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 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 forestland 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: FLAT CAN Agreement # 30-074421

2. Name of applicant: Department of Natural Resources

3. Address and phone number of applicant and contact person:
   South Puget Sound Region
   950 Farman Ave. N
   Enumclaw, WA 98022
   Telephone: (360) 825-1631
   Contact: Jerry Kvale

4. Date checklist prepared: 05/05/2003

5. Agency requesting checklist: Department of Natural Resources

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

   a. Auction Date: 02/25/04
   b. Planned contract end date (but may be extended): 10/31/05
   c. Phasing: Does not apply

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   Timber Sale

   a. Site preparation: None

   b. Regeneration Method:

Unit NO :1	HAND PLANT	01/01/2006	85 Acres
Unit NO :2	HAND PLANT	01/01/2006	58 Acres
Unit NO :3	HAND PLANT	01/01/2006	5 Acres
Unit NO :4	HAND PLANT	01/01/2006	2 Acres
Unit NO :5	HAND PLANT	01/01/2006	3 Acres

   c. Vegetation Management: Treatment needs will be assessed using current vegetation management guidelines. Control of competing brush within the sale area and along roads will be done in accordance with the Forestry Handbook, dated July 1999.

d. Thinning: A survey to determine the need for pre-commercial thinning (PCT) will be conducted at age 15. If it is determined that the stand needs PCT the information gained from the survey will be used to schedule the thinning.

Roads: Road maintenance including grading, ditch clean out, repair or replacement of culverts will occur as necessary on existing roads.

Rock Pits and/or Sale: Rock may be obtained from any commercial source or the Stetson pit on State land. The rock pit will remain open for future sales in area.

Other: This area is currently under a brush lease. Firewood cutting may be allowed after timber harvest.

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: **Dated 4/28/03***
☒Wildlife report: **Dated 4/21/2003***
☐Geotechnical report:
☒Other specialist report(s): **Geologist, slope stability checklist, dated 5/8/2003***
☐Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):
☒Rock pit plan: **In the road plan***
☒Other: Habitat Conservation Plan (HCP), Forest Resource Plan, TRAX, Soil Survey, Forest Resource Inventory System (FRIS), GIS Analysis

*The above referenced documents can be obtained from the SEPA Center or 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.
No.

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:

This proposal consists of approximately 153 acres in five Forest Management Units (FMUs). All FMUs are located in the Lilliwaup WAU, within the Hood Canal State Forest in Mason County.

The harvest units are located on flat to gently rolling terrain. The steepest slope is 50% on less than 1% of the sale. Elevation of proposal is approximately 400 to 660 feet. The dominant tree species is Douglas fir with some western hemlock, western white pine, red cedar, and red alder. Where steep slopes were encountered, the unit boundaries were located at the slope break as recommended by the geologist. This sale meets the DNR's Habitat Conservation Plan (HCP) requirement of a minimum of 8 leave trees per acre (or 40 trees per 5 acres) and 7 percent of the trees per acre over 12 inches dbh. On this sale leave trees clumped were clumped to prevent wind throw. These clumps are spaced so there is 1 clump per 5 acres. When possible, the clumps were positioned to protect sensitive areas such as: wetlands, steep slopes, residual old growth trees, snags, and large diameter woody debris. There are 18 leave tree clumps (40 trees each, greater than 12 inches DBH) located in Unit 1. There are twelve leave tree clumps (40 trees each, greater than 12 inches DBH) located in Unit 2, as well as two clumps with 20 leave trees each. There is one clump with 40 leave trees in Unit 3, one clump with 24 leave trees in Unit 4, and one clump with 30 leave trees marked in Unit 5. Scattered residual old growth trees have been marked as leave trees.

Unit 1 has a small wetland less than .25 acre. This wetland has been protected with a leave tree clump. All residual old growth are marked as leave trees.

The District Engineer designed all the roadwork for this proposal, which includes: re-construction, pre-haul maintenance and new construction. The rock pit is the existing DNR Stetson pit.

Estimated volume of timber to be sold is 2,461 mbf of mixed conifer and hardwoods.

b. Timber stands description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.
The proposal is a 153-acre regeneration harvest. Harvesting will be with a ground based harvest system. The proposal contains a relatively uniform stand of second-growth Douglas fir, red cedar, white pine and western hemlock. The origin of the stand is estimated to be: Unit 1; 1936, Units 2, 3, and 4 ; 1939, Unit 5; 1892. Objectives for this proposal include: providing revenue for the State Forest Board Transfer Lands (01), Common School (03) and the CEPR&I (06) trusts; maintaining biological diversity; maintaining the productivity of the site; protecting water, fish and wildlife.

