

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: **ON TIME VRH and VDT**

Agreement # **30-088892**

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

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

4. Date checklist prepared: **03/11/2016**

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

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

a. Auction Date: **10/25/2016**

b. Planned contract end date (but may be extended): **October 31th, 2018**

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.

Timber Sale:

a. Site preparation:

Site preparation, including a chemical herbicide application, may be used in Units 1-5 to ensure that planting can be achieved at acceptable levels to meet or exceed Forest Practices standards following harvest. Slash piles on landings may be burned during the fall before planting.

b. Regeneration Method:

Units 1-5 will be hand planted with native conifer species following harvest. Units 6-20 are Riparian Thinnings and Unit 21 is a Right-of-Way and will not be planted.

c. Vegetation Management:

Treatments for Units 1-5, including a chemical herbicide application, could occur following harvest. Treatments will be based on vegetative competition, and will ensure a free-to-grow status that complies with Forest Practices Standards.

d. Thinning:

In Units 1-5 pre-commercial thinning needs will be assessed at approximately 7 years of age for conifer species. Commercial thinning potential will be assessed at approximately 25 to 35 years of age. Thinning will be done as needed to meet desired density, stocking, species diversity, and growth.

Roads: Road maintenance assessments will be conducted and will include periodic ditch and culvert cleanout, and grading as necessary. Construction, reconstruction, pre-haul maintenance and abandonment are associated with forest management activities.

Rock Pits and/or Sale: The existing State-owned Vantage Quarry will be used for this proposal.

Other: Slash may be burned following harvest activities or sold as biomass. Firewood permits for the sale area may be issued to the public after timber harvest activities are completed.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

- 303 (d) – listed water body in WAU: temp sediment completed TMDL (total maximum daily load):
- Landscape plan:
- Watershed analysis:
- Interdisciplinary team (ID Team) report:
- Road design plan: Road Plan Dated: 04/04/2016
- Wildlife report:
- Geotechnical report:
- Other specialist report(s):
- Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):
- Rock pit plan: Attached to Road Plan dated: 04/04/2016
- Other: Forest Practices Board Manual; Forest Practices Activity Maps; Policy for Sustainable Forests (PSF 2006); State Soil Survey; Habitat Conservation plan (HCP 1997); HCP Checklist; Riparian Forest Restoration Strategy (RFRS); Planning and Tracking Reports and associated maps; road Maintenance and Abandonment Plan (RMAP):# 240657. The following information is provided by DNR's GIS Database: Weighted Old Growth Habitat Index (WOGHI); WAU Rain-on-Snow Layer; Marbled Murrelet Habitat Layer; Spotted Owl Habitat Layer; and USGS and GLO maps; State Lands Geologist Remote Review (SLGRR) Tool.

Referenced documents may be obtained for review from the South Puget Sound Region Office in Enumclaw during the SEPA comment period.

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 # FHPA Burning permit Shoreline permit Incidental take permit 1168 & PRT 812521 Existing HPA Other: Board of Natural Resources Approval.

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 On Time VRH and VDT Timber Sale consists of five variable retention harvest (VRH) units, fifteen variable density thinning (VDT) units, and one right-of-way unit. The area selected for consideration was approximately 196 gross acres, which was reduced to 175 net acres after consideration of leave tree areas (LTA), Riparian management Zones (RMZ), Wetland Management Zones (WMZ) and existing roads. Approximately, 3,002 mbf of mixed conifer and hardwood species will be harvested. Approximately, eight leave trees per acre (TPA) larger than ten inches in diameter at breast height will be retained as individual and leave tree clumps distributed throughout the VRH harvest units. Leave tree clumps were used to protect sensitive areas. Within the VDT units leave trees will consist of basal areas of 130 to 150, with a relative density more than 35, and more than 75 leave trees per acre.

Road work associated with this proposal includes 26,522 feet of pre-haul maintenance to install additional cross drains, reshape the road surface, apply surface rocking and clean ditches to improve drainage. Approximately 1,854 feet of required new road construction, 2,423 feet of optional construction, 3,452 feet of required decommissioning, 145 feet of required abandonment and 1,893 feet of required reconstruction. Replacement of an undersized culvert with a 30 inch by 60 foot culvert on the E-6500 road at station 32+94 on a Type 4 stream is part of this proposal.

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

Unit	Origin Date	Species Composition
1	1983	Over Story: Douglas-fir, western Hemlock, western red cedar, red alder, big leaf maple, sitka spruce Understory: Sword Fern, salal, low-Oregon grape, salmonberry, elderberry, huckleberry, skunk cabbage, devil's club.
2	1983, 1986	Over Story: Douglas-fir, western Hemlock, western red cedar, red alder, big leaf maple, sitka spruce Understory: Sword Fern, salal, low-Oregon grape, salmonberry, elderberry, huckleberry, skunk cabbage, devil's club.
3	1951, 1963, 1983	Over Story: Douglas-fir, western Hemlock, western red cedar, red alder, big leaf maple, sitka spruce Understory: Sword Fern, salal, low-Oregon grape, salmonberry, elderberry, huckleberry, skunk cabbage, devil's club.
4	1983, 1989	Over Story: Douglas-fir, western Hemlock, western red cedar, red alder,

		big leaf maple, sitka spruce Understory: Sword Fern, salal, low-Oregon grape, salmonberry, elderberry, huckleberry, skunk cabbage, devil's club.
5	1957, 1983	Over Story: Douglas-fir, western Hemlock, western red cedar, red alder, big leaf maple, sitka spruce Understory: Sword Fern, salal, low-Oregon grape, salmonberry, elderberry, huckleberry, skunk cabbage, devil's club.

The soil site indexes are 124 and 129 for west side Douglas-fir.

Type of Harvest: This proposal is a variable retention harvest for units 1-5. Units 6-20 are variable density thinning units and Unit 21 is a right-of-way. The variable retention harvest, variable density thinning, and right-of-way total 175 net harvest acres. This timber sale will utilize ground base and cable logging harvest methods.

Overall Unit Objectives: The objectives of this proposal is to produce revenue for the State Forest Transfer (01), the Common School and Indemnity (03), Charitable\Educational\Penal, Reformatory Institution (06), University – Original (11), and Forest Board Repayment (42) trusts through the production of merchantable timber.

c. Road activity summary. See also forest practice application (FPA) for maps and more details.

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		4,277	1.6	
Reconstruction		1,893		
Abandonment		145	0.10	
Bridge Install/Replace	0			
Culvert Install/Replace (fish)	0			
Culvert Install/Replace (no fish)	29*			

*24 are cross drains, 4 are replace/install, 1 is being removed.

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.

a. *Legal description:* :

T16N R3W S07 Timber Harvest
T16N R3W S17 Timber Harvest
T16N R3W S18 Timber Harvest
T16N R3W S19 Timber Harvest
T16N R4W S22 Vantage Quarry

b. *Distance and direction from nearest town (include road names):*

Unit 1, 5 and 6: From Interstate 5, take Maytown exit (milepost 95) onto Maytown Road SW and follow for 2.9 mi. Continue onto 128th Avenue SW for 0.8 mi. Turn left onto Mima Road SW and continue for 1.3 mi. Turn right onto Bordeaux Road SW and continue for 1.5 mi. Bordeaux Road then becomes into E-Line. Stay on the E-Line for an additional 3.6 miles. Then turn left onto the E-6000. Unit 1 will be approximately 0.2 miles on your left. Continue on the E-6000 for 1 mile to arrive at Unit 5.

