

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: **LITTLE JOHN VRH & VDT**

Agreement # **30-093571**

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

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

**Northwest Region
919 N. Township St.
Sedro-Woolley, WA 98284**

**Contact Person: Laurie Bergvall
Telephone: (360) 856-3500**

4. Date checklist prepared: **07/6/2016**

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

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

- a. *Auction Date:* **1/25/2017**
- b. *Planned contract end date (but may be extended):* **03/31/2019**
- c. *Phasing:* **Does not apply.**

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:*
Harvest units may be treated with herbicides prior to planting. Assessment for treatment will occur after completion of harvest.
- b. *Regeneration Method:*
Hand plant conifer seedlings within two years after completion of harvest in VRH portions of the proposal.
- c. *Vegetation Management:*
Treatment to be assessed in 3-5 years. Competing vegetation may be treated by manual cutting and/or herbicide.
- d. *Thinning:*
Treatment to be assessed in 10 to 15 years for pre-commercial thinning. A commercial thinning is possible in 25 to 45 years.

Roads:

The AL-ML, AL-33, AL-46 and AL-4604 road will continue to be used for future timber sales and forest management activities.

Rock Pits and/or Sale:

The Alger and Macadamia hardrock pits will continue to be used for future timber sale road construction and road maintenance activities. Onsite rock may be used for road construction, if rock sources are discovered along haul routes or within the sale area.

Other:

Firewood from piled material, if available, may be sold following the completion of harvest activities.

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: **Lake Whatcom: available at Northwest Region office**
- Watershed analysis: **Lake Whatcom**
- Interdisciplinary team (ID Team) report:
- Road design plan: **Available at the Northwest Region office.**
- Wildlife report: **Available at the Northwest Region office.**
- Geotechnical report:
- Other specialist report(s): **Mitigation for the use of an abandoned road through a WMZ on Little John TBS, from Sabra Hull, dated June 1, 2016.**
- Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):
- Rock pit plan: **Available at the Northwest Region office**
- Other: **State Soil Survey, 1992; Policy for Sustainable Forests, December 2006; Final Habitat Conservation Plan (HCP)**

& Environmental Impact Statement, September 1997; Riparian Forest Restoration Strategy, 2006; Memo from Lake Whatcom Inter-Jurisdictional Review Committee, dated September 29, 2016.

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

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

FPA # **FHPA** **Burning permit** **Shoreline permit** **Incidental take permit** **Existing HPA** **Other:**

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

a. Complete proposal description:

The following acres are all approximate: 296.1 acres were evaluated for harvest with this proposal. This has been reduced to 258.7 gross acres due to operational feasibility as well as wetland and stream buffers. The remaining 241.1 net acres are distributed among 5 units consisting of 191 acres of variable retention harvest (VRH) and 47.4 acres of variable density thinning (VDT) with in-stream downed wood recruitment as directed under the agency's Riparian Forest Restoration Strategy. There is also 2.0 acres that will be cut for road right-of-way including 0.7 acres designated as expansion of the Macadamia Pit on Blanchard Mountain. The proposal is surrounded by State managed trust land.

**Rock pits will be utilized with this proposal. Rock pit names are listed in A.7.
Road work will be completed as part of this proposal, as listed in A.11.c.**

Estimated Volume:	7,116 MBF
Logging System:	Ground-based/Cable
Cable Landings:	0
Existing rock pits:	2
Roads	See A-11-c

b. Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.
The following information was gathered from the agency's Forest Resource Inventory System:

Unit 1 and 2 of this proposed harvest is of similar age and composition. These are conifer dominated stands with an origin date of 1960. The stand has a 50-year site index of 111 (WH) with an RD of 60 and a QMD of 19.4 inches. By basal area, the stand is 60% Douglas-fir, 40% hemlock. These units will be harvested with VRH and VDT cutting prescriptions.

Unit 3 and 4 of this proposed harvest is of similar age and composition. These are conifer dominated stands with an origin date of 1971. The stand has a 50-year site index of 111 (WH) with an RD of 62 and a QMD of 17.9 inches. By basal area, the stand is 69% Douglas-fir, 26% western hemlock, 2% Silver fir, and 3% redcedar. These units will be harvested with VRH and VDT cutting prescriptions.

Objectives for this sale include:

- 1. Generate revenue for state trust beneficiaries.**
- 2. Maintain biological productivity of the site.**
- 3. Retain short and long term forest structural diversity.**
- 4. Protect and maintain water quality.**
- 5. Meet or exceed the Forest Practices Rules, Policy for Sustainable Forests, Riparian Forest Restoration Strategy and the HCP.**
- 6. Identify and protect historic and archaeological sites consistent with state/federal law.**

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 (#)	Steepest Side Slope Road Crosses
Construction		2,914	0.5		20%
Reconstruction		0		0	NA
Abandonment		0	0	0	NA
Pre-haul maintenance		46,399			
Temporary construction**		4,865	1.84		25%
Bridge Install/Replace	0	0			
Culvert Install/Replace (fish)	0				
Culvert Install/Replace (no fish)	4*				

*This refers to only typed stream crossings and does not include relief culverts.

**Of the length listed for Temporary Construction in the above table, zero feet up to the entire length listed may be built.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

a. Legal description :

Harvest Units:

Township 36 North, Range 04 East, Sections 3, 4, 9, 10
Township 36 North, Range 03 East, Section 14

Rock Pits:

Township 36 North, Range 04 East, Sections 3
Township 36 North, Range 03 East, Section 14

Pre-haul Maintenance:

Township 36 North, Range 04 East, Sections 3, 9, 10, 15, 16, 21, 22
Township 36 North, Range 03 East, Sections 11, 12, 14

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

The units are located approximately 6 miles east of Alger, WA.

c. Identify the names of all watershed administrative units (WAU). See also landscape/WAU map on DNR website:

<http://www.dnr.wa.gov/sepa> under the topic "Current SEPA Project Actions – Timber Sales" for a broader landscape perspective.

The following data was reported in the Department's Geographic Information Systems (GIS) database on July 11, 2016.

WAU Name	WAU Acres
Friday Creek	22,006
Samish River	59,478
Lake Whatcom	36,265
Samish Bay	13,208

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)

No cumulative change in the environment is expected from the combination of past and future activities with this proposal. This proposal as well as past and future activities either meet or surpass Forest Practices Rules by complying with the commitments of the HCP and as such protect water quality and mitigate environmental impacts.

Data in the table below was reported in the Department's GIS database on July 11, 2016 and estimated from available GIS information on July 11, 2016.

Name of WAU	Acres	DNR Managed Acres	Non-DNR Managed Acres	Percent DNR Managed Land	Percent Private Managed Land
Friday Creek	22,006	2,141	19,865	9.7	90.3
Samish River	59,478	8,930	50,548	15	85
Lake Whatcom	36,265	6,928	29,337	19.1	80.9
Samish Bay*	13,208	4,092	9,116	31	69

*The Samish Bay WAU is represented for the purpose of 0.7 acres of expansion to the Macadamia Hardrock Pit and road maintenance for rock haul. No other activities are planned for this proposal and the rest of the checklist will focus on other WAU's.

Past Activities in WAU

The following table reports Forest Practice approved applications for harvest activities in the Friday Creek WAU, the Samish River WAU and the Lake Whatcom WAU within the past seven years on both DNR managed lands and non-DNR lands. The data was reported in the Department's GIS database on July 11, 2016.

