

**STATE FOREST LAND
ENVIRONMENTAL CHECKLIST**

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *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> under "SEPA Center." 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.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

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.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

Timber Sale Name: **Riley Rotor Aerial** *Agreement #:* **30-088957**

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

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

Northwest Region **Contact Person: Allen McGuire**
919 North Township Street **Telephone: (360) 856-3500**
Sedro - Woolley, WA 98284

4. Date checklist prepared: **11/05/2013**

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

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

- a. *Auction Date:* **05/25/2014**
- b. *Planned contract end date (but may be extended):* **9/30/2015**
- 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: Treatment to be assessed in 2-3 years.*
- a. *Regeneration Method: Hand plant with conifer seedlings within the first two years after harvest.*
- b. *Vegetation Management: Treatment to be assessed in 3-5 years.*
- c. *Thinning: The need for a pre-commercial thinning will be assessed in 10 to 15 years.*

Roads: The CRI-15, FC-ML, FC-41, FC-46, FC-51, EB-ML, EB-11, EB-58, and EB-5804 roads will be used for future management activities.

Rock Pits and/or Sale: The EB-1106 and EB-5804-01 hardrock pits will be used for future management activities. Onsite rock may be used for road construction, if rock sources are discovered along haul routes or within the sale area.

Other:

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): 303D for temp Higgins Creek near FC-41 Rock Pit.
- Landscape plan:
- Watershed analysis:
- Interdisciplinary team (ID Team) report:
- Road design plan: Available at Northwest Region office.
- Wildlife report:
- Geotechnical report:
- Other specialist report(s):
- Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):
- Rock pit plan: Available at Northwest Region office.
- Other: State Soil Survey, 1992; Policy for Sustainable Forests, December 2006; final Habitat Conservation Plan (HCP) & Environment Impact Statement, September 1997.

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 are known at this time.**

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

- HPA Burning permit Shoreline permit Incidental take permit FPA # _____ Other:

11. Give brief, complete description of our 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 specific information on project description.)

- a. *Complete proposal description: The Riley Rotor timber sale is a two unit variable retention harvest (VRH) located approximately 15 miles by road northeast of Arlington, WA. Access to the proposal is available through private property off Lake Riley Road. The proposal is located within the Lower North Fork Stillaguamish WAU and the Jim Creek WAU and is exclusively on State Forest Transfer trust (01) land.*

Unit 1

Gross acres: 171.4
Leave tree acres: 5.8
Net acres: 165.6

Unit 2

Gross acres: 23.6
Leave tree acres: 0.8
Net acres: 22.8

Total Net Harvest Acres: 188.4

Total Volume: 10,793 MBF

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

Stand Description:

The proposed activity will take place in mixed species stand primarily composed of, Douglas-fir, western hemlock and western redcedar, with a smaller component of bigleaf maple, red alder, and black cottonwood. The proposal is comprised of stands with origin dates ranging from 1928 to 1934. The understory is primarily comprised of sword fern, salmon berry, huckleberry, and vine maple. Medium-sized snags and woody debris are present throughout these stands.

Harvest:

The proposal is an “even age” variable retention harvest. Both helicopter and downhill cable operations will be utilized. There are a total of 1,561 reserve trees (clumped and scattered) in all units combined.

Overall Unit Objectives:

Harvest objectives are to generate revenue for trust beneficiaries through sustainable forest management while meeting the obligation of Forest Practices rules and the Department’s HCP. Specific objectives are to harvest the stand while protecting streams (water quality and fish habitat) and wetlands, retain structurally unique trees, and minimize soil impacts.

Wildlife Objectives:

The general wildlife objective is to minimize the immediate impact to current wildlife populations while retaining some unique characteristics for future wildlife habitat needs. Leave tree areas were designed to contain trees resistant to wind throw, while protecting relatively unique features such as snags, large down woody debris, very old western redcedar stumps, large structurally unique trees, mossy vine maple communities, and riparian areas. Many of the leave trees are large structurally unique trees that have the characteristics desired for future snag retention. Leave trees are representative of the proposed sale timber type, which consists predominantly of conifer species. Snags will be left in areas where possible and if they meet the Washington State Department of Labor and Industries’ safety guidelines.