Units 2, 3, 7, 8, 9, 10, 11, 12, 13, 14 and 15: From Unit 1, Continue on the E-6000 for 0.8 miles. Turn right onto the E-6050 for 0.2 miles. The E-6050 is a ROW Unit. Turn right onto the E-6500 and arrive at Units 3, 11, 12, 13, 14 and 15. Continue on the E-6500 for 0.3 miles to arrive at Units 2, 7, 8, 9 and 10.

Unit 4, 16, 17, 18, 19 and 20: From the E-Line/E-6000 junction, continue on the E-line for 1.1 miles. Turn left onto the E-5000 and continue for 1.5 miles to arrive at Units 16, 17, 18, 19, and 20.

Vantage Quarry: From Bordeaux Road SW continue onto the E-Line. Follow the E-Line for 7 miles and turn right onto the E-3020 to arrive at Vantage Quarry.

c. *Identify the names of all watershed administrative units (WAU). See also landscape/WAU map on DNR website: <http://www.dnr.wa.gov/sepa> under the topic "Current SEPA Project Actions – Timber Sales" for a broader landscape perspective.*

WAU Name	WAU Acres	Proposal Acres
WADDEL CREEK	24,322	
Sub basin #3	11,697	196

13. *Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website <http://www.dnr.wa.gov/sepa> for a broader landscape perspective.)*

This proposal is located within the Waddell Creek Watershed Administrative Unit (WAU). Agriculture and home sites are located in the valleys near the major streams. There appears to be a trend towards increasing conversion of agriculture and forest land to home sites in the low to mid elevation ranges. The uplands are mainly managed for timber production. Ownership includes large industrial forests, small private forests, and Department of Natural Resources managed forests. Forested stands within the WAU appear to be primarily second

and third growth stands. The numbers of forest practice activities shown on the WAU maps (referenced above on the Department's website) along with observations within the WAU indicate that the WAU is intensively managed for timber production, including variable retention harvest, thinning, and partial cuts.

The following tables are an estimated summary of past and future activities on Department of Natural Resources managed land and privately managed land in the Waddell Creek WAU (information is based on Forest Practices applications that have been approved in the last seven years as of November 23rd, 2015 compiled by the Department's GIS database). No attempt was made to predict future timber harvest on private ownerships within the WAU. The source for this information only provided the acreage at the WAU level.

Waddell Creek WAU	WAU ACRES/SUB-BASIN ACRES	ACRES OF EVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	ACRES OF UNEVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	PROPOSED ACRES OF EVEN-AGED HARVEST IN THE FUTURE*	PROPOSED ACRES OF UNEVEN-AGED HARVEST IN THE FUTURE*
DNR Managed Land	18,643	1,784**	188	2,140 (estimated)	0 (estimated)
Private, Other State(Non-DNR, and Federal Ownerships	5,679	206 (estimated)	0 (estimated)	Unknown	Unknown
Total	24,322	1,990	188	2,140	0

*Future is defined as occurring within the next 5-7 years (approximately).

**40 acres of the Acres of Even-Aged Harvest within the last seven are salvage acres.

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 of Natural Resources to mitigate for cumulative effects related to management activities. The applicable strategies incorporated into this proposal are as follows:

- **Retaining Riparian Management Zones (RMZ) to protect water quality, stream bank integrity, stream temperatures, and provide down woody debris. RMZs will develop older riparian forest characteristics that, in combination with other strategies, will help support older riparian forest dependent wildlife and aquatic species.**
- **Wetland Management Zones (WMZ) will protect water quality, sensitive wetland soils, and to maintain hydrologic function and natural water flow. WMZs will**

develop older wetland forest characteristics that, in combination with other strategies, will help support older forest dependent wildlife and aquatic species.

- Evaluating the proposal for potential slope instability.
- Retaining a minimum of 8 trees per acre (greater than 10 inches diameter at breast height) clumped and scattered throughout the units. This strategy will provide legacy elements for recruitment of future snags, coarse woody debris, multi-layered stands, and large diameter trees. In combination, these features will provide elements of older forest habitat characteristics within the new plantation.
- Analyzing, designing, and constructing roads to minimize effects on the environment.

A regular maintenance schedule will be followed to allow for proper road surface run-off and drainage. Haul routes for this proposal have been evaluated for potential environmental impacts. To ensure sediment is minimized during hauling, cross-drains, sediment ponds, and other structures will be used to disconnect ditch water from flowing streams. Road ditch water will be routed to the forest floor for filtering to prevent it from entering live streams.

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 WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).*

The Waddell Creek WAU ranges from approximately 80 to 2,656 feet in elevation and generally consists of rolling to flat topography with moderate to steep slopes and numerous incised draws. The WAU receives approximately 45 to 60 inches of precipitation annually, the majority of which falls as rain. The primary timber types are Douglas-fir and western hemlock with red alder dominating the draws and lowlands. Secondary species include big leaf maple, cottonwood, and western red cedar. The WAU is located in the western hemlock vegetation zone.

- 2) *Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).*

The proposal is in the lower elevations in the rain dominated zone. The proposal is very similar to the above description except Douglas-fir, western red cedar, and western hemlock are the primary species in the proposal units.

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

88 percent.

- 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 a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.

State Soil Survey #	Soil Texture	% Slope	Mass Wasting Potential	Erosion Potential
0578	SILT LOAM	20-40	LOW	MEDIUM
0575	SILT LOAM	5-20	INSIGNIFICANT	MEDIUM
0657	GRAVELLY SILT LOAM	30-65	MEDIUM	HIGH

There are no agricultural soils onsite.

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

1) *Surface indications:*

A DNR State Lands licensed geologist remotely reviewed all units of the sale utilizing digital orthophotos, LiDAR digital elevation models, and other information available in DNR's GIS database. One potential inner gorge was located within a Type 3 and Type 4 RMZ between units 2 and 3. Another inner gorge was located within a Type 3 RMZ between units 3 and 4. Other areas within the sub-basins experienced shallow rapid slope failures adjacent to streams during the storm events of 2007 and 2009 when southwest Washington experienced high amounts of precipitation.

2) *Is there evidence of natural slope failures in the sub-basin(s)?*

No Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:

There is evidence of small, shallow slope failures within the sub-basins. These are generally associated with slopes greater than 70 percent within convergent landforms such as bedrock hollows and inner gorges. These landforms, per local knowledge, typically occur within the RMZs, lower slopes of the main draws, and on headwalls at the top of steep draws.

3) *Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?*

No Yes, *type of failures (shallow vs. deep-seated) and failure site characteristics:*

Associated management activity:

Indicators of small shallow slope failures are evident in harvested areas within the sub-basins.

4) *Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?*

No Yes, *describe similarities between the conditions and activities on these sites:*

Past harvest activities (pre Forest Practices Rules) operated on areas now recognized as potentially unstable. This proposal avoids Forest Practices rule defined landforms by excluding all identified potentially unstable landforms from the harvest area.