Name of WAU	DNR Acres Even-aged Harvested in Last 7 years	DNR Acres Uneven-aged Harvested in Last 7 Years	DNR Expected Harvest Acres Within Next 7 Years*	Private Acres Even-Aged Harvested in Last 7 Years	Private Acres Uneven-aged Harvested in Last 7 Years
Friday Creek	44	200	214	407	104
Samish River	415	59	357	1,334	346
Lake Whatcom	290	0	898	392	49

*Acres include even-aged, uneven-aged and salvage.

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 even-age for example). Future harvest acres for non-DNR lands are difficult to determine and are not represented in the table.

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.

Future forest management activities in these WAUs will include road building, rock pit expansion, silvicultural work and timber harvesting. Activities occurring on DNR managed land will follow Forest Practices Rules, Habitat Conservation Plan (HCP) guidelines and the Policy for Sustainable Forests – policies designed to minimize environmental impacts. Future forest management activities on privately managed, non-DNR lands will be subject to Forest Practice Rules.

The Department's Habitat Conservation Plan (HCP) outlines strategies to protect federally listed threatened and endangered species, and species that are in danger of being listed in the future, as well as uncommon habitat types found on forest lands in western Washington. HCP riparian buffers were applied to this proposal with the intent of protecting salmon and trout habitat, and will be applied to all future sales in the vicinity. The HCP identifies large, structurally unique trees and snags as uncommon habitats that need to be protected. An average of 8 trees per acre will be left in the proposed harvest units. These trees will function for future snag and large structurally unique tree recruitment.

Under the Interim Strategy for the marbled murrelet in the North Puget Planning Unit, under the Department's HCP, several stands in this WAU have been deferred from timber harvest to provide habitat. The Interim Strategy also requires Department field staff to search for and delineate any "newly identified" marbled murrelet habitat in the vicinity of any proposed timber sales. These stands may be deferred from timber harvest throughout the remainder of the Interim Strategy (with occasional exceptions made to allow road and/or yarding access into non-habitat areas), and may be considered to be removed from harvest rotation for a longer period of time under the Department's yet-to-be-developed Long-Term Strategy for Marbled Murrelets.

Field staff have determined that no "newly identified" marbled murrelet habitat exists in or near the proposal. This has been verified by a region biologist. The proposal meets all requirements of the Interim Strategy.

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 Samish River WAU is located in Skagit and Whatcom Counties. The entire WAU lies within the westside western hemlock zone, and has an elevation range of 0 to 4,285 feet. The Samish River is the major water body found in the WAU, which drains into Samish Bay. All aspects are fairly evenly represented. Climate is moderate with an average annual precipitation of 41 inches. The major timber type is Douglas-fir, with western redcedar and western hemlock as sub-species. A hardwood component of bigleaf maple, red alder, and cottonwood are present at lower elevations. The stand ages throughout the WAU are approximately 0-100 years with patches of timber between 100 and 150 years old.

The Friday Creek WAU is located in Skagit and Whatcom Counties. The entire WAU lies within the westside western hemlock zone, and has an elevation range of 49 to 2,652 feet. Friday Creek is the major water body found in the WAU, which drains into the Samish River. Climate is moderate with an average annual precipitation of 44 inches. All aspects are fairly evenly represented. The major timber type is Douglas-fir, with western redcedar and western hemlock as sub-species. A hardwood component of bigleaf maple, red alder, and cottonwood are present at lower elevations. The stand ages throughout the WAU are approximately 0-100 years with patches of timber between 100 and 150 years old.

The Lake Whatcom WAU is located in Skagit and Whatcom Counties. The entire WAU lies within the westside western hemlock zone, and has an elevation range of 305 to 3,364 feet. Lake Whatcom is the major water body found in the WAU, which provided drinking water to the city of Bellingham. The water later drains into Bellingham Bay. Climate is moderate with an average annual precipitation of 51 inches. The major timber type is Douglas-fir, with western redcedar and western hemlock as sub-species. A hardwood component of bigleaf maple, red alder, and cottonwood are present at lower elevations. The stand ages throughout the WAU are approximately 0-100 years with patches of timber between 100 and 150 years old.

The Samish Bay WAU is located in Skagit and Whatcom Counties. The entire WAU lies within the westside western hemlock zone, and has an elevation range from sea level to 2,299 feet. The WAU ranges from flat to mountainous topography, and consists of approximately 13,208 acres. Climate is moderate with 36 inches of average annual precipitation. A majority of the WAU is within the Douglas-fir forest vegetation zone. The major timber types are second and third growth planted Douglas-fir stands and natural stands of mixed hardwood and mixed conifer ranging in age from 0 to 75 years. The lower elevations along the southern end of the WAU are experiencing rural residential development.

The Samish Bay WAU is represented for the purpose of 0.7 acres of expansion to the Macadamia Hardrock Pit and road maintenance for rock haul. No other activities are planned for this proposal and the rest of the checklist will focus on other WAU's.

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

None known. The proposal is on western facing slopes between 1,560 feet and 2,400 feet in elevation. The proposal area is consistent with the WAU descriptions above.

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

90%

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

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

State Soil Survey #	Soil Texture	% Slope	Mass Wasting Potential	Erosion Potential
0142	ANDIC XEROCHREPTS-ROCK OUTCROP-COMPLEX	60-90	HIGH*	HIGH*
4789	MONTBORNE V. GRAVELY SILT LOAM	3-30	INSIGNIFICANT	LOW
4792	MONTBORNE-RINKER-COMPLEX	30-65	MEDIUM	MEDIUM
6700	RINKER VERY CHANNERY LOAM	30-65	MEDIUM	MEDIUM
9160	WOLLARD GRAVELY SILT LOAM	3-30	INSIGNIFICANT	LOW

* Potential impact to soils with high mass wasting and erosion potentials will be mitigated by achieving lead end suspension of logs using cable yarding techniques, or when ground-based yarding is allowed, only low ground pressure tracked machines will be utilized.

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

1) *Surface indications:*

Inner gorge features that are present throughout the WAUs. Stream adjacent shallow rapid landslides exist in some of the riparian buffers.

The statewide landslide inventory (LSI) screening tool indicates no presence of polygons mapped as landslides within the proposed harvest unit boundaries. This landslide database is maintained by the Washington State Department of Natural Resources, Forest Practices Division. The LSI includes landslides mapped during many different projects including large-scale geologic mapping, watershed analyses, landscape planning, and landslide hazard zonation, in addition to other case studies and mapping efforts. A large majority of landslides identified by these projects are mapped by remote review with minimal field verification. In addition, dormant and ancient deep-seated landslides are mapped in many projects included in the LSI. A large number of the remotely identified landslides and deep-seated features have been mapped with a questionable, probable, or unknown certainty. As a result, the LSI database is meant to be used as a screening tool and field verification is a necessary step in confirming the absence, presence, and extent of mapped features, as well as their actual level of activity/instability.

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:

According to WAU data from GIS there are some small shallow slope failures located within the Samish River, the Friday Creek WAU, the Lake Whatcom WAU and sub-basins. All features are stream adjacent and bounded out of the sale area.

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:

Specific areas are not known, but due to terrain and landforms in the vicinity it is likely landslides have occurred. It is possible that some of these shallow failures were triggered by historic timber harvests and road construction activity.

Associated management activity:

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:

All failures are small scale features that are stream adjacent or inner gorge. All features have been bounded out of the sale area.

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

Roads were designed to minimize ground-based yarding distances to an average of 600 feet or less. Roads are located on gentle terrain and have been located to avoid unstable slopes and water crossings. A State Lands Licensed Engineering Geologist reviewed the proposal in the office and field and found no rule-identified features within the sale area. Tools utilized during the office review include the Forest Practices Landslide Inventory (LSI), LiDAR topographic maps, orthophotographs, and stereoscopic aerial photos taken from 1947 to 2004. Any Rule Identified Landforms within the evaluated area were bounded out of the final sale proposal.

