-41 year old state timber.

Unit 4 is bordered to the north by 41 year old state timber, east by 28-65 year old state timber, to the south by 26 year old state timber, and to the west by 37-43 year old state timber.

Unit 5 is bordered to the north, south, east, and west by 59 year old state timber.

Unit 6 is bordered to the north and east by 26 year old state timber, and to the south and west by 44 year old state timber.

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

*Please see Summary of
Comments*
9/4/2020 CD

None found in corporate database.

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

Retaining existing stands within bounded out areas throughout the proposal, leave tree areas within harvest units, and replanting with native conifer species in the VRH units following harvest. Other native conifer and deciduous species may regenerate naturally onsite.

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

Scotch broom, Himalayan 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:

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:

Eagles were observed in flight, no nests are known within 660' of the sale area.

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

Please see Summary of Comments
9/4/2020 CD

TSU Number	Common Name	Federal Listing Status	State Listing Status
MIDDLE RIDGE U3	Marbled murrelet	Threatened	Endangered

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

Pacific flyway Other migration route:

Explain:

This site is part of the Pacific flyway but is not used extensively for resting or feeding by waterfowl.

Please see Summary of Comments
9/4/2020 CD

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

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

Species/Habitat: Spotted Owl – The DNR mitigates for the potential of significant adverse environmental impacts to northern spotted owls in the OESF by implementing the HCP strategy. This strategy established threshold percentages for spotted owl habitat on DNR-managed lands for Landscape Planning Units (LPU). Each LPU is managed to achieve and maintain at least 20% Old Forest Habitat and at least 40% of Old and Young Forest (or Structural) Habitat types taken together according to a schedule of habitat enhancement and harvest activities developed within the Forest Land Plan (FLP). Units 1-4 are located within the Lower Clearwater SOMU. The Copper Mine SOMU is currently 58.20% NSO habitat, and will contain 56.99% NSO habitat following the harvest of 247.4 acres of Young Forest Habitat. The Copper Mine SOMU is currently in the Maintenance and Enhancement Phase, although it contains 15.1% Old Forest and has not yet met that threshold target. The harvest of NSO Young Forest Habitat in the Copper Mine SOMU complies with the DNR State Trust Lands HCP Implementation Agreement for the Northern Spotted Owl dated in 2017, as over 40% of the landscape will remain as Young Forest Habitat and better. No harvest of Old Forest Habitat will occur.

Species/Habitat: Marbled Murrelet – The proposal area was evaluated for habitat protection or other marbled murrelet conservation opportunities. All units within the proposal are non-habitat according to the State Lands marbled murrelet habitat model.

Species /Habitat: Riparian– Interior core buffers have been applied to all Type 1, Type 2, Type 3, Type 4 waters, and unstable Type 5's, as well as equipment limitation zones on all typed waters as described in B.3.a.1)b). Type 1, Type 2, Type 3, and Type 4 streams have also been evaluated with the Windthrow Probability model to identify buffers with a high probability of severe endemic windthrow. The Windthrow Probability Model did not identify any areas of high risk of severe endemic windthrow. Buffers are designed to protect the unstable portions of the stream banks, protect waters from siltation, and decrease water temperatures by providing shade and cover. Buffers also allow the natural occurrence of woody debris that provides pools and eddies for fish habitat along stream banks. Furthermore, these buffers will develop old-forest characteristics that, in combination with the owl and murrelet strategies, will help support old-forest dependent wildlife.

Species /Habitat: Upland – Harvest will not occur in areas with moderate or high risk of slope failure and delivery to a public resource. Wind-firm, dominant, and structurally unique trees were targeted for retention. A minimum of eight trees per acre were retained individually and in clumps to provide habitat structures for wildlife species within VRH units. Timber removal will temporarily create open environments that provide valuable foraging and potential habitat for a variety of wildlife species associated with early-stage forest environments.

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

There are no known invasive animal species on or near the site.

6. Energy and natural resources

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

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

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

No.

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

None.

7. Environmental health

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

- 1) Describe any known or possible contamination at the site from present or past uses.

None known.

- 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

None known.

