

STATE FOREST LAND **SEPA ENVIRONMENTAL CHECKLIST**

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at <http://www.dnr.wa.gov> 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.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. BACKGROUND

1. Name of proposed project, if applicable:

Timber Sale Name: **CHUM**

Agreement # 30-093140

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

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

**Andrew Gorbett
Department of Natural Resources
411 Tillicum Lane
Forks, WA 98331
(360) 374-2800**

4. Date checklist prepared: **08/26/2015**

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

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

a. *Auction Date:* **03/30/2016**

b. *Planned contract end date (but may be extended):* **10/15/2018**

c. *Phasing:* **N/A**

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

Timber Sale:

a. *Site preparation:*

**TSU No. 1: Ground Herbicide 08/15/2019; 8 acres
TSU No. 2: Ground Herbicide 08/15/2019; 25 acres
TSU No. 3: Ground Herbicide 08/15/2019; 18 acres
TSU No. 4: Ground Herbicide 08/15/2019; 12 acres
TSU No. 5: Ground Herbicide 08/15/2019; 87 acres
TSU No. 6: Ground Herbicide 08/15/2019; 29 acres
TSU No. 7: Ground Herbicide 08/15/2019; 14 acres
TSU No. 8: Ground Herbicide 08/15/2019; 18 acres**

b. *Regeneration Method:*

**TSU No. 1: Hand Plant 01/15/2020; 8 acres
TSU No. 2: Hand Plant 01/15/2020; 25 acres
TSU No. 3: Hand Plant 01/15/2020; 18 acres
TSU No. 4: Hand Plant 01/15/2020; 12 acres
TSU No. 5: Hand Plant 01/15/2020; 87 acres
TSU No. 6: Hand Plant 01/15/2020; 29 acres**

TSU No. 7: Hand Plant 01/15/2020; 14 acres
TSU No. 8: Hand Plant 01/15/2020; 18 acres

c. Vegetation Management:

Continuing assessment of units to determine future vegetation management strategy will be required.

d. Thinning:

PCT expected 10 to 15 yrs. post-planting.

Roads: Road maintenance, periodic ditching, and culvert and ditch cleanouts as needed.

Rock Pits and/or Sale:

Mary Clark Pit

Other:

Future forest management activities are anticipated to continue within the WAUs and adjacent to the current proposal. Potential activities may include but are not limited to biomass salvage, firewood salvage, hardwood slashing, planting, pre-commercial thinning, commercial thinning, and regeneration harvest. All future activities will be consistent with the DNR's Habitat Conservation Plan (HCP), applicable policies and planning documents.

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: **Sekiu, Hoko** temp sediment completed TMDL
(total maximum daily load):

Landscape plan:

Watershed analysis: **Sekiu, Hoko**

Interdisciplinary team (ID Team) report:

Road design plan: **10/7/2015**

Wildlife report:

Geotechnical report:

Other specialist report(s): **Geologist Memorandum: Additional Slope Stability**

Information Regarding the Proposed Chum Timber Sale

Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):

Rock pit plan: **Mary Clark Pit Plan 9/21/15**

Other:

Final Habitat Conservation Plan (September 1997), Forestry Handbook (August 1999), Sustainable Harvest Calculation (Sept 2004), Forest Practices board manual, Policy for Sustainable Forests (PSF 2006), HCP Checklist, Planning and Tracking reports and associated maps, Road Maintenance and Abandonment Plan (RMAP) for the Sekiu administrative unit: #2610029. The following documents are all generated from Department GIS databases: OESF Habitat Marbled Murrelet Habitat Model, and Marbled Murrelet Adjacency Map, Northern Spotted Owl Habitat Mapping.

All documents are available for review at the Olympic Region office during the SEPA review.

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.

FPA # FHPA Burning permit Shoreline permit Incidental take permit
 Existing HPA Other: **Board of Natural Resources Approval**

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

a. *Complete proposal description:*

The Chum timber sale is an 8 unit timber sale proposal encompassing approximately 357 gross acres and 6763 mbf of timber. Of the 357 gross acres there are 211 acres of variable retention harvest, 127 acres of Riparian Management Zone (RMZ), 8 acres of leave tree areas and 11 acres of existing roads. All units are accessed from the S-1000 road system.

Estimated Sale Volume:	6,763 MBF
Total Proposed Acres:	357
RMZ	127
Existing Road Acres:	11
Leave Tree Area Acres:	8
Total Number of Leave Trees:	1,700
Net Harvest Acres:	211

Approximately 3,355 feet of new construction, 2,035 feet of reconstruction and 32,446 feet of pre-haul maintenance are proposed to meet the needs of the sale. The Mary Clark Pit located in Section 32, Township 30 North, Range 12 West W.M. is the designated rock source for the sale.