All yarding corridors and skid trails used in the proposal will be rehabilitated with water bars after operations are complete.

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

Approx. acreage new roads: 2.34 acres Approx. acreage new landings: 2.8 acres Fill Source: Native Fill or rock
Road construction will utilize standard cut and fill methodology. Native soil and rock will be excavated from the road prism and used for fill in the sub-grade and over cross drains and stream crossings.

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

Road construction will expose bare soil and minor erosion may occur from freshly exposed soils along road cut slopes and embankment slopes. Yarding, rock and timber hauling, and road construction during periods of heavy rainfall could cause localized erosion. Road plan requirements include the use of grass seed or other revegetation methods to protect exposed soils from 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): Approximately 1% of the site will be covered with permanent new rock covered (gravel) roads.*

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

(Include protection measures for minimizing compaction or rutting.)

The following timing and access restrictions will be applied to the project:

- No road construction or abandonment, or timber or rock haul will occur from November 1 to March 31 unless the operator formulates an adequate plan to prevent erosion from entering surface waters.
- No ground-based yarding operations will occur from November 1 to March 31 during times of heavy precipitation and/or soil saturation unless the operator formulates an adequate plan, approved by the Contract Administrator, to prevent erosion from entering surface waters.

The following strategies will be applied to proposed road construction/abandonment/maintenance:

- All roads will be constructed to meet or exceed Forest Practices standards and the Habitat Conservation Plan guidelines.
- Appropriate drainage devices including proper culvert size and placement, drain dips, water bars and ditching, will be used as necessary to reduce surface erosion.
- Road pioneering will generally not extend more than 500 feet beyond completed construction.
- Soils that are exposed by road work will be revegetated the year roads are constructed.
- On newly constructed roads, cross-drain culverts will be adequate in size and frequency to prevent concentration of road runoff to the extent that it would cause gulying of stream drainages. Cross drain culverts will be placed in order to minimize the amount of ditch water that flows into surface waters. Riprap will be utilized at culvert inlets and outlets as necessary to prevent erosion at these vulnerable points. Existing roads will be maintained so that drainage structures remain functional.
- Storm patrols will be conducted as necessary on existing and newly constructed roads to identify and address potential erosion problems. In areas adjacent to constructed roads where soil disturbances have occurred, straw mulch, grass seed or some other appropriate measure will be used to prevent sediments from being transported.

The following strategies will be applied to the proposed timber harvest:

- For harvest activities, ground-based operations will be limited to sustained slopes generally 35% or less. However, if self-leveling ground-based equipment is authorized, it may be used on sustained slopes up to 50%. Riparian (RMZ) and wetland (WMZ) buffers as described in B.3.a.1.b. and B.3.a.1.c., will be retained.
- The leading end of logs will be suspended when being yarded to reduce soil disturbance.
- Any equipment trails will be water-barred as necessary.

2. Air

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.
Minor amounts of road dust and equipment exhaust are expected as a result of harvest and timber hauling activities. Slash piles may be burned. If slash piles are burned, it will be done in accordance with the Washington State Department of Natural Resources Smoke Management Plan.
- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
None known.
- c. Proposed measures to reduce or control emissions or other impacts to air, if any:
If slash burning occurs, it will be done in accordance with the Washington State Smoke Management Plan.

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:

Samish River via Dry Creek and Friday Creek. Lake Whatcom via Briannan Creek

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	5	12	30' Equipment Limitation Zone
Unnamed Stream	4	12	100'
Dry Creek	3	1	158'
Unnamed Stream	5	1	33' (Lake Whatcom WAU)
Wetland (greater than 0.25 acre, less than 1 acre)	Forested	1	100'
Wetland (greater than 1 acre)	Forested	2	158'

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

No harvest will occur in the RMZs with the exception of that required for new road construction and riparian restoration activities. All new and existing roads through RMZs will be monitored during hauling to ensure ditchwater and road runoff will not enter or otherwise adversely affect water quality or RMZ function. Corrective action such as straw bales, silt fencing, rock-lined ditches, and sediment traps will be installed/constructed as necessary. No wind buffer was deemed necessary due to low windthrow risk.

Ditchwater will be diverted through relief culverts or ditch outs prior to stream crossings to keep sediment out of stream. Exposed soils will be grass seeded. In the variable density thinning portions of the proposal, thinning will occur within the 100-foot RMZ buffers of type 4 streams up to the 25-foot inner core zone, leaving approximately 130-140 trees per acre and 140 square feet of basal area.

In the Lake Whatcom WAU there will be a 33-foot, no-harvest buffer on all type 5 streams per the Lake Whatcom Landscape Plan.

Use of an abandoned road through a WMZ was evaluated by a Wetland Specialist. See memo prepared by Specialist dated June 1, 2016.

- 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):

Culverts will be installed at stream crossings on newly constructed roads. Ditchwater will be diverted through relief culverts or make use of topographic controls prior to stream crossings to keep sediment out of streams. A culvert will be removed from an orphaned grade within the harvest area and will redirect the affected stream into its original channel. Timber will be felled within and immediately adjacent to the RMZs as described in the table in B.3.a.1.b. With the exception of downed wood recruitment activities in the RMZs, timber will be felled away from the streams where safely possible to avoid damage to residual trees within the RMZ, the inner zone, and protect stream bank integrity. Timber will be felled and yarded away from type 5 streams where safely possible. All timber will have the leading end of the logs elevated during yarding to reduce soil disturbance near these features. In addition, there are 30-foot equipment limitation zones on all typed streams in the 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.
Does not apply.

- 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:
All stream flow will be temporarily diverted through bypass culverts or retained behind (or pumped around) a coffer dam during culvert installation in typed streams. Also, typed waters may be temporarily diverted, if culvert replacement is deemed necessary, through the course of operations, on typed water crossing on existing roads.

- 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?

The following tables were generated on July 11, 2016 by the Department's GIS database. Data is not available for the individual sub-basins.

Friday Creek WAU:

Erosion Potential	Acres	% in WAU	Mass Wasting Potential	Acres	% in WAU
High	2202.7	10.0	High	2202.7	10.0
Medium	5554.2	25.2	Medium	5554.2	25.2
Low	12859.2	58.4	Low	336.5	1.5
Variable	0.0	0.0	Insignificant	12726.8	57.8
No Data	241.8	1.1	No Data	241.8	1.1
N/A	204.2	0.9			

Samish River WAU:

Erosion Potential	Acres	% in WAU	Mass Wasting Potential	Acres	% in WAU
High	0.0	0.0	High	0.0	0.0
Medium	939.7	1.0	Medium	470.3	0.5
Low	33751.1	36.9	Low	461.4	0.5
Variable	145.0	0.2	Insignificant	37056.1	40.5
No Data	14362.0	15.7	No Data	14362.0	15.7
N/A	3297.1	3.6			

Lake Whatcom WAU:

Erosion Potential	Acres	% in WAU	Mass Wasting Potential	Acres	% in WAU
High	5744.7	15.8	High	5727.4	15.8
Medium	8991.6	24.8	Medium	8190.3	22.6
Low	14888.8	41.1	Low	1149.9	3.2
Variable	0.0	0.0	Insignificant	14741.8	40.7
No Data	64.2	0.2	No Data	64.2	0.2
N/A	184.2	0.5			

- 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:

There is evidence of minor changes and aggradation to the channels of some streams. These changes can most likely be attributed to past mass wasting and peak flow events. Debris flows or torrents have scoured some channels down to bedrock and may have historically resulted in small course changes in some low gradient channel segments.