- 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Petroleum-based fuel and lubricants may be used and stored on site during the operating life of this project.

- 4) Describe special emergency services that might be required.

The Department of Natural Resources, private, and fire protection district suppression crews may be needed in case of wildfire. In the event of personal injuries, emergency medical services may be required. Hazardous material spills may require Department of Ecology and/or county assistance.

- 5) Proposed measures to reduce or control environmental health hazards, if any:
No petroleum-based products will be disposed of on site. If a spill occurs, containment and cleanup will be required. Spill kits are required to be onsite during all heavy equipment operations. The cessation of operations may occur

*Please see
 Summary of
 Comments*
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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.*)

State and private timber lands are adjacent to the sale. 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?
Commercial Forest Land
- f. What is the current comprehensive plan designation of the site?
Commercial Forest Land
- 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:
See 8.1 above.

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?*
N/A
- c. Proposed measures to reduce or control aesthetic impacts, if any:
None.

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?
Dispersed informal recreation in the form of hiking, hunting, fishing, berry picking, and sightseeing. Logging road are also used for ATV/motorcycles, mountain bike riding, and horseback riding.
- 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.** *Please see Summary of Comments*
9/4/2020 CD
- 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. **None.** *Please see Summary of Comments*
9/4/2020 CD
- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. **A check of the Department of Archaeology and Historic Preservation (DAHP) database, Land Resource Manager (LRM) Special Concerns Report, and historical maps were used to identify cultural resources in the proposed project area. During timber sale preparation, trained foresters found no evidence on or near the site to indicate any potential cultural 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. **If a presently-unknown cultural resource is discovered during project operations, DNR will comply with the March 2010 Cultural Resources Inadvertent Discovery Guidance.** *Please see Summary of Comments*
9/4/2020 CD

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 101 and Clearwater Road.**
- 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? **N/A.**
- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? **None.**
- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). **Yes, see A-11-c.**
- 1) *How does this proposal impact the overall transportation system/circulation in the surrounding area and any existing safety problem(s), if at all?*

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

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

No.

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

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

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

No.

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

None.

15. Public services

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

No.

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

None.

16. Utilities

- a. Check utilities currently available at the site:

electricity natural gas water refuse service telephone sanitary sewer
 septic system other: *No utilities on site per Andrew 9/4/2020 CD

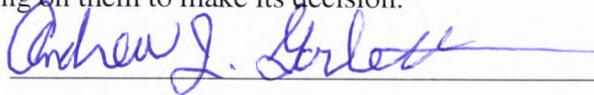
- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

None.

C. SIGNATURE

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

Signature:



Name of signee

Andrew Gorbett

Position and Agency/Organization

DNR - Olympic

Date Submitted:

8-19-2020



Summary of Comments

I have reviewed this SEPA Checklist and have the following comments:

CD

A. Background

8. The Engineering Geologic Risk Assessment Middle Ridge Timber Sale and Slope Stability Informational Form are available on FPARS with FPA/N 2616667. The NSO Best 70 Map is on file with the Region Office.
10. FPA/N 2616667 and the associated Engineering Geologic Risk Assessment Middle Ridge Timber Sale are available for viewing in FPARS.
11. FPA/N 2616667 indicates approximately 249.5 acres (approximately 8,158.2 MBF) of even-aged and right-of-way harvest are included in this proposal within six harvest units. The FPA also indicates approximately 3,152 ft of road construction and spoils deposits totaling approximately 13,400 cy are included. Four Ns and one NP crossing are planned (per Question 14 of FPA/N 2616667).
12. The location of this proposal is confirmed as Sections 9, 15, 16, 21, 22 Township 25 Range 12 West; Section 13 Township 25 Range 12 West & Section 18 Township 25 Range 11 West (Copper Pit); and Section 34 Township 27 Range 11 West (Red Creek Quarry) in Jefferson County (per Question 7 of FPA/N 2616667).

