

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: **Dingo Dance**

Agreement # **30-095917**

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

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

Washington Department of Natural Resources

South Puget Sound Region

950 Farman Avenue North

Enumclaw, WA 98022

Audrey Mainwaring

(360) 802-7001

4. Date checklist prepared: **8/29/2018**

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

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

a. Auction Date: **5/28/2019**

b. Planned contract end date (but may be extended): **10/31/2021**

c. Phasing: **Not Applicable**

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: **Herbicide application as needed to ensure establishment of planted seedlings.**

b. Regeneration Method: **Hand plant with native conifer species within two years following completion of harvest. The harvest unit will be planted at a density that meets or exceeds Forest Practice standards.**

c. Vegetation Management: **Vegetation management needs will be assessed from plantation ages three to eight. Vegetation control activities will be scheduled as needed.**

d. Thinning: **Pre-commercial thinning needs may be assessed at approximately 8-10 years of age.**

Roads: The roads that are part of this proposal will receive periodic road maintenance such as grading, ditch cleanout and vegetation management during harvest activities. The mainline haul roads outside the harvest area will be used for future forest land management activities such as timber harvesting, silviculture, recreation and fire control. The roads used will remain open after the completion of harvest activities and maintained as part of a road maintenance plan for the Tahoma State Forest. The purchaser of this proposal will be required to complete road maintenance on those roads used during the sale as part of this proposal.

Rock Pits and/or Sale: Rock for the construction of landings and surfacing for new road construction will come from the Plum Pit located in the SE ¼, NW ¼ of Section 21, Township 14 North, Range 6 East, W.M., the Iron Horse Pit located in SW ¼, NE ¼ of Section 8, Township 14 North, Range 6 East, W.M. and the Grinder Pit located in SW1/4, NE1/4 of Section 21 T14N R06E, W.M.

Other: Post harvest will assess slash and debris piles for possible prescribed burn of piles to clear acreage for silviculture, fire prevention and safety.

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: **Mineral and North Fork Mineral Creek**

Interdisciplinary team (ID Team) report:

Road design plan: **Included in the Road Plan, dated 9/12/18**

Wildlife report: **Marbled Murrelet Habitat Assessment Memorandum dated 9/24/2018; Dingo Dance Consultation Memorandum from Alan Mainwaring dated 8/22/2018**

Geotechnical report:

Other specialist report(s):

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

Rock pit plan: **Included in Road Plan, dated 9/12/18**

Other:

- 1) Owl habitat surveys for 1996
- 2) Policy for Sustainable Forests
- 3) State Soil Survey
- 4) GIS WAU Analysis: Maps and data pertaining to mass wasting and erosion potential, hydrologic maturity and roads per square mile, and rain-on-snow zones. This information has been adjusted where more recent and accurate proprietary data exists.
- 5) LRM Special Concerns Report
- 6) DNR’s 1997 Habitat Conservation Plan
- 7) Final EIS South Puget Sound Planning Unit Forest Land Plan
- 8) Fish and Wildlife Remote Review from Alan Mainwaring dated 10/17/2017
- 9) Email Correspondence dated 10/29/2017 from Alan Mainwaring
- 10) Email correspondence dated 6/8/2018 and 9/7/2017 from Susie Wischart

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

None known.

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

FPA FPHP Burning permit Shoreline permit Incidental take permit 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 Dingo Dance proposal lies within the boundary of the North Fork Mineral Creek Watershed Administrative Unit (NF Mineral Creek WAU) in the Tahoma State Forest. The total proposal area selected for consideration was 115 acres, which was reduced to an area of 45 net acres due to logging feasibility, protection of Riparian Management Zones (RMZs), potentially unstable slopes and other sensitive areas.

The total net harvest area of the proposal consists of one variable retention harvest (VRH) unit and two right-of-way harvest units. Road work associated with this proposal consists of 9,767 feet of required pre-haul maintenance, 1,942 feet of optional construction and 516 feet abandonment, if built.

Unit 1

- **Approximate Net Acres: 44**
- **Logging System: Mixed, Cable and ground based**
- **Estimated Volume: 1,538 MBF**

Unit 2 Right-of-Way

- **Approximate Net Acres: <1**
- **Logging System: Ground based**
- **Estimated Volume: 12 MBF**

Unit 3 Right-of-Way

- **Approximate Net Acres: <1**
- **Logging System: Ground Based**

- **Estimated Volume: 20 MBF**

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

The proposed harvest area is located on a steep, planar hillside and ridge top. Slopes in the proposal area range from 10 to 82 percent. Elevation ranges from approximately 2,320 to 3,480 feet.