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

No Yes, explain:

This proposal includes both the harvest of timber and road work. The removal of overstory vegetation will temporarily reduce interception of water and increase infiltration and saturation of water onto the forest floor which could temporarily increase overland flow.

WMZ and RMZ buffers (see B.3.a.1.b) and other activity control measures (see B.1.h) ensure that any overland flow from disturbed soil areas will filter through substantial amounts of forest-floor vegetation before entering any perennial stream channels.

Road work disturbs surface soils where some temporary surface erosion is likely to occur, especially with the first winter rains following road work at temporary culvert installation locations. These temporary installations will follow Forest Practices Rules and RMAP requirements to minimize any erosion-related water quality impacts. See question B.1.h, B.3.a.1.c, and B.3.d. for a partial listing of some of the specific erosion protection measures.

- 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 following tables were generated on July 11, 2016 by the Department's GIS database. Data is not available for the individual sub-basins.

Friday Creek WAU

Land Owner	Miles of Road	Miles per Square Mile
Non-DNR	193.6	5.6
DNR	17.2	0.5
Total	210.7	6.1

Samish River WAU

Land Owner	Miles of Road	Miles per Square Mile
Non-DNR	320.1	3.4
DNR	85.0	0.9
Total	405.1	4.4

Lake Whatcom WAU

Land Owner	Miles of Road	Miles per Square Mile
Non-DNR	232.2	4.1
DNR	50.8	0.9
Total	283.1	5.0

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:

All of Units 1a, 1b and 2 lie in the rain dominated zone. All of Units 3a, 3b, and 4a lies within the significant ROS zone. Of Unit 4b, 51.6 acres falls within the significant ROS zone in the Samish River WAU, accounting for 98% of that unit's area.

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?

Less than 33.33% of Samish River sub-basin 10 is in the significant rain on snow zone. PR 14-004-060, Assessing Hydrologic Maturity, does not apply. Based on a GIS report generated in July 11, 2016:

WAU <u>or</u> sub-basin(s)	ROS acres:	% sub-basin in significant ROS zone	DNR hcp-managed forest land acres in ROS:	% DNR hcp-managed forest lands in ROS:	% DNR managed lands rated hydrologically mature
Samish River Sub-Basin 10	932	24.64	537	57.6	34.84

No attempt has been made to estimate acres of private ownership that is rated as hydrologically mature.

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):

Historic shallow failures on steep slopes and inner-gorges have occurred throughout the WAUs as stated in B.1.d.2. These events were likely the result of peak flow events.

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 located in the significant rain-on-snow zone, but is not expected to contribute to a peak flow impact.

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.

As stated in B.3.a.14, this proposal is not expected to cause a damaging increase in peak flows. In order to minimize the risk of road failures during peak flow events, all culverts utilized in new road construction will be sized to withstand a 100-year flood event. Culverts and ditches will be maintained so that they remain functional. Storm patrols will be conducted as necessary on existing and newly constructed roads to identify and address potential erosion problems.

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.

Channelized water through ditches and culverts emptying out onto the forest floor will increase surface saturation in localized areas, but is not expected to affect ground water

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Minor amounts of oil and lubricants could be inadvertently spilled as a result of heavy equipment use. None of these substances will be disposed of on site.

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.

Storm water runoff from landings and road surfaces will be collected by ditches and diverted through cross drain culverts onto the forest floor. Culverts will be placed to minimize the amount of ditch water entering existing streams.

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

No Yes, describe:

Erosion and mass wasting are unlikely, provided appropriate forest practices outlined in the timber sale contract are used during road construction and timber harvesting near all waters. Some logging slash may enter type 5 streams. Minor spills of petroleum products resulting from logging operations may occur on roads or landings but it is unlikely that any waste material could enter any surface or ground water.

- a. Note protection measures, if any.

Existing regulations and contract requirements regarding spill prevention and waste cleanup will be followed.

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

New road construction may intercept subsurface water flows. Intercepted water will be collected by ditches and directed to relief culverts affecting drainage patterns as described in B.3.b.1.

- 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.)

Constructed ditches, cross-drain culverts, drain dips, and water bars will be used to control road related runoff. Straw, grass seeding, or other appropriate methods may be used on any soil exposed cut and fill slopes during the course of this proposal in order to prevent sediment movement. Roads and landings will be crowned to avoid water accumulation. Falling and yarding away from all seasonal streams will be applied where feasible. All activities associated with this proposal will meet or exceed Forest Practices standards and will follow the Habitat Conservation Plan. See also B.1.d.5 and B.1.h.

4. Plants

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

deciduous tree:

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

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: sword fern

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.)

See A.11. Third-growth conifer and hardwoods will be removed using a VRH prescription over the majority of the proposed harvest area. In the RMZ treatment areas, select Douglas-fir and western hemlock will be removed using a thinning prescription. Some immature trees or snags may be left unless they need to be felled for safety or operational reasons. Understory vegetation will be disturbed by logging or road building activities. These stands will retain snags, dominant and co-dominant and /or structurally unique trees via clumps and scattered leave trees to increase horizontal and vertical diversity over the landscape.

- 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.")

Timber types adjacent to the proposal range from young, uniform conifer stands approximately 5-15 years of age to mature timber similar to the proposed removal area, as described in A.11.b.

2) *Retention tree plan:*

An average of 8 trees per acre in the variable retention harvest units will be left as scattered leave trees and in clumps that are distributed across the proposal area. These clumps include all tree species currently found in the proposal area. These clumps were located around features that will contribute to the maintenance of biological diversity such as snags, down logs, areas with extensive understory development and large wind firm conifer trees.

- c. List threatened and endangered *plant* species known to be on or near the site.
DNR's TRAX system indicates no known threatened, endangered, or special concern plant species in or near the sale area.
- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
The variable retention harvest portion of the proposal area will be planted with conifer seedlings after harvest. See green tree retention plan in B.4.b.2.
- e. List all noxious weeds and invasive species known to be on or near the site.
The DNR TRAX indicates no known noxious weeds or invasive species. However, it is likely that Himalayan blackberry, bull thistle, Canadian thistle, or Scotch broom may be found on or near 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:
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).
The Department's TRAX database did not reveal any threatened or endangered species in the area.
- c. Is the site part of a migration route? If so, explain.
Pacific flyway Other migration route: Explain if any boxes checked:
All of Washington State is considered part of the Pacific Flyway. No impacts are anticipated as a result of this proposal.
- d. Proposed measures to preserve or enhance wildlife, if any:

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

Species/Habitat: Fish Habitat

Protection Measures: Stream protection measures listed in B.3.a.1.b.c, B.3.a.2.; soil protection measures in B.1.h.; slope stability protection in B.1.d.5; and peak flows protection in B.3.a.16. Numerous RMZs to be thinned as part of the HCP Riparian Forest Restoration Strategy in order to restore and maintain fresh water habitat for salmonid species, and contribute to the conservation of other species that depend on aquatic and riparian areas. See A.11.a., A.11.b., and B.3.a.1.b.

Species /Habitat: **Mature Forest Components**
Protection Measures: **Retention tree plan described in B.4.b.2**

- e. List any invasive animal species known to be on or near the site.
No invasive animal species were observed on the site.

6. Energy and natural resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.
Does not apply.
- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
Does not apply.
- 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:
Does not apply.