B. Environmental Elements

Earth

- 1.b. The steepest slope is confirmed via FPA/N 261667 question 19.
- 1.d. The FPA/N, Slope Stability Informational Form, Engineering Geologic Risk Assessment Middle Ridge Timber Sale indicates that inner gorges, bedrock hollows, groundwater recharge areas for glacial deep-seated landslides, relict glacial deep-seated landslides, dormant-distinct bedrock deep-seated landslide, active bedrock deep-seated landslides, a dormant-distinct bedrock deep-seated landslide, and indicators of shallow slope failures are found in and around the proposed harvest and road construction.

Water

- 3.a.1. FPA/N 2616667 indicates many typed streams per HCP.
- 3.a.2. FPA/N 2616667 indicates work within 200ft of typed waters per HCP (question 25 and 26 of the FPA/N).

Plants

- 4.b. FPA/N 2616667 will remove approximately 8,158.2 MBF of timber.
- 4.c. FPRAM check indicates no potential conflicts with T&E plant species.

Animals

- 5.b. FPRAM check indicates the harvest area is within SOSEA, but it is not NSO habitat. Additionally, FPRAM check indicated the proposal is within MM detection areas and the 1.5 mile occupied buffer. A NSO Best 70 Map is on file at the Region Office.
- 5.c. Washington State is considered part of the Pacific Flyway; however no impacts are anticipated as a result of this proposal.



Environmental Health

- 7.a.5. If contamination is suspected, the proponent must contact the Department of Ecology.

Historic and cultural preservation

- 13.a. FPRAM check confirms no conflict with cultural historical sites or resources.
- 13.b. FPRAM check confirms no conflict with archaeological or cultural sites or resources.
- 13.d. In the event that any unknown historical/archaeological resources are encountered, ground disturbing activities must be halted and DAHP and local tribes contacted.