5) *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 potentially unstable slopes were excluded from the harvest areas.**
- **Stream culverts on haul routes will be replaced as needed with larger culverts to reduce flow impediment.**
- **Cross-drains and ditch-outs will be utilized to minimize the potential for mass wasting and slope failures associated with poor drainage.**
- **Lead end log suspension during logging.**
- **Skid trails and cable roads may be water barred post harvesting activities, if necessary to avoid concentrating surface water runoff.**
- **Use of tracked equipment will minimize the potential for soil compaction and subsequent runoff from the harvest areas.**

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

Approx. acreage new roads: 1.6 Approx. acreage new landings: 0.72

Fill Source: Vantage Quarry or native material.

Approx. Cubic yards of fill: No fill will require trucking material in. All will be derived from pushing material in the process of constructing subgrade.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Yes. Some erosion could occur as a result of building new roads, installing culverts, and hauling timber. Incidental erosion may occur within the sale boundaries but

should be confined to the area of disturbance by vegetation left on-site and erosion control measures.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*

All new roads will cover less than 1 percent of the proposal area with impervious rock surfacing.

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

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

- **No harvest RMZs and WMZs function to protect streams and wetlands from sediment delivery. To protect soils from compaction and rutting as well as water quality, within the thinned RMZs and WMZs ground-based harvesting equipment will not be allowed within 50 feet of the outer edge of the flood plain.**
- **Type 5 stream headwalls and seeps are protected by leave tree clumps or 30-foot equipment limitation zones.**
- **Harvested areas are replanted with coniferous species to reestablish root bound soils.**
- **Roads are constructed and harvesting operations are restricted during saturated soil conditions.**
- **The proposal is harvested utilizing lead end suspension to minimize soil disturbance.**
- **Skid trails may be water barred post harvesting activities, if necessary.**

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. If landing debris is burned after harvest, 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 timber sale map available at DNR region office, or forest practice application base maps.)

Yes.

a. Downstream water bodies:

There are multiple streams and wetlands. All waters within the Waddell Creek WAU flow to Mima Creek to the Black River and finally to the Chehalis River.

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

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in feet (per side for streams)
Wetland	0.25 ac to <1 acre, Forested	1	100 foot no-cut
Stream	3	11	Managed and no-cut average 186 foot buffer
Stream	4	7	Managed and no-cut 100 foot buffer
Stream	5	27	30 feet ELZ/ leave tree protection

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

RMZs for this proposal are designed in accordance with the Department's HCP procedures. Stream types were identified by using the physical characteristics of the stream. All RMZs are measured horizontally from the edge of the 100-year floodplain. Local knowledge of prevailing wind direction and observation of standing trees in nearby RMZs in recently harvested units determined no wind buffers were necessary. Leave trees and a 30-foot equipment limitation zone will protect Type 5 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 map available at DNR region office.)

Description (include culverts):

Harvest will occur within 200 feet of streams, but beyond the buffer distances listed above with the exception of the variable density thin (VDT) units (6-20). Some Type 3 streams have a managed average 186 foot buffer, some have a no-cut average 186 foot buffer and some streams have portions of both managed and no-cut buffer protecting them. Some Type 4 streams have a managed 100 foot buffer, some have a no-cut 100 foot buffer and some streams have portions of both managed and no-cut buffer along them.

The Type 3 and Type 4 RMZ thinning prescriptions in units 6-20 (VDT), were developed in accordance with the Riparian Forest Restoration Strategy. The primary goal of this additional harvest is to accelerate the current stand's trajectory towards a fully functional and structurally complex forest in the future. This will be accomplished by harvesting suppressed trees from the smallest diameter classes and retaining dominant trees. Species diversity will also be maintained by harvesting intermediate Douglas-fir, leaving western red cedar and dominant Douglas-fir. The inner 25 foot "no cut" zone of the RMZ units have been bound out of the harvest unit with white Timber Sale Boundary tags. A total of 96 trees within the RMZ will be felled adjacent and/or across one Type 3 stream as part of DNR's Riparian Forest Restoration Strategy, and 64 trees within the RMZ will be converted to snags. These trees will become an essential component of the riparian ecosystem as large down woody debris. Trees may be cut in RMZs for safety or operational needs, but will be left in place to provide large woody debris functions in the riparian area.

Timber harvest may occur over Type 5 streams and wetlands less than 0.25 acres. Type 5 streams and wetlands less than 0.25 acres may have tailhold cables strung over them and/or timber yarded across them. If yarding occurs near Type 5 streams, a 30-foot equipment limitation zone will be utilized to maintain stream function, stream bank integrity and minimize possible sediment delivery.

There will be one culvert replacement on a Type 4 stream, three culvert installations on Type 5 streams, and one culvert removal on a Type 5.

- 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.

When replacing culverts, fill will be removed and replaced on Type 5 streams.

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

No

Yes, description:

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

When replacing culverts, fill will be removed and replaced on Type 4 and Type 5 streams.

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

No Yes, describe location:

A culvert replacement on a Type 4 stream at station 32+94 on the proposed E-6500 road lies within the 100-year floodplain.

- 5) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No Yes, type and volume:

This proposal could possibly introduce small amounts of sediment into the streams associated with this proposal during wet weather within or adjacent to the proposal area as a result of road building and harvest operation activity. The erosion control measures and operation procedures outlined in B.1.d.5. and B.1.h are expected to prevent sediment delivery.

- 6) *Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?*

Yes. Within the sub-basin, soils and terrain susceptible to surface erosion and/or mass wasting are generally located on strongly convergent slopes steeper than 70 percent. Any such areas identified and deemed rule-identified per the Forest Practices were excluded from the proposal. The potential for eroded material to enter surface water is minimized due to the erosion control measures and operational procedures outlined in B.1.d.5. and B.1.h.

- 7) *Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?*

No Yes, describe changes and possible causes:

During the winters of 1996, 2007, and 2009, (suspected) 100-year precipitation events occurred. The storms set rainfall and flood level records in Southwest Washington and Northwest Oregon. The events caused many shallow mass-wasting events, which caused stream channels to change location and/or dimension. The full extent and long-term impacts across the WAUs from these storms is not known due to varying ownerships.

8) *Could this proposal affect water quality based on the answers to the questions 1-8 above?*

No Yes, explain:

This proposal could introduce small amounts of sediment into streams during wet weather within or adjacent to the proposal area as a result of road building and harvest activities. The erosion control measures and operation procedures outlined in B.1.d.5. and B.1.h. are designed to avoid sediment delivery. Due to preventative measures required during the project, activities associated with this project are not expected to affect water quality.

9) *What are the approximate road miles per square mile in the WAU and sub-basin(s)? Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?*

No Yes, describe:

The Waddell Creek WAU averages 5.1 miles per square mile. Road mileages for the sub-basins are similar to the WAU mileages. The high number of miles per square mile may be due to the majority of the WAU being in an urbanized environment or topography driven.

10) *Is the proposal within a significant rain-on-snow (ROS) zone? If not, STOP HERE and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*

No Yes, approximate percent of sub-basin(s) in significant ROS zone:

Or, approximate percent of WAU:

11) *If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?*

Not applicable.

12) *Is there evidence of changes to channels associated with peak flows in the WAU and sub-basin(s)?*

No Yes, describe observations in the WAU and in the sub-basin(s):

Normally, there are few significant changes associated with peak flows in the WAUs

and sub-basins. During the winters of 1996, 2007, and 2009, (suspected) 100-year precipitation events occurred. Many channels in the WAUs were altered during these events due to high stream flows. In some cases the channels have been scoured down to bedrock, in others the increase in sediment loads and large woody debris delivery has changed channel locations and increased pool/riffle ratios.

