

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: **Bull Legged VRH VDT**

Agreement # **30-097651**

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

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

Levi Puksta
Department of Natural Resources
411 Tillicum Lane
Forks, WA. 98331
(360)374-2800

4. Date checklist prepared: **07/26/2018**

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

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

a. Auction Date: **12/12/2018**

b. Planned contract end date (but may be extended): **10/31/21**

c. Phasing:

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:

Unit 4: GROUND HERB	11/01/2021	8 Acres
Unit 5: GROUND HERB	11/01/2021	14 Acres
Unit 6: GROUND HERB	11/01/2021	4 Acres

b. Regeneration Method:

Unit 1: HAND PLANT	01/01/2022	14 Acres
Unit 2: HAND PLANT	01/01/2022	85 Acres
Unit 3: HAND PLANT	01/01/2022	7 Acres
Unit 4: HAND PLANT	01/01/2022	8 Acres
Unit 5: HAND PLANT	01/01/2022	14 Acres
Unit 6: HAND PLANT	01/01/2022	4 Acres

c. *Vegetation Management:*

Continuing assessment of units to determine future vegetation management strategy will be required.

d. *Thinning:*

PCT expected 10 to 15 years post-planting.

Roads:

Road maintenance, periodic ditch and culvert cleanout as needed.

Rock Pits and/or Sale:

Copper Pit and Red Creek Quarry.

Other:

Future forest management activities are anticipated to continue within the Upper Clearwater Watershed Administrative Unit (WAU) and adjacent to the current proposal. Potential activities may include but are not limited to firewood salvage, biomass salvage, hardwood slashing, pre-commercial thinning, commercial thinning and regeneration harvest. All future activities will be consistent with the DNR's Habitat Conservation Plan (HCP) and applicable policy and planning documents.

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: OESF Forest Land Plan (2016)

Watershed analysis:

Interdisciplinary team (ID Team) report:

Road design plan:

Wildlife report:

Geotechnical report: Geologic Risk Assessment prepared by Jeff Keck (DNR Geologist)

Other specialist report(s): WADNR west side old growth assessment prepared by Jessica Huggins (DNR Fish and Wildlife Biologist 3)

GEO TECH ASSESSMENT IS AVAILABLE IN FPARS UNDER #2615684 Ja

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

Rock pit plan: Copper Pit and Red Creek Quarry.

Other: Final Habitat Conservation Plan (September 1997), Forestry Handbook (August 1999), Sustainable Harvest Calculation (Sept 2004), Spotted Owl Habitat Mapping, Forest Practices board manual, WAU Map for Rain-On-Snow areas, Policy for Sustainable Forests (PSF 2006), HCP Checklist, Land Resource Manager (LRM) Special Concerns Report and associated maps, Road Maintenance and Abandonment Plan (RMAP) for the Upper Clearwater administrative unit: #2610029. The following documents are all generated by Department GIS databases: OESF Habitat Marbled Murrelet Habitat Model, and Marbled Murrelet Proximity Map, Weighted Old Growth Habitat Index (WOGHI) and NSO Best-70 Map.

Documents are available for review at the Olympic Region office during the SEPA review 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.

No.

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 Existing HPA Other: Board of Natural Resources

FPA CAN BE FOUND ON FPARS UNDER # 2615684

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:*

Bull Legged VRH VDT Timber Sale is located approximately 28 miles south of Forks, Washington in Jefferson County, off of the Hoh-Clearwater Mainline. It is located in the Upper Clearwater WAU. Bull Legged VRH VDT Timber Sale consists of 8 units, 6 units of Variable Retention Harvest (VRH), 1 unit of Variable Density Thinning (VDT), and 1 unit of Right-of-Way (ROW). It encompasses approximately 225 gross proposal acres with an estimated volume of 3,547 mbf. Of the 225 gross proposal acres, there are 132 net acres of VRH, 9 acres of VDT, 2 acres of ROW, 62 acres of unstable slope protection and Riparian Management Zone's (RMZ's), 1 acre of Wetland Management Zone (WMZ), 6 acres of Leave Tree Area's (LTA's), and 13 acres of existing roads.

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

Bull Legged VRH VDT Timber Sale consists of 8 units, 6 units of VRH, 1 unit of VDT, and 1 unit of ROW. It consists of 44 to 72 year-old mixed conifer timber with small amounts of red alder. The slopes within the harvest units range from 0-110%. Elevations within the proposed area range from 341-1374 feet. The sale will utilize 54% ground-based logging methods and 46% cable logging methods.

Unit 1 is a 30 acre gross unit consisting of primarily 72 year-old western hemlock and Douglas-fir. The slopes range from 0-35% and have an elevation range of 560-900 feet. There are 14 acres of VRH, 15 acres of unstable slope protection and RMZ's, 1 acre of LTA's with 91 trees, and 21 individual leave trees scattered throughout the unit. The unit will utilize 100% ground-based logging methods.

Unit 2 is a 132 gross acre unit consisting of primarily 51 year-old western hemlock and Douglas-fir. The slopes range from 0-110% and an elevation range of 341-1374 feet. There are 85 acres of VRH, 9 acres of existing roads, 34 acres of unstable slope protection and RMZ's, and 4 acres of LTA's with 665 trees and 15 trees scattered throughout the unit. The unit will utilize 78% cable logging methods and 22% ground-based logging methods

Unit 3 is a 13 gross acre unit consisting of primarily 51 year-old western hemlock, Douglas-fir and red alder. The slopes range from 0-70% and an elevation range of 480-640 feet. There are 7 acres of VRH, 1 acre of existing roads, 3 acres of unstable slope protection and RMZ's, 1 acre of WMZ, and 1 acre of LTA's with 53 trees and 3 trees scattered throughout the unit. The unit will utilize 100% ground-based logging methods.

Unit 4 is a 12 gross acre unit consisting of primarily 44 to 47 year-old western hemlock and Douglas-fir. The slopes range from 0-35% and an elevation range of 500-620 feet. There are 8 acres of VRH, 1 acre of existing roads, 3 acres of unstable slope protection and RMZ's, and less than 1 acre of LTA's with 32 trees and with 32 trees scattered throughout the unit. The unit will utilize 100% ground-based logging methods.

Unit 5 is a 19 gross acre unit consisting of primarily 44 to 47 year-old western hemlock and Douglas-fir. The slopes range from 0-35% and an elevation range of 460-620 feet. There are 14 acres of VRH, 2 acre of existing roads, 3 acres of unstable slope protection and RMZ's, and 112 trees scattered throughout the unit. The unit will utilize 100% ground-based logging methods.

Unit 6 is an 8 gross acre unit consisting of primarily 47 year-old western hemlock and Douglas-fir. The slopes range from 0-25% and an elevation range of 440-500 feet. There are 4 acres of VRH, 4 acres of unstable slope protection and RMZ's, and 32 trees scattered throughout the unit. The unit will utilize 100% ground-based logging methods.

Unit 7 is a 2 acre ROW unit and consists of 51 year-old western hemlock, Douglas-fir, and small amounts of red alder. Unit 7 will be harvested to daylight the existing C-2830 road which will be used to access part of Unit 2. The unit will utilize 100% ground-based logging methods.

Unit 8 is a 9 acre gross unit consisting of primarily 72 year-old western hemlock and Douglas-fir. The slopes range from 0-35% and have an elevation range of 560-900 feet. There are 9 acres of VDT. The unit will utilize 100% ground-based logging methods.

