

**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: **PHELPS CREEK** *Agreement #:* 88241

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

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

**Larry Leach, Klickitat District Manager
WADNR, Southeast Region
713 Bowers Rd.
Ellensburg, WA 98926
(509) 493-3218 ext. 221**

4. Date checklist prepared: **12/21/2012**

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

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

- a. *Auction Date:* **07/25/2013**
b. *Planned contract end date (but may be extended):* **12/30/2015**
c. *Phasing:* **N/A**

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:* **None.**
b. *Regeneration Method:* **None.**
c. *Vegetation Management:* **None.**
d. *Thinning:* **None.**

Roads: **Road maintenance will be conducted annually and may include periodic ditch and culvert cleanout, and road grading as necessary to minimize erosion and failures. Construction, reconstruction, and abandonment are associated with this forest management activity.**

Rock Pits and/or Sale: **None.**

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

- 303 (d) – listed water body in WAU: temp sediment completed TMDL (total maximum daily load):
- Landscape plan:
- Watershed analysis:
- Interdisciplinary team (ID Team) report:
- Road design plan: Available at the Pacific Cascade Region office.
- Wildlife report:
- Geotechnical report:
- Other specialist report(s):
- Memorandum of understanding (sportsmen’s groups, neighborhood associations, tribes, etc.):
- Rock pit plan:
- Other: Policy for Sustainable Forests; Environmental Impact Statement (EIS) adopted July 31, 1992 & DNR Habitat Conservation Plan (HCP), adopted January 30, 1997; HCP Amendment #1 for the Klickitat HCP Planning Unit April 2004, with associated maps, Forest Practices Board Manual and activity maps, Road Maintenance and Abandonment Plan (RMAP) #R2700786L.

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.

None.

11. HPA Burning permit Shoreline permit Incidental take permit **1168&PRT 812521** FPA # **2705291**
 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 timber sale is located near BZ Corners in a block of State forestland managed as part of the Husum Sub Landscape, and designated as nesting, roosting, and foraging (NRF) habitat for northern spotted owls. The timber stands are single-storied second growth Douglas-fir stands of approximately 70 years of age. The proposal is a variable density thinning removing approximately 1/2 of the standing basal area generally from the lower diameter classes and retaining the larger dominant trees to maintain sustainable stocking and NRF habitat post-harvest. There are 3 timber sale units with a total net acreage of 368 acres. A stream channel within Unit 1 is protected by a 50’ RMZ that has been bounded out of the Unit. The project will require 13638 feet of new construction, reconstructed roads, and the maintenance of existing roads. The forest haul roads lead directly onto State Highway 141. The timber will be machine cut and ground skidded.

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

The timber stands are fairly uniform second growth stands of 90% Douglas-fir and 6% grand fir, and 4% Bigleaf maple. The stands currently meet NRF habitat characteristics; however the dense and uniform stocking has produced a single-storied stand with relatively narrow overall diameter range. The stands have differentiated into healthy dominant individual Douglas-fir trees of approximately 20”-26” dbh, with the remainder of the trees in an intermediate/suppressed class of short crowned smaller diameter trees. There are pockets of root rot where mortality has allowed small canopy openings, but they are not large enough for viable natural regeneration.

An ice storm in January 2012 damaged a significant number of the smaller diameter trees throughout the stands. There was some blowdown, but most damaged trees suffered broken boles. Many of the smaller diameter broken trees will be harvested in this thinning proposal.

The harvest will be a ground-based mechanical thinning harvest of damaged and smaller diameter trees. The overall unit objectives are to remove approximately 1/2 of the basal area from the smaller diameter classes and to maintain sustainable NRF habitat post-harvest. The stand volume before harvest is approximately 40 Mbf per acre.

Unit	Proposal Acres	Avg. TPA > 8” dbh	Avg. Basal Area	Stand Age	QMD	RD Curtis
1	139	162	207	70 yrs	15”	53
2	30	175	240	62 yrs	16”	60
3	202	144	236	70 yrs	17”	58
Total	371					

This table contains unit specific cruise information collected in 2012.

