STATE FOREST LAND
EVIRONMENTAL CHECKLIST

2411689

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 decided 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. Highlighted questions are supplemental to the standard SEPA checklist. These questions look at the proposed project in relationship to the surrounding landscape. 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 attached 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: Stossel Run Agreement #:30- 070718

2. Name of applicant: Department of Natural Resources

3. Address and phone number of applicant and contact person:
   WA Department of Natural Resources
   South Puget Sound Region
   950 Farman Avenue North
   Enumclaw, WA 98022
   (360)802-2115
   Contact: Sean Greif

4. Date checklist prepared: 3/27/06

5. Agency requesting checklist: Department of Natural Resources

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

   a. Auction Date: 12/12/2006
   b. Planned contract end date (but may be extended): 10/31/2007
   c. Phasing: None

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: The timber sale unit will be hand planted within 2 years following harvest activity
   c. Vegetation Management: Methods to reduce competing vegetation will be assed for approximately 15 years following harvest
   d. Thinning: Surveys to determine need approximately 15 years following harvest

   Roads: There is approximately 1,515 feet of optional construction road that may be built to access the harvest unit. In addition, spot rocking, and culvert inlet repair will be required as pre-haul maintenance on approximately 3,190 feet of the existing CV100 road. Approximately 1,515 feet of the optional construction roads will be deactivated, if built, upon completion of the harvest. Road construction contains several cross drain culverts and replacement of three existing culverts at water crossings. All stream crossings have been designed to maintain the natural stream channel and minimize the disturbance to stream banks. It is estimated that the

existing Drunken Charlie pit may be expanded approximately 0.2 acres. All road construction and deactivation will be during dry weather and measures will be taken to prevent any sediment delivery to typed streams.

Rock Pits and/or Sale:
Rock may be obtained from any commercial source or the State owned Drunken Charlie Pit.
Other: 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: Tolt Watershed Analysis, dated 1997 on file at the Sound Puget Sound Region Office
☐Interdisciplinary team (ID Team) report:
☒Road design plan:dated 5/15/2006
☐Wildlife report:
☐Geotechnical report:
☐Other specialist report(s):
☐Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):
☒Rock pit plan: included in the road plan, dated 5/15/2006
☒Other: see below
Habitat Conservation Plan (HCP), dated September 1997
TRAX
Forest Resource Plan (FRP)
State Soil Survey
Forest Resource Inventory System (FRIS)
GIS Analysis
WA Department of Fish and Wildlife (WDFW)Priority Habitat and Species (PHS) database.
North Puget Planning Unit Reclassified Marbeled Murrelet Habitat Model
RMAP #240027

Above *referenced documents are available upon request from the South Puget Sound region office during the SEPA comment period.*

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

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: Board of natural resources approval.

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 Stossel Run timber sale is a one-unit regeneration harvest and is approximately 23 acres gross and 19 acres net. This proposal is on site class II soil, with a site index of 130. The east boundary is a buffer for Stossel Creek (type 2) and also parallels Stossel county road. The southern boundary is a buffer for a type 4 stream that becomes a type 3 near the east end where it flows into Stossel Creek. The rest of the sale is surrounded by a young stand approximately 20-25 years of age. There are three leave tree clumps. The first clump is on the north end of the sale and is approximately 1.5 acres. This clump was established to aid in the protection of a cliff. The second clump is on the south end of the sale and extends slightly up the east side. This clump is approximately 2 acres and aids in the protection of a type 5 stream. The third clump is in the middle of the sale and is approximately .5 acres. The leave tree clumps were placed on the ends of the sale since it is completely surrounded by young stands. The middle clump was located to decrease the distance between leave clumps. This proposal is expected to yield approximately 1,246 MBF of merchantable timber.

There is approximately 1,515 feet of optional construction road that may be built to access the harvest unit. In addition, spot rocking, and culvert inlet repair will be required as pre-haul maintenance on approximately 3,190 feet of the existing CV100 road. Approximately 1,515 feet of the optional construction roads will be deactivated, if built, upon completion of the harvest. Road construction contains several cross drain culverts and replacement of three existing culverts at water crossings. All stream crossings have been designed to maintain the natural stream channel and minimize the disturbance to stream banks. It is estimated that the existing Drunken Charlie pit may be expanded approximately 0.2 acres. All road construction and deactivation will be during dry weather and measures will be taken to prevent any sediment delivery to typed streams.

b. Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.
The current stand is approximately 75 years of age. The proposal encompasses areas in site class II land. Douglas-fir dominates the overstory. There is some western red cedar and western hemlock intermixed, most of which is suppressed. There is occasional red alder and big leaf maple. The understory consists of vine maple, sword fern, and salmon berry. The elevation of the proposal area ranges from 570 to 1,000 feet above sea level. The stand contains woody debris on the forest floor from past logging activity and windfall.