The majority of the harvest area is in the stem exclusion stage of development. The harvest units are composed of 49 to 63 year old, fire regenerated second growth mixed conifer stands. Tree species composition includes Douglas-fir and western hemlock with minor components of western redcedar, Pacific silver fir, noble fir, western white pine, cottonwood and red alder. The understory, when present, is dominated by beargrass and Oregon grape along with salal and small amounts of vine maple in some areas.

Short-term objectives:

- 1) Create revenue for trust beneficiaries through timber harvest.**
- 2) Provide legacy trees for the future stands. Unit 1 will be a variable retention harvest retaining 8 leave trees per acre. Residual trees have been left as scattered individuals and clumps within the harvest unit to enhance structural diversity over time and to provide habitat for various species of animals and plants.**
- 3) Native conifer stands will be established within two years of harvest. The growth of these trees may be enhanced and managed by altering the density of the plantation through pre-commercial thinning in order to produce future high quality timber and northern spotted owl (NSO) dispersal habitat.**
- 4) Two Type 4 streams will be protected in riparian management zones (RMZs). Seven Type 5 stream within the unit will be protected with a 30 foot Equipment Limitation Zone.**

Long-term objectives:

- 1) Timber Stand Improvement: a series of intermediate thinnings and harvests will be scheduled as needed during the development of the new stands. The primary objective of the treatment will be to stimulate wood production, generate trust revenue, create new canopy layers, and enhance important structural components to produce stand conditions associated with older stands.**
- 2) Habitat Management: create, maintain, and improve the components within the developing stand with each succeeding treatment, as part of the overall objective to create quality NSO dispersal and wildlife habitat.**

- 3) **Resource Protection:** the protection of soil productivity and water quality will remain priorities. Each harvest prescription will be crafted to prevent soil erosion and limit compaction. Large coarse woody debris will be left to contribute to site productivity.
- 4) **Create a sustainable source of revenue for trust beneficiaries.**
- 5) **Maintain hydrologic maturity across DNR managed lands.**

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		1,942	.7	N/A
Reconstruction		0		N/A
Abandonment		516	.2	N/A
Bridge Install/Replace	0			N/A
Culvert Install/Replace (fish)	0			N/A
Culvert Install/Replace (no fish)	9*			

* **Five cross drain culverts, three contingency culverts, and one stream culvert.**

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:*

**T14N R06E S21 – Unit 1, Unit 2, Unit 3, and Plum Pit
T14N R06E S8 – Iron Horse Pit
T14N R06E S21 – Grinder Pit**

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

From Elbe, drive east on SR-706 for approximately 6.5 miles. Turn right (south) on the 1 Rd. for 2.7 miles. Turn right (west) onto the 2 Rd. and follow for 2.3 miles. Turn left onto the 23 Rd. and follow for approximately 1.6 miles to the 23 Rd. gate. Continue for 1.1 miles. Turn right onto the 234 Rd. and follow for approximately 0.6 miles. To reach the timber sale, from the 234 Rd. turn right onto the 234-1 Rd. and follow for 0.7 miles.

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
NF MINERAL CREEK	17,545.20	45
Sub-basin #3	5,789	45

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.)

The North Fork Mineral Creek WAU is 17,545 acres in size, with 21 percent in private ownership and 79 percent is managed by DNR. On DNR managed lands 7 percent of the land base has had some form of forest practices activity in the last seven years. In the next five year period, a combination of variable retention harvests and variable density thinnings will be used to harvest timber from the area. The variable density thinnings will be designed to improve northern spotted owl (NSO) dispersal habitat.

It is anticipated that the implementation of the procedures of the Habitat Conservation Plan (HCP) and compliance with existing forest practice regulations will minimize or prevent any potential impact that this proposal may have 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).*

The North Fork Mineral Creek WAU generally consists of steep topography with benches, rolling hills, ridges, and mountainous terrain. Elevation ranges from 1,431 feet to 5,218 feet with an average of 3,031 feet.

Annual rainfall generally ranges between 80 and 110 inches per year with an average of 97 inches per year. Temperatures range from winter lows of 10 degrees Fahrenheit to summer highs of 90+ degrees Fahrenheit. Snow normally covers the ground from December through March in elevations above 2,500 feet.