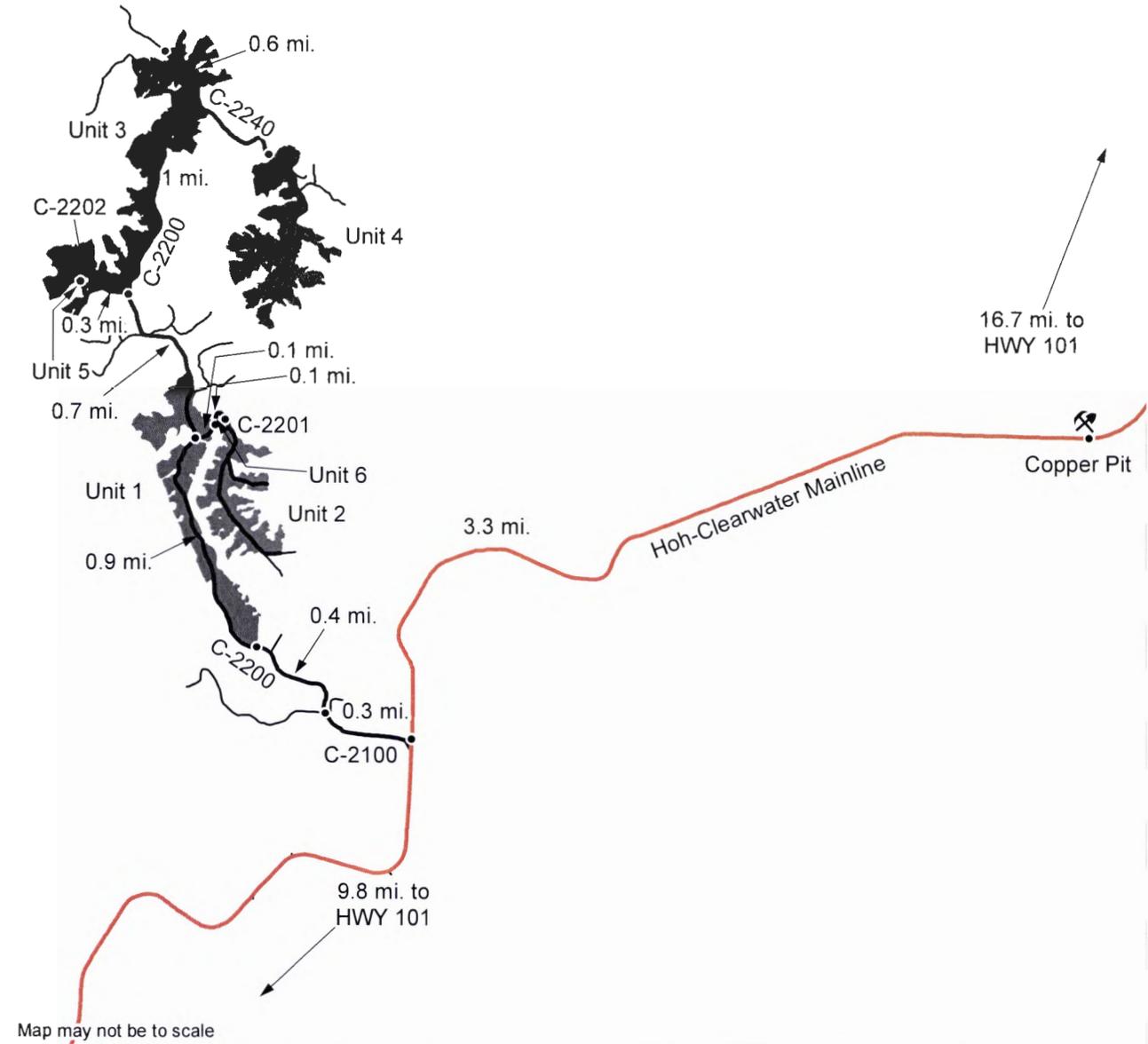
Chelsea Drum 9/4/2020

Chelsea Drum
Department of Natural Resources – Olympic Region
Forest Practices Coordinator

DRIVING MAP

SALE NAME: MIDDLE RIDGE
AGREEMENT#: 30-100649
TOWNSHIP(S): T25R12W
TRUST(S): Common School and Indemnity (3)

REGION: Olympic Region
COUNTY(S): Jefferson
ELEVATION RGE: 300'-1100'



- Timber Sale Boundary
- Other Route
- Haul Route
- Hoh-Clearwater Mainline
- Distance Indicator
- Rock Pit