This unit will be planted with Douglas-fir and western red cedar within two years following completion of harvest activities. This type of harvest accomplishes the Department's objective to provide revenue to the Trust while managing for and providing habitat as directed under the 1997 Habitat Conservation Plan (HCP), protecting hydrologic function and water quality under Forest Practice and HCP regulations.

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

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		1,515	1	N/A
Reconstruction		0		N/A
Maintenance		3,190		N/A
Abandonment		0	N/A	N/A
Bridge Install/Replace	0			N/A
Culvert Install/Replace (fish)	0			N/A
Culvert Install/Replace (no fish)	3*			

*Stream crossing replacement culverts, this proposal also includes 5 new cross drain culverts to be installed.

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 attached timber sale map. See also color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")

a. Legal description:
Harvest and road work in Sections 12 and 13 Township 26 North, Range 7 East, W.M.
Rock pit operations in Section 5 Township 26 North, Range 08 East, W.M.

b. Distance and direction from nearest town (include road names):
The proposal is approximately 6 miles northeast of Duvall. See Timber Sale vicinity map for street names.

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
TOLT	63743	23

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 Stossel Run Timber Sale is located on DNR land within the Marckworth State Forest. The proposed sale is located within the Tolt WAU. This WAU has mixed forestland ownership with the majority of the land being in private ownership. Of the 63,461 acres in the WAU, only 9 percent is in State ownership. Please see the table below for information regarding DNR's management within the WAU. This information is based on the best available data as of May 8, 2006, and is based off the GIS spatial data, not the tabular information.

Name of WAU or sub-basin	Total Acres	Percent DNR Managed Forest land	DNR Managed Forested Acres	Non-DNR Managed Forested Acres	Percent Non-DNR Managed Forest Land	Proposal Acres
Tolt	63,743	9%	5,833	57,910	91%	23
Sub-basin #07041503	4,008	63%	2,535	1,473	37%	23

Name of WAU	DNR acres of even-aged approved FPA's	DNR acres of un-even-aged approved FPA's	Non-DNR acres of even-aged approved FPA's	Non-DNR acres of uneven-aged approved FPA's	Total acres in WAU of even-aged approved FPA's	Total acres in WAU of uneven-aged approved FPA's
Tolt	673	3	5143	718	5816	721

Protection measures were applied to this proposal that will prevent potential negative cumulative effect issues. Completed DNR harvest activities have mitigated environmental impacts on a site-by-site basis according to the guidelines of the forest practice rules, Habitat Conservation Plan (HCP), and recommendations by the region biologist. All previously harvested areas have been replanted with Douglas-fir and western red cedar seedlings.

Streams have been protected with the appropriate HCP buffers that will prevent sediment delivery and preserve water quality. Potentially unstable areas have been removed from the sale area. Roads will have drainage structures that comply with HCP and forest practice rules. Contract language will prohibit the use of equipment that may pose high risk to soil compaction and will suspend operations during periods of wet weather when rutting may occur. Retention of live green trees in leave tree clumps throughout the sale area will over time facilitate large woody debris content to the forest floor, provide habitat for different wildlife species and lessen the aesthetic impacts to the site.

This proposal is within the North Planning Unit, which has a marbled murrelet reclassified habitat model. Theis proposal is not within any reclassified marbled murrelet habitat polygons. The proposal consists of second growth timber that does not have habitat characteristics for the marbled murrelet.

Future activities in the WAU within the next year include timber harvesting, road construction/maintenance and silviculture activities. These activities will continue to follow the HCP, Forest Resource Plan, and Forest Practice rules.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☐Rolling, ☐Hilly, ☐Steep Slopes, ☐Mountainous, ☒Other: Rolling broken with steep slopes

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).
The Tolt WAU contains rolling mountainous terrain. The topography is similar to other locations along the foothills of the western Cascades with elevations ranging from 800 to 4,000 feet. The topography is generally the result of glacial action during the last ice age with recent erosion features from stream action. Most of the WAU (approximately 55 percent) is in the slope range of 0 – 30 percent; 28 percent is in the slope range of 31 to 65 percent; 1 percent is in the 65 to 100 percent range; and 16 percent has slopes in excess of 100 percent. The climate is generally moderate with precipitation range of about 35 to 80 inches per year. Temperature in Fahrenheit ranges from about the low 20's in the winter to the 90's in the summer. The major timber type is Douglas-fir/western hemlock.