Silvicultural Objectives:

The primary silvicultural objective for these harvest areas is to grow healthy and diverse forest stands as rapidly as possible while maintaining or improving the ecological integrity of the area. The area will be planted with conifer seedlings at a density that meets or exceeds Forest Practices standards. Some natural regeneration is expected from seeds scattered by leave trees and adjacent stands. This natural regeneration should offset some of the expected seedling mortality attributed to deer browse, rodent damage and competing vegetation. Regeneration surveys will be conducted to monitor the progress of the new young stand.

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

Type of Activity	How many	Length (feet) (Estimated)	Acres (Subgrade) (Estimated)	Fish Barrier Removals (#)	Steepest Side Slope Road Crosses
Construction		N/A	N/A		N/A
Reconstruction		178		0	0
Abandonment		N/A	N/A	N/A	N/A
Temporary construction		N/A	N/A		N/A
Bridge Install/Replace	2	58			
Culvert Install/Replace (fish)	0				
Culvert Install/Replace (no fish)	0				

12. Location of 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 timber sale map available at DNR region office, and/or color landscape/WAU map on the DNR website <http://www.dnr.wa.gov> under "SEPA Center.")

a. Legal description:

**Sections 20, 21 and 29 of Township 32 North, Range 7 East, W.M.
Sections 25 and 27 of Township 32 North, Range 6 East, W.M.**

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

The proposed timber sale is located approximately 15 miles northeast of Arlington. To access Unit 1 from Arlington, head east on Hwy 530 4.4 miles to Jim Creek Road and follow for 5.8 miles. Veer left onto Lake Riley Road and follow for 1.5 miles, then turn right at the Van Der Berg Driveway. Follow this for 0.1 miles, then make the first right turn after the bridge. Follow 0.1 mile until reaching the helicopter landing.

To access Unit 2 from Arlington, head east on Hwy 530 a half mile past mile marker 35 to the Fry Creek Mainline. Follow the FC-ML 4.1 miles and veer left. Continue 0.7 mile to the private gate. Continue past gate 0.7 mile to arrive at the unit.

This proposal will include acquisition of access from private landowners through road use permits in Sections 20 and 29 of Township 32 North, Range 7 East.

c. Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website <http://www.dnr.wa.gov> under "SEPA Center.")

WAU Name	WAU Acres	Gross Proposal Acres
JIM CREEK	30,620.2	179
LOWER NF STILLAGUAMISH	36,685.9	16

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> under "SEPA Center" for a broader landscape perspective.)

WAU Name	Acres	DNR-Managed Acres	Other Acres	% DNR Managed Land	% Other Land	Gross Proposal Acres	% of Proposal in WAU
Jim Creek	30,620	9,094	21,526	29.7	70.3	179	0.25%

WAU Name	Acres	DNR-Managed Acres	Other Acres	% DNR Managed Land	% Other Land	Gross Proposal Acres	% of Proposal in WAU
Lower North Fork Stillaguamish	36,686	15,004	21,643	41	59	16	0.04%

Past and Future DNR Activities in WAU

DNR Managed Lands – Past and Future Harvests

(This proposal included as part of the estimated acreage for future harvests.) Date that DNR database was accessed: Nov. 19, 2013

Jim Creek	Estimated Acreage Harvested in Past 7 Years	Est. Acreage for Future Harvests through 2020	Total Est. Acreage Past and Future
WAU Acres	726	2,690	3,416
% of WAU	2.4%	8.8%	11.1%
% of DNR Acres in WAU	8%	29.6%	37.5%

Lower NF Stillaguamish	<i>Estimated Acreage Harvested in Past 7 Years</i>	<i>Est. Acreage for Future Harvests through 2020</i>	<i>Total Est. Acreage Past and Future</i>
<i>WAU Acres</i>	1,175	1,865	3,040
<i>% of WAU</i>	3.2%	5.1%	8.3%
<i>% of DNR Acres in WAU</i>	7.8%	12.4%	20.2%

Future forest management activities in the WAUs 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), and the Policy for Sustainable Forest 2006 – policies designed to minimize adverse 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 and slope stability buffers intended to protect salmon and trout habitat were applied to this proposal, 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, in 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 will 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 will be considered to be left unharvested for a longer period of time under the Department's yet-to-be-developed Long Term Strategy for marbled murrelets. No stands of "newly-identified" habitat are in the vicinity of this proposal.