Major forest types found in this WAU consist of Douglas-fir and western hemlock, with noble fir and Pacific silver fir found in higher elevations and red alder and black cottonwood found in lower elevations adjacent to streams.

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

The proposal location is representative of the NF Mineral Creek WAU at similar elevations and aspects.

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

The steepest slope is approximately 82 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
0485	V.CINDERY LOAMYSAND
0988	V.CINDERY LOAMYSAND
0484	V.CINDERY LOAMY SAND
1186	V.CINDERY SANDY LOAM
6099	PHEENEY- ROCK OUTCROP- COMPLEX

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

1) *Surface indications:*

There are surface indications of instability on some steep, convergent slopes and in over steepened slopes near stream channels adjacent to the harvest units. Areas identified during remote and field reviews that suggested potential instability, such as bedrock hollows and inner gorges, were excluded from the harvest area. Southeast of the harvest unit a non-rule-identified bedrock dormant-distinct deep-

seated landslide (DLSL), two active rock fall areas of the headscarp, and slopes over 65% and over were located on the toe of the non-rule-identified DLSL. There were no clear signs of recent deep-seated activity.

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:

Potentially unstable slopes and landforms have been identified within the WAU by remote and field review by DNR foresters and a remote review by a DNR State Lands Geologist-in-Training, and by a watershed analysis (Benda and Coho 1998). Aerial photo analysis and LiDAR remote sensing were also used in the analysis of this proposal. Natural slope failures tend to occur in areas where slopes are both steep (generally 70 percent and greater) and convergent, such as bedrock hollows, convergent headwalls and stream associated inner gorges.

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: Small surface failures on cut and fill slopes within road right-of-ways have been observed on orphaned logging roads, old skid trails and railroad grades, as well as some side cast failures on active logging roads within this WAU. These types of failures are generally associated with extreme precipitation events and typically occur on sub-standard road grades that were constructed using older road building methods.

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:

The primary similarity between this site and other sites with slope failures is the presence of steep slopes. The proposal area was reviewed by the DNR State Lands Geologist-in-Training remotely with ortho photographs and LiDAR analysis prior to commencing field work.

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

A DNR State Lands Geologist-in-Training and foresters conducted remote reviews and site visits to screen for potentially unstable landforms. The harvest boundaries and road locations are designed to exclude areas identified as potentially unstable with the likelihood of delivery to public resources. Haul roads will be upgraded to current Forest Practice Rules and maintained through the duration of harvest activities. Measures will be taken

throughout operations to control soil erosion which may include construction of water bars, road and trail muck removal with logs, silt traps, or other measures on skid trails, yarding corridors and haul roads. Lead end of all logs will be suspended during harvest operations to control impacts on soils that could result in excessive soil displacement and exposure.

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

Approx. acreage new roads: 0.7 Approx. acreage new landings: 1 Fill Source: Plum Pit, Grinder Pit and Iron Horse Pit

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

Minimal erosion may occur as a result of road construction, road use and logging operations.

- 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 two percent of the sale acreage will be covered with impervious surface that consists of rock applied to the surface of 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.)*

A detailed Road Plan is included as part of the timber sale contract to ensure the following:

- **Roads will be crowned or in-sloped and cross drained to provide for water drainage.**
- **Cross drains will be properly spaced, installed and maintained.**
- **Protection measures to avoid sediment delivery will be addressed as needed during operations and may include the use of water bars, catch basins or silt traps.**
- **There will be periodic maintenance and inspection of the road system to ensure proper drainage.**
- **From November 1st to May 15th the purchaser shall comply with a maintenance plan to include further protection of water, soil, roads, and other forest assets at the Purchaser's expense. Preventative measures shall be in place prior to operating during this period.**
- **A detailed plan of operations will be developed by the Purchaser and approved by the Contract Administrator prior to commencing operations.**
- **Harvest equipment will be limited in areas to reduce compaction and erosion impacts.**
- **The lead end of logs will be suspended during all yarding operations.**

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.

Minimal amounts of engine exhaust from logging equipment, log trucks, and automobile exhaust will be emitted as a result of this proposal.

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

None.

- b. 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:*

North Fork Mineral Creek, Mineral Creek and the Nisqually 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)
Unnamed Stream	4	2	100
Unnamed Stream	5	7	30-foot equipment Limitation Zone or excluded from the proposal

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

The streams adjacent to this proposal were identified during field reconnaissance. The stream types were determined using physical stream

characteristics according to DNR's Trust Forestland Habitat Conservation Plan (HCP) water typing system and appropriate buffers were applied. Refer to the associated timber sale map for stream types and locations.