2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).
There is little difference between the proposal location and the general description of the WAU with the exception of the specific location of the proposal area. The elevation of the proposal area ranges from 570 to 1,000 feet and slopes range from 0-65 percent.

b. What is the steepest slope on the site (approximate percent slope)? 65 percent on less than 5 percent of the sale area.

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	% Slope	Acres	Mass Wasting Potential	Erosion Potential
8107	GRAVELLY LOAM	15-30	19	INSIGNIFIC'T	LOW
8108	GRAVELLY LOAM	30-60	4	MEDIUM	MEDIUM

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

1) Surface indications:

There were two areas identified during aerial photography review and field reconnaissance suggesting surface indication of potentially unstable soils near the proposal area. These areas were identified as bedrock hollows and the features remain outside of the sale area within associated RMZ buffers.

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:
Yes, shallow-rapid and deep-seated landslides are common along valley walls, terrace slopes, and delta fronts. The landslides generally occur due to steep slope gradients. Timber sale boundaries are located away from any steep slopes or potential triggers of instability.

3) Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?
☐No ☒Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:
Associated management activity:
There are places where erosion has occurred due to railroad grade construction in the 1930's. This has caused accelerated sedimentation over the last seventy years as the streams have been actively cutting through the fills. There are areas in the WAU where road construction has caused some small failures. Road builders historically exploited terrace slopes and large rotational slumps for ease of construction, making it difficult to determine which came first. In the sub-basin there are no shallow failures associated with timber harvest that were observed, but there are some shallow failures attributed to road building activities on steep slopes.

4) Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?
☒No ☐Yes, describe similarities between the conditions and activities on these sites:
The proposal is located on stable ground. Steep slopes have no road building activities. There will be no undercut slopes for road excavation, and measures will be taken to reduce concentration of water from roads and skid trails.

5) Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.
Areas adjacent to the units that were identified during GIS review and field reconnaissance suggesting potential slope instability were excluded from the harvest area. In steep areas, cable yarding was chosen to protect slopes and leave tree groups placed to protect seasonally wet and steep areas. Sub-grades of new road construction will not have woody debris placed in fills and pioneering will be accomplished with a tracked excavator. Landing debris will not be perched.

As needed, the haul roads will be graded, and culverts and ditches cleaned to maintain the road crown and drainage. During logging and landing construction the operator will be required to suspend one end of all logs during the yarding operations. Harvest operations may be suspended during wet weather, if in the opinion of the contract administrator the operation has the potential to impact public resources.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: 1 Approx. acreage new landings: .5 Approx. acreage rock pit fills: .2
Fill source:N/A

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
There is always some potential that erosion could occur as a result of the timber harvesting, yarding, and hauling. Prudent road construction and logging techniques and normal maintenance techniques will help eliminate erosion, and prevent impacts to public resources.

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): 0.5 acres

h. Propose measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)
Yarding, hauling and construction are restricted between November 1 and May 31. Timber hauling and harvest activity may be suspended at any time that the contract administrator determines that resource damage may be occurring. Regular road maintenance will help limit erosion. Culverts and ditches have been constructed to control the water flow and redistribute water to the forest floor. Roads will be graded to maintain proper drainage. Culverts and ditches will be cleaned to ensure that they remain functional. Approximately 1,515 feet of optional road, if built, will be deactivated after harvest activities are complete. The residual leave trees and vegetation will limit erosion related to runoff.

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.
Incidental amounts of emissions will be produced by harvest equipment or dust created by the movement of equipment during operation.

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: None.