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.
The timber sale contract contains language that addresses hazardous materials spill prevention; hazardous material spill containment, control and cleanup; and hazardous material release reporting. If any toxic or hazardous chemical spill occurs, or if past contamination is discovered, the Department of Ecology will be notified. There is minimal hazard due to heavy equipment operations. There is a potential fire hazard if operating in moderate fire weather conditions during the summer.
- 1) Describe any known or possible contamination at the site from present or past uses.
No site contamination is known presently or from past uses.
 - 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.
Heavy equipment fuel and fluids will be used on-site during the project. The timber sale contract contains language that addresses these materials and potential spills. In addition, various pesticides may be used on the site for vegetation management.
 - 4) Describe special emergency services that might be required.
 - **Firefighting by the Department of Natural Resources, possibly supported by local fire districts.**
 - **Emergency medical and/ or ambulance service for personal injuries.**
 - **Responses by the Department of Ecology if a spill were to occur.**
 - 5) Proposed measures to reduce or control environmental health hazards, if any:
Safe operation of all equipment will be encouraged. Industrial restrictions and precaution levels regarding forest fire protection will be enforced. The timber purchaser will be required to have fire suppression equipment on site during the restricted fire season while harvest activity is ongoing, operations will cease if relative humidity falls below 30%.
- 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 rock drilling/crushing machinery, rock blasting, road building, and logging equipment such as chain saws, yarding whistles, and log/dump trucks will increase noise levels during periods of operation, typically occurring between 4 a.m. and 5 p.m. on weekdays, on a short-term basis. Noise from road construction and harvest activity will be present in the immediate vicinity of this proposal during operations. Noise from log hauling will be present along the haul routes during operations.**
- 3) Proposed measures to reduce or control noise impacts, if any:
Noise associated with harvest and road construction activity will be minimal anywhere but in the immediate vicinity of the proposal. Harvest activity and log hauling are historic activities in the area and noise should not be present above customary levels.

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. The proposal should have minimal effects on nearby 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?
Yes, this site has historically been working forest land. No conversion is planned.
 - 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:
Yes. The proposal is a forest land management operation. This is typical for the area and has been so historically. See also A.7.a, A.11.a, A.11.c, B.1.h, B.3.a.1.c, and B.3.d.
- c. Describe any structures on the site.
No structures on site.
- d. Will any structures be demolished? If so, what?
No.
- e. What is the current zoning classification of the site?
Industrial Forestry.
- f. What is the current comprehensive plan designation of the site?
Industrial Forestry.
- g. If applicable, what is the current shoreline master program designation of the site?
Not applicable.
- h. Has any part of the site been classified as a critical area by the city or county? If so, specify.
Does not apply.
- i. Approximately how many people would reside or work in the completed project?
Does not apply.
- j. Approximately how many people would the completed project displace?
Does not apply.
- k. Proposed measures to avoid or reduce displacement impacts, if any:
Does not apply.
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
This project is consistent with current comprehensive plans and zoning regulations.

- m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:
Project should have no effect on adjacent agricultural or forest lands.

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
Does not apply.
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
Does not apply.
- c. Proposed measures to reduce or control housing impacts, if any:
Does not apply

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:
City of Burlington and Town of Alger
- 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:
Interstate 5, State Hwy 99
- 3) *How will this proposal affect any views described in 1) or 2) above?*
The proposal is marginally visible from I-5, Old Hwy 99. Although this proposal will be visible to the public, the majority of the landscape where this proposal will occur is managed as commercial forest land, and as such consists of forest stands with a wide range of age classes, including recently harvested areas.
- c. Proposed measures to reduce or control aesthetic impacts, if any:
Timber harvesting is a normal occurrence in the vicinity of the proposal, and recent timber harvests are visible throughout the area. Within and around the proposal area, un-harvested stands, stream buffers, and leave tree clumps will remain to reduce the visual impact. These residual stands will break up the view of the harvested area considerably, and will help maintain the aesthetic quality of the area. Furthermore, the proposal area will be planted with conifer trees within two years of completion of harvest activities.

11. Light and glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
Does not apply.
- b. Could light or glare from the finished project be a safety hazard or interfere with views?
Does not apply.
- c. What existing off-site sources of light or glare may affect your proposal?
Does not apply.
- d. Proposed measures to reduce or control light and glare impacts, if any:
Does not apply.

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?
A portion of the Pacific Northwest Trail runs along the border of a sale unit which is bounded by forest roads.

Other informal recreational opportunities exist in the vicinity such as mountain biking, hunting, berry picking, and mushroom picking.
- b. Would the proposed project displace any existing recreational uses? If so, describe.
Use of the proposal area by other users may be limited during the course of operations due to safety concerns. However, no permanent displacement of existing use will occur as a result of this proposal.
- b. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
Notification to public will take place prior to start of work including warning signs and notification through internet and direct contact to user groups.

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 known buildings, structures, or sites are located on or near the proposal area.
- 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.
- 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.
Methods for review include reviewing DNR TRAX reports, consulting affected tribes, reviewing historical GLO and USGS maps, and reviewing GIS data. The Skagit River Systems Co-op and Upper Skagit Tribe were notified of this proposal on April the 20, 2016. A face to face meeting was held with representatives from various tribes on April 28, 2016 in order to provide more comprehensive information concerning this and other proposals. No concerns have been raised as of the submittal of this document.
- 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.

The DNR's Cultural Resources Inadvertent Discovery Guidance will be followed should presently unknown cultural resources be identified during operations.

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.
Please see WAU and adjacency maps on the DNR website under "SEPA CENTER". See A.12.b. There will be no addition of public roads to access the site as a result of this proposal.
 - 1) *Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?*
No. Dust abatement will be utilized as necessary.
- 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?
Does not apply.
- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?
Does not apply.

- 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).

New forest roads will be constructed as part of this proposal. See A.11.c

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

Apart from log hauling traffic during the course of operations, this proposal will have minimal impact on the overall transportation system in the surrounding 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?

It is estimated that up to 30 log and rock truck trips per day would occur during harvest and road building activities. These trips would occur primarily between the hours of 4 a.m. and 5 p.m. on weekdays. Once the logging has been completed, the only anticipated vehicle trips are for periodic road maintenance and stand assessments/maintenance accounting for 1-2 trips per year.

- 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.

The proposal will locally increase log and/or rock truck traffic during harvest and road building activities.

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

None.

15. Public services

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

No.

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

None.

16. Utilities

- a. Check utilities currently available at the site:

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

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

None.

C. SIGNATURE

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

Signature: Boyer Hart

Name of signee Boyer Hart

Position and Agency/Organization Pre Sales Forester

Date Submitted: 9/30/16

**INTER-JURISDICITONAL COMMITTEE FOR
IMPLEMENTING THE LAKE WHATCOM LANDSCAPE PLAN**

Curt Veldhuisen (Chair)
Dick Whitmore

Steve Fox
Tom Westergreen
Aubrey Stargell

DATE: September 29, 2016

TO: Zach Barstow, DNR

FROM: Lake Whatcom Inter-Jurisdictional Review Committee

RE: Review of proposed Little John timber sale

In June and August 2016, you provided the IJC with draft maps of the Little John timber sale for review. Of the total 241 sale acres, around 15 acres (~6%) are within the Lake Whatcom Planning Area (LWPA), with the remaining majority outside the LWPA. Because of the small area and very limited stream length draining to Lake Whatcom, the analysis by IJC was limited in scope. Curt Veldhuisen visited Unit 1a on July 5, 2016 and other portions were assessed from the maps and our general familiarity with the area from previous visits.