Objectives are as follows:

The overall objectives for this sale includes the production of saw logs and pulp material, which will create revenue for the 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. Approximately 69 acres (approximately 25 percent of the proposal) have been set aside for unstable slope, RMZs, WMZs, CMZs, and leave tree areas. In addition, these stands will be managed to protect site productivity and maintain the integrity and water quality of adjacent streams.

Ecological- The VRH will promote diverse forest structure across the landscape while preserving ecological integrity and function. The variable density thinning (VDT) in the 100 meter marbled murrelet buffer will maintain a closed canopy.

Economic- Generate revenue for Common Schools (03) Trust.

Statute- Comply with the Washington State Habitat Conservation Plan, OESF Forest Land Plan, Forest Practice rules, and implement the Policy for Sustainable Forests.

Social- Accommodate dispersed informal recreational activities on DNR managed lands.

Specific objectives are to provide riparian protection, protection of unstable slopes, 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. 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		1275	1	0
Reconstruction		0		0
Abandonment		0	0	0
Bridge Install/Replace	0			0
Culvert Install/Replace (fish)	1			N/A
Culvert Install/Replace (no fish)	3			

The 4 culverts shown in the table above will be temporary culverts, all of which will be removed by sale completion. Approximately 78,360 feet of pre-haul maintenance, and 2,575 feet of decommissioning will be completed to meet the needs of the timber sale.

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 maps on DNR website: <http://www.dnr.wa.gov/state-environmental-policy-act-sepa>. Click on the appropriate region under "Current SEPA Actions – Timber Sales.")

a. *Legal description:*

T25N R11W S2
 T25N R11W S3
 T25N R11W S9
 T25N R11W S10
 T25N R11W S16
 T25N R11W S17
 T26N R11W S35
 T25N R12W S13 Copper Pit
 T27N R11W S34 Red Creek Quarry

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

The timber sale is located approximately 28 miles south of Forks, WA. on the C-2000, C-2010, C-2800, C-2830 and C-3000 road systems. Copper Pit is located on Copper Pit road, approximately 30.7 miles south of Forks, WA. Red Creek Quarry is located on the H-1044, approximately 21.6 miles south of Forks, WA.

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

WAU Name	WAU Acres	Proposal Acres
UPPER CLEARWATER	58138.70	143

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/state-environmental-policy-act-sepa> for a broader landscape perspective.)*

Land Manager	Acres	% of WAU
DNR	57219	98.4
Federal	308	0.5
Other Land (Private & Other Public Land)	612	1.1

Data Source & Description: DNR ownership updated weekly. Non-DNR Public Lands (NDMPL) data. Management parcels are for federal, state (excluding DNR), tribal, county, and city lands within the state. Data was created by DNR Engineering Division Resource Mapping in 1994 and is periodically updated by mapping projects (100k quad or statewide MPL map).

Activities within the past seven years and those proposed for the near future are summarized for

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the Upper Clearwater WAU in the following table. On DNR ownership in the Upper Clearwater WAU during the past seven years approximately 1577 acres of even-aged and 285 acres of uneven-aged harvests have occurred. In the future, stands will be selected for regeneration, thinning, and partial cut harvests as they meet the Department's financial and ecological policies and mandates. Over the past seven years on Non-DNR managed lands within the Upper Clearwater WAU there have been 1 acre of even-aged harvest and 0 acres of uneven-age harvest. It is unknown what future plans other landowners have within this WAU.

FOREST PRACTICE APPROVED APPLICATIONS FOR HARVEST ACTIVITIES

WAU	Ownership	Even-aged Harvest acres within last 7 years	Uneven-aged Harvest acres within last 7 years	Planned Even-aged Harvest (next 5 years)	Planned Uneven-aged Harvest (next 5 years)	Salvage
Upper Clearwater	DNR Managed Land	1577	285	3003	780	0
	Non-DNR Managed Land	1	0	Unknown	Unknown	Unknown
	Total	1578	285	3003	780	0

NOTE: This information is derived from activity locations collected by varying methods ranging from hand drawn maps to precise GPS collection. No verification of map accuracy or activity completion is conducted. Totals may not be the sum of all harvest types due to overlapping activities. The same land may be counted more than once if, in the past seven years, more than one Forest Practice application has been approved for different harvests (salvage and evenage for example).

NOTE: All acreages are approximate. Rounding to the nearest 10 or even to the nearest 50 acres may be appropriate. Totals may not be the sum of all harvest types due to overlapping activities.

Data Source & Description: DNR Forest Practices Application Review System (FPARS) data. Table shows the last seven years of proposed harvest areas, some of these areas may not have actually been harvested. Data are continuously updated.

This proposal and all future management activities on DNR lands will be conducted in accordance with the State's Habitat Conservation Plan (HCP, 1997), OESF Forest Land Plan, Policy for Sustainable Forests (2006), 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**
- **Retaining Riparian Management Zones (RMZ's) on typed waters. This includes a variable width interior core buffer on type 1, 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 units.**
- **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 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. Road maintenance standards will improve the quality of the existing road network and reduce potential impacts on the environment.

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).*

Upper Clearwater WAU

Elevation: 252'-3812' with a mean elevation of 1443'.

Annual Precipitation: weighted average 133 annually.

Forest Vegetation Type: Western Hemlock

Peak Rain on Snow: 46.6%

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

This proposal has an elevation range of 341-1374 feet. There will be no harvest within the rain on snow zone.

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

110%

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	Acres	Mass Wasting Potential	Erosion Potential
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3976	GRAVELLY SILT LOAM	5-25	23	MEDIUM	LOW
5225	SILT LOAM	10-90	74	HIGH	HIGH
3970	VERY GRAVELLY LOAM	5-25	45	INSIGNIFICANT	LOW
5224	SILT LOAM	2-25	1	MEDIUM	MEDIUM

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

1) *Surface indications:* **This proposal is located on a range of slopes and is immediately adjacent to incised stream channels with actively slumping banks evidenced by over steepened slopes and exposed bare soil. All areas of potential slope instability associated with this proposal with medium or high potential have been appropriately buffered and deferred from harvest.**

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: **Within the upper reaches of WAU there are areas of shallow landslides and deep-seated landslides. These are mainly associated with incised streams, headwall areas and deep seated landslides. All areas of potential slope instability associated with this proposal with medium or high potential have been appropriately buffered and deferred from harvest.**

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: **There are areas within the WAU where shallow landslides have occurred mainly associated with past logging and road construction on unstable slopes.**

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:

5) *Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.* **A state lands geologist-in-training, licensed geologist and trained foresters identified the recharge area to one active, deep-seated, glacial landslide and all inner gorges, bedrock hollows and convergent headwalls were excluded from the harvest. All areas of potential slope instability associated with this proposal with medium or high potential have been**

appropriately buffered and deferred from harvest.

- 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 Acre Approx. acreage new landings: Less than a ¼ acre
Fill Source: Copper Pit & Red Creek Quarry*

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
Yes. A small amount of incidental surface erosion could occur during the course of road construction and harvest activities. However, prudent road location, construction, and maintenance, as well as the mitigating measures outlined in question (h) below will minimize and control any possible erosion.
- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*
Less than 2% in roads and landings.
- 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 will 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.
Engine exhaust from logging equipment and dust from passage of log trucks is the only foreseeable emissions to the air. Logging slash, if burned, will be burned adhering to the State's smoke management plan.
- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. **N/A.**
- c. Proposed measures to reduce or control emissions or other impacts to air, if any:
None.