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

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		8159	5	0
Reconstruction		5479		0
Abandonment		8747	5	0
Bridge Install/Replace	0			0
Culvert Install/Replace (fish)	0			0
Culvert Install/Replace (no fish)	10			

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: **T4N R10E S2 and S3**

- b. *Distance and direction from nearest town (include road names):* **The proposal area is approximately 6 miles north of Husum, Washington and is accessed via Highway 141. The two forest roads into the sale area are designated the B4500 and the B5000.**
- 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	Proposal Acres
GILMER CREEK	24652.6	371

Sub-basins have not been delineated within eastside WAU's.

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.)*

The following table is an estimated summary of past activities on Department of Natural Resources (DNR) managed land and private managed land in the Gilmer Creek WAU. Information is based on Forest Practices applications that have been approved in the last seven years as of January, 2013, compiled by the department's GIS database. No attempt was made to predict the future timber harvest on private ownership within the WAU. The source for this information only provided the acreage at the WAU level.

Harvest Type	Acres on DNR Land	Acres on Non-DNR Land	Acres on All Lands
EVEN-AGE	91	1334	1425
SALVAGE	12	866	878
UNEVEN-AGE	4	306	310

The DNR owns and manages 9002 acres or 36% of the land within the Gilmer Creek WAU. The WAU is on both sides of the White Salmon River and contains both forested and orchard and grazing land. This proposed timber sale is within the forested slopes on the west side of the river. The sale area is in the center of the Husum sub-landscape, a block of State forestland managed for NRF habitat under the HCP. This area has two protected Northern Spotted Owl (NSO) nest sites, a large unmanaged natural area preserve, and several steep and significant stream channels. The average of only 1.0 miles per square mile of road in this proposal area reflects the largely unmanaged acres and the steep and rugged topography.

The Department of Natural Resources has a Habitat Conservation Plan with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service concerning threatened and endangered species and their habitats. The HCP requires the Department to manage landscapes to provide and sustain long-term habitat in exchange for an Incidental Take Permit. This agreement identifies specific strategies the department implements to mitigate for potential, landscape cumulative effects related to individual management activities. The applicable strategies incorporated into this proposal are in part as follows:

Stand health, habitat condition, and function are continually evaluated in planning timber sales or other silvicultural treatments within the entire Husum sub-landscape. The Husum sub-landscape is currently meeting the threshold of 33% of the lands meeting the nesting roosting foraging definition. In consultation with the region's biologist, via a site visit of the stands thinned in this proposal, no change in the current habitat classification of these stands is expected post-harvest. The habitat threshold should remain unchanged. The timber sale prescription is a thinning that is intended to enhance and sustain the NRF habitat condition in these stands that lie between two protected NSO sites.

There are currently no future timber sale plans for this area following this harvest.

The 303d listed water within the Gilmer WAU for temperature sensitivity is a 1/2 mile section of the White Salmon River just above the confluence with Rattlesnake Creek. This location is approximately 10 miles downstream from the proposed partial harvest timber sale, and no impacts to temperature of the White Salmon River are anticipated from this harvest proposal. The RMZ buffer along the seasonal stream in Unit 1 will limit any changes to stream temperature in this section and it is 10 miles above the section of the White Salmon River that is sensitive to temperature.

An RMZ buffer of 50' per side along a seasonally wet stream course is intended to protect water quality, stream bank integrity, stream temperature, and to provide nutrients and large down woody debris.

An ELZ along a type Ns stream channel is intended to minimize the delivery of sediment to the channel which could be carried into the type F stream below the proposal.

The existing roads are redesigned to improve drainage and to disperse runoff prior to entering typed waters.