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).*

Jim Creek divides the Jim Creek WAU. The WAU has an average of 62 inches annual precipitation. The south and southwest area of the WAU consists of generally hilly terrain with some steep slopes leading into incised stream channels that feed Jim Creek. The north and northeast portions generally are more mountainous terrain characterized by steep slopes from major mountain tops. Elevations in this WAU vary from 75 feet to 4,442 feet at ridge tops. Elevations in the vicinity of the proposal range from 680 feet to 1,300 feet, while slopes vary from 0% to 90%. Jim Creek flows westward through the WAU. Approximately 15.3% of the total WAU acreage falls within the significant rain-on-snow (SROS) zone.

The Lower NF Stillaguamish WAU is within the western hemlock forest zone, and contains several coniferous species including Douglas-fir, western redcedar, western hemlock, and Pacific silver fir. Red alder, bigleaf maple, and black cottonwood also occur intermixed with the conifers, typically in more disturbed or wetter sites. Landforms within this WAU range from steep, rocky slopes to gently sloping lowlands. The majority of the WAU is in the rain-dominated zone and receives 40-70 inches of rain in an average year. The elevation ranges from 50 to 2,900 feet and the upper elevations contain the relatively small percentage of the WAU that is in the Significant Rain on Snow Zone. There is no Snow Dominated Zone within the Lower NF Stillaguamish WAU.

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

This proposal is located on steeper portions of the topography in these WAUs. However all areas of potential instability are located outside of the proposed harvest boundary.

c. What is the steepest slope on the site (approximate percent slope)?
130%

- 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 prime farmland. *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 or Soil Complex Name	% Slope	Mass Wasting Potential	Erosion Potential
1956	ELWELL-OLOMOUNT-ROCK OUTCROP-COMPLEX	30-65	No Data	No Data
5715	OSO-GETCHELL-ROCK OUTCROP-COMPLEX	65-90	No Data	No Data
5660	OLOMOUNT-ELWELL-ROCK OUTCROP-COMPLEX	65-90	No Data	No Data
9146	GRAVELLY LOAM	15-30	INSIGNIFICANT	MEDIUM
8112	TOKUL-OGARTY-ROCK OUTCROP-COMPLEX	0-25	No Data	No Data
2461	GETCHELL-OSO-ROCK OUTCROP-COMPLEX	30-65	No Data	No Data

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

1) *Surface indications:*

There are some surface indications of potentially unstable slopes in the vicinity of but not within this proposal. Most of them occur in RMZs and are in the form of excessive channel scouring and inner gorges.

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

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

There is some evidence of small slope failures along some of the stream reaches in the Lower NF Stillaguamish and Jim Creek WAUs. These are generally associated with stream reaches in steep draws that have formed by cutting through dense glacial till. Areas that appeared to have potential future impact have been 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:

Associated management activity:

A large rain on snow event occurred in November of 2011 and caused a debris slide in a substantial inner gorge drainage separating the two proposal units. This slide originated from an old grade near the top of Wheeler Mountain. No management had occurred in that area in several decades.

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 slopes located within the proposal are very different from the slopes where the debris slide occurred. The slopes in this proposal are primarily divergent slopes draining away from the main canyon. All slopes greater than 70% draining into the stream have been bounded out of the harvest area.

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

The yarding methods being used (downhill cable and helicopter) will allow for the use of all existing roads. No new roads to be constructed on this site.

All type 4 streams have a 100-foot buffer applied to them. A small convergent area with trace amounts of flowing water was bounded out of Unit 1A due to it meeting the criteria for an inner gorge. All other slopes greater than 70% draining into a stream were bounded out of the proposal.

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Approx. acreage new roads: 0.0 Approx. acreage new landings: 1.0 Fill source: Native fill or rock.

There will be no new road construction associated with this proposal. Only road reconstruction and landing construction will be performed.

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

Road reconstruction and landing construction could expose bare soil. 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):*
Less than 1 percent of the site will be covered with permanent new rock covered 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.)
All landings to be constructed and roads to be reconstructed will 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. In areas adjacent to reconstructed roads where soil disturbances have occurred, straw mulch, grass seed or some other appropriate measure will be used to prevent sediments from being transported. See also engineer's road plan for this timber sale.