Road-related protection measures for this proposal include preventing silt-bearing runoff from entering streams and prohibiting organic debris or waste material from being placed within 50 feet of a live stream or wetland.

- 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 up to the buffers listed above. Harvest will occur up to Type 5 streams within the unit although equipment will be limited within 30 feet of the stream.

Cables may be hung over the listed streams but logs will not be yarded over or through Type 4 streams.

One stream culvert will be placed in a Type 4 stream with work associated with this proposal.

- 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:

There is one culvert replacement within the 100-year floodplain of a Type 4 stream.

- 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?*

The erosion potential for soils in the immediate proposal vicinity is considered medium. The mass wasting potential for soils in the immediate proposal vicinity is considered low to high. The unit boundary excludes all identified potentially unstable slopes and landforms, minimizing potential for eroded material to enter surface water. This data was collected from state soil survey data.

- 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:

Major changes to North Fork (NF) Mineral Creek and some of its tributaries in the amount of large organic debris, channel width and locations are primarily due to large scale rain-on-snow events and annual spring runoff.

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

No Yes, explain:

This proposal should not significantly impact water quality. This conclusion is based upon examination of past logging and harvesting activities within this WAU and current design of the harvest units of this proposal. Some minor erosion may occur although this proposal is not anticipated to increase the potential for mass wasting or an event that would significantly impact stream or water quality. Erosion control measures will be implemented as described in question B.1.h above to prevent the potential for sediment delivery to surface waters. The proposal also incorporates best management practices for road design and construction.

- 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?*

No Yes, describe:

The NF Mineral Creek WAU contains an average of 4.9 miles of road per square mile. On non-DNR lands the average is 1.0 miles of road per square mile, while on DNR lands the average is 3.8 miles of road per square mile.

- 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*

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questions below.

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

Or, approximate percent of WAU:

NF Mineral Creek WAU Sub-basin #3: 94.2 percent (ROS/Snow Dominated Zone: All Ownerships)

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?

I. SUB-BASIN NAME	TOTAL ROS ACRES (DNR) WITHIN SUB-BASIN	CURRENT DNR SUB-BASIN ACRES IN HYDRO MATURE FOREST IN ROS	APPROX. PERCENT DNR LANDS IN SUB-BASIN RATED HYDROMATURE IN ROS
NF Mineral Creek WAU Sub-basin #3	4364	2909	78.97%

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 WAU that contains the proposal area has evidence of channel modification that could have been caused by peak stream flows. This could have been partially attributed to past harvest practices that resulted in increased peak flows. This is manifested in processes such as toe undercutting, scour, and over bank flows.

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 is in the same general area as other recent harvesting activities. There is no indication that past, current, or foreseeable future proposals working in combination with this proposal will contribute to peak flow impact within the North Fork Mineral Creek WAU

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 measures addressing possible peak flow/flooding impacts.*

The current guidelines for HCP implementation include prescriptions that address the potential for peak flow impacts. HCP procedure PR-14-040-006 provides guidance for assessing the hydrological maturity levels for the sub-basins within the rain-on-snow zone. This policy is used to manage hydrological maturity levels and reduce impacts of timber harvest operations to peak flow rates.

This proposal includes maintaining cross-drains and ditch-outs on the haul routes. These structures will ensure that ditch water is deposited on the forest floor and not allowed to flow directly into typed waters. Drivable waterbars will be constructed as needed on roads from November 1st – May 15th and following completion of harvest operations to help mitigate erosion into road drainage. Leave trees within the harvest unit will minimize soil displacement and surface erosion.

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.

Groundwater will not be withdrawn and no water will be discharged to groundwater, however, it is possible that minor amounts of subsurface flow will be intercepted with road construction excavation slopes. There are no known wells within the proposal area.

- 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.

Insignificant amounts of oil and other lubricants could be discharged inadvertently as a result of heavy equipment use. If spills occur, containment and cleanup will be required. Spill kits are required to be onsite during all heavy equipment operation.

- 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.*

None.

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.

The location of cross drain culverts will be selected to disperse collected storm water from the ditches onto the forest floor. The frequent spacing of culverts will minimize the distance water flows before being dispersed onto the forest floor. Consequently, no surface or ditch water will flow directly into existing stream channels. Ditch outs will also be used to direct runoff onto the forest floor. No water runoff will be channeled onto exposed soils.