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.)

a. *Downstream water bodies: Unnamed perineal streams, Clearwater River, Queets River, Pacific Ocean*

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	1	Variable width interior core buffer of 150'-175'.
Stream	3	10	Variable width interior core buffer of 100'-115'.
Stream	4	12	Variable width interior core buffer of 55'-115'.
Stream	5	44	Variable width interior core buffers of 5'-30' and a 30' equipment limitation zone (ELZ) adjacent to all type 5's.
Wetland	Forested	2	Average 100-year two-thirds site index buffer of 106' on wetlands over 0.25 acres but less than 5 acres.

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

For all sales in accordance with the Habitat Conservation Plan, all floodplains and unstable slopes are protected with variable width interior core buffers based on site specific conditions.

There is one Type 1 stream, ten Type 3 streams, twelve Type 4 streams, Forty-four Type 5 streams, and two forested wetlands associated with this proposal.

The Type 1 stream has been protected with a 150'-175' no harvest interior core buffer.

Type 3 streams have been protected with 100'-115' interior core buffers.

Type 4 streams have been protected with 55'-115' interior core buffers. Unit 4 and 5 will utilize allotted acres along one un-named type 4 channel. There will be 1.3 acres of harvest in these units which are allotted acres associated with the Upper Clearwater 676 type 3 sub-basin. Unstable Type 5 streams are protected with interior core buffers (5' – 30'). There is also a 30' equipment limitation zone (ELZ) protecting all streams.

There are also 2 wetlands adjacent to the sale boundary. The wetlands have been protected with an average 100-year two-thirds site index buffer of 106' on wetlands over 0.25 acres but less than 5 acres.

Windthrow probability modeling and field assessments were done on the sale area and determined low risk of severe endemic windthrow for the interior core buffers. Due to this, no external 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 culverts, 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. Soils exposed during road construction activities will be protected from erosion by grass seeding, mulching with hay, and sediment fence.

- 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): **Timber felling, bucking, yarding, bridge maintenance, and road construction will occur within 200 feet of all 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 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.

No Yes, type and volume:

- 7) 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. The potential for eroded material entering surface water is low. The possibility for eroded material entering surface water has been minimized due to the fact that unstable slopes within, or directly adjacent to, the sale area has been appropriately buffered and the measures listed in B. 1. h.

- 8) 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:

Yes, areas within the Upper Clearwater WAU show evidence of changes to stream channels. Some steep drainages in the WAU 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.

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

No Yes, explain:

This proposal will have minimal effects on water quality. Measures described in B 1-h, wet weather restrictions on road work and logging operations will all contribute to reducing the potential of affecting water quality.

- 10) 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?

Land Owner	Miles of Road	Miles per Square Mile
Non-DNR	7.5	0.1
DNR	334.0	3.7
Total	341.5	3.8

Data Source & Description: DNR State Lands Transportation (ROPA.ROAD). Data is the best estimate of the transportation routes in the state, however, should not be considered a complete inventory of these routes. Updates to this data are variable.

No Yes, describe:

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

11) *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:

12) *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? N/A.*

13) *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):

The Upper Clearwater WAU shows evidence of slope failures which caused a shift in some stream channels. Also, some stream segments show cutting and scouring which can be attributed to the absence of LWD during peak flow events. Refer to B.3.a.8.

14) *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.*

This proposal should not measurably change the timing, duration, or amount of water in a peak flow event. The harvest prescription, size and location of units, road design and buffering, will minimize this proposal's impact to peak flow.

15) *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:

16) *Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection*

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measures addressing possible peak flow/flooding impacts.

Road maintenance and construction will minimize impacts by using cross drains to release ditch water onto stable forest floors where much of the energy can be dissipated prior to reaching stream channels. Maintaining large RMZ's on streams that maintain bank stability, hydrologic functions and provides recruitment of LWD. See B.1.h, B.3.a.1.c and A.13 for additional 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. **N/A**
- 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.

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 will be collected by roadside ditches. Ditch-outs and culvert cross-drains will divert storm water onto stable forest floor. This water will percolate through the soil and ultimately flow into streams which drain the area.**

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

No *Yes, describe:*

a. Note protection measures, if any.

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

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so, describe. NO.

- 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:

grass

pasture

crop or grain

wet soil plants:

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

water plants:

water lily, eelgrass, milfoil, other:

other types of vegetation:

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.)

3,546 mbf OF MATURE TIMBER IS PLANNED FOR

- 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: 30

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

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

Unit 1 is bordered to the north by 106 year old timber, and to the south, east and west by 72 year old timber.

Unit 2 is bordered to the north by 35 year old timber, to the east and west by 51 year old timber, and to the south by 145 year old timber.

Unit 3 is bordered to the north by 51 year old timber, to the east and south by 145 year old timber, and to the west by 44 year old timber.

Unit 4 is bordered to the north by 44 year old timber, to the east and south by 194 year old timber, and to the west by 47 year old timber.

Unit 5 is bordered to the north, south and west by 47 year old timber, and to the east by 194 year old timber.

Unit 6 is bordered to the north, south, east and west by 47 year old timber.

Unit 7 is bordered to the north by 35 year old timber, and to the east, south and west by 51 year old timber.

2) *Retention tree plan:*

Unit 1: This unit has a 1-acre leave tree area with 91 trees and 21 individual trees scattered throughout the unit.

Unit 2: This unit has two leave tree areas totaling 4-acres and containing 665 trees with 15 individual trees scattered throughout the unit.

Unit 3: This unit has a 1-acre leave tree area with 53 trees and 3 individual trees scattered throughout the unit.

Unit 4: This unit has a less than 1-acre leave tree area with 32 trees and 32 individual trees scattered throughout the unit.

Unit 5: This unit has 112 individual trees scattered throughout the unit.

Unit 6: This unit has 32 individual trees scattered throughout the unit.

Unit 8 (VDT): This unit will be thinned from below to achieve a residual of 170 square feet of basal area and 130 trees per acre, resulting in an overall relative density of 45.

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

TSU Number	FMA_ID	Common Name	Federal Listing Status	WA State Listing Status
None Found In Database Search				

A CHECK OF FPAM DATA BASE CONFIRMS NO CONFLICT WITH TREE PLANT SPECIES. JA

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
All units in this proposal will be replanted with a mix of Douglas-fir, and Western hemlock, within one growing season upon expiration of the contract. Other native conifer and deciduous species may regenerate naturally on the site. Native grass seed will also be used on areas of exposed mineral soil during road building operations. See A.7 (a.b.c.d.) and B.4.b.(2), above.
- 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: hawk, heron, eagle, songbirds, pigeon, other:

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

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

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

*** Eagles have been observed in flight in this vicinity. There are no known nest sites within 660 feet of the harvest proposal.**

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

Timber Sale Unit	FMA ID #	Common Name	Federal Listing Status	WA State Listing Status
1	307570	Northern Spotted Owl	Threatened	Endangered
2	307572	Northern Spotted Owl	Threatened	Endangered
3	307573	Northern Spotted Owl	Threatened	Endangered
4	307574	Northern Spotted Owl	Threatened	Endangered
4R	307615	Northern Spotted Owl	Threatened	Endangered
5	307616	Northern Spotted Owl	Threatened	Endangered

5R	307617	Northern Spotted Owl	Threatened	Endangered
6	307618	Northern Spotted Owl	Threatened	Endangered
7	307619	Northern Spotted Owl	Threatened	Endangered
8	307571	Northern Spotted Owl	Threatened	Endangered
8	307571	MURRELET	Threatened	Endangered

A CHECK ON FPRM DATABASE CONFIRMS NO CONFLICT WITH THE ANIMAL SPECIES, SO

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

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

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

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). The sale area is considered non-habitat according to the OESF HCP definitions for NSO habitat. Currently the Upper Clearwater is currently 33.7% habitat.