From the map (attached) and our site visit, we see that there are two Lake Whatcom tributaries in the sale area: 1. A small forested wetland on the western edge of Unit 2 and 2. A Type 5 stream exiting the western edge of Unit 3a. Both features cross the mainline road (AL-ML), which presumably is to be used for the sale. Neither water is fish-bearing but either could deliver sediment toward Lake Whatcom, which is the focus of this memo. There are no areas within the LWPA portion of the sale that appear vulnerable to slope instability.

Sediment Protections

The wetland is protected by a Special Management Area, which will be thinned but have an equipment limitation area around the wetland perimeter. The Type 5 stream will have a 33-foot no-cut/no-entry buffer required under the Lake Whatcom Landscape Plan. If implemented properly, the IJC expects that these strategies will adequately protect these waters from logging-related sediment delivery.

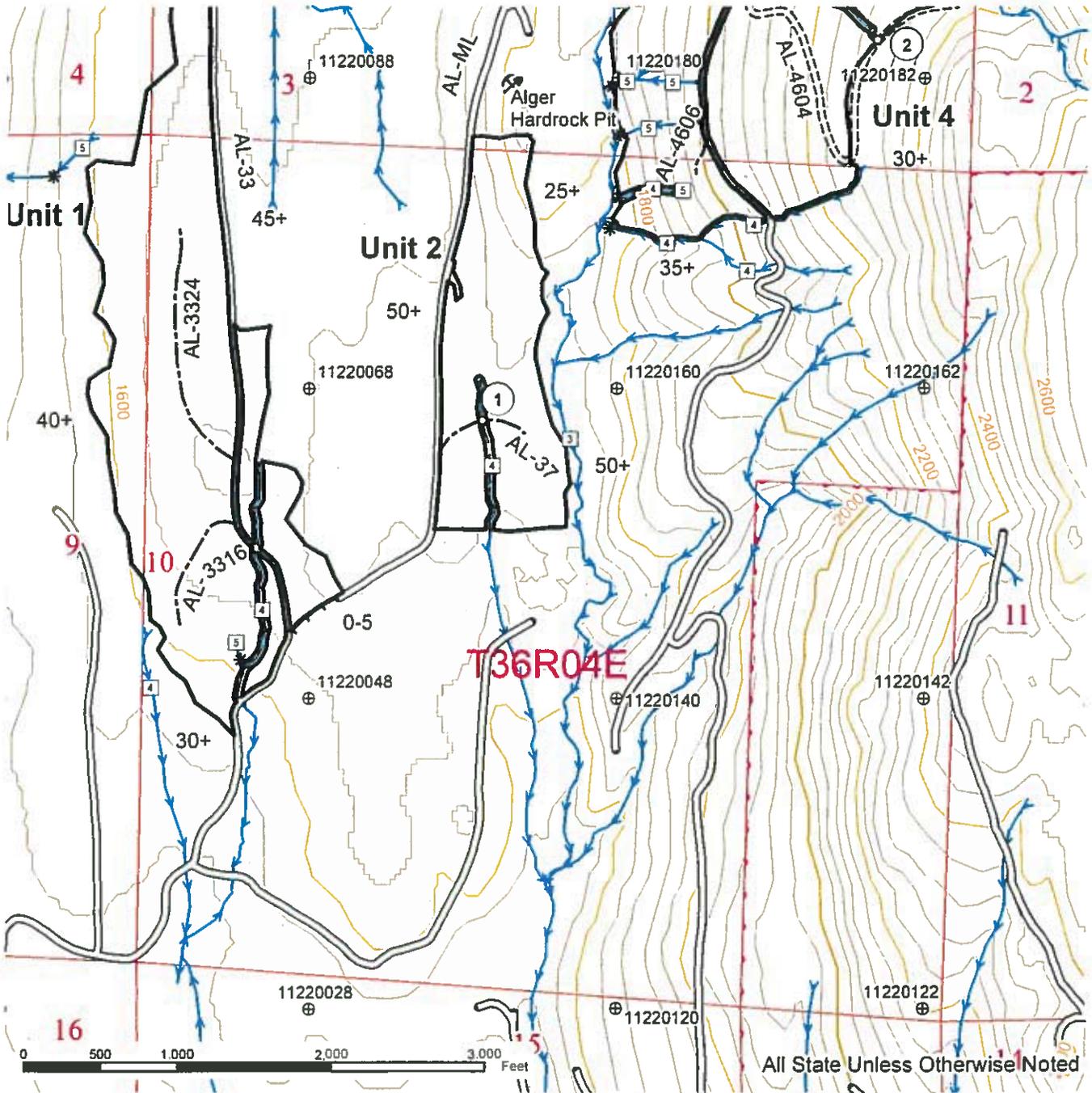
The second concern is that these streams could transport sediment generated from the haul road. We understand that this road was brought up to Forest Practices drainage standards during Road Maintenance and Abandonment Plan work by DNR. This should have reduced the contributing ditch length to both crossings. Additionally, you have indicated a seasonal haul closure is in place during winter months, supplemented by various other sediment control practices when needed. As anywhere else, the success of these sediment control measures is highly dependent on problem recognition and mitigation by timber operators and DNR compliance staff. However from past practice, the IJC believes these measures are adequate.

To conclude, the IJC believes that the Little John sale is well designed and will equal or exceed protections required under the Lake Whatcom Management Plan.