13) *Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.*

The current proposal may temporarily change the timing, duration, and/or magnitude of peak flows due to decreased evapotranspiration and canopy interception, but measurable impacts are not anticipated.

14) *Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?*

No Yes, possible impacts:

15) *Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.*

- Streams and wetlands are protected with buffers, leave tree clumps, or equipment limitation zones, as mentioned above in B. 3. a. 1, to maintain stream and wetland function, stream bank integrity, and minimize possible sediment delivery.
- The proposal's harvest units are each less than 100 acres to minimize impacts to watershed hydrology.
- VRH areas will be replanted to minimize impacts to the watershed hydrology with the exception of right-of-way units.
- Allowing green-up (regenerated stands that are either 4 ½ feet tall or 5 years of age) of adjacent stands to minimize impacts to watershed hydrology.
 - See B.1.d.5. and B.1.h. for further protection measures.

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.

- 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 down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?*

No Yes, describe:

- a. *Note protection measures, if any.*

Not applicable.

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.

Storm water runoff from road surfaces and intercepted subsurface flow 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:

- a. *Note protection measures, if any.*

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

Slash which enters any typed stream and is identified by the Contract Administrator will be removed post-harvest. Additional cross drains will be installed to diffuse concentrated water flow and spread it out on the forest floor. No additional protection measures will be necessary to protect these resources beyond those described in B.1.d.5., B.1.h., B.3.a.2., and B.3.a.16.

- 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-16, B-3-b-3-a, and B-3-c-2-a.

4. Plants

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

deciduous tree:

alder, maple, aspen, cottonwood, western larch, birch,
 other:

evergreen tree:

Douglas fir, grand fir, Pacific silver fir, ponderosa pine,
lodgepole pine, western hemlock, mountain hemlock, Englemann
spruce, Sitka spruce, red cedar, yellow cedar, other:

shrubs:

huckleberry, salmonberry, salal, other: **Oregon grape and
Vine Maple**

grass

pasture

crop or grain

wet soil plants:

cattail, buttercup, bullrush, skunk cabbage, devil's club,
 other: **Water Parsley**

water plants:

water lily, eelgrass, milfoil, other:

other types of vegetation: **Sword Fern**

plant communities of concern:

- b. What kind and amount of vegetation will be removed or altered? (See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)

- 1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See color landscape/WAU and adjacency maps on the DNR website:

<http://www.dnr.wa.gov/sepa>

(Click on the DNR region under the Topic "Current SEPA Project Actions - Timber Sales.")

Unit 1: To the North are 22 and 80 year-old Douglas-fir plantations. To the west is a four year-old Douglas-fir planation. To the South and the east is a 33 year-old Douglas-fir planation.

Unit 2: To the North and East are 25 and 33 year-old Douglas-fir plantations. To the South and West is a 33 year-old Douglas-fir plantation.

Unit 3: To the North are 33 and 53 year-old Douglas-fir plantations. To the East and West is a 33 year-old Douglas-fir plantation. To the South are 33 and 65 year-old Douglas-fir plantations.

Unit 4: To the North, East, South, and West is a 33 year-old Douglas-fir plantation surrounding the unit.

Unit 5: To the East and South is a 33 year-old Douglas-fir plantation. To the North is a 59 year-old Douglas-fir plantation. To the West are 33, 12, and 59 year-old Douglas-fir plantations.

Units 6-20 are immediately adjacent to the VRH units; age of adjacent stands are described for the stands exterior to the RMZ.

Unit 21 (ROW): To the North, Northeast, Northwest is a 33 year-old Douglas-fir planation. To the South, Southeast, Southwest is a 53 year-old Douglas-fir plantation.

2) *Retention tree plan:*

Retention tree clumps are marked across the VRH units. A combination of Douglas-fir, western hemlock, western red cedar, and red alder were left for green tree retention and snag recruitment. Retention tree numbers were based on leaving eight trees per acre. Trees were mostly left in clumps. This type of leave tree pattern is conducive to a safe harvest operation and allows the distribution of wildlife trees throughout the proposal. An alternate leave tree strategy was employed and resulted in leaving many of the leave tree clumps to protect Type 5 streams, headwaters of streams, and wetland function. 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.

See B.3.a.2 for a description of the trees to remain after thinning activities in the VDT units.

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

None found in database search or observed onsite.

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

Some natural regeneration of native species will occur on site after harvest. Leave trees from current stand will remain as described in retention tree plan above. The site will be replanted with native conifer species after harvest.

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

Himalayan blackberry and English holly were found on site. Invasive plant species that can be found on forest land extensively throughout Grays Harbor and Thurston Counties and are likely on or near the site include:

- Tansy ragwort
- Scotch broom
- Knotweed (various species)
- English ivy
- Knapweed (various species)
- Orange hawkweed

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: hawk, heron, eagle, songbirds, pigeon, other: grouse

mammals: deer, bear, elk, beaver, other: Coyote

fish: bass, salmon, trout, herring, shellfish, other:

unique habitats: talus slopes, caves, cliffs, oak woodlands, balds,
mineral springs

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

None found.

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

Pacific flyway Other migration route: *Explain if any boxes checked:*

This proposal is located in the Pacific Flyway. Migratory waterfowl use the Pacific Flyway, however, the area in which this proposal is contained is not generally the type of area used for resting or feeding by migratory waterfowl. While migrating through Pacific Northwest forests, many Neotropical migratory birds are closely associated with riparian areas, cliffs, snags, and structurally unique trees. Riparian areas and

special habitats are protected through implementation of the Department's Habitat Conservation Plan.

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

This sale has been designed to comply with the Department's HCP and provides for the protection of wildlife and their habitats. Scattered and clumped leave trees provide nesting, roosting and foraging areas for avian species as well as protect unique features such as wet areas. Well engineered and constructed roads reduce potential water quality impacts for downstream fish populations. Large diameter leave trees, and leave trees with unique structure, will remain post-harvest to enhance the wildlife habitat value of the future stand. The regenerated stand will be composed of mixed Douglas-fir and western red cedar.

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

Riparian/Wetland habitat

RMZs and WMZs as described in B.3.a.1) c. and B.3.a.2).

Upland habitat

- **A minimum of 8 leave trees per acre were left clumped and scattered in the VRH units.**
- **Snags will be left where operationally feasible.**
- **Older large down woody debris will be left onsite.**

Marbled Murrelet

This proposal is within the South Coast Planning Unit which has a Marbled Murrelet reclassified model. This proposal is not within any occupied stands, reclassified Marbled Murrelet habitat or released reclassified Marbled Murrelet habitat.

Northern Spotted Owl:

This proposal is not located within a designated Spotted Owl Management Unit (SOMU) or within any Owl Areas, PR14-004-120.

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

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

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

Not applicable. The completed project will not require energy.

- 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:

Not applicable. The completed project will not require energy.

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 incidental 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 and no indications of contaminants observed on site.

- 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 fuel will be used on site for operation of logging equipment. Herbicides may be used for site-preparation and vegetation management within the new plantation following harvest.

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

There are no special emergency services required at this time. The Department of Natural Resources and fire protection district suppression crews may respond to wildfire in the proposal area. In the event of a hazardous materials spill the Purchaser will contact the Department of Natural Resources and the Department of Ecology.