Species/Habitat: Marbled Murrelet - The entire proposal area was evaluated for habitat protection or other marbled murrelet conservation opportunities. Updated information from the US Fish and Wildlife Services (USFWS Ref# 13410-2009-F-0388) indicates 100 meters as the threshold distance for significant murrelet behavioral response. Unit 8 is within 100 meters of an occupied site and timing restrictions will be enforced for timber harvest and heavy equipment operations from one hour before sunrise to two hours after official sunrise and from one hour before official sunset to one hour after official sunset, between April 1 and September 23. Other portions of the proposal are within 1/4 mile, but not 100m. Following updated USFWS guidance, the region biologist does not recommend timing restrictions in these areas.

Species/Habitat: Riparian and Wetland - Interior core buffers have been applied to type 1, 3, 4, and unstable 5 waters. Equipment limitation zones are on all typed streams, as described in B.3.a.1)b). Riparian buffers are designed to protect the unstable portions of the stream banks, and help to protect waters from siltation and increased temperature by providing shade and cover. Buffers also allow the natural occurrence of woody debris that provides pools and eddies for fish habitat along

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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 – Diverse habitat for upland wildlife will be provided by the following measures: All areas of potential slope instability associated with this proposal with medium or high potential have been appropriately buffered and deferred from harvest. These in concert with riparian buffers provide for mature forest areas. Windfirm, 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 and structures for wildlife species. Timber removal will temporarily create open environments that provide valuable foraging and potential habitat for a variety of wildlife species associated with early-staged forest environments.

- e. List any invasive animal species known to be on or near the site.
None.

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

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.
 - 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.
 - 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.
None.

- 4) Describe special emergency services that might be required.
Fire Suppression, Hazardous waste cleanup, emergency medical services.
- 5) Proposed measures to reduce or control environmental health hazards, if any:
The timber sale contract requires the purchaser to minimize risk of fire and does not allow for disposal of any kind of waste on any State lands. Pump trucks and/or pump trailers will be required on site during fire season. Hazardous waste cleanup materials will be required on site. If any toxic or hazardous spills occur or if past contamination is discovered, the Department of Ecology will be notified.

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. **Noise from chainsaws, heavy equipment and log truck traffic will be perceptible while the sale is active.**
- 3) Proposed measures to reduce or control noise impacts, if any:
Unit 8 is within 100 meters of an occupied site and timing restrictions will be enforced for timber harvest and heavy equipment operations from one hour before sunrise to two hours after official sunrise and from one hour before official sunset to one hour after official sunset, between April 1 and September 23.

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.*)
Commercial Forest Land. No
- 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 current use of the project site is working forest. No portion of this proposal will be converted to no-forest use.
 - 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 Use.**
- g. If applicable, what is the current shoreline master program designation of the site? **N/A.**
- 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: **The design of the project is consistent with the current comprehensive plans and procedures pertaining to DNR's Habitat Conservation Plan and the state forest practices act.**
- 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.
N/A.
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
N/A.
- c. Proposed measures to reduce or control housing impacts, if any:
N/A.

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?
N/A.
- b. What views in the immediate vicinity would be altered or obstructed?
None.
 - 1) *Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?*

 No *Yes, viewing location:*
 - 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?

N/A.

- c. Proposed measures to reduce or control aesthetic impacts, if any:
N/A.

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?
Dispersed informal recreation in the form of hunting, hiking, fishing, berry picking, sightseeing, etc.
- b. Would the proposed project displace any existing recreational uses? If so, describe.
No.
- 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 located on or near the site? If so, specifically describe.
No. A CHECK ON FARM DATA BASE CONFIRMS NO CONFLICT WITH
- 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, IOWA
- 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 and Land Resource Manager (LRM) Special Concerns Report shows no known cultural resources on or near the site. A check of the cultural resources layer

on the State Upland viewing tool shows no cultural resources on or near the site. During timber sale preparation, trained foresters found nothing on or near the site to indicate any potential cultural resource

- 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.

None.

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.

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

This proposal will have no additional impacts on the overall transportation system in the area.

- 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).

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

This proposal will have 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 nonpassenger vehicles). What data or transportation models were used to make these estimates?

Approximately 10-15 log truck trips per day through peak harvest times. Estimates were based on harvest traffic on similar sites.

- 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:

Roads will be maintained in compliance with HCP and Forest Practice requirements and will divert storm water onto stable forest floors. To avoid erosion

and impacts to water quality, soils exposed during culvert installation will be grass seeded and covered with hay.

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:  PUKSTA

Name of signee Levi Puksta

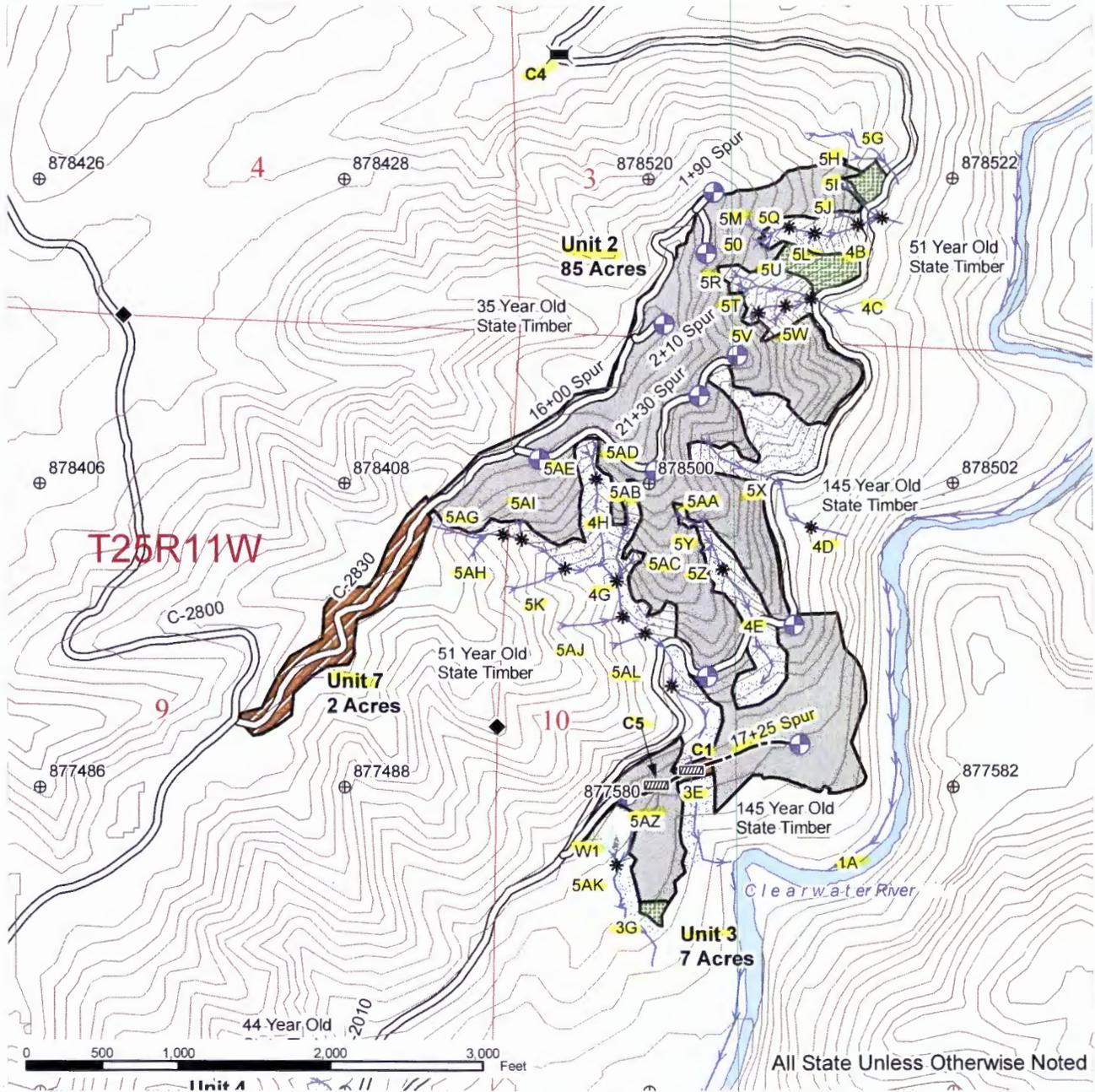
Position and Agency/Organization Unit Forester