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		137	.1	0
Reconstruction		7,586		0
Maintenance		52,153		0
Abandonment		0	0	0
Bridge Install/Replace	0			0
Culvert Install/Replace (fish)	0			0
Culvert Install/Replace (no fish)	2*			

*This includes crossdrains.

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:

Parts of: Section 5 and 8 Township 23 North, Range 03 West, W.M.

b. Distance and direction from nearest town (include road names):
This proposal is approximately 2 miles west of Hood Canal, and 10 miles north of Hoodsport. The primary access for the project begins 15 miles by road north of Hoodsport on US Hwy 101. From Hwy 101 turn onto the USFS 24 road and go west 3.7 miles to the DNR 3000 road. Go southeast 0.8 miles down the 3000 road to Unit 1.

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
LILLIWAUP	35050	153

13. Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)

WAU or Sub-basin	Total Acres	DNR Managed Acres	Hydrologically Mature DNR Land- Acres	Non-DNR Managed Land	Percent DNR Managed Land	Percent Hydrologically Mature Land	Percent Non-DNR Managed Land	Proposal Acres
Lilliwaup	35,050	16,821	13,822	18,229	48	82%	52%	153
Sub-basin: Eagle Creek	There is no acreage information on this sub-basin yet.							153

There are 35,050 acres in the WAU. 42% is private, 10% federally owned and 48% is in State ownership. The State manages approximately 16,821 acres. In the past 7 years, the State has harvested about 2047 acres in regeneration harvests and 474 acres in a partial cut. All regeneration harvests have been reforested. The harvest rate is about 2.0% of the state land base. Private lands have had approximately 2,197 acres under Forest Practice Permits for some type of harvest over the last seven years. This is less than 2% per year on non-State ownership in the WAU. Future harvests in the WAU will continue at or below the same rate. All harvests on state land since 1999 have been under our HCP guidelines.

Several environmental issues have been mitigated for in the current proposal to assure this activity will not contribute to an increased chance of environmental impact. The primary potential environmental issues identified in this area were soil disturbance and stream quality. The Type 3 streams, Type A and B wetlands are protected by riparian management zones. A Type 5 stream with an incised channel east/southeast of unit 2 has been left outside the boundaries. This will reduce sediment delivery to the streams and preserve water quality. Unstable slopes were bounded out to prevent any future erosion from harvest activities. Roads have been designed to avoid potentially sensitive areas and located on stable slopes. All roads will have adequate drainage structures that comply with all HCP and Forest Practice Rules. Riparian Management Zones and wildlife trees including leaving clumps of trees around some snags and large downed logs will serve to enhance diversity, act as potential habitat and aid in soil and wildlife protection. Ground based yarding will be limited to slopes less than 30 percent. During yarding log ends will be required to be suspended above the ground to reduce soil disturbance. A total of 1,334 leave trees have been left to preserve structural diversity for wildlife habitat. The site will be planted within two years of harvest with Douglas fir and western white pine.

Future activities in the WAU within the next 2 years include timber harvest, road maintenance, and silviculture activities. These activities will continue to follow Forest Practices Rules and HCP. This will ensure that all components of the environment are adequately protected and preserved to minimize the chance of environmental impact. This proposal, combined with past, and foreseeable future forest practice activities is not expected to have a negative cumulative impact on peak flows and water quality due to protection placed on potential unstable slopes and typed water for each forest practice activity.

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). Lilliwaup WAU ranges from sea level to 4,000 feet with landforms ranging from steep mountains to glacial outwash. Rain-on-snow at the higher elevations with rainfall ranging from 60 to 100 inches per year. The following list is a breakdown of precipitation ranges and rain-on-snow acreages found within the WAU.

PRECIPITATION:

2,131 acres with 60"/yr.
13,861 acres with 70"/yr.
9,825 acres with 80"/yr.
2,475 acres with 90"/yr.
833 acres with 100"/yr.

RAIN-ON-SNOW:

3,874 acres in Peak rain-on-snow zone
19,581 acres in Lowland zone
5,630 acres in Rain dominated zone

The majority of timber within the WAU is second growth Douglas-fir.