- 5) Proposed measures to reduce or control environmental health hazards, if any:

The cessation of operations may occur during periods of time when relative humidity falls below 30 percent. Operations will also comply with Industrial Forest Precaution Level restrictions. Fire tools and equipment, including pump trucks and/or pump trailers, will be required on site during fire season. In the event of a lubricant spill the Purchaser will contact the Department of Natural Resources and the Department of Ecology. Quick response spill kits are required to be on site in case of smaller spills, as are larger spill kits if hazardous materials are going to be stored on site during operations. No oil or lubricants will be allowed to be disposed of on site. Herbicides will be used in accordance with Washington State Forest Practice and Department of Agriculture regulations.

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.

Log trucks will use forest roads, county roads, and State Route 12. This is normal activity for this area and is consistent with existing traffic. Noise will be increased during daylight hours generated from the operation of machinery and power tools.

- 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.*)

The state land surrounding the units is managed for timber production and recreation by the DNR. Current use on nearby or adjacent properties should not be affected by this proposal.

- 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?

The proposal area is currently being managed as forest lands. It will be replanted for continued forest management following harvest.

- 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. The proposal is consistent with forest land normal business operations.

- 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?

Thurston County: 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?

There is no shoreline master program designation.

- 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:

None.

- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

This proposal is consistent with the Department's habitat Conservation Plan and Policy for Sustainable Forests, as well as the county's comprehensive plan designation and zoning classification.

- m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

Proposed timber harvest is designed to meet Forest Practices Rules, HCP Strategies, and Policies for Sustainable Forests.

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

- 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?

There are no proposed structures.

- b. What views in the immediate vicinity would be altered or obstructed?

- 1) *Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?*

No Yes, viewing location: **Units 4 and 5 may be visible from Gate Rd.**

2) *Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?*

No Yes, scenic corridor name:

3) *How will this proposal affect any views described in 1) or 2) 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 wetlands and Type 3, Type 4, and some Type 5 streams. There will also be clumps scattered throughout. This view will change to that of a young plantation after seedlings are planted and the planted trees continue to grow.

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

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

11. Light and glare

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

None.

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

None.

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?

There is no designated recreation within the proposal area. However, hunting, hiking, horseback riding, mountain biking, mushroom and berry picking, and other informal outdoor recreation activities may occur within the proposal area.

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

Some types of informal recreation may be displaced during periods of active logging.

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

None at this time.

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 located on or near the site? 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.

Cultural resources were not observed within the proposed area of activity. None were found from a search of the TRAX database or with the Department of Archaeology and Historic Preservation.

- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

This proposal was reviewed for archeological/historic resources using DNR's Planning and Tracking database and USGS and GLO maps. The proposal area was field reviewed by a DNR Cultural Resources Technician.

- 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.

In the event that any unknown archaeological resources are encountered, ground disturbing activities would be halted and an Agency Archaeologist will be contacted to survey the site and develop a Site Protection Plan.

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.

Hauling will occur on forest roads to State Route 12 and forest roads to Bordeaux Road, to Mima Road, to 128th Avenue S.W., to Maytown Road S.W. to Interstate 5.

- 1) *Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?*

No.

- 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.

- 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 above.

- 1) *How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?*

There will be improvements to existing forest roads with post and pre-haul maintenance, construction, reconstruction, and abandonment on DNR roads.

- 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 nonpassenger vehicles). What data or transportation models were used to make these estimates?

There may be 15 to 20 round trips per day of log and rock haul while the operation is active. Peak volumes would occur during the yarding and loading activities between 5:00 a.m. and 7:00 p.m. of the operating period. No truck traffic will occur directly from this proposal once the project is complete.

- 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.

This proposed timber harvest will not affect or be affected by the movement of agricultural and forest products.

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

None.

15. Public services

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

No.

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

None.

16. Utilities

a. Check utilities currently available at the site:

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

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

None.

C. SIGNATURE

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

Signature: 

Name of signee David Lorence

Position and Agency/Organization DNR SPS Assistant Region Manager

Date Submitted: 6/23/16
AEM
6-14-16

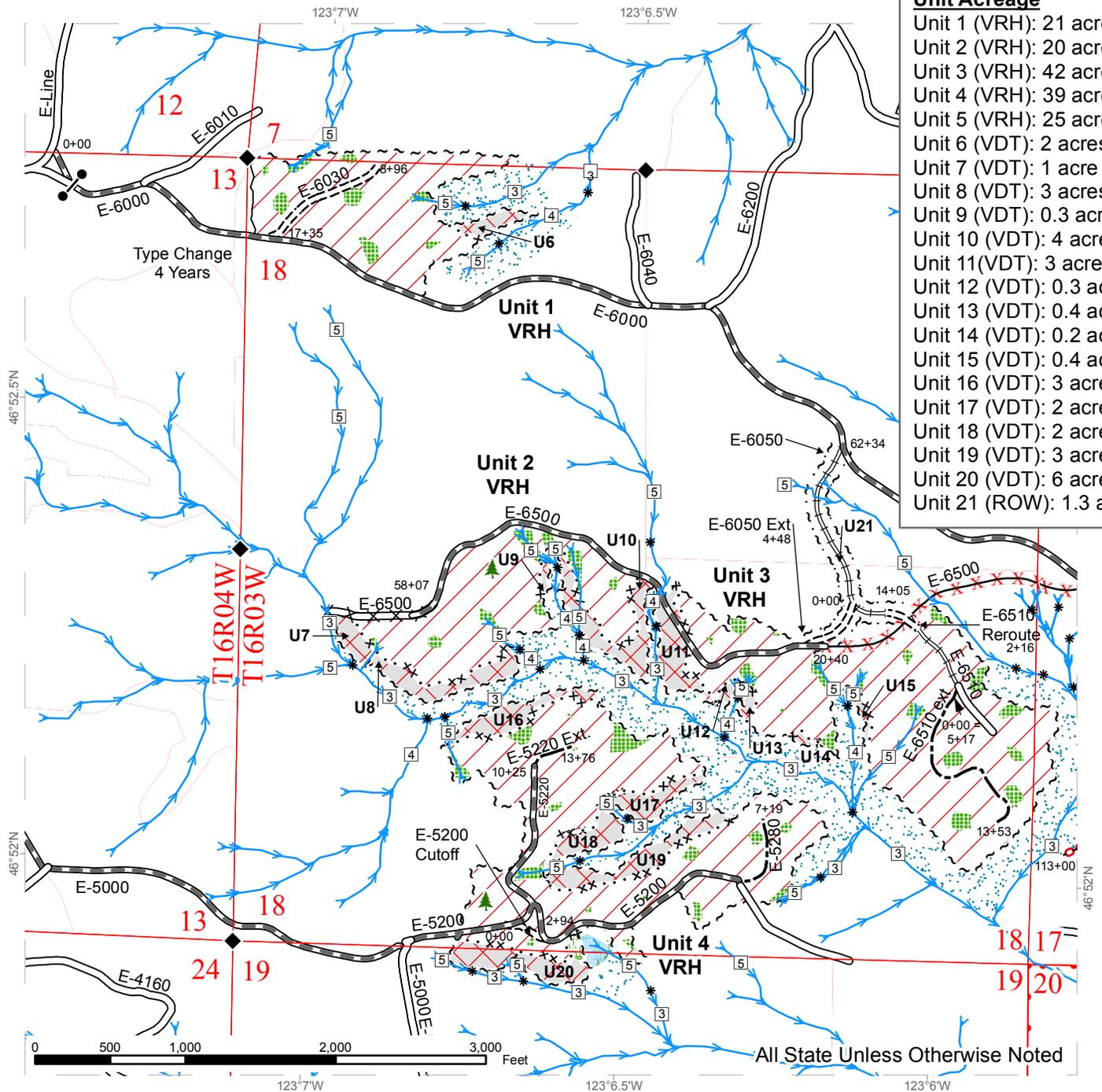
TIMBER SALE MAP

SALE NAME: ON TIME VDT & VRH
AGREEMENT #: 88892
TOWNSHIP(S): T16R03W, T16R04W
TRUST(S): State Forest Transfer (1), Common School and Indemnity (3), Charitable/Educational/Penal & Reformatory Instit. (6), University - Original (11), Forest Board Repayment (42)