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 Gilmer WAU runs from the lowest elevation of 370' at the confluence of Rattlesnake Creek with the White Salmon River and up to 4286' at Monte Cristo Peak. It is bisected by the White Salmon River and includes east-facing forested slopes of Douglas-fir and grand fir, and more mixed forest stands and**

orchard ground east of the river. The forest vegetation zone is Grand fir series. The average rainfall is 50 inches a year.

- 2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).
The timber sale is at approximately 2200' elevation on the mid-slope of the west side of the WAU, west of Highway 141.

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

The steepest slopes are approximately 30% across most of the site.

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	Acres	Mass Wasting Potential	Erosion Potential
8088	GRAVELLY LOAM	5-30	221	INSIGNIFICANT	MEDIUM
1344	GRAVELLY LOAM	30-50	68	MEDIUM	HIGH
1045	LOAM	15-30	64	INSIGNIFICANT	MEDIUM
8089	GRAVELLY LOAM	30-65	6	LOW	MEDIUM
3904	COBBLY LOAM	30-65	4	LOW	HIGH
4691	GRAVELLY LOAM	45-65	8	MEDIUM	HIGH

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

1) *Surface indications: None.*

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 was a large deep-seated slope failure at the top of Wieberg Creek during the significant 1996 rain-on-snow event in February of that year. The failure is a very steeply inclined northeast facing slope at the top of Wieberg creek. Within the inner gorge, the underlying soil was unconsolidated material that had been exposed by the stream action and when the slope failed it slid material more than 2 1/2 miles downstream.

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:

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 proposed site is on upland slopes of less than 30% and stable soil types. The small acreage of potential unstable soil types listed in the soil table above reflects the somewhat low resolution of the soil maps. The potentially unstable soil types are on steeper slopes which were excluded from the proposal.

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

The sale boundaries were designed to exclude steep slopes and stream courses with erosive soils. The existing roads within all of the units will be reconstructed to lessen grades and provide for better cross drainage. The engineered road design includes the placement of fills in stable locations, compaction of fills, improved drainage, and continuing routine maintenance. Several small seasonal creek crossings will have culverts installed.

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

Approx. acreage new roads: 5 Approx. acreage new landings: 6 Fill source: Pit run rock for a temporary culvert and hand-placed culvert armoring rock will come from the B5010 pit.

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

Yes, some erosion could occur as a result of building new roads, abandonment of old roads, installing culverts, and hauling timber.

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

Less than 2% of the site will be covered with impervious road surface after project completion.

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

(Include protection measures for minimizing compaction or rutting.)

Operational timing restrictions will limit wet weather compaction and rutting. Road drainage structures will be improved and maintained during and after the logging operation. The road design includes the addition of several cross drain culverts and the lessening of some grades to limit the runoff effects of the road network. Skid trails within the units will be waterbarred and have logging slash deposited along them to control runoff as needed.

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.

Minor amounts of exhaust and road dust will be created during the operation. If landing debris is burned following harvest, smoke will be generated. There will be no emissions after the project is complete.

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

No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

All slash burning will be conducted under the Washington State smoke management guidelines, which includes a silvicultural burn permit.

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.) **Yes.**

a) *Downstream water bodies:* **A type Np creek lies between Units 1 and 2 and flows into Wieberg creek and then into the White Salmon River. Phelps creek is north of Unit 1, and Wieberg creek is south of Unit 2. Both of these creeks flow into the White Salmon River. There are 2 Np creeks on either side of Unit 3. They both flow into the White Salmon River.**

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

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Unnamed Stream	Non-perennial stream	one	50 feet

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

There is an unmapped stream channel that extends upslope into Unit 1. It is an Ns (seasonal) stream however a 50' RMZ buffer will protect soils.

A steep slope with incised channel was bounded out of Unit 3. The mapped portion of the stream, within the unit, is type Ns and low gradient. This stream channel will have a 30' Equipment Limitation Zone (ELZ) to protect the channel.

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):

Timber harvest will occur to within 50' of the stream channels within Unit 1 and 3. All type Np creeks outside of the timber sale boundaries are a minimum of 50 feet beyond the timber sale boundaries.