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

None of this sale is within the rain-on-snow zone and is located on flat to rolling terrain at 400-600 feet.

b. What is the steepest slope on the site (approximate percent slope)?
50 percent slope on less than 1 percent of the 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 landform 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
7331	SHELTON	5-15	85	INSIGNIFIC'T	LOW
2977	HOODSPORT	15-40	36	LOW	LOW
4352	LYSTAIR	0-5	10	INSIGNIFIC'T	LOW
2529	GROVE	5-15	9	INSIGNIFIC'T	LOW
8223	TYPIC UDORTHENTS	60-90	5	HIGH	MEDIUM
2528	GROVE	0-5	3	INSIGNIFIC'T	LOW
2534	GROVE	0-5	3	INSIGNIFIC'T	LOW
2530	GROVE	15-40	1	LOW	LOW
4353	LYSTAIR	5-15	1	INSIGNIFIC'T	LOW
2976	HOODSPORT	5-15	0	INSIGNIFIC'T	LOW

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

Yes. See below.

1) Surface indications:

The topography within the five harvest units is relatively flat with slopes generally less than 30% with a maximum slope of 50% on less than 1% of the sale. The boundary was established back from the top of the break along the northern portions of Unit 1 and the southern portions of Unit 2. This was done to protect the slopes adjacent to the unit. These slopes increase to greater than 80% in places with the base of the slope at Jorsted Creek (Unit 1) and Eagle Creek (Unit 2). The geologist found a shallow rapid failure to the northwest of Unit 2 during the field inspection. This failure is approximately 25 to 30 feet wide and is located outside of the unit boundary. Tension cracks, exhibiting displacement on the order of 4 inches (horizontal and vertical), were observed, to the southwest of Unit 2, for a length of about 15 feet. To the south of Unit 2 there is a roughly 100-foot wide scarp that appears to be no higher than about 10 feet. Narrow tension cracks were identified within about 10 feet above the crown, and slightly jack-strawed trees grow around and just below the scarp. See geologist Ana Pierson's report, dated 5/8/03. Ana did not visit Unit 5 as this unit was added to the proposal after she inspected the other units. Unit 5 is a flat unit that does not contain unstable slopes adjacent to the boundary.

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:

Steep banks along the major streams have slumped into the streams. There are no perennial streams in the sale area.

3) Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?
☐No ☒Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:
Associated management activity:

This response is for the entire WAU. No failures noted in the sub-basin. The only ones known are minor in the Washington Pass area on National Forest land and one minor slump on a 70-year-old railroad grade in Section 26, Township 23 North, Range 4 West, W.M. They failed because of poor road building practices in the 1930's.

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:

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

No harvest will occur on unstable slopes. All streams and wetlands were buffered according to HCP requirements along with additional protection stated in B 2.d.1).

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: .75 (The majority of the landings are pre-existing from a small wood thinning) Approx. acreage rock pit fills: 0

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

Yes, based on experience, minor erosion could occur from exposed soil on roads, landing and skid trail surfaces.

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):

h.

Approximately 7,723 feet of new and existing road will remain after harvesting is completed. The acres involved are less than 3% of the proposal acreage.

h. Propose measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)
Road locations are on stable soils and have little potential for deliverability to typed streams. Rutting limits, and diverting water off road surfaces onto the forest floor will minimize the potential for erosion.

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.

Insignificant amounts of engine exhaust from logging equipment and dust on roads from log truck traffic.

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:

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, and wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. (See attached timber sale map and forest practice base maps.)

Yes. See below.

a) Downstream water bodies:

On unit 1: Jorsted Creek (type-3) flows along the northern boundary. A class B wetland is located to the southeast of the unit and there is a class A wetland to the southwest of the unit.

On unit 2: Eagle Creek (type-3) flows along the western boundary. There are three Type 5 streams associated with this unit. One initiates its flow in the northwest corner of the unit, the second is just to the south of the aforementioned and initiates its flow outside the unit, and the third is located outside the unit boundary to the east. There is a Type A wetland to the north of the unit.

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)
Eagle creek	3	1	450+
Jorsted creek	3	1	175-190
Wetland	A	2	150-160
Wetland	B	1	100
Stream	5	1	125
Stream	5	2	20

Eagle Creek is buffered greater that the site index potential tree height due to potential unstable slopes. The buffer was placed at the top of the slope break above the creek , resulting in variable buffer widths. The first Type-5 stream listed above was excluded from the harvest unit because it has steep slopes associated with it. Of the other Type-5 streams, 1 is within this proposal and is protected with a leave tree clump to exclude equipment

with the intent of protecting soil structure and hydrologic function. The other Type 5 stream is located outside the unit boundary.

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

The streams and wetland that are adjacent to this proposal (shown on the timber sale map) were identified during the initial field reconnaissance. All buffers meet the requirements of the HCP. No wind buffers are needed along RMZs. No harvesting equipment will be permitted in the RMZ.

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):

RMZs have been established along Eagle and Jorsted Creeks (Type 3s). The Type 3 RMZ buffer requirements vary from 150-160 feet based on potential site index tree height. The RMZ is 100 feet from the Type B wetland. All boundaries, leave areas, and buffers comply with the HCP.