Date Submitted: 09/19/2018

FOREST PRACTICES ACTIVITY MAP

SALE NAME: BULL LEGGED VRH VDT
APPLICATION#: TBD by FP Staff

COUNTY(S): Jefferson
TOWNSHIP(S): T25R11W; T26R11W

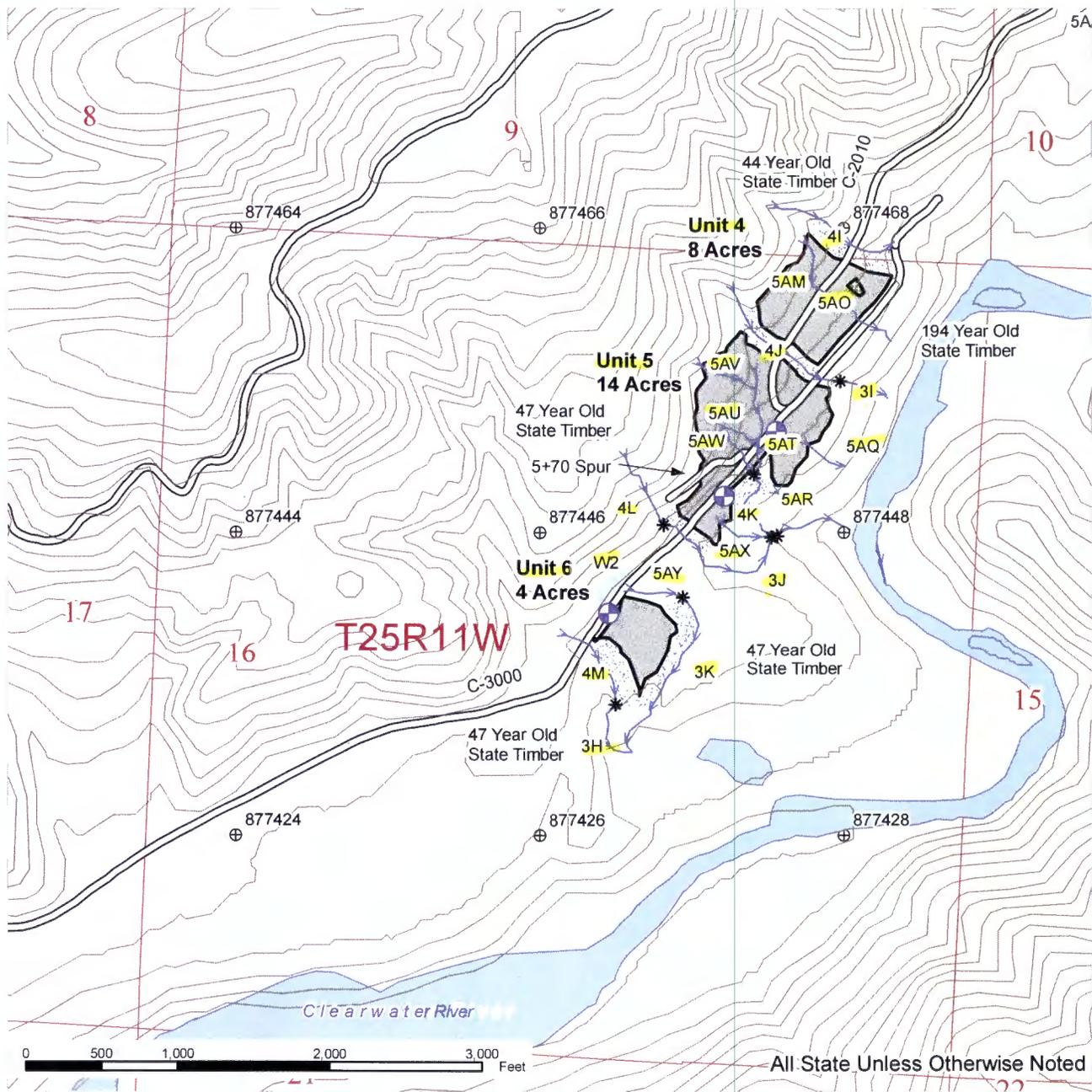


⊕ Tics - 2000' Interval	* Stream Break	▨ Riparian Management Zone
⌘ Bridge	→ Streams	▨ Leave Tree Area
⊕ Landing	— Existing Road	▨ Right Of Way
▨ Culvert Install	- - - Optional Construction	▨ Wetland Management Zone
— Contours 40-foot	▨ Timber Sale Unit	▨ Forested Wetland