REGION: South Puget Sound Region
COUNTY(S): THURSTON
ELEVATION RGE: 262-1122

Unit Acreage

- Unit 1 (VRH): 21 acres
- Unit 2 (VRH): 20 acres
- Unit 3 (VRH): 42 acres
- Unit 4 (VRH): 39 acres
- Unit 5 (VRH): 25 acres
- Unit 6 (VDT): 2 acres
- Unit 7 (VDT): 1 acre
- Unit 8 (VDT): 3 acres
- Unit 9 (VDT): 0.3 acres
- Unit 10 (VDT): 4 acres
- Unit 11(VDT): 3 acres
- Unit 12 (VDT): 0.3 acres
- Unit 13 (VDT): 0.4 acres
- Unit 14 (VDT): 0.2 acres
- Unit 15 (VDT): 0.4 acres
- Unit 16 (VDT): 3 acres
- Unit 17 (VDT): 2 acres
- Unit 18 (VDT): 2 acres
- Unit 19 (VDT): 3 acres
- Unit 20 (VDT): 6 acres
- Unit 21 (ROW): 1.3 acres



VRH Units	Special Mgmt Unit Boundary Tags	Required Construction	Streams
VDT Units	Right of Way Tags	Required Reconstruction	New Streams
Leave Tree Area	Timber Type Change	Required Decommissioning	Stream Break
Forested Wetlands	Existing Roads	Required Abandonment	Stream Type
Riparian Mgmt. Zone	Decommissioned Road	Optional Construction	Leave Trees
Wetland Mgmt. Zone	Required Pre-Haul Maintenance		Gate: H957
Sale Boundary Tags			

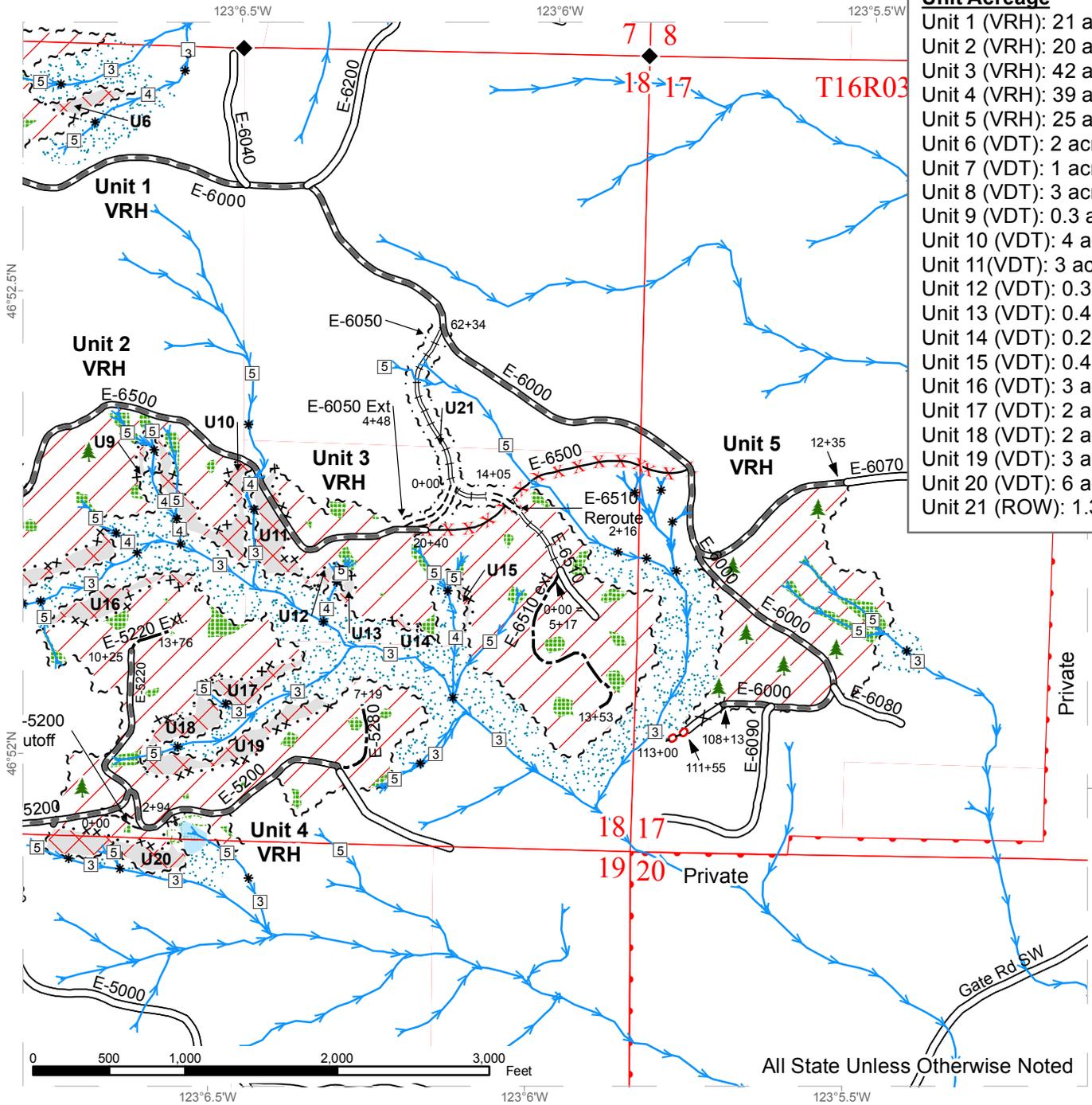
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All State Unless Otherwise Noted

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Forested Wetlands	Decommissioned Road	Required Abandonment	Stream Type
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Sale Boundary Tags			