FOREST PRACTICES ACTIVITY MAP

SALE NAME: LITTLE JOHN
 APPLICATION #: 93571

COUNTY(S): SKAGIT
 TOWNSHIP(S): T36R04E

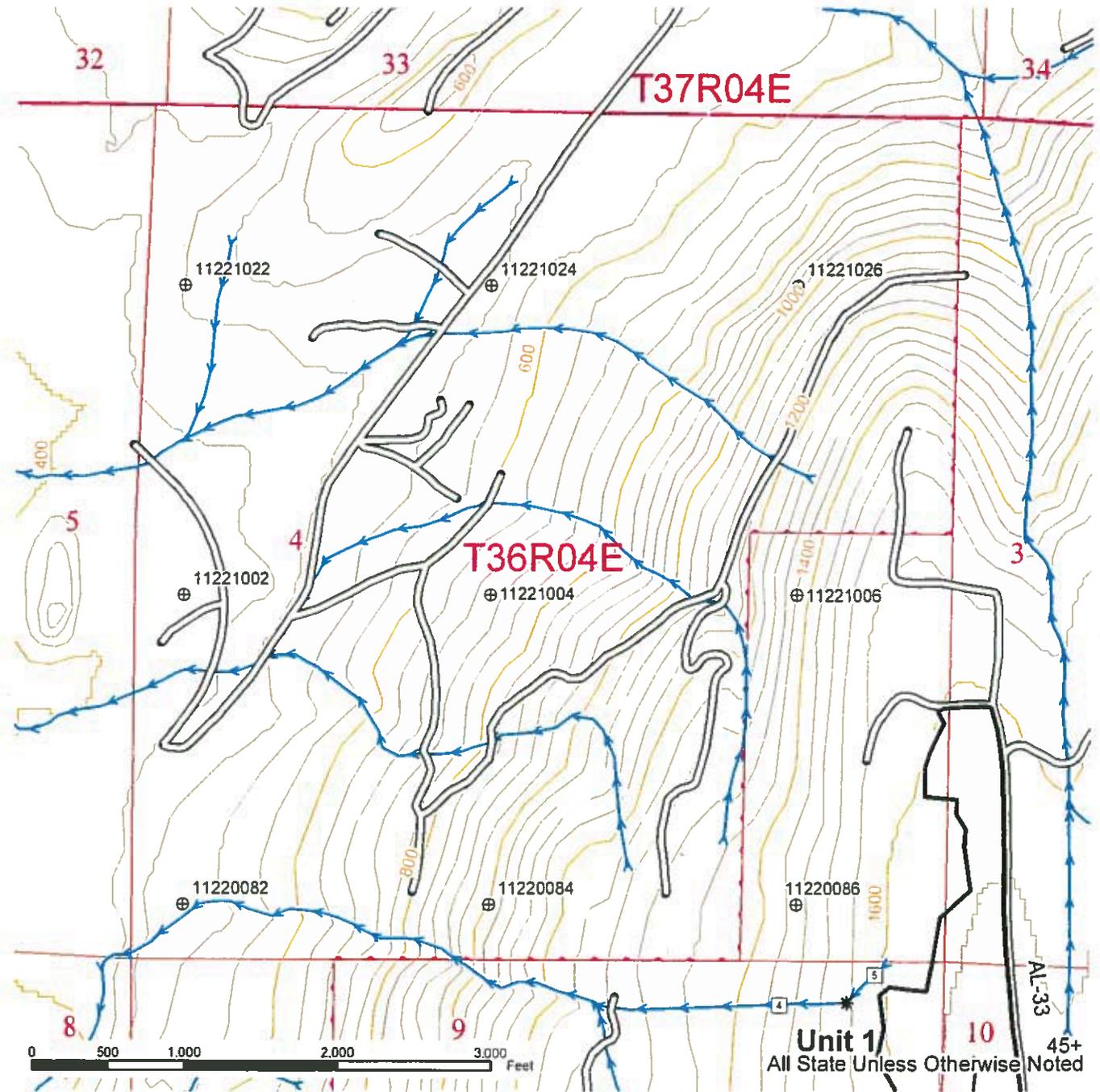


Streams	Existing Roads	Culvert
Stream Type 3	New Construction	Existing Rock Pit
Stream Type 4	Temporary Construction	Timber Sale Unit
Stream Type 5	Designated Skid Trail	
Stream Break		

FOREST PRACTICES ACTIVITY MAP

SALE NAME: LITTLE JOHN
 APPLICATION #: 93571

COUNTY(S): SKAGIT
 TOWNSHIP(S): T36R04E

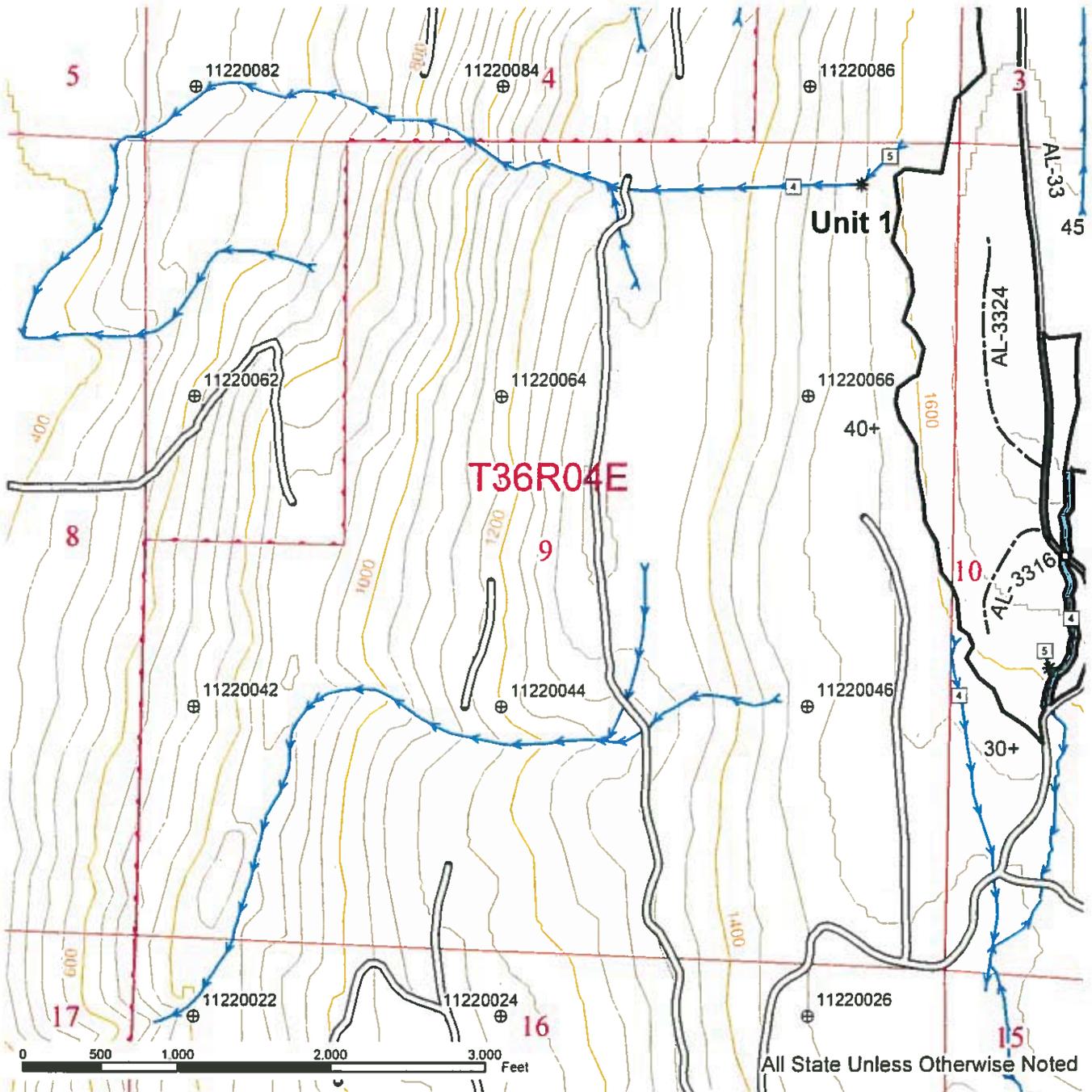


Streams	Existing Roads
Stream Type 4	Temporary Construction
Stream Type 5	Timber Sale Unit
Stream Break	