FOREST PRACTICES ACTIVITY MAP

SALE NAME: BULL LEGGED VRH VDT
APPLICATION #: TBD by FP Staff

COUNTY(S): Jefferson
TOWNSHIP(S): T25R11W; T26R11W



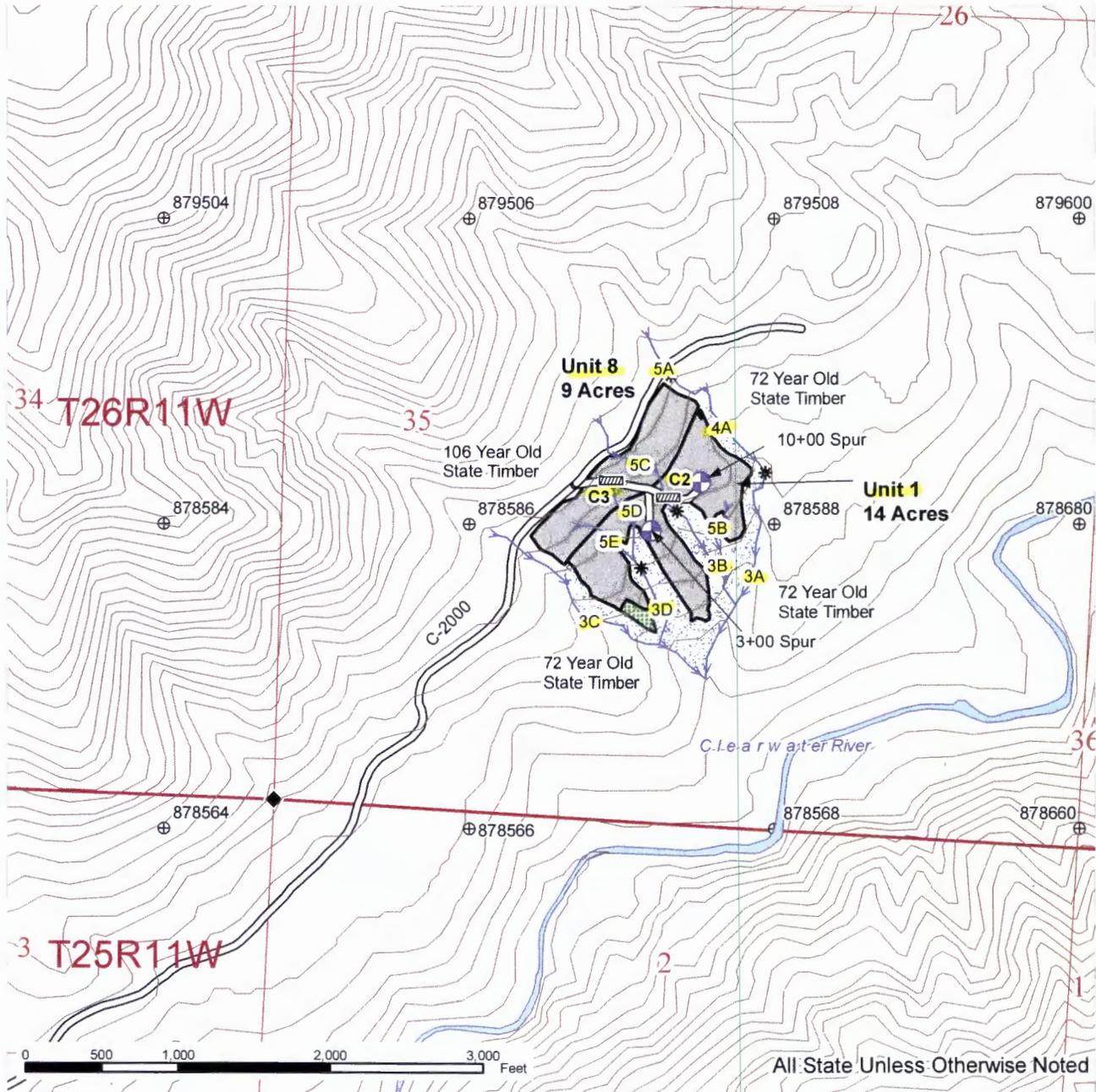
⊕ Tics - 2000' Interval	* Stream Break	▨ Riparian Management Zone
⌒ Bridge	→ Streams	▨ Leave Tree Area
⊕ Landing	⌒ Existing Road	▨ Right Of Way
▨ Culvert Install	⌒ Optional Construction	▨ Wetland Management Zone
— Contours 40-foot	▨ Timber Sale Unit	▨ Forested Wetland



FOREST PRACTICES ACTIVITY MAP

SALE NAME: BULL LEGGED VRH VDT
 APPLICATION #: TBD by FP Staff

COUNTY(S): Jefferson
 TOWNSHIP(S): T25R11W; T26R11W



All State Unless Otherwise Noted

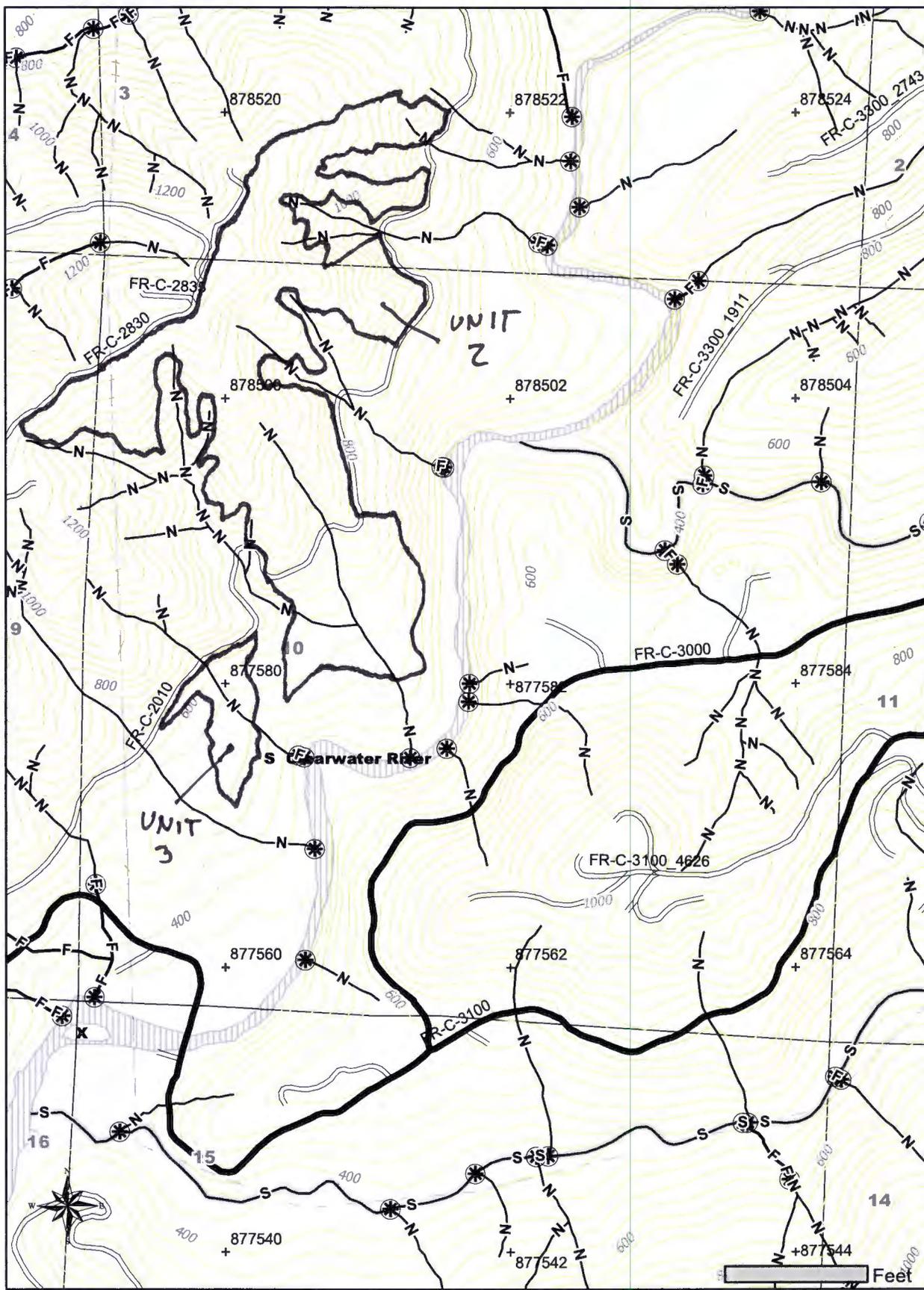
⊕ Tics - 2000' Interval	* Stream Break	Riparian Management Zone
Bridge	→ Streams	Leave Tree Area
Landing	— Existing Road	Right Of Way
Culvert Install	- - - Optional Construction	Wetland Management Zone
— Contours 40-foot	Timber Sale Unit	Forested Wetland