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

No Yes, describe:

Minor amounts of motor oil, grease, and hydraulic fluids may leak from equipment or be washed off equipment by rainwater.

a. *Note protection measures, if any.*

No lubricants will be disposed of on site. If spills occur, containment and cleanup will be required. Spill kits are required to be onsite during all heavy equipment operations.

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

- **Proper landing locations**
- **Road construction and maintenance techniques utilizing Forest Practice Rules and best management practices**
- **Use of sound, adequate ballast and surfacing for road construction and maintenance if rocking is deemed necessary.**

The following measures will be used to reduce and control the impacts of surface, ground and runoff water:

- Spacing and placement of culverts with head walls.
- Frequent catch basins and energy dissipaters
- Use of ditch outs.

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: western
white pine

shrubs:

huckleberry, salmonberry, salal, other:

grass

pasture

crop or grain

wet soil plants:

cattail, buttercup, bullrush, skunk cabbage, devil's club,
other: **Sedge, American Speedwell (Both adjacent to site)**

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.)

Approximately 1570 MBF of primarily Douglas-fir, western hemlock and western redcedar will be removed. The age of the timber is between 49 and 69 years old. There is some understory vegetation in areas within the harvest unit that will be disturbed or damaged during the felling and yarding process.

- 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."))

The stands immediately adjacent to the proposed harvest unit are DNR managed State trust lands within the North Fork Mineral Creek WAU and are similar to the proposal area. These stands are typically second-growth, range in age from 21 to 93 years old and are dominated by Douglas-fir and western hemlock.

2) *Retention tree plan:*

Unit 1 is a variable retention harvest that is designed to retain at least 8 leave trees per acre, all greater than 10 inches in diameter at breast height (DBH). These leave trees were selected from the dominant and co-dominant size classes, and are marked with a band of blue paint or yellow "Leave Tree Area" tags. The leave trees are individually scattered or clumped throughout the unit.

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

None found in an agency database search or onsite

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

Replanting of native conifer species at a density that meets or exceeds Forest Practice standards within two years following harvest.

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

None are known or were observed on the site.

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: **cougar**

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 in database search or observed onsite.

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

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

All of western Washington is within the Pacific flyway. It is possible that some migratory birds use this area as a stopping over point but none have been observed on site.

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

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

Species /Habitat: Riparian

Protection Measures: HCP minimum 100 foot RMZ on Type 4 streams and Forest Practice Rule 30 foot equipment limitation zones on Type 5 streams.

Species /Habitat: Upland

Protection Measures: Scattered and clumped leave trees at an average of 8 trees per acre

Species /Habitat: Northern Spotted Owl

Protection Measures: This proposal is located within the Tahoma Spotted Owl Management Unit (SOMU), which is within a designated Dispersal Management Area within the South Puget HCP planning unit. The Tahoma SOMU is at 17.27 percent total NSO Habitat. Next best habitat has been identified within this SOMU to bring the SOMU up to the 50 percent threshold. The proposed unit is in "non-habitat" that is not identified as next best habitat and is available for the full range of management options. A variable retention harvest (VRH) has been prescribed. There is a proposed road that will be built through 0.71 acres of Movement Plus habitat to access the harvest unit. This activity will not change any current amounts of total movement habitat with the Tahoma SOMU. This proposal is consistent with DNR's HCP and PR 14-004-120 Northern Spotted Owl Management (Westside) and PR 14-001-030 Settlement Agreement.

Species/Habitat: Marbled Murrelet

Protection Measures: This proposal is within South Puget HCP Planning Unit, which does not have a Marbled Murrelet Reclassified Habitat Model. A 165 foot no harvest buffer has been established between the sale and the suitable habitat. Timing restrictions within ¼ miles of 7.75 acre polygon of suitable habitat to the north will be in effect for this sale prohibiting harvesting, road construction and the operation of heavy equipment during the Critical Nesting Season (April 1-August 31) during Daily Peak Activity of the marbled murrelet which is from 1 hour before sunrise to 2 hours after sunrise -and- 1 hour before sunset to 1 hour after sunset. The Dingo Dance Timber Sale is in full compliance with PR 14-004-320 Protecting Marbled Murrelet Habitat.

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

Barred owl (*Strix varia*).

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.

Does not apply.

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

No.

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

None.

7. Environmental health

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

Minimal amounts of oil and other lubricants may be accidentally discharged during heavy machinery operation. There is some risk of fire if operations occur during dry times of the year.

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

None known.

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

None known.

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

Oil based products will be used by equipment during the development and operating life of the project.