Timber hauling will occur over the type Np creek between Unit 1 and 2. A, one season, temporary culvert will be installed and will be removed following the harvest.

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.

The temporary culvert that is to be installed on the stream between Unit 1 and Unit 2 will be installed with geotextile fabric and covered with pit run rock. The borrow pit is on the B5010 road adjacent to the site. Approximately 8 yards of rock may be utilized.

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: **A temporary diversion of water will be required during the installation and subsequent removal of the temporary culvert.**

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 sub-basin contains erosive soils on slopes greater than 30% and terrain susceptible to mass wasting along inner gorges and slopes greater than 60%. There is potential for un-vegetated slopes within the sub-basin to supply eroded material to surface waters.

This proposal does not contain these soil types or slopes and so the potential for eroded soils to enter surface streams is low.

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 erosion along Wieberg creek from the 1996 storm resulted in a severely degraded stream channel and a loss of substantial amounts of soil and streamside vegetation. The channel is much wider and deeper and eroded down to underlying unconsolidated large cobble that does not support renewed vegetative cover.

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

No Yes, explain: **This proposal is not anticipated to negatively impact water quality due to the mitigation measures outlined in Questions 1-7 above. These can be summarized by sale boundary locations to exclude soils and slopes susceptible to erosion, RMZ and ELZ protections on stream channels within the unit boundaries, and the temporary culvert installation engineering design.**

The erosion along Wieberg creek from the 1996 storm resulted in a severely degraded stream channel and a loss of substantial amounts of soil and streamside vegetation. The channel is much wider and deeper and eroded down to underlying unconsolidated large cobble that does not support renewed vegetative cover.

10) *What are the approximate road miles per square mile in the WAU and sub-basin(s)?* **3.0 miles per square mile is the WAU average.**

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. **34% of WAU in peak ROS zone.**

Approximate percent of sub-basin(s): **Sub-basins are not delineated on the eastside of the Cascade Range.**

- 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?

Approximately 60% of the ROS acreage in the WAU is mature forest.

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

No Yes, describe observations:

Stream channels within the proposal area show evidence of high flows and a lack of fine sediment.

- 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 a thinning that will leave a hydrologically mature forest canopy and thus no increases to peak flows are expected.

- 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:

There is an undocumented domestic intake on the creek south of Unit 3.

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

The boundary of Unit 3 is well above the water intake and along the top of the slope. No ground disturbance will occur that would impact this site. See also b.1.d.5. and B.1.h. for further protection measures. The post-harvest stand will remain hydrologically mature, the stream channels are protected with buffers to maintain natural drainage, and the road network will be upgraded to disperse runoff water more regularly through the addition of cross drains and other road design improvements.

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.

No.

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

None.

- 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:

The downstream domestic intake is a surface source as stated above. It will not be affected by changes to groundwater amounts, timing, or movements. This proposal is not anticipated to affect groundwater.

a) Note protection measures, if any.

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.

Storm water runoff from road surfaces and intercepted subsurface flow will be collected by roadside ditches and diverted onto the forest floor to allow infiltration. Ditch-outs and cross drain culverts will be installed and maintained to direct ditch water onto the forest floor.

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

Some logging slash may inadvertently enter surface waters.

a) Note protection measures, if any.

A 50' buffer was included in Unit 1 to bound out a streamcourse that leads directly to a crossing point on the main road. A new spur road north of this stream channel will be insloped to direct runoff to the road ditch and not into the stream channel. No yarding will be allowed across this channel.

The B5010 road into Unit 2 will be abandoned following the harvest and the stream adjacent portion will be ripped, water barred and seeded.

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.)

1. All road drainage structures will be maintained in an operable state during and after logging operations.

2. Roads have been designed to divert water to the forest floor to minimize the risk of erosion.

3. Operational restrictions will exist during wet conditions to minimize rutting and soil disturbance on skid trails and logging roads while the proposal is in operation. No operations will be allowed from November 1 thru April 30th unless ground and weather conditions are favorable.