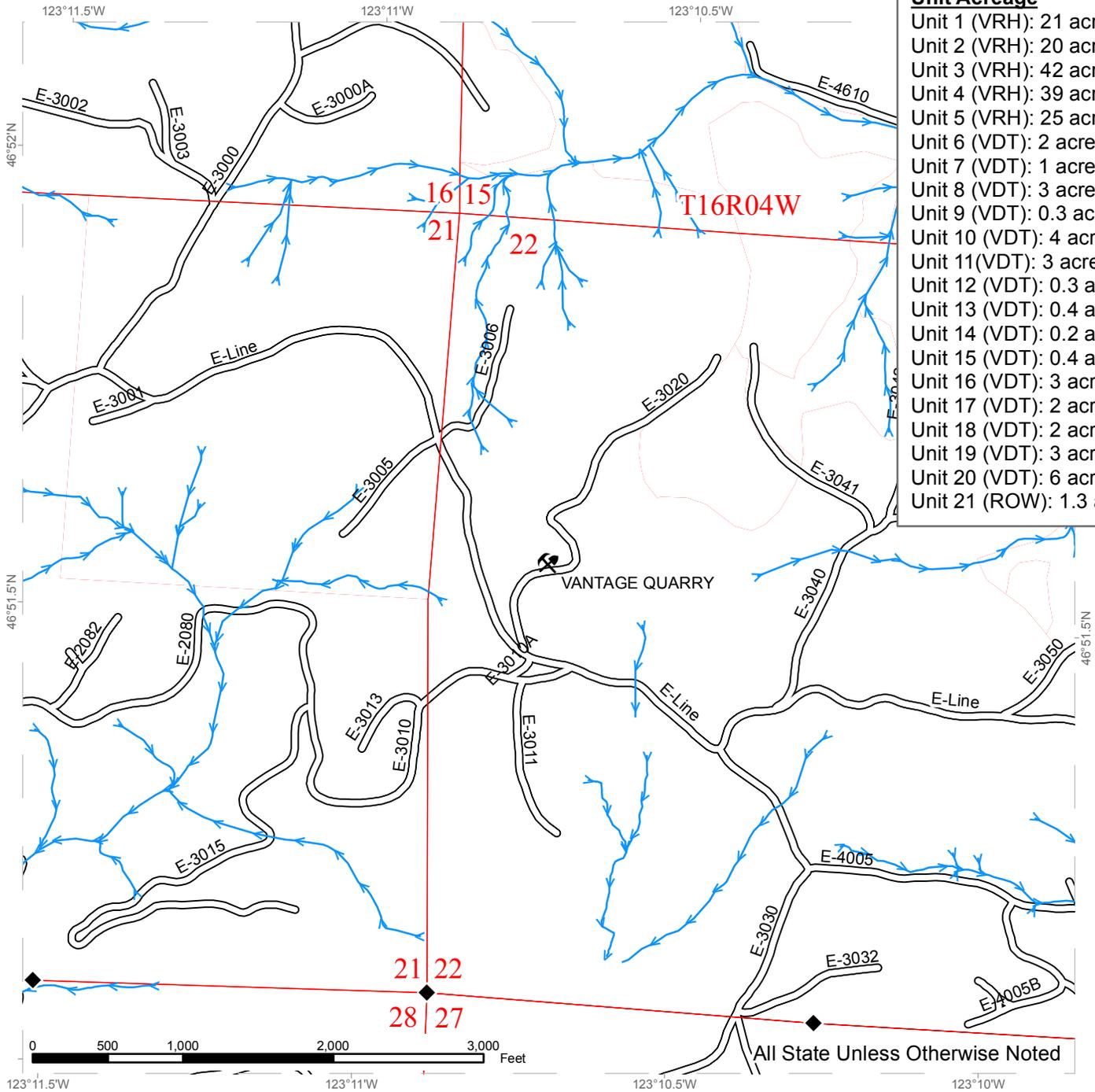
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Unit 11 (VDT):	3 acres
Unit 12 (VDT):	0.3 acres
Unit 13 (VDT):	0.4 acres
Unit 14 (VDT):	0.2 acres
Unit 15 (VDT):	0.4 acres
Unit 16 (VDT):	3 acres
Unit 17 (VDT):	2 acres
Unit 18 (VDT):	2 acres
Unit 19 (VDT):	3 acres
Unit 20 (VDT):	6 acres
Unit 21 (ROW):	1.3 acres



All State Unless Otherwise Noted

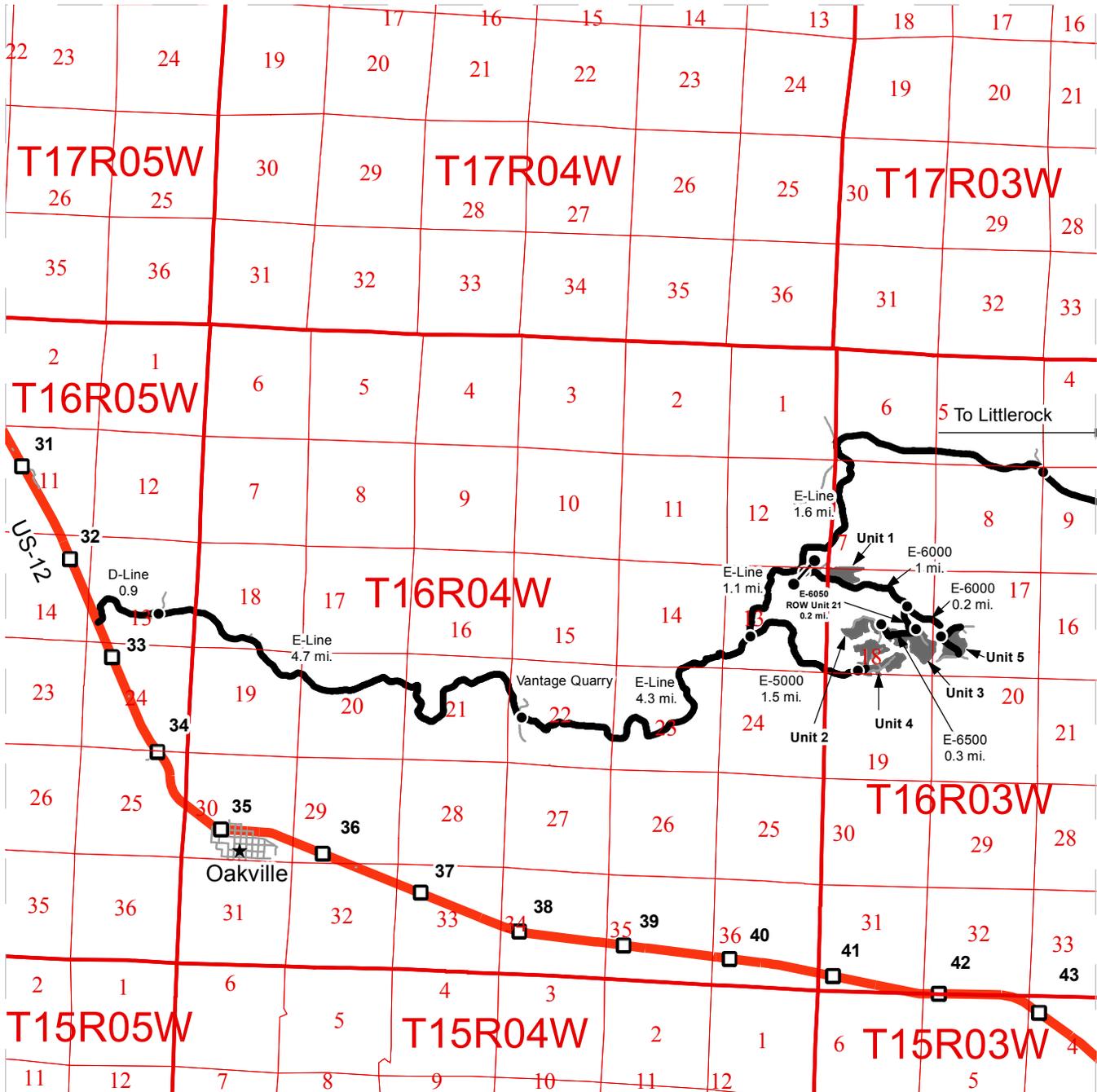
	Existing Roads		Streams
			New Streams

N

DRIVING MAP

SALE NAME: ON TIME
AGREEMENT#: 88892
TOWNSHIP(S): T16R03W, T16R04W
TRUST(S): State Forest Transfer(1), Common School and Indemnity(3), Charitable/Educational/Penal & Reformatory Instit.(6), Forest Board Repayment(42)

REGION: South Puget Sound Region
COUNTY(S): THURSTON
ELEVATION RGE: 262-1122



- Highways
- Haul Route
- Other Route
- Milepost Markers
- Distance Indicator
- ★ Town
- Gate

Driving Directions:

Vantage Quarry: From Highway 12, Enter the D-line (just after milepost 33). Continue on the D-Line for 0.9 mi. and turn right onto the E-Line. Continue on the E-Line for 4.7 mi. and turn left onto the E-3020. Arrive at Vantage Quarry.