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

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

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

During the fire season, April 15 through October 15, operators will comply with all State fire laws and have the proper fire equipment on site. In addition, operations will be suspended if the onsite relative humidity falls below 30 percent. A 300 gallon water supply is required to be on site during the "Closed Season".

b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

There will be short term low level and high level noise created by the use of harvesting equipment within the proposal area. This type of noise has been historically present in this geographical area. The typical hours of operation will be Monday through Friday from 4:00 a.m. to 8:00 p.m.

- 3) Proposed measures to reduce or control noise impacts, if any:

Timber haul, road construction, and rock haul will not be permitted on weekends or State recognized holidays without prior written approval from the Contract Administrator.

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.)*

Timber production and forest management under state and private ownerships. The proposal will not affect current land uses on nearby or adjacent properties.

- 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 has been used as working forest lands. Approximately 2 percent of the project area will be converted to logging roads and landings as a result of this proposal.

- 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?

Forest Resources Zone.

- f. What is the current comprehensive plan designation of the site?

Timber production.

- g. If applicable, what is the current shoreline master program designation of the site?

Does not apply.

- 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 located within the Forest Resources Zone of Lewis County and is compatible with that designation. The use of harvest planning information based on data taken from DNR's GIS database, and strict adherence to the DNR's Forestry Handbook and the HCP will assure that this proposal is compatible with the existing and projected land use and plans. The DNR's Forestry Handbook is on file at the South Puget Sound Region office in Enumclaw.

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

None.

9. Housing

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

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?

Does not apply.

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

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

No Yes, viewing location:

Mount Tahoma Trails Association (MTTA) has several ski huts and ski trails on DNR land under a joint agreement. The proposal area is visible from a small portion of this ski trail system.

- 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?*

Other than being visible from a small portion of the MTTA trail system, this proposal will not affect any views.

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

Native conifers will be hand planted within two years of harvest activity to establish a new stand of trees that will provide green up of the harvest area. The harvest units will become less visible over time. The leave tree retention plan will help mitigate the initial visible impact of the harvest.

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 are informal recreational activities such as hiking, fishing, and hunting in and around the proposal site. See also B-10-b-1.

- 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:

Timber haul, road construction and rock haul will not be permitted on weekends or state recognized holidays unless approved in writing by the Contract Administrator.

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.

None known or observed onsite.

- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

None known or observed onsite.

- 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.

The DNR's database was checked for any potential impacts and GLO and historic maps were reviewed.

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

If cultural resources or human remains are found during the active harvest operations, all activities will cease until the area has been investigated, and the DNR guidelines for Inadvertent Discovery will be followed.

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.

The haul route will utilize DNR forest roads within the Tahoma State Forest.

- 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, the nearest public transit is approximately 20 miles away in the town of Morton.

- 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).

Improvements will be made to existing forest roads and new forest roads may be constructed to facilitate harvest operations. See question A.11.a.

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

There will not be any increase over historic levels.

- 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 10 to 15 round trips per day while the operation is active. Peak volumes would occur during the yarding and loading activities between 4:00 a.m. and 4:00 p.m. of the operating period. 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.

No.

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

None.

15. Public services

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

Accidents would need to use existing emergency services provided by the local communities. Wildfires would need fire response from the local fire districts and the DNR.