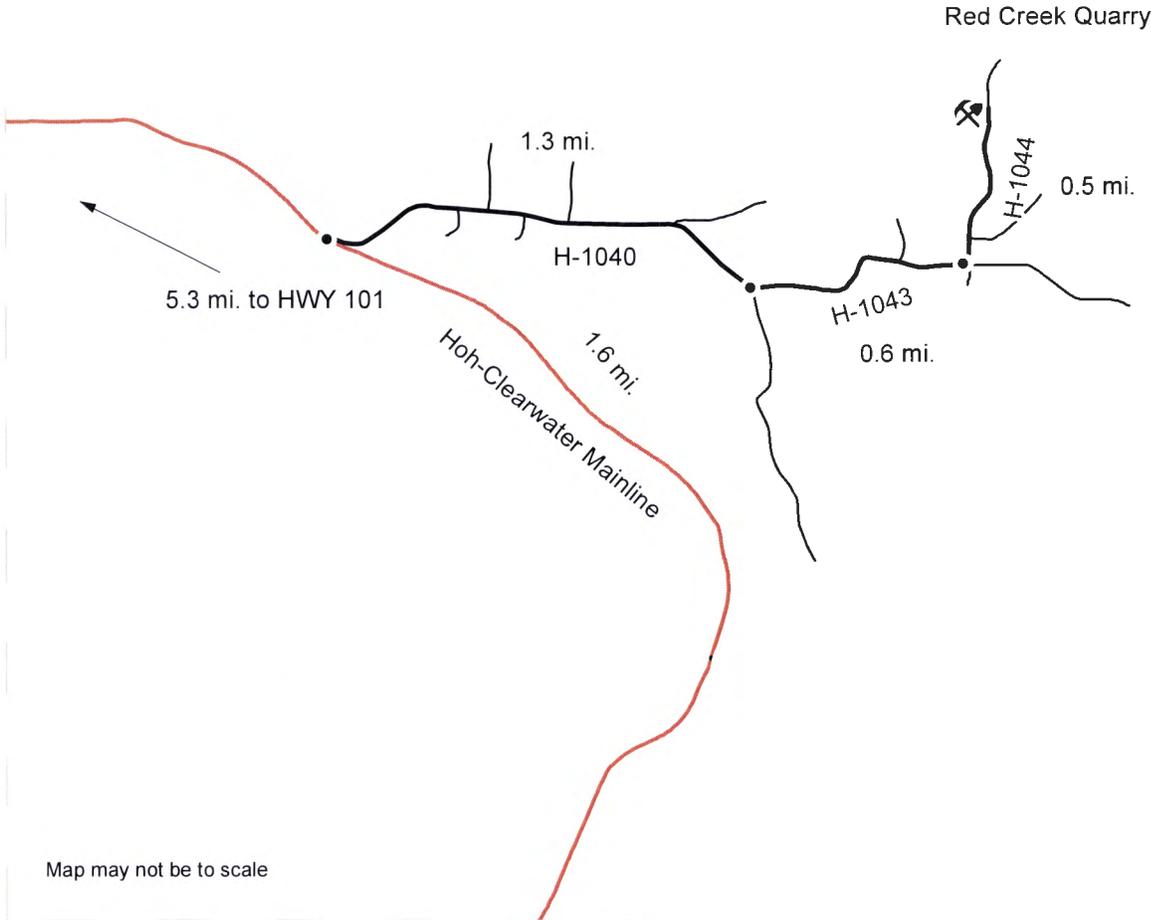
DRIVING DIRECTIONS:
 Copper Pit: From Forks, travel 15.5 miles south, and turn left on the Hoh-Clearwater Mainline. Drive 16.7 miles, and Copper Pit will be on the right.
 Unit 1: From Copper Pit, continue on the Hoh-Clearwater Mainline for 3.3 miles to the C-2100 junction. Turn right onto the C-2100, and continue for 0.3 miles to the C-2200 junction. Turn right onto the C-2200. Continue for 0.4 miles. Unit 1 will be on the right.
 Unit 6: Continue on the C-2200 for 0.9 miles to the C-2201 junction. Turn right onto the C-2201, and proceed for 0.1 miles. Unit 6 will be on the right and left.
 Unit 2: From Unit 6, proceed for 0.1 mi. Unit 2 will be on the left.
 Unit 3: From the C-2200/C-2201 junction, proceed on the C-2200 for 0.7 miles to the C-2200/C-2202 junction. Unit 3 will be on the left.
 Unit 4: Continue on the C-2200 for 1 mile to the C-2240 junction. Turn right onto the C-2240. Proceed for 0.6 miles. Unit 4 will be on the right and left.
 Unit 5: From the C2200/C-2202 junction, turn left onto the C-2202. Walk 0.3 mi. Unit 5 will be on the right and left.



DRIVING MAP

SALE NAME: MIDDLE RIDGE
AGREEMENT#: 30-100649
TOWNSHIP(S): T25R12W
TRUST(S): Common School and Indemnity (3)

REGION: Olympic Region
COUNTY(S): Jefferson
ELEVATION RGE: 300'-1100'



- Rock Pit
- Distance Indicator
- Haul Route
- Other Roads
- Hoh-Clearwater Mainline