4. Skid trails will be water barred at the completion of each setting on slopes over 20% or as needed.

5. Existing roads, landings and skid trails will be used wherever practical.

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: **Vine maple**
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:

**DNR Natural Heritage 2051 Common Name: Grand fir/Vanillaleaf
 State Rank S3; Federal Rank G3
 DNR Natural Heritage 4054 Common Name: Grand fir/Oceanspray
 State Rank S2; Federal Rank G2G3
 DNR Natural Heritage 6280 Common Name: Grand fir/Pinegrass
 State Rank S4; Federal Rank G4?**

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

Approximately 3.3 MMBdft of Douglas-fir timber will be removed from the sale area. This is approximately 50% of the standing basal area per acre. The prescription is a thinning from below removing trees up to 20" diameter at breast height.

- 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.")
- All of the timber sale units are surrounded by timber stands that are similar to the proposed units. The stands are Douglas-fir dominated with smaller amounts of grand fir. The ages are approximately 70 years. There is an older stand on the east side of Units 1 and 2 that is approximately 90 years of age. This stand has some larger remnant Douglas-fir trees in patches. Along the south boundary of Unit 3 are some open grassy areas with mixed Oregon Oak trees.**

- 2) Retention tree plan:
Approximately 60-80 trees per acre of the dominant Douglas-fir trees will remain after the harvest.

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

Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
The thinning prescription is intended to remove suppressed trees and to increase the amount of light to the forest floor. This will enhance the natural understory vegetation and the plant associations in the stands.

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: **winter wrens**
 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).

TSU Number	FML ID	Common Name	Federal Listing Status	WA State Listing Status
1	83165	SPOTTED OWL: Site:1116-WIEBERG CREEK	THREATENED	ENDANGERED
1	83165	SPOTTED OWL: Site:874-PHELPS CREEK	THREATENED	ENDANGERED
2	83166	SPOTTED OWL: Site:1116-WIEBERG CREEK	THREATENED	ENDANGERED
2	83166	SPOTTED OWL: Site:874-PHELPS CREEK	THREATENED	ENDANGERED
3	85372	SPOTTED OWL: Site:1116-WIEBERG CREEK	THREATENED	ENDANGERED

The Phelps Creek NSO site #874 is located approximately 0.8 miles from the north boundary of Unit 1. The Wieberg Creek NSO site #1116 is located approximately 0.5 miles from the south boundary of Unit 1. Both nestsites have a protected nest core established and no harvest activities will occur within them. The 0.7 mile timing restriction from March 1st – August 30th will apply to approximately 50 acres of Unit 1.

c. Is the site part of a migration route? If so, explain.
Pacific flyway Other migration route: Explain if any boxes checked:

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

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: **Northern spotted owls** Protection Measures: **The harvest is intended to enhance and sustain nesting, roosting, foraging (NRF) habitat by removing small diameter trees and increase the overall QMD of the stand. The expected result of this activity is to increase stand vigor and its resilience to forest pathogens and fire for the long term. Large diameter trees with forks and mistletoe will be left as well as large diameter snags. A seasonal timing restriction will limit operations within 0.7 miles of the nestsite.**
The prescription is intended to preserve the habitat function of the stand for at least another 20 years out and thus maintain the landscape level threshold of habitat.