FOREST PRACTICES ACTIVITY MAP

SALE NAME: LITTLE JOHN
 APPLICATION #: 93571

COUNTY(S): SKAGIT
 TOWNSHIP(S): T36R04E

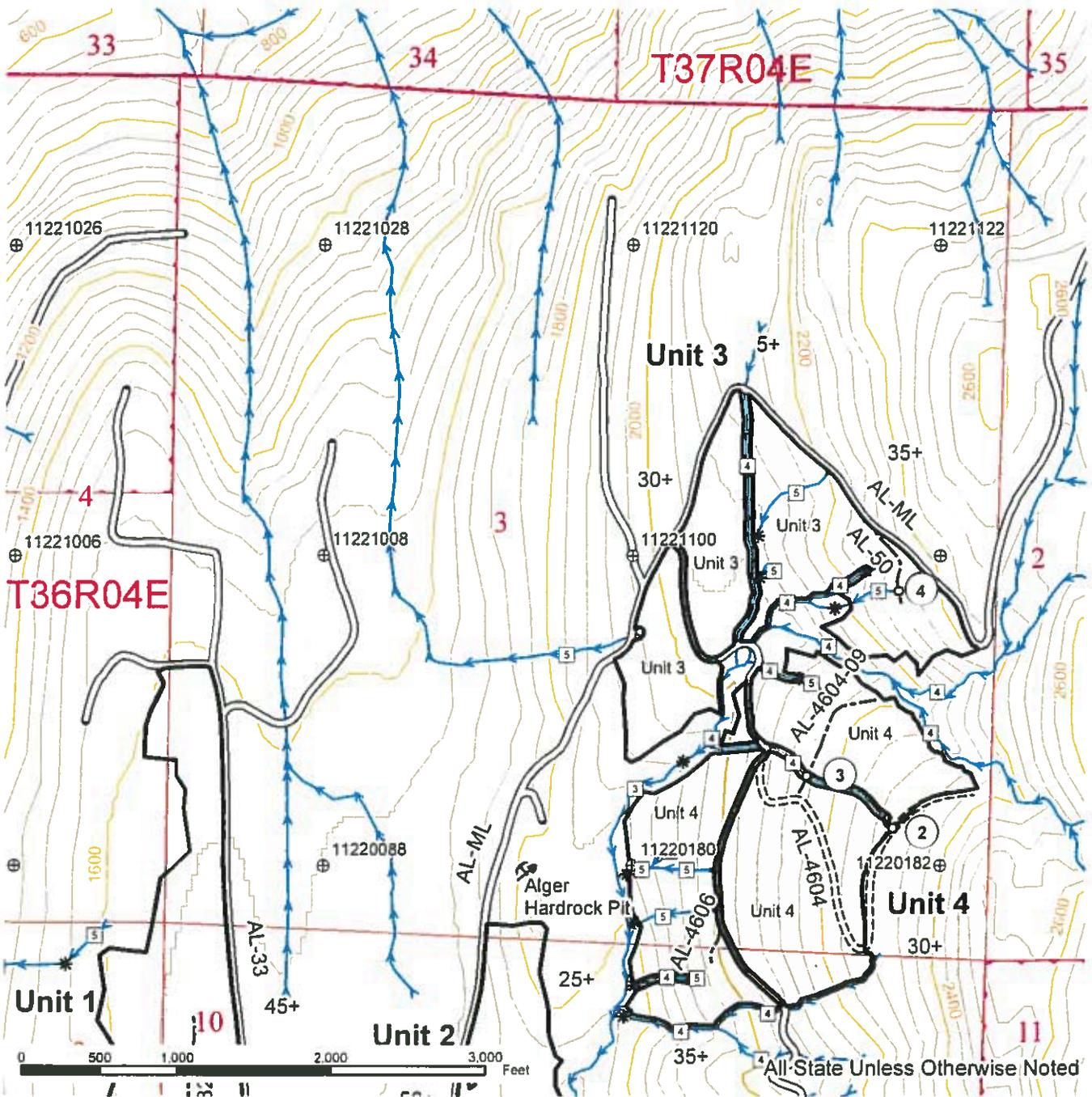


	Streams		Existing Roads
	Stream Type 4		Temporary Construction
	Stream Type 5		Timber Sale Unit
	Stream Break		

FOREST PRACTICES ACTIVITY MAP

SALE NAME: LITTLE JOHN
 APPLICATION #: 93571

COUNTY(S): SKAGIT
 TOWNSHIP(S): T36R04E

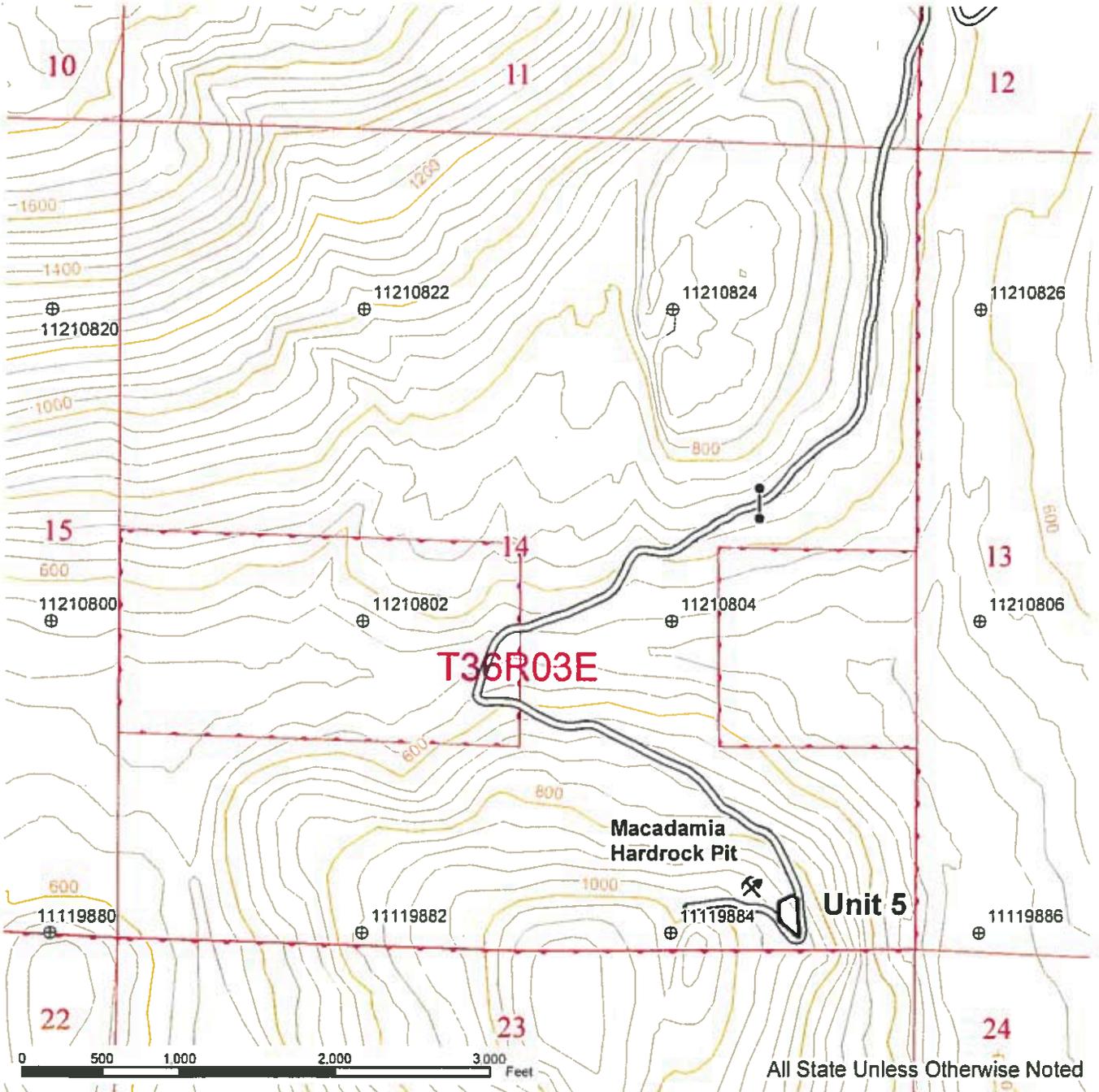


	Streams		Existing Roads		Culvert
	Stream Type 3		New Construction		Existing Rock Pit
	Stream Type 4		Temporary Construction		Timber Sale Unit
	Stream Type 5				
	Stream Break				

FOREST PRACTICES ACTIVITY MAP

SALE NAME: LITTLE JOHN
APPLICATION #: 93571

COUNTY(S): SKAGIT
TOWNSHIP(S): T36R03E



Existing Roads Existing Rock Pit

The legend shows a double line for 'Existing Roads' and a pickaxe symbol for 'Existing Rock Pit'. To the right of the legend is a north arrow pointing upwards, labeled with 'N'.