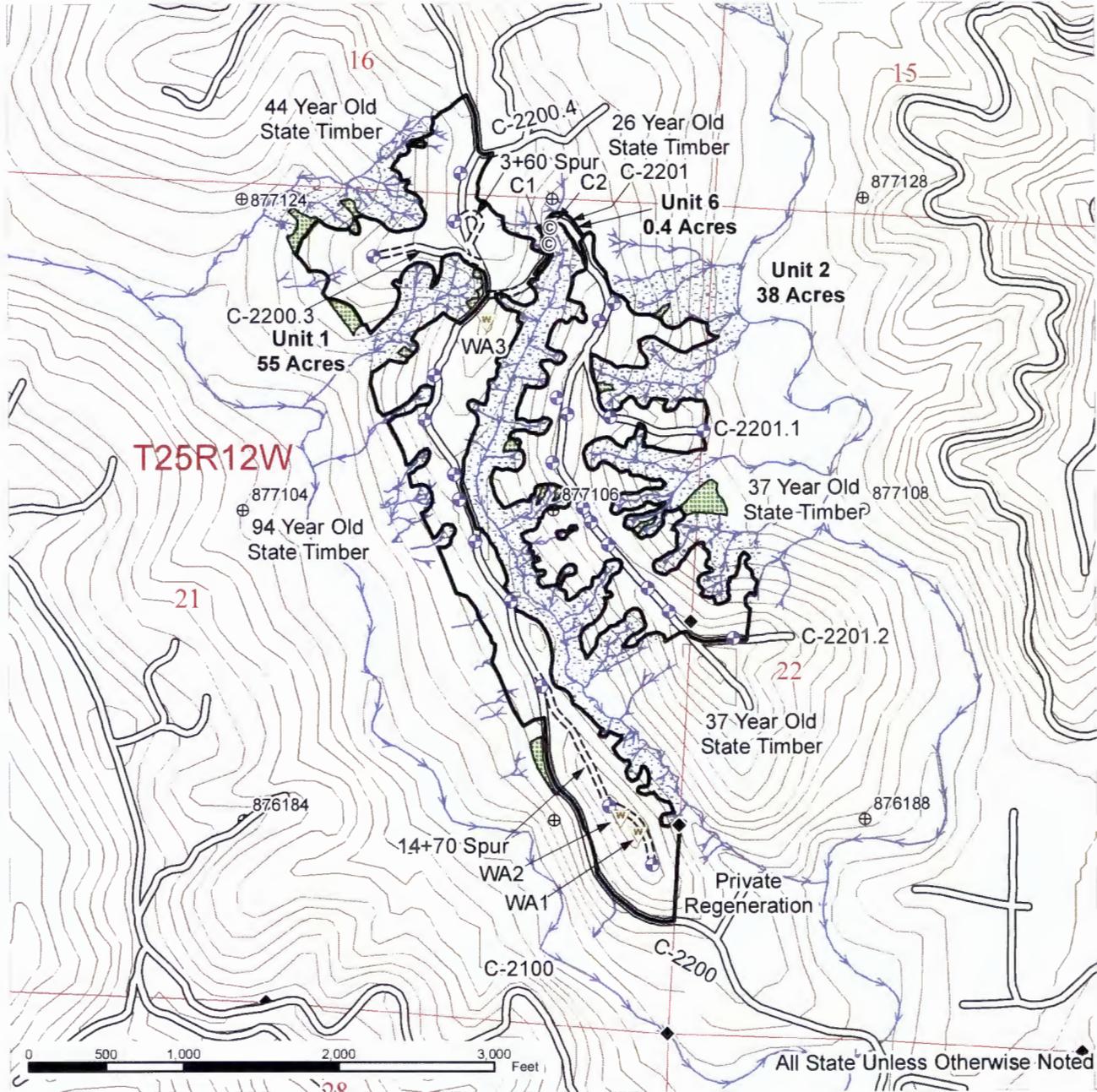
DRIVING DIRECTIONS:
 From Forks travel 15.5 mi. south and turn left on the Hoh-Clearwater Mainline.
 Red Creek Quarry: Proceed on the Hoh-Clearwater Mainline for 5.3 mi. and turn left on the H-1040. Continue for 1.3 mi. and turn left on the H-1043. Drive 0.6 mi. and turn left on the H-1044. Proceed for 0.5 mi. and Red Creek Quarry will be on the left.