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.
There is a risk of minor spills of hydraulic fluid and/or oil from the logging equipment during the operation.
- 1) Describe special emergency services that might be required. **None.**
 - 2) Proposed measures to reduce or control environmental health hazards, if any:
All equipment on site and using accesses to the site will be equipped with fire extinguishing equipment during the fire season. Pump trucks and/or trailers will be required on site during the fire season. In the event of a lubricant spill, the purchaser will contact the Department of Natural Resources and the Department of Ecology. Spill kits will be required for dealing with small spills. No oil or lubricants will be allowed to be disposed of on site. Risk of wildfire is mitigated by following industrial fire precaution level (IFPL) shutdown regulations.
- b. Noise
- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?
None.
 - 2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.
Logging equipment and log trucks will create noise during the normal working hours throughout the projects operational period. Approximately 15 log truck loads per day would be operating to and from the proposal's site.
 - 3) Proposed measures to reduce or control noise impacts, if any: **None.**

8. Land and Shoreline Use

- a. What is the current use of the site and adjacent properties? (*Site includes the complete proposal, e.g. rock pits and access roads.*)
Forest Management.
- 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?
Forest Resource.
- f. What is the current comprehensive plan designation of the site?
Long term forest management.
- g. If applicable, what is the current shoreline master program designation of the site?
Does not apply.
- h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.
No.
- 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?
None.
- k. Proposed measures to avoid or reduce displacement impacts, if any:
None.
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
This proposal is consistent with current landscape objectives. There is no change to existing land use, and no impacts from adjacent land uses on this proposal.

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: **Does not apply.**

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?
Does not apply.
- b. What views in the immediate vicinity would be altered or obstructed? **No views will 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:
- 2) *Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?*
 No Yes, scenic corridor name:
- 3) *How will this proposal affect any views described in 1) or 2) above?*
This proposal will not affect any views in the area.
- c. Proposed measures to reduce or control aesthetic impacts, if any: **No measures are proposed to reduce or control aesthetic impacts from this proposal.**

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? **Does not apply.**
- d. Proposed measures to reduce or control light and glare impacts, if any: **None.**

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?
There are no designated recreation opportunities in the proposal area. Snow mobiling, hunting, and camping take place informally.
- b. Would the proposed project displace any existing recreational uses? If so, describe:
Recreational activities within the proposal may experience some disruption during the logging operation but these activities would resume once the operation is completed.
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
Warning signs for log trucks and logging activities will be posted in the area of the proposal. Informal recreation will only be displaced for the short-term and then will resume at the end of the proposal.

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.
None.
- c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)
This proposal was reviewed for archeological/historic resources using DNR's Planning and Tracking database, GIS database, USGS, and GLO maps. In the event that any unknown archaeological resources are encountered, ground disturbing activities would be halted and a Department of Natural Resources archeologist will be contacted to survey the site and develop a Site Protection Plan. The Department's Inadvertent Discovery Plan is available at the Region office or at <http://www.dnr.wa.gov/BusinessPermits/Topics/AppraisalPackets/Pages/Home.aspx>.

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.
The site is directly accessed by forest roads from Highway 141.
- 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?
Not Applicable.
- 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).

The proposal will require approximately 5479 feet of reconstructed forest road and 8159 feet of new construction.

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

The project will not change the overall transportation system or circulation in the area.

- 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.
Approximately 15-20 log truck loads per day will be during the active operation and the trips will be spread out throughout the daytime hours.
- g. Proposed measures to reduce or control transportation impacts, if any:
Warning signs will be posted where the forest roads come out onto the highway.

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.
None.
- 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.
Does not apply.