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: Dean Adams

Name of signee Dean Adams

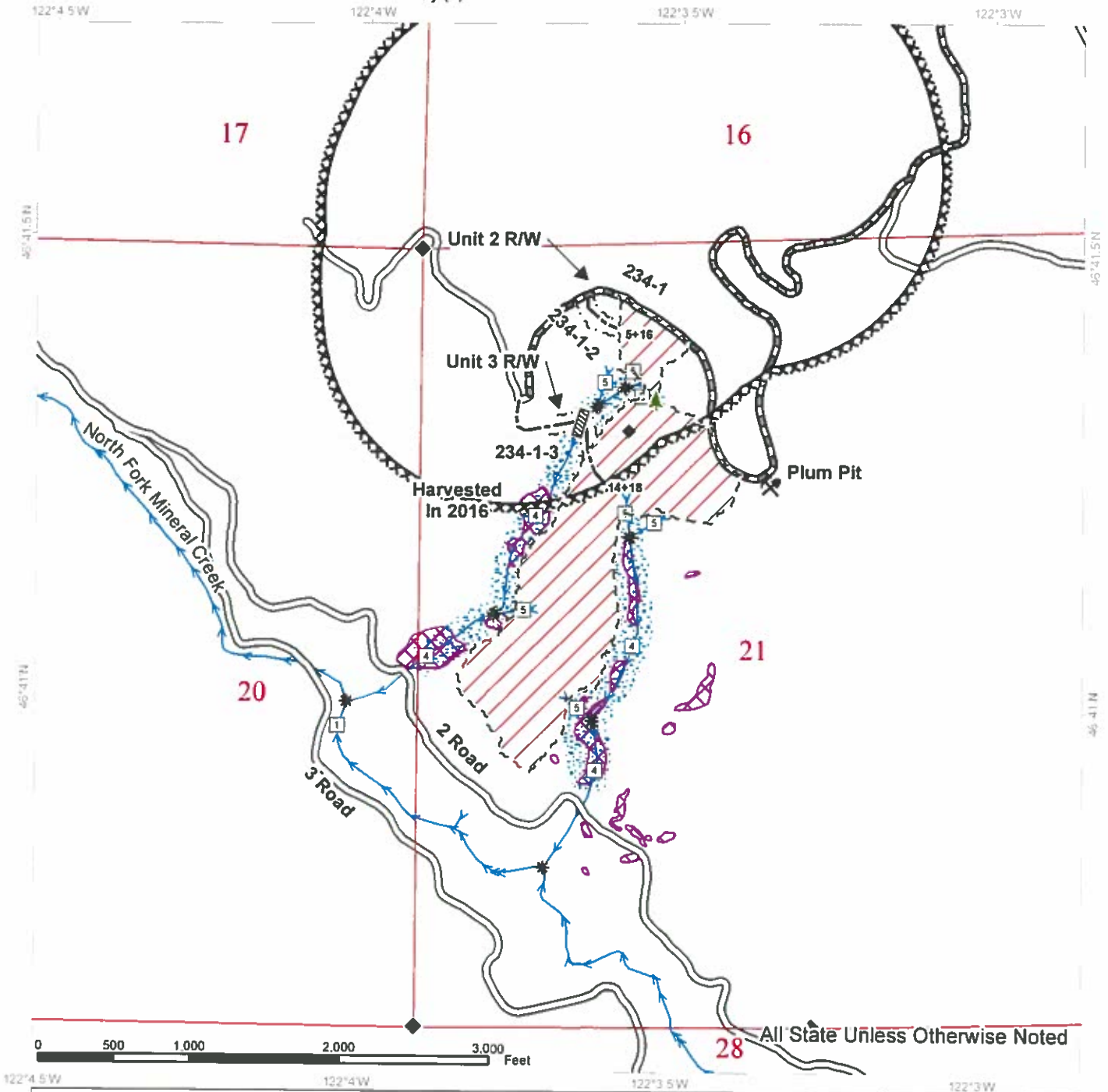
Position and Agency/Organization State Lands Assistant Region Manager, DNR

Date Submitted: 2/08/19
AEM 2-5-19

TIMBER SALE MAP

SALE NAME: DINGO DANCE
AGREEMENT #: 30-095917
TOWNSHIP(S): T14R6E
TRUST(S): Common School and Indemnity (3)