FOREST PRACTICE ACTIVITY MAP

TOWNSHIP 25 NORTH HALF 0, RANGE 11 WEST (W.M.) HALF 0, SECTION 10

Application #: 2615684



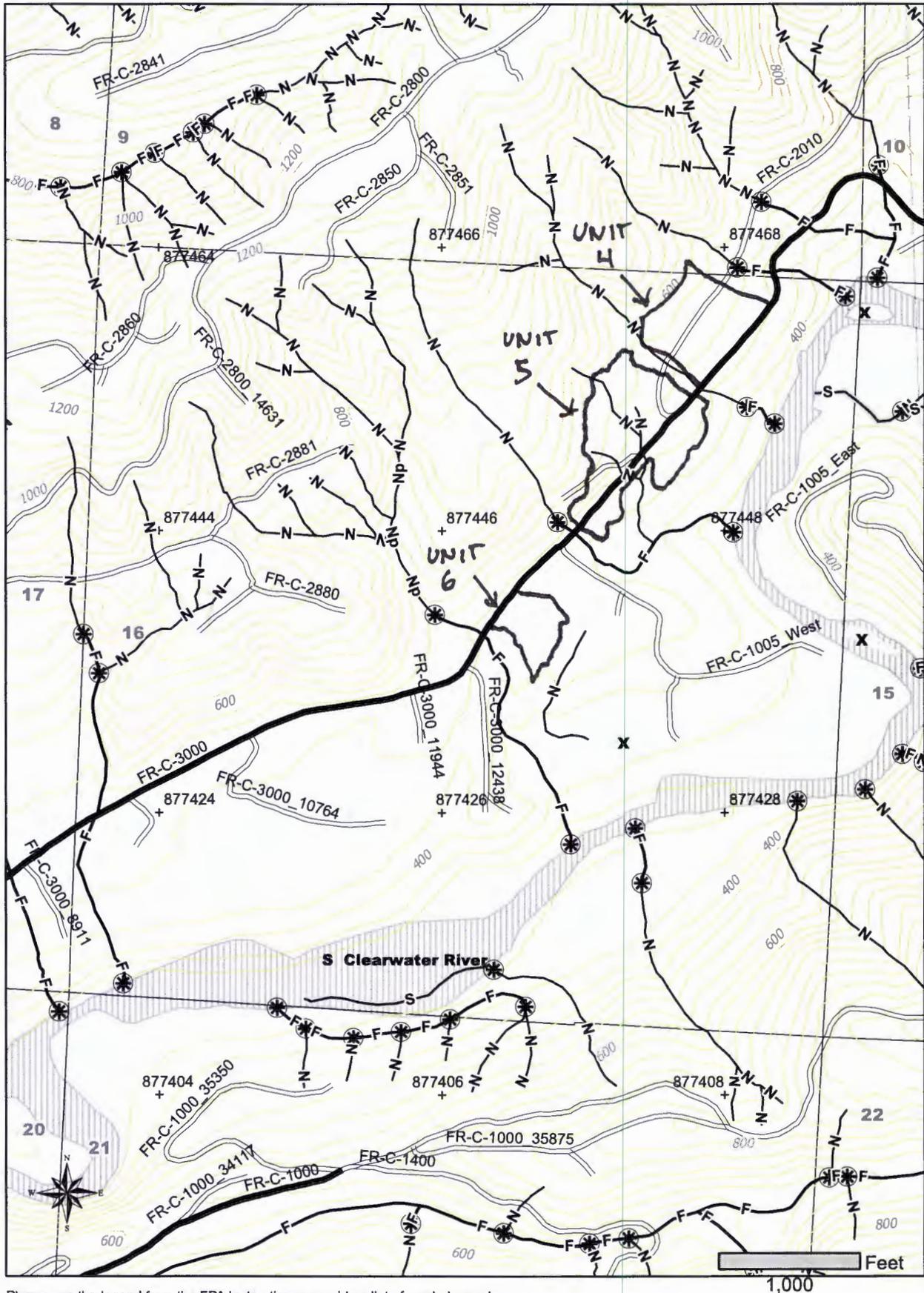
Please use the legend from the FPA Instruction or provide a list of symbols used.

Date: 9/18/2018 Time: 12:02:45 PM
NAD 83
Contour Interval: 40 Feet

FOREST PRACTICE ACTIVITY MAP

TOWNSHIP 25 NORTH HALF 0, RANGE 11 WEST (W.M.) HALF 0, SECTION 16

Application #: 2615684



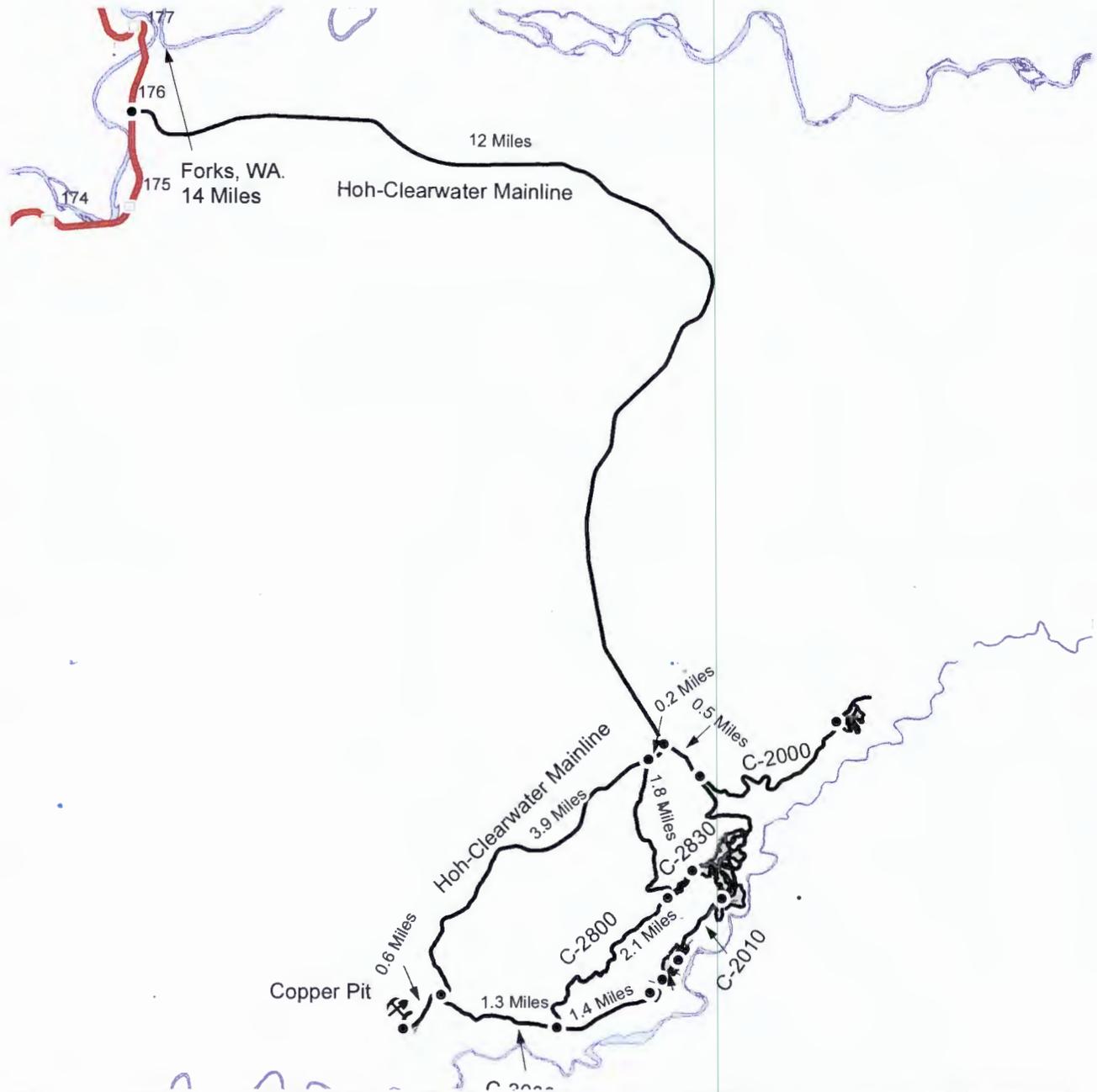
Please use the legend from the FPA instruction or provide a list of symbols used.