Unit 4: From Vantage Quarry, continue on the E-Line for 4.3 mi. and then turn right onto the E-5000. Continue on the E-5000 for 1.5 mi. Arrive at Unit 4.

Unit 1: From the E-Line/ E-5000 junction, turn right onto the E-Line and follow for 1.1 mi. Then turn right onto the E-6000. In approximately 0.2 mi. Arrive at Unit 1.

Unit 2 & 3: From Unit 1, continue on the E-6000 for 0.8 mi and turn right onto the E-6050 and follow for 0.2 mi. Then turn right onto the E-6500. Arrive at Unit 3. Follow the E-6500 for 0.3 mi. and arrive at Unit 2.

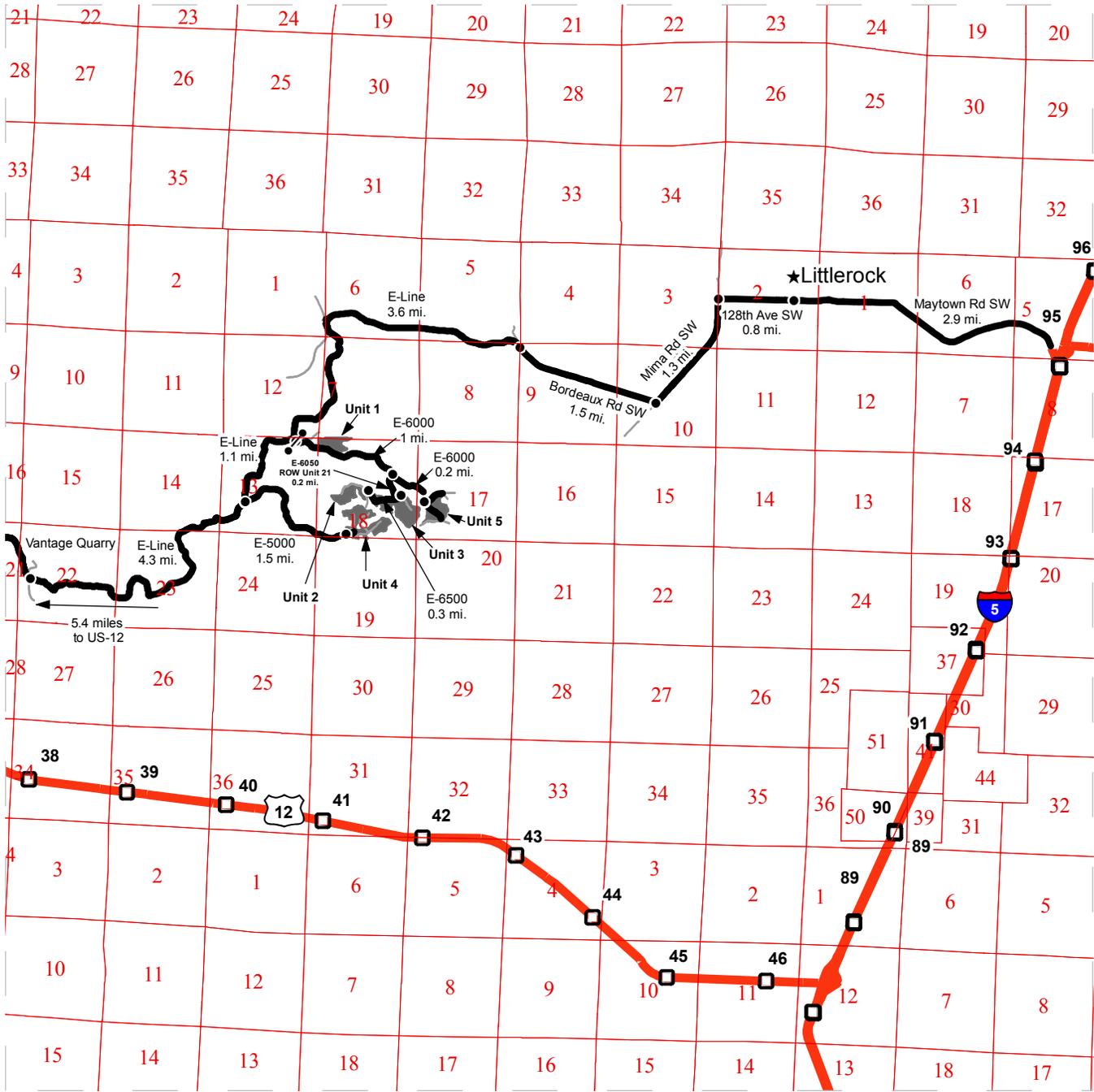
Unit 5: From Unit 1, continue on the E-6000 for 1.2 mi. and arrive at Unit 5.



DRIVING MAP

SALE NAME: ON TIME VRH & VDT
AGREEMENT#: 88892
TOWNSHIP(S): T16R03W, T16R04W
TRUST(S): State Forest Transfer(1), Common School and Indemnity(3), Charitable/Educational/Penal & Reformatory Instit.(6), Forest Board Repayment(42)

REGION: South Puget Sound Region
COUNTY(S): THURSTON
ELEVATION RGE: 262-1122



- Highways
- Haul Route
- Other Route
- Milepost Markers
- Distance Indicator
- ★ Town
- Gate

Driving Directions:

Unit 1 & 5: From Interstate 5, take Maytown exit (milepost 95) onto Maytown Rd SW and follow for 2.9 mi. Continue onto 128th Ave SW for 0.8 mi. Turn left onto Mima Rd SW and follow for 1.3 mi. Turn right onto Bordeaux Rd SW and follow for 1.5 mi. (Bordeaux Rd turns into E-Line). Stay on the E-Line for 3.6 mi. Then turn left onto the E-6000. Unit 1 will be approximately 0.2 mi on your left. Continue on the E-6000 for 1 mi. and arrive at Unit 5.

Unit 2 & 3: From Unit 1, Continue on the E-6000 for 0.8 mi. Turn right onto the E-6050 for 0.2 mi. (this road is a ROW Unit). Turn right onto the E-6500 and arrive at Unit 3. Continue on the E-6500 for 0.3 mi. and arrive at Unit 2.

Unit 4: From the E-Line/E-6000 Junction, Continue on E-line for 1.1 mi. Turn left onto the E-5000 and follow for 1.5 mi. Arrive at Unit 4

Vantage Quarry: From Bordeaux Rd SW, follow and continue onto the E-Line. Follow the E-Line for 7 mi. and turn right onto the E-3020. Arrive at Vantage Quarry.