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

The Chum timber sale is an 8 unit VRH timber sale. The units range in age from 33 to 48 year old second growth timber. The area is dominated by western hemlock, Douglas-fir, and Sitka spruce with components of western red cedar, and red alder in the overstory. The average DBH ranges from 10 to 21 inches across the units. The sale utilizes ground and cable based harvest methods.

Unit 1 is 20 gross acres containing 8 VRH acres, 10 RMZ acres, 0.1 leave tree acres, and 1.6 acres of existing roads. This unit consists of 45 year old second growth timber. The primary conifer species are Douglas-fir, western hemlock, and Sitka spruce. Slopes are generally less than 35% slopes with sections of the unit with slopes up to 70%. The elevation range is 400' and 560'. The harvest will be 100% ground based. There are 34 leave trees in leave tree clumps and 30 individually marked scattered leave trees.

Unit 2 is 51 gross acres containing 25 VRH acres, 23 RMZ acres, 0.5 leave tree acres, and 2.1 acres of existing roads. This unit consists of 47 year old second growth timber. The primary conifer species are Douglas-fir, western hemlock, and Sitka spruce. Slopes are generally less than 35% slopes with sections of the unit with slopes up to 70%. The elevation range is 400'-650'. The harvest will be approximately 80% ground based and 20% cable harvest. There are 153 leave trees in leave tree clumps and 47 individually marked scattered leave trees.

Unit 3 is 40 gross acres containing 18 VRH acres, 19 RMZ acres, 0.7 leave tree acres, and 1.9 acres of existing roads. This unit consists of 40 year old second growth timber. The primary conifer species are Douglas-fir, western hemlock, and Sitka spruce. The unit ranges from 10-70% slopes. The elevation range is 520'-660'. The harvest will be approximately 85% ground based and 15% cable harvest. There are 132 leave trees in leave tree clumps and 8 individually marked scattered leave trees.

Unit 4 is 31 gross acres containing 12 VRH acres, 18 RMZ acres, 0.6 leave tree acres, and 0.1 acres of existing roads. This unit consists of 40 year old second-growth timber. The primary conifer species are Douglas-fir, western hemlock, and Sitka spruce. The unit ranges from 10-70% slopes. The elevation range is 620'-760'. The harvest will be approximately 80% ground based and 20% cable harvest. There are 91 leave trees in leave tree clumps and 11 individually marked scattered leave trees.

Unit 5 is 127 gross acres containing 87 VRH acres, 32 RMZ acres, 3.8 leave tree acres, and 4.4 acres of existing roads. This unit consists of 33, 34 and 40 year old second growth timber. The primary conifer species are Douglas-fir, western hemlock, and Sitka spruce. The unit ranges from 10-70% slopes. The elevation range is 720'-1040'. The harvest will be approximately 50% ground based and 50% cable harvest. There are 510 leave trees in leave tree clumps and 180 individually marked scattered leave trees.

Unit 6 is 47 gross acres containing 29 VRH acres, 16 RMZ acres, 1.3 leave tree acres, and 0.5 acres of existing roads. This unit consists of 48 year old second growth timber. The primary conifer species are Douglas-fir, western hemlock, and Sitka spruce. The unit is generally flat with slopes up to 30%. The elevation range is 360'-400'. The harvest will be 100% ground based. There are 154 leave trees in leave tree clumps and 90 individually marked scattered leave trees.

Unit 7 is 23 gross acres containing 14 VRH acres, 9 RMZ acres, 1 leave tree acres, and 0.6 acres of existing roads. This unit consists of 48 year old second growth timber. The primary conifer species are Douglas-fir, western hemlock, and Sitka spruce. The unit is generally flat however there are short stretches of slopes of up to 60%. The elevation range is 360'-440'. The harvest will be 100% ground based. There are 69 leave trees in leave tree clumps and 46 individually marked scattered leave trees.

Unit 8 is 18 gross acres containing 18 VRH acres, 0 RMZ acres, 0.1 leave tree acres, and no existing roads. This unit consists of 48 year old second growth timber. The primary conifer species are Douglas-fir, western hemlock, and Sitka spruce. The unit is generally flat however there are short stretches of slopes of up to 55%. The elevation range is 330'-440'. The harvest will be 100% ground based. There are 55 leave trees in leave tree clumps and 90 individually marked scattered leave trees.

Objectives are as follows:

Ecological- VRH to promote diverse forest structure across the landscape while preserving ecological integrity and function.

Economic- Generate revenue for Common School (3), Agricultural School (4) & Capitol Grant (7) trusts.

Statute- Comply with the OESF HCP, Forest Practice rules, and implement the Policy for Sustainable Forests.

Social- Accommodate dispersed informal recreational activities on DNR managed lands.