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 and forest practice activity maps.)
Yes. Stossel Creek, a stream wetland complex, follows the eastern boundary of the proposed area. There are 2 more streams in the southern end of the sale that join together before flowing into Stossel Creek. All waters are within the Tolt WAU and eventually flow into the Tolt River. See below table for more information.

a) Downstream water bodies:
Stossel Creek flows into the Tolt River, which flows into the Snoqualmie 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)
Stossel Creek	2	1	200
Stream	3	1	200
Stream	4	1	100
Stream	5	1	30 foot equipment limitation zone
Stossel Creek Wetlands	A	2	200

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.
Streams/wetlands that are within this proposal area were identified during the initial field reconnaissance. The stream/wetland typing was determined using resource information gathered from field visits. Field foresters reviewed and confirmed the stream/wetland types. Once the stream/wetland typing was confirmed, HCP buffers were applied. RMZ/WMZ widths are listed in the above table. The Type 5 stream is further protected by a leave tree clump. The leave tree clump above the cliff was added to increase wind firmness of the trees outside the boundary.

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 attached timber sale map.)
Description (include culverts):
The sale complies with the DNR's Habitat Conservation Plan guidelines. Harvest activities will occur beyond the 100 foot buffer on the Type 4 stream. Logging may occur up to the stream channel of the Type 5 stream within the unit; however, a 30-foot equipment limitation zone will minimize soil disturbance. Cables may be hung inside the buffer for Stossel Creek, but not over the county road or Stossel Creek.

All timber will be felled away from these RMZs. Existing logging roads will be used as the haul route. These roads cross several Type 4 and 5 streams. A DNR engineer has developed the road plan to conform to forest practices standards.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.
None

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. (Include diversions for fish-passage culvert installation.)
☒No ☐Yes, description:

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒No ☐Yes, describe location:

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒No ☐Yes, type and volume:

7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?
Yes, the WAU sub-basin contains a small percentage of terrain that is highly susceptible to erosion. The proposal has adequate stream and wetland buffers as to disperse water onto the forest floor and filter any sediment before reaching streams or wetlands.

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:
Streams within the WAU have experienced accelerated aggradations in low gradient reaches that have acted as areas of deposition. Storm events have caused increased aggradations and scouring in some of the side channels within the sub-basins and coarse sediments have reduced pool depths and redirected the stream channels. In general, the stream systems currently contain excess fine sediments. This has occurred primarily from natural storm events.

9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☒No ☐Yes, explain:
Mass wasting and erosion potential in the sale vicinity is very low. The proposal is located on stable ground and will have little or no effect on water quality due to seasonal restrictions, boundary location, and harvest equipment restrictions.

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

The Tolt WAU has approximately 3.5 road miles per square mile / sub-basin # 07041503 has 4.0 miles per square mile.

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 <u>or</u> 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 <u>or</u> sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?
Not applicable.

13) Is there evidence of changes to channels associated with peak flows in the WAU <u>or</u> sub-basin(s)?
☐No ☒Yes, describe observations:
There is evidence of slope failures that have occurred during periods of peak flow and were probably caused by major rain-on-snow events. None have occurred in the proposal area. Channel migration and deposition have created problems along North Fork Creek.

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.
The foreseeable likelihood of this proposal contributing to peak flow impact as viewed in conjunction with past, present and future proposals is minimal. Past sales in the Tolt WAU on DNR managed lands have totaled less than 200 acres annually. There is no indication that this trend will change. Limiting DNR sales to less than 100 contiguous acres will help reduce the potential of peak flow occurrences. Green up rules restricting adjacency of sales adds to the protection. Harvesting activities on privately owned lands within the watershed seem to be consistent with historic averages. Few adverse effects have been witnessed in conjunction with these activities and there is little reason to believe there will be in the near future.

15) Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?
☒No ☐Yes, possible impacts:

16) Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.
This sale will not contribute to peak water runoff problems. The proposal includes adequate protection of the streams near the units. The current guidelines for HCP implementation include prescriptions that address the potential for peak flow impacts. There will be approximately ten leave trees per acre left on site in three clumps to assist in soil protection and provide a natural seed source for the next stand of trees. In addition to leave trees retained on-site, the harvest area will be planted with conifer seedlings within 2 years following harvest. Also, this proposal has an adequate number of drainage structures on the haul route. These structures will ensure ditch water is deposited on the forest floor and not allowed to flow directly into typed water or concentrate water in a single area.

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.
Insignificant amounts of oil or other lubricants may be inadvertently discharged as a result of heavy equipment use. No oils or lubricants will be disposed of on site.

3) Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?
☒No ☐Yes, describe:

a) Note protection measures, if any.

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.
The source of runoff is rainfall and snow melt. Surface water run-off will be collected where needed by road ditches and will be diverted by culverts onto the forest floor. Culverts are placed in adequate numbers and proper locations so as to prevent direct flow of these waters into live streams. The remaining trees, vegetation, and topography will restrict surface water runoff. Water will be absorbed through the forest floor.