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. There is no data available for the sub-basin. The following is for the entire WAU:

SURFACE EROSION POTENTIAL
HIGH -- 1,832 Acres (7%)
MEDIUM-- 4,286 Acres (16%)
LOW -- 18,745 Acres (72%)
VARIABLE -- 27 Acres
DOES NOT APPLY -- 493 Acres (2%)
NO DATA -- 804 Acres (3%)

MASS WASTING POTENTIAL
HIGH -- 5,923 Acres (23%)
MEDIUM -- 1,791 Acres (7%)
LOW -- 3,380 Acres (13%)
INSIGNIFICANT -- 14,245 Acres (54%)
NO DATA -- 849 Acres (3%)

The potential for eroded material to enter surface water is likely where erosion and mass wasting potential is high adjacent to streams.

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), and change in channel dimensions)?
☐No ☒Yes, describe changes and possible causes:

The steep incised channels continually have minor slope failures in this WAU. This is a natural process and is unrelated to any known activity of which we are aware. There is no evidence of this within the sale area.

9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☒No ☐Yes, explain:

10) What are the approximate road miles per square mile in the WAU and sub-basin(s)? DNR: 2.7, NON-DNR: 4.3
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?

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:

Streams within the WAU have experienced accelerated aggradation. In general, the stream systems currently contain excess fine sediments. This has occurred primarily from natural storm events. There is no evidence of stream aggradation within this sale area.

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.

With proper culvert installation, road construction and regular maintenance, any runoff will be minimized.

15) Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposal 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.

Some minor runoff may occur from roads during peak flow, but cross drain culverts have been designed and installed to direct ditchwater onto the forest floor prior to entering any surface water. Periodic maintenance should prevent any failures.

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 and other lubricants may be discharged inadvertently 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. None

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

2) Could waste materials enter ground or surface waters? If so, generally describe.
Yes.
a) Note protection measures, if any.

The timbered buffers protecting wetlands and streams will reduce the possibility of waste materials entering surface waters. No lubricants or containers will be disposed of on site.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

Good landing location, sound construction techniques utilizing the best management practices, timing restrictions on construction and hauling and yarding will minimize surface erosion problems. The spacing and placement of culverts, along with the use of ditch outs will reduce or control surface, ground, and water runoff impacts. (See surface water, ground water, and water runoff sections above, questions B-3-a1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)

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: white pine
☒shrubs: ☒huckleberry, ☒salmonberry, ☒ salal, ☐other:
☐grass
☐pasture
☐crop or grain
☐wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☐skunk cabbage, ☐devil's club, ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☒other types of vegetation: Sword fern
☐plant communities of concern: None

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.)

All merchantable timber will be removed except 8 leave trees per acre; these are clumps of 40 trees in Units 1,2 and 3. Unit 4 has a 22 tree clump and Unit 5 has a 30 tree clump Logging equipment will disturb all under-story shrubs within the harvest area. This under-story will easily regenerate itself once the harvest operations are complete. Streams and wetlands have buffers that meet HCP requirements along their perimeters. No harvest operations will occur within these buffers. Scattered residual old growth trees have been marked as leave trees. See sale area map for buffer locations.

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.")

Second growth timber is adjacent to all units except along the BPA power lines, which are northwest of Unit 1. Along unit 1 there is approximately 3900 feet of boundary adjacent to private lands. The adjacent timber stands age ranges from 20+-year-old saplings (on private land) to between 60 and 70 years old on state land.

Unit 1 is surrounded by RMZ's, power-lines, private land and 1800 feet of state owned timbered lands. The age of timber in the state RMZ is 64 years old, where as the trees in the state owned timbered lands are 67 years old, and the private land is stocked with 20+-year-old saplings.

Unit 2 is surrounded by RMZ's and state owned timbered land. The RMZ's timber age ranges from 64 to 125 years of age, as do the trees on the state owned timberland.

Units 3 and 4 are surrounded by a 20 year old stand of state timber.

Unit 5 has a stand of 15-year-old timber to the north, west, and south. A 40-year-old stand is growing to the east of the unit.

2) Retention tree plan:
All units have very few snags. Clumps of leave trees are marked with blue paint at a rate of one 40 tree clump per 5 acres. On all of the units the leave trees account for 11% of the stand over 12 inches diameter at breast height (DBH). All residual old growth within the units were marked as leave trees. The other leave trees are vigorous second growth Douglas fir, western hemlock and red cedar.