REGION: South Puget Sound Region
COUNTY(S): Lewis
ELEVATION RGE: 2320-3480



All State Unless Otherwise Noted

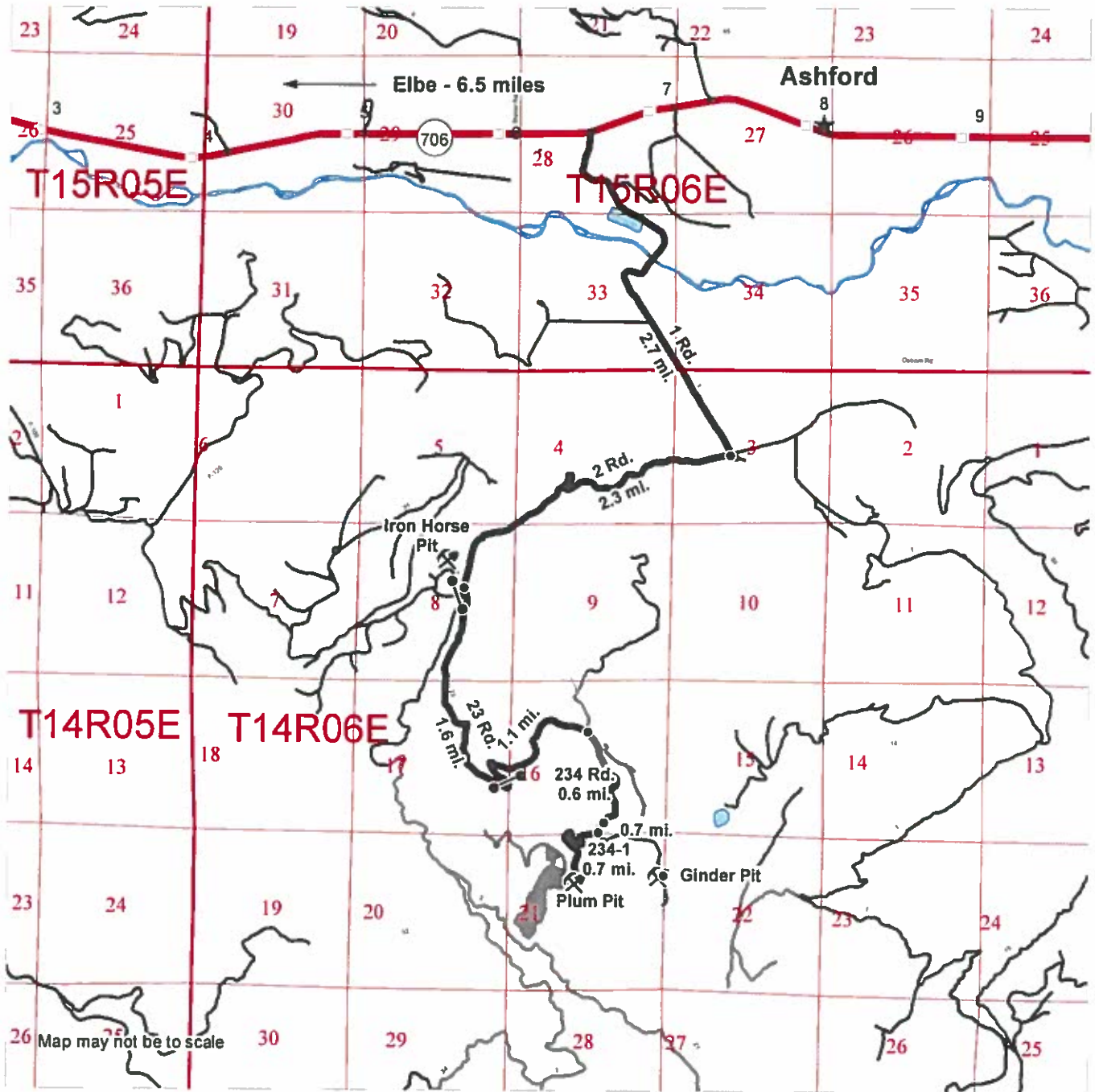
Variable Retention Harvest	Existing Roads	Stream Type
Tailhold Exclusion Area	Required Pre-Haul Maintenance	Stream Type Break
Riparian Mgt Zone	Optional Construction	Culvert
Sale Boundary Tags	Timing Restriction	Leave Tree Area <1/4-acre
Right of Way Tags	Streams	Rock Pit
Public Land Survey Sections		Survey Monument



DRIVING MAP

SALE NAME: DINGO DANCE
AGREEMENT#: 30-095917
TOWNSHIP(S): T14R6E
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REGION: South Puget Sound Region
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- Timber Sale Unit
- Haul Route
- Other Road
- Milepost Markers
- Distance Indicator
- Rock Pit
- Town
- Gate (Lock CJ-18)

DRIVING DIRECTIONS:

From Elbe, drive east on SR-706 for approximately 6.5 miles. Turn right (south) on the 1 Rd. for 2.7 miles. Turn right (west) onto the 2 Rd. and follow for 2.3 miles. Turn left onto the 23 Rd. and follow for approximately 1.6 miles to the 23 Rd. gate. Continue for 1.1 miles. Turn right onto the 234 Rd. To reach the timber sale, from the 234 Rd. turn right onto the 234-1 Rd. and follow for 0.7 miles.

Ginder Pit: From the 234 Rd. and 234-1 Rd. intersection continue another .7 miles down the 234 Rd.

Plum Pit: From the 234 Rd. turn right onto the 234-1 Rd. and follow for 0.7 miles.

Iron Horse Pit: From the 2 Rd. turn right onto the 24 Rd. After 0.2 miles, turn right onto the 241 Rd. and follow for 0.25 miles. Follow for approximately 0.6 miles.