2) Could waste materials enter ground or surface waters? If so, generally describe.
The wetland and riparian management zones protecting wetlands and streams will reduce the possibility of waste materials entering ground or surface waters.

a) Note protection measures, if any.

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.)
Hauling of forest products and road use will be carefully monitored under this proposal to protect road conditions and resources. Timber, rock and equipment hauling will be restricted between November 1 and May 31. The haul roads are designed to a standard that will support logging operations. Use of haul roads will be limited by their capability to handle heavy haul traffic during periods of wet weather and freeze/thaw associated with cold weather operations. The following measures will be taken, when in the opinion of the contract administrator, there is a need to prevent road damage and/or sedimentation of surface waters runoff from haul roads:

- The number of loads hauled may be limited during periods of inclement weather during the normal operating season.
- Erosion control structures (straw bales, silt fencing, installation of cross drains, or other methods to prevent delivery of sediment to streams) may be required during harvest operations.
- Roads may be temporarily closed during periods of heavy precipitation.
- Other logging activities, such as hauling and yarding may be suspended during periods of wet weather to reduce the potential of sediment delivery.

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: sword fern
☐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.)
This proposal will reduce the acreage in the WAU of 75 year old Douglas-fir, western hemlock and western red cedar by 19 acres. There will be approximately 10 trees per acre retained on-site to retain large woody debris, structural diversity and remain in compliance with the HCP. This proposal will not have significant impact to the overall composition of the WAU.

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.")
Adjacent stand conditions are as follows: The north, west, and south sides of the proposal are bordered by a Douglas-fir/western hemlock stand that is 20-25 years of age. To the east of the proposal is a 75 year old Douglas-fir stand that is the RMZ for Stossel Creek. This stand also has an area to the south that is predominately 75 year old red alder and big leaf maple.

2) Retention tree plan:
The retention tree prescription for the stand included 3 leave tree clumps that average of 10 conifer trees per acre, which is consistent with the Habitat Conservation Plan (HCP) and forest practices regulations while meeting stand objectives to maintain site productivity and ecological function. In order to facilitate cable yarding, corridors may need to be cut through marked leave tree clumps.

This leave tree strategy was employed for three reasons: (1) to recruit future wildlife habitat and unique forest stand structure components (snags and large woody debris); (2) to provide vertical, horizontal and species diversification within the future plantation; and (3) to protect the visual aspect of the sale. A total of 3 clumped leave tree areas have been marked throughout the Unit. This strategy provides a biological legacy, protecting the ecological value in large woody structures, fungal communities, and coarse woody debris.

c. List threatened or endangered plant species known to be on or near the site. 2411689

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
None Found in Database Search				

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
None, except the planting of conifer tree seedlings within 2 years after the harvest.

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: cougar
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	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
None Found in Database Search				

c. Is the site part of a migration route? If so, explain.
☒Pacific flyaway ☐Other migration route: Explain if any boxes checked:
Although within the Pacific Flyway, few migrating waterfowl have been witnessed utilizing the area.

d. Proposed measures to preserve or enhance wildlife, if any:
This proposed sale conforms to all regulations under the 1997 DNR Habitat Conservation Plan (HCP). The HCP includes a number of strategies to enhance and preserve wildlife over time. Specific to this proposal is the riparian strategy (to conserve and protect habitat for species that are dependent on aquatic and riparian habitat), and quality leave tree retention (which may provide critical elements for upland species and preserve long term site productivity through the maintenance of forest processes).

Retained trees are located within three leave tree groups. Grouped or clumped leave trees improve wildlife habitat, better protect fungal communities, and protect trees from severe weather conditions. Compared to single scattered tree retention. In addition, these groups were located around individual species and tree types known to have high wildlife use such as large limbs, open crowns, runners, and broken tops. These trees with unique characteristics have been retained at an approximate rate of two trees per acre throughout the sale. This will provide current and future habitat for a variety of wildlife species including woodpeckers, sapsuckers, and cavity dwellers. Large hard snags and large soft snags with high evident use and cavities have also been retained in these groups where possible.

Stream buffers have been established. These buffers, while protecting the water quality of the streams, will provide shelter and foraging areas for the riparian species that are indigenous to the area.

The sale boundary locations will prevent fine sediment generated from the logging operation from entering streams. There are many large trees within the RMZ/WMZ's, that will help maintain high shade levels, low water and air temperatures and dead and down trees needed for quality wildlife habitat.