Date: 9/18/2018 Time: 12:22:48 PM
NAD 83
Contour Interval: 40 Feet

DRIVING MAP

SALE NAME: BULL LEGGED VRH VDT
AGREEMENT#: 30-097651
TOWNSHIP(S): T25R11W; T26R11W
TRUST(S): Common School and Indemnity (3)

REGION: Olympic Region
COUNTY(S): Jefferson
ELEVATION RGE: 341'-1374'



	Highway
	Haul Route
	Other Road
	Distance Indicator
	Rock Pit
	Milepost Markers
	Timber Sale Unit

Timber Sale Area: From Forks drive 14 miles South on US 101 and turn left onto the Hoh-Clearwater Mainline. Continue for 12 miles to the C-2000 junction (see next page for further directions).

Copper Pit: From the Hoh-Clearwater Mainline and C-2000 junction continue on the mainline for 4.7 Miles and turn right onto Copper Pit rd.



DRIVING MAP

SALE NAME: BULL LEGGED VRH VDT
AGREEMENT#: 30-097651
TOWNSHIP(S): T25R11W; T26R11W
TRUST(S): Common School and Indemnity (3)

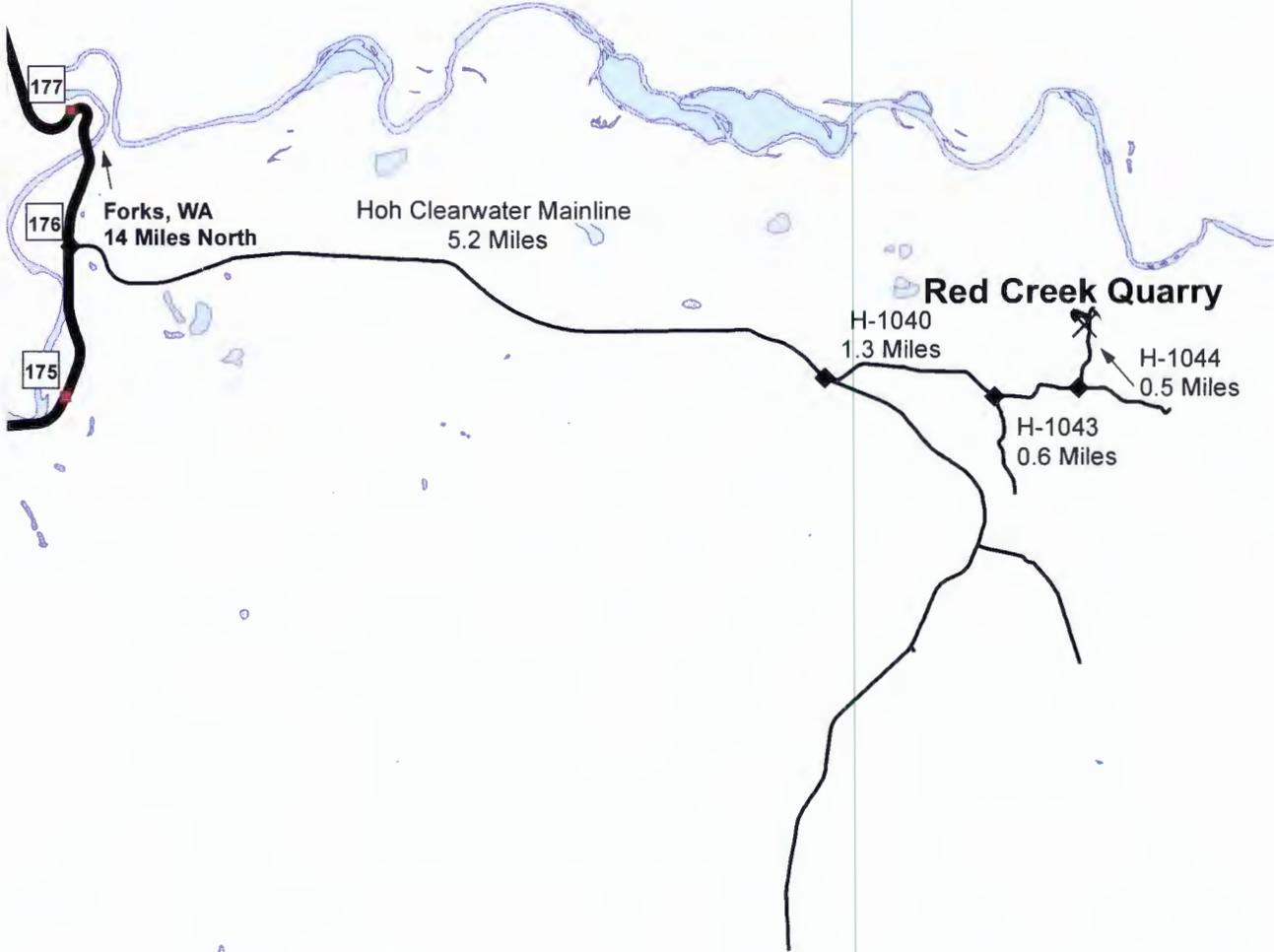
REGION: Olympic Region
COUNTY(S): Jefferson
ELEVATION RGE: 341'-1374'



<p>— Haul Route</p> <p>— Other Road</p> <p>• Distance Indicator</p> <p>■ Timber Sale Unit</p>	<p>Unit 1 & 8: From the Hoh-Clearwater Mainline and C-2000 Junction take the C-2000. Go 0.5 miles to the C-2010. Continue on the C-2000 for another 2.2 miles to Unit 1 & 8.</p> <p>Unit 3: From the C-2000 and C-2010 Junction take the C-2010. Go 2.1 miles to Unit 3.</p> <p>Unit 7: From the Hoh-Clearwater Mainline and C-2000 Junction continue on the mainline for 0.2 miles and turn left onto the C-2800. Continue for 1.8 miles and turn left onto the C-2830 where Unit 7 begins.</p> <p>Unit 2: From Unit 7 continue on the C-2830 for 0.4 miles to Unit 2.</p> <p>Unit 6: From the Hoh-Clearwater Mainline and C-2800 Junction continue on the mainline for 3.9 miles and turn left onto the C-3000. Continue for 2.7 miles to Unit 6.</p> <p>Unit 5: From Unit 6 continue on the C-3000 for 0.2 miles to Unit 5.</p> <p>Unit 4: From Unit 5 continue on the C-3000 for 0.2 miles to Unit 4.</p>
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DRIVING MAP: Red Creek Quarry



- Open Water
- Highways
- Pits
- Gates
- Haul Route
- Milepost Markers
- Distance Indicator

DRIVING DIRECTIONS:

From Forks: Head south approximately 14 miles to mile post 176 on US 101, and turn left onto the Hoh-Clearwater Mainline. Head east approximately 5.2 miles to the H-1040 and continue 1.3 miles and turn left onto the H-1043. Continue along the H-1043 0.6 miles and turn left onto the H-1044, go 0.5 miles and Red Creek Quarry is on the left.