C. SIGNATURE

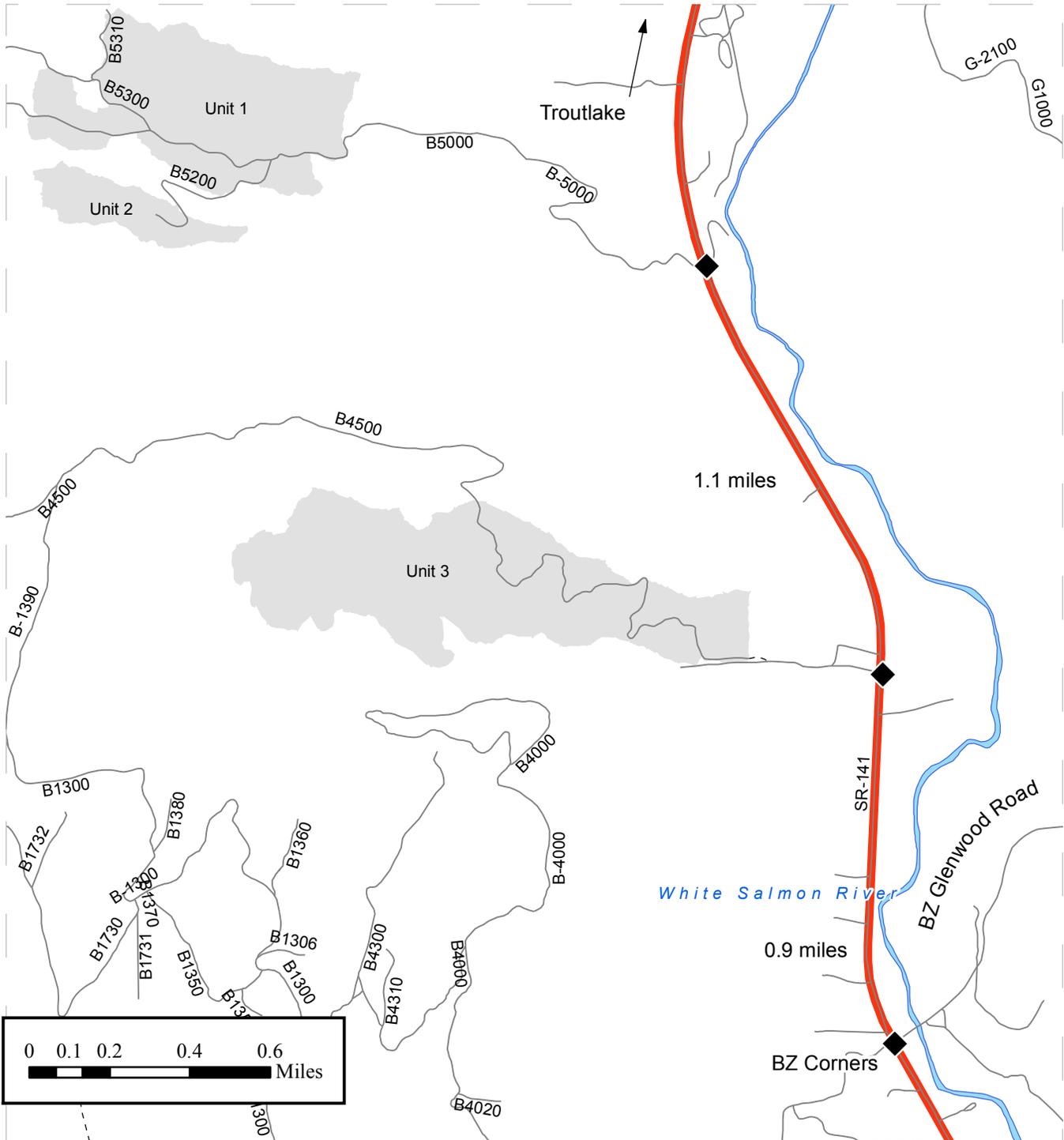
The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: **Albert Durkee** _____ Date: _____
Title: **Unit Forester**

DRIVING MAP

SALE NAME: Phelps Creek
AGREEMENT#: 30-088241
TOWNSHIP(S): T05N R10 E and T04N R10E
TRUST(S): State Board Transfer (01) and Common School (03)

REGION: Southeast
COUNTY(S): Klickitat
ELEVATION RGE: 1000-2560'



█ Highways
█ Open Water
█ units

DRIVING DIRECTIONS:

Unit 1 and Unit 2 Directions
 From the BZ Glenwood Road and SR 141 junction head northbound on SR 141 approximately 2.0 miles and turn left onto B5000.

Unit 3 Directions
 From the BZ Glenwood Road and SR 141 junction head northbound on SR 141 approximately 0.9 miles and turn left onto B4500.