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

Species /Habitat: Cliffs	Protection Measures: Although the cliffs adjacent to this proposal are not believed to be utilized by unique wildlife species, per DNR region biologist recommendation, there will be no harvest within 30 feet of the base of the cliffs. These cliffs are located outside of the sale boundary.
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.
Does not apply.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:
Does not apply.

7. Environmental Health

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

Minimal health hazard due to operating heavy equipment and the minor spillage of fuel and lubricating oils are always present with this type of operation. The risk of forest fire is always present and will be increased for about two years following harvest due to logging slash.

1) Describe special emergency services that might be required.
Department of Natural Resources, private and rural fire suppression resources. Emergency medical or air ambulance for personnel injuries. Hazardous material spills may require Department of Ecology and/or county assistance.

2) Proposed measures to reduce or control environmental health hazards, if any:
Fire equipment will be required on site during closed fire season. Operations will cease if relative humidity falls below 30 percent.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?
Does not apply.

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, road maintenance and forest products hauling operations will create increased noise limited to weekdays during the operating season.

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.)
Timber production/forest management (Forestry) in the Forest Production Zone of King County and incidental recreation.

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?
Forestry.

f. What is the current comprehensive plan designation of the site?
Forest production zone.

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?
Does not apply.

k. Proposed measures to avoid or reduce displacement impacts, if any:
Does not apply.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
This proposal is compatible with surrounding land uses and with the comprehensive plan.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
Does not apply.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
Does not apply.

c. Proposed measures to reduce or control housing impacts, if any:
Does not apply.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?
Does not apply.

b. What views in the immediate vicinity would be altered or obstructed?
This proposal is located within the Marckworth State Forest. One residential view in the immediate area will be altered by this proposal. Occasional views from forest roads and Stossel Creek county road used for informal recreation will be slightly altered. Topography, leave tree groups, and riparian zones within the sale will serve to break up these altered views.

1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
☐No ☒Yes, viewing location:
There is one resident to the east of the sale. The RMZ for Stossel Creek buffers the property line (county road) in the southeast quarter of section 12 in Township 26 north, Range 7 east, W.M.

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:
Stossel Creek county road.

3) How will this proposal affect any views described in 1) or 2) above?
This proposal will open up the forest canopy on the upper 2/3 of the slope. The RMZ for Stossel Creek on the eastside of the proposal is on the lower 1/3 of the slope. This along with the leave tree clumps will break up the altered view.

c. Proposed measures to reduce or control aesthetic impacts, if any:
The riparian management zones adjacent to streams and placement of the required leave tree clumps will assist in easing any visual or aesthetic impacts created by the harvest operations. Reforestation will also occur on the site within 2 years after harvest activities.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
Does not apply.

b. Could light or glare from the finished project be a safety hazard or interfere with views?
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?
Informal recreation in the area includes hiking, fishing, hunting, mushroom picking, mountain biking, and horseback riding.

b. Would the proposed project displace any existing recreational uses? If so, describe:
The proposed activity will temporarily reduce the availability of mushroom picking in portions of the unit. The road will be closed to bicycle, horse, and hikers while active logging operations are occurring.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
Hauling will not occur on weekends or state recognized holidays, which will reduce impact to recreationalists.

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.
None that are known.

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.)
None.

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.
See Timber Sale Vicinity Map.

1) Is it likely that this proposal will contribute to an <u>existing</u> 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, The nearest transit stop is approximately 6 miles away at the junction of the Stillwater Hill Road and the Big Rock Road near Duvall.

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).

1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?
There will be short-term increase in traffic during the operating period for this proposal due to forest products and equipment hauling. The roads constructed under this proposal will not affect the overall transportation system to the public since this road system is closed to motorized public use.

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.
Peak traffic volumes will occur during the summer months between 6 am and 6 pm. Up to 20 log truck trips per day (typically during one summer season only) could be possible. There will be no log truck traffic once the sale is complete.

g. Proposed measures to reduce or control transportation impacts, if any:
No hauling of forest products on weekends or holidays.

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.
Wildfire would need response from DNR and County fire department.

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.
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: Sean Greif, Natural Resource Specialist 1 (Title) Date: 3/16/2006

Reviewed by: Mark Thibo, Operations Manager (Title) Date: 6/15/2006

Approved by: For Randy Acker, South Puget Sound Region Manager Date: 8/10/06

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