2. Air

- a. What types of emissions to the air would result from the proposal (i.e., dust from truck traffic, rock mining, crushing or hauling, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.
No emissions are anticipated other than minor amounts of equipment exhaust and road dust created by log hauling activities.
- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
None.
- c. Proposed measures to reduce or control emissions or other impacts to air, if any:
If slash burning occurs, it will be in adherence to the Washington State Smoke Management Act.

3. Water

a. Surface:

- 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:*
Jim Creek is approximately 1 mile downstream of the entire sale area.

b) *Complete the following riparian & wetland management zone table:*

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Wetland	open water	1	No WMZ (road already built)
Un-named Stream	3	2*	156
Un-named Stream	4	11	100
Un-named Stream	5	5	30' Equipment Limitation Zone

***One stream on private property. Application of log stringer bridge, no RMZ applied.**

- c) *List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.*
- **Two type 3 streams will be crossed with log stringer bridges over existing bridges. A small portion of one is adjacent to the sale and will be protected with a 156-foot no-harvest buffer.**
 - **Eleven type 4 streams will be protected with a 100-foot riparian no-harvest buffer.**
 - **Five type 5 streams will be protected with a 30-foot equipment limitation zone, with limited equipment crossings to mitigate the risk of sedimentation.**
 - **Ditchwater will be diverted through relief culverts prior to stream crossing to keep sediment out of stream. Exposed soils will be grass seeded.**

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) to 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):

Two log stringer bridges are proposed to be constructed over existing concrete bridges of unknown load design. Ditchwater may be diverted through relief culverts prior to stream crossing to keep sediment out of stream. Exposed soils will be grass seeded. See engineer's road plan (available upon request at the Northwest Region office) for more information.

- 2) 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:
The proposal will involve installing bridges over two streams in the 100-year flood plain, but no harvest will occur.
- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
 No Yes, type and volume:
- 7) *Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?*
Yes, although some soil disturbance is anticipated in conjunction with yarding and landing construction activities, buffers and equipment exclusion zones will greatly decrease the potential for eroded material to enter surface waters as a result of activities associated with this proposal. Most of the soils in the sub-basin have a moderate chance of mass wasting. However, most of the soils in the proposal have a low chance of mass wasting.
- 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:
The Lower NF Stillaguamish WAU and Jim Creek WAUs have channel migration zones (CMZ). As their channels migrate, they undercut stream banks and sometimes cause mass wasting and erosion.
- 9) *Could this proposal affect water quality based on the answers to the questions 1-8 above?*
 No Yes, explain:
The proposed harvest activity should have little effect on stream and water quality. Buffers, equipment exclusion zones, yarding methods, and the placement of leave trees will help minimize any impacts to water quality.
- 10) *What are the approximate road miles per square mile in the WAU and sub-basin(s)?*
**Lower NF Stillaguamish: 4.8
Jim Creek: 4.8**
- 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:
- 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 WAU in significant ROS zone.
Approximate percent of sub-basin(s):
- 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?*
- 13) *Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?*
 No Yes, describe observations:
Peak flows have caused changes to occur in the routing of the North Fork Stillaguamish River, and associated streams that drain into the North Fork Stillaguamish River within the sub-basins. The known changes are primarily due to natural peak water flow.

- 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 may slightly change the timing, duration, and amount of peak flow. Flow rates may increase slightly during low and high flow periods due to decreased transpiration and interception during the first decade of new forest growth. To minimize impacts type 4 riparian buffers are established and prudent landing construction techniques will be followed. Refer also to B.3.a.1.c. and B.3.a.2. above.
- 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:
The proposal is within 1.0 mile of Jim Creek. Due to the protective measures cited in B-3-a-1-c and B-3-a-2, significant changes in water amount, quality or movement should not occur.
- 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.*
Please refer to B-1-h, B-3-a-1-b, B-3-a-1-c, B-3-a-2, and B-3-a-14.

b. Ground Water:

- 1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.
Channelized water from ditches and culverts emptying out onto the forest floor will increase surface saturation in localized areas, but is not expected to adversely 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.
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.
- 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:
Several adjacent landowners have water intakes on their property near the proposal. The buffers that have been applied to all the streams indicate that changes in ground water will not be measurable.
- a) *Note protection measures, if any.*
Please refer to B-1-h, B-3-a-1-b, B-3-a-1-c, B-3-a-2, and B-3-a-14.

c. Water Runoff (including storm water):