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

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:

Hand-planting 250 Douglas fir and 50 white pine seedlings per acre within 2 years following harvest. Red cedar, western hemlock and red alder will naturally seed in the harvest area.

5. Animal

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

birds: ☒hawk, ☐heron, ☒eagle, ☒songbirds, ☐pigeon, ☐other:
mammals: ☒deer, ☒bear, ☒elk, ☐beaver, ☐other:
fish: ☐bass, ☐salmon, ☐trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐talus slopes, ☐caves, ☐cliffs, ☐oak woodlands, ☐balds, ☐mineral springs

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

TSU Number	Common Name	Federal Listing Status	WA State Listing Status
1	BALD EAGLE	THREATENED	THREATENED
2	BALD EAGLE	THREATENED	THREATENED
3	BALD EAGLE	THREATENED	THREATENED
4	BALD EAGLE	THREATENED	THREATENED
5	BALD EAGLE	THREATENED	THREATENED

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

This proposal is not an existing resting area for waterfowl.

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

This proposal conforms to all 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. Leave trees are wind firm and well-formed dominant and co-dominant trees representing the current diversity of species.

In addition, individual species and tree types known to have high wildlife use have been retained. Trees with unique characteristics (such as forked or damaged tops) will be retained throughout the sale to provide current and future habitat for a variety of wildlife species including woodpeckers, sapsuckers, and cavity dwellers.

1) Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.
Species /Habitat: Bald Eagle Protection Measures: None*
Species /Habitat: Protection Measures:
Species /Habitat: Protection Measures:

*Our agency's Planning and Tracking system indicated that the proposed harvest units are within a Bald Eagle Territory. The territory is associated with a nest, which is no longer present. Since the proposal is over ½ mile from the indicated site, no management strategy was implemented per the HCP.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Does not apply.

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

Does not apply.

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

Does not apply.

7. Environmental Health

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

1) Describe special emergency services that might be required.

Minimal health hazard due to operating heavy equipment and the minor spillage of fuel and lubrication 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.

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%.

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, road construction and maintenance and forest products hauling operations will increase noise during the operating season. None of this is an increase above normal historical use.

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).

b. Has the site been used for agriculture? If so, describe.
No.

c. Describe any structures on the site.
Does not apply.

d. Will any structures be demolished? If so, what?
Does not apply.

e. What is the current zoning classification of the site?
Mason County has no zoning.

f. What is the current comprehensive plan designation of the site?
Long-term commercial forestry.

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?

None.

j. Approximately how many people would the completed project displace?
None.

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:
None.

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?

No residential views in the immediate area will be altered by this proposal. Views from forest roads will be altered from timbered (200+ trees per acre) to harvested (one 40 tree clump per 5 acres). Riparian/wetland 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:

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?
Does not apply.

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

Reforestation will occur within two years following harvest. Within all five units, mature wildlife reserve/green recruitment trees (one 40 tree clump per 5 acres) will be left in clumps, plus individual scattered.

11. Light and Glare

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

b. Could light or glare from the finished project be a safety hazard or interfere with views?
Does not apply.

c. What existing off-site sources of light or glare may affect your proposal?
Does not apply.

d. Proposed measures to reduce or control light and glare impacts, if any:
Does not apply.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?
Hunting, mushroom gathering, brush picking, and berry picking.

b. Would the proposed project displace any existing recreational uses? If so, describe:
No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
None.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.
No.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.
None known.

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)
Does not apply.

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.
Haul routes will utilize state forest roads before connecting with US highway 101. See vicinity map.

1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?
No.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?
No. The nearest transit stop is in Hoodsport, approximately 15 miles from the proposal.

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).

Yes. All roadwork in this proposal applies to DNR managed roads. 137 feet of optional road construction, 7,586 feet of optional reconstruction, and 5,800 feet of pre-haul maintenance is included with this proposal. Construction/reconstruction includes additional drainage structures, replacement of cross drain culverts, grading and reshaping existing road surface.

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 operation period for this proposal due to forest products and equipment hauling. The established forest roads under this proposal will not affect the overall transportation system to the public.

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 may occur during the late spring to late summer months. Up to 12-log truck trips per day could be possible. No log truck traffic after the sale is complete.

g. Proposed measures to reduce or control transportation impacts, if any:
None.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.
Wildfire would need response from DNR and County fire department. Accidents would need county EMS response.

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: ___Jerry Kvale_____Date: _5/13/03_____
Title: Unit forester

Reviewed by: ___Herb Cargill_____ Date: __6/12/03_____
Title: Timber Operations District Manager

Approved by: _____ Date: _____
Gretchen Nicholas, South Puget Sound Region Manager