FOREST PRACTICES ACTIVITY MAP

SALE NAME: MIDDLE RIDGE
APPLICATION #: TBD by FP Staff

COUNTY(S): Jefferson
TOWNSHIP(S): T25R12W

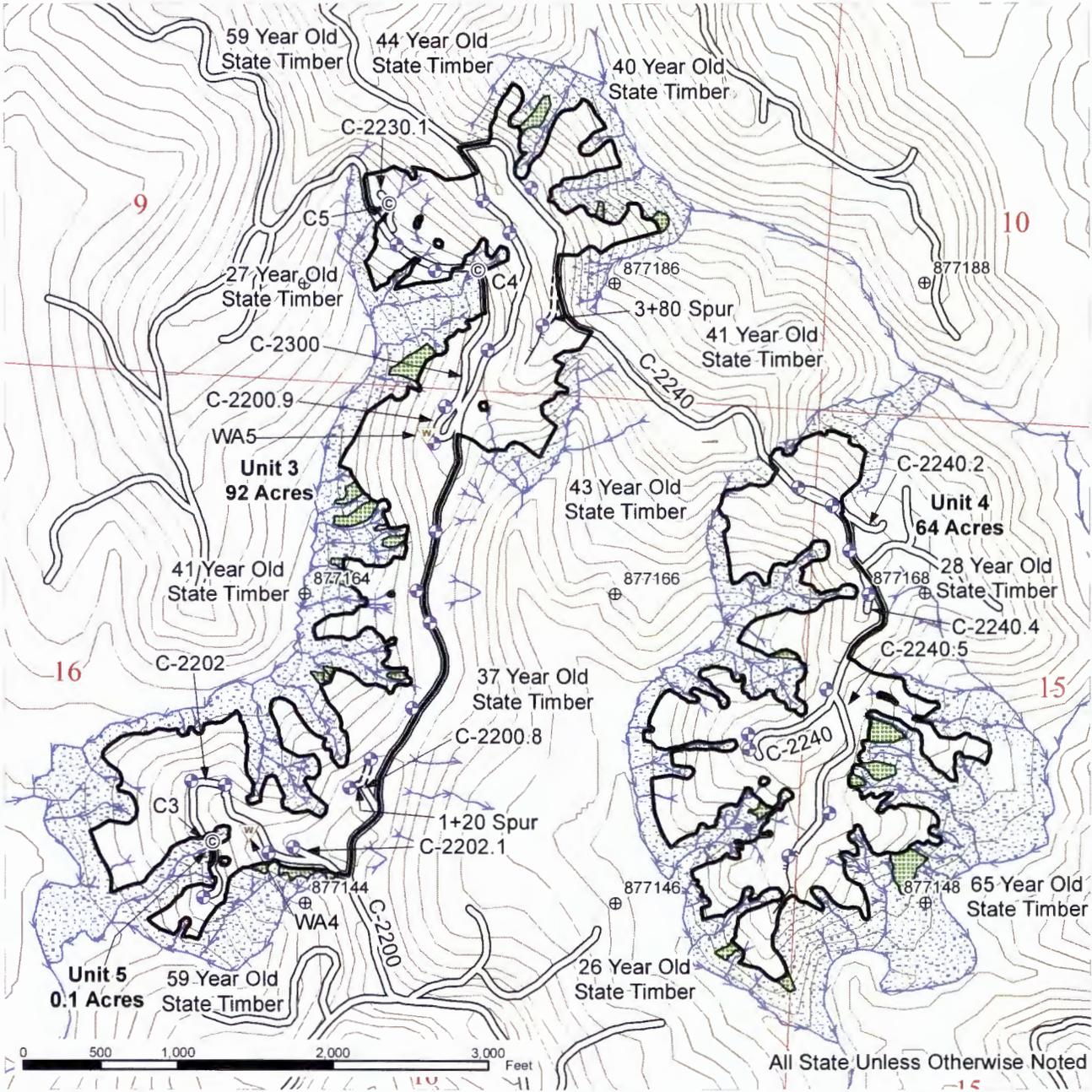


Timber Sale Boundary	Crossing
Leave Tree Area	Survey Monument
Riparian Mgt Zone	Waste Area
Existing Roads	Contours 40-foot
New Construction	Public Land Survey Sections
Streams	Tics - 2000' Interval
Landing	

FOREST PRACTICES ACTIVITY MAP

SALE NAME: MIDDLE RIDGE
APPLICATION #: TBD by FP Staff

COUNTY(S): Jefferson
TOWNSHIP(S): T25R12W



Timber Sale Boundary	Landing
Leave Tree Area	Crossing
Riparian Mgt Zone	Waste Area
Existing Roads	Contours 40-foot
New Construction	Public Land Survey Sections
Designated Skid Trail	Tics - 2000' Interval
Streams	