- 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.
Runoff from the road surfaces will be collected in ditches and diverted to stable areas on the forest floor through the uses of ditches, culverts, and energy dissipaters.
- 2) Could waste materials enter ground or surface waters? If so, generally describe.
It is not anticipated that waste material will enter ground or surface water as a result of this proposal.
- a) *Note protection measures, if any.* **Spill kits will be required on site at all landings. The buffers described in question 3.a.1.c above will not permit harvest activities within a minimum of 100 feet of the type 4 streams.**

- d. Proposed measures to reduce or control surface, ground, and runoff water 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.)
Appropriate drainage devices including proper culvert size and placement, drain dips, water bars and ditching, will be used as necessary to reduce surface erosion. Silt fencing may be placed next to live stream crossings to prevent sediment delivery. All exposed soil areas resulting from road reconstruction will be grass seeded or receive protective cover of straw or some other suitable material if ground disturbance occurs. Temporary bridges will be removed after

the proposed harvesting activity, following Forest Practices rules and regulations applying to road abandonment. Construction, earthwork, and grubbing of skid trails will be avoided. Falling patterns will facilitate yarding away from draws and streams. Roads and landings will be crowned to avoid water accumulation. All roads will be reconstructed to meet or exceed Forest Practices standards and the Habitat Conservation Plan guidelines.

4. Plants

a. Check or circle types of vegetation found on the site:

- deciduous tree: alder, maple, aspen, cottonwood, western larch, birch, other:
evergreen tree: Douglas fir, grand fir, Pacific silver fir, ponderosa pine, lodgepole pine,
western hemlock, mountain hemlock, Englemann spruce, Sitka spruce,
red cedar, yellow cedar, other:
shrubs: huckleberry, salmonberry, salal, other:
grass
pasture
crop or grain
wet soil plants: cattail, buttercup, bullrush, skunk cabbage, devil's club, other:
water plants: water lily, eelgrass, milfoil, other:
other types of vegetation:
plant communities of concern:

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

- 1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: <http://www.dnr.wa.gov> under "SEPA Center.")
The proposal is surrounded by DNR managed conifer dominated stands that originated in 1934, private residential lots, privately owned conifer stands zoned for commercial forestry, and U.S. Navy land.
- 2) Retention tree plan:
Both units will have an average of eight wildlife and green recruitment leave trees per acre remaining on site upon completion of harvest activities. A total of 1,561 trees will be left, both clumped and scattered. Retained trees will provide wildlife habitat, older forest components, and a seed source to surrounding areas. Multiple snags were retained on site in these clumps. This will ensure that trees best suited to the site, and /or exhibits desirable wildlife habitat characteristics will be left on site. The site will be replanted with conifer seedlings at a stocking level that meets or exceeds Forest Practices standards.

c. List threatened or endangered *plant* species known to be on or near the site.
None found in database.

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
- **An average of eight wildlife and green retention trees per acre will be clumped and scattered throughout the proposal.**
 - **RMZs will be retained with no harvest buffers on all type 4 streams.**
 - **Harvest areas will be replanted with native conifers.**
 - **Exposed soils adjacent to live waters, due to road construction, will be grass seeded.**

5. Animal

a. Circle or check any birds animals or unique habitats which have been observed on or near the site or are known to be on or near the site:

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

None known.

- 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. While migrating through Pacific Northwest forests, many neotropical migratory birds are closely associated with riparian areas, cliffs, snags, and structurally unique trees. Riparian areas and special habitats are protected through implementation of DNR's Habitat Conservation Plan.
- d. Proposed measures to preserve or enhance wildlife, if any:
By designing this sale to comply with the State's HCP, some wildlife habitat will be retained. An average of eight mature trees per acre will be left within the sale area. Larger diameter trees that have large limbs, open crowns, and broken tops will be left to maintain some current habitat needs and provide future habitat opportunities for many species. These trees will likely become snags and retention trees in future generations. Riparian Management Zones will maintain water quality, provide migratory corridors for wildlife; and maintain habitat for fish, amphibians, and other riparian-dependent species. All RMZs left along type 4 waters and wetlands are conducive to water quality and serve as protected areas for wildlife habitat.
- 1) *Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.*
Species /Habitat: Protection Measures:
Species /Habitat: Protection Measures:
Species /Habitat: Protection Measures:

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.
None.
- 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.
The timber sale contract contains language that addresses hazardous materials spill prevention; hazardous material spill containment, control and cleanup; hazardous material release reporting.
- 1) 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.**
- 2) Proposed measures to reduce or control environmental health hazards, if any:
- **Compliance with state laws.**
 - **Fire suppression equipment will be required on site during fire season and operations will cease if relative humidity falls below 30%.**
 - **Public access may be restricted during times of high fire danger.**
- 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 long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.
A considerable amount of noise will be created during the active helicopter operations associated with this proposal. This noise impact will be localized, but the sound may carry due to the basin topography the helicopter will be operating in. This noise impact will be during daylight hours and be short-term in duration.

- 3) Proposed measures to reduce or control noise impacts, if any:
A letter has been sent to the adjacent landowners to notify them of the pending activity and to get their feedback on when the helicopters should operate.

8. Land and Shoreline Use

- a. What is the current use of the site and adjacent properties? (*Site includes the complete proposal, e.g. rock pits and access roads.*)
Timber production.
- b. Has the site been used for agriculture? If so, describe.
No.
- c. Describe any structures on the site.
None
- d. Will any structures be demolished? If so, what?
No.
- e. What is the current zoning classification of the site?
Commercial Forest Land.
- f. What is the current comprehensive plan designation of the site?
Resource Land.
- g. If applicable, what is the current shoreline master program designation of the site?
Not applicable.
- h. Has any part of the site been classified as an "environmentally sensitive" area? 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:
All harvest units will be reforested with a commercial species and retained as forestland. This proposal is consistent with current land use designations and zoning regulations.

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 principle exterior building material(s) proposed?
Not applicable.
- 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:
This proposal will be visible from SR 530, the local community around Lake Riley, Lake Riley Boat Launch and the Jim Creek area.
- 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:
SR 530.
- 3) *How will this proposal affect any views described in 1) or 2) above?*
- c. Proposed measures to reduce or control aesthetic impacts, if any:

- c. Proposed measures to reduce or control aesthetic impacts, if any:
Leave trees, riparian buffers, and wildlife habitat buffers will reduce the aesthetic impacts significantly. Additionally, the proposal area will be re-planted with trees within two years of harvest activities. This proposal will only add to the existing multi-cohort landscape that stretches across the Wheeler Mountain area.

11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
None.
- b. Could light or glare from the finished project be a safety hazard or interfere with views?
No.
- c. What existing off-site sources of light or glare may affect your proposal?
None.
- d. Proposed measures to reduce or control light and glare impacts, if any:
None.

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?
No designated recreational uses in the immediate vicinity. Observed informal recreation includes hunting, and hiking.
- b. Would the proposed project displace any existing recreational uses? If so, describe:
Recreation will be temporarily displaced during logging operations in the timber harvest area.
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
None.

13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.
No.
- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.
Not applicable.
- c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)
Forest Practices and DNR TRAX runs indicate no known historical or archaeological sites on or near the proposal. Any cultural resources identified during operations will be protected. Should archaeological material or cultural items be discovered during the course of operation, all work in the vicinity will be stopped and associated tribes and Department of Archaeological and Historic Preservation (DAHP) will be contacted.

Information regarding this proposal was submitted to the Stillaguamish and Tulalip tribes in October, 2013.

14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.
No public roads currently serve the site. Road Use Permits are being acquired for access for this proposal which will provide access to Lake Riley Road. Alternate access is off of SR 530 to a gated forest road on the north side of Wheeler Mountain that crosses state managed and privately owned forest lands.
- 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 site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?
No.
- c. How many parking spaces would the completed project have? How many would the project eliminate?

- None.**
- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).
No new roads will be constructed with this proposal. All improvements are temporary in duration and will only occur on privately owned roads that are not accessible to the public.
- 1) *How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?*
No impact. No new roads will be created with this proposal.
- e. Will the project 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? If known, indicate when peak volumes would occur.
The completed project will generate less than one vehicular trip per day on average. Up to 25 vehicular trips per day could occur during peak harvest activities. These trips would occur primarily between the hours of 4:00 AM to 5:00 PM on weekdays, and possibly weekends.
- g. 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, 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. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.
Telephone service to private residence along haul route.
- 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.

Completed by:  *acting Coscoda District Manager* Date: *11/19/13*
Title