Specific objectives are to provide riparian protection, protection of unstable slopes, protection of soils and habitat conservation for threatened and endangered species. Riparian protection measures were designed for all waters in and adjacent to this proposal in accordance with DNR's OESF Riparian strategy.

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

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		3,355	1	
Reconstruction		2,035		
Abandonment				
Bridge Install/Replace				
Culvert Install/Replace (fish)	1			1
Culvert Install/Replace (no fish)	1			

Additionally approximately 32,446 feet of pre-haul maintenance is scheduled with the road activities for this sale. Pre-haul maintenance will include grading, ditching, brushing, cleaning culverts, and installing cross-drains on existing forest roads.

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

- a. *Legal description:* :
Units 1, 2, 3, 4: T32N R13W S20
Units 3, 4, 5: T32N R13W S29
Units 6, 7, 8: T32N R13W S16
Unit 5: T32N R13W S30
Mary Clark Pit: T30N R12W S32

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

The Chum timber sale is , approximately 7 miles from Clallam Bay, and accessed by the SR-112 and the S-1000 road. s

c. Identify the names of all watershed administrative units (WAU). See also landscape/WAU map on DNR website: <http://www.dnr.wa.gov/ResearchScience/sepa/Pages/Home.aspx> under the topic “Current SEPA Project Actions – Timber Sales” for a broader landscape perspective.

WAU Name	WAU Acres	Proposal Acres
HOKO	45,993.8	66
SEKIU	29,379.5	145

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.”)

LAND MANAGEMENT

Seki Land Manager	Acres	% of WAU
DNR	4,045	13.8
Other State (Non-DNR)	33	0.1
Tribal	1,903	6.5
Other Land (Private & Other Public Land)	23,399	79.6

Hoko Land Manager	Acres	% of WAU
DNR	11,067	24.1
Federal	328	0.7
Other State (Non-DNR)	962	2.1
Other Land (Private & Other Public Land)	33,637	73.1

Activities within the past seven years, and those proposed for the near future are summarized for the Sekiu and the Hoko WAU’s in the following tables. In the future, stands will be selected for regeneration, thinning, and partial cut harvests as they meet the Department’s financial requirements, ecological policies, and mandates. It is unknown what future plans other landowners have within these WAU.

Within the last 7 years the DNR harvested 98 acres of even-aged timber and 149 acres of uneven aged timber in the Sekiu watershed. The DNR has planned 339 acres of even-aged harvests as well as 56 acres of uneven-aged harvest in the Sekiu watershed.

WAU	Ownership	Even-aged Harvest acres within the last	Uneven-aged Harvest acres within the last	Planned Even-aged Harvest	Planned Uneven-aged Harvest	Salvage
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		seven year	seven year			
Sekiu	DNR Managed Land	98	149	339	56	0
	Non-DNR Managed Land	0	Unknown	Unknown	Unknown	Unknown
	Total	98	N/A	339	56	N/A

Within the last 7 years the DNR harvested 252 acres of even-aged timber and 1,210 acres of uneven-aged timber in the Hoko watershed. The DNR has planned 1,172 acres of even-aged harvests as well as 148 acres of uneven-aged harvest in the Hoko watershed.

WAU	Ownership	Even-aged Harvest acres within the last seven year	Uneven-aged Harvest acres within the last seven year	Planned Even-aged Harvest	Planned Uneven-aged Harvest	Salvage
Hoko	DNR Managed Land	252	1,210	1,172	148	3
	Non-DNR Managed Land	191	5	Unknown	Unknown	1,117
	Total	443	1,215	1,172	148	1,120

This proposal and all future management activities on DNR lands will be conducted in accordance with the State's Habitat Conservation Plan (HCP, 1997), Policy for Sustainable Forests (2006), and Forest Practices Rules. The HCP is an agreement with the federal government concerning threatened and endangered species and their habitat, which requires DNR to manage landscapes with the intent to preserve and enhance habitat used by fish and older forest dependent species. The applicable HCP strategies incorporated into this and future proposals are as follows:

- Retaining Riparian Management Zones (RMZ's) on Type 3, Type 4 and unstable type 5 streams and maintaining equipment limitation zones adjacent to Type 5 streams;
- Deferring harvest on unstable slopes;
- Retaining a minimum of 8 leave trees per acre dispersed and aggregated throughout the units;
- Designing, constructing, and maintaining a road system to minimize potential adverse effects on the environment;
- Implementing procedures pertaining to threatened and endangered species.

In concert, the HCP strategies for spotted owl, marbled murrelet, and riparian conservation will contribute to the retention and development of older forests, while the leave tree procedure will enhance the structural diversity of forests across the landscape. Road network planning, maintenance, and abandonment will reduce the amount of roads needed for management and improve the quality of existing roads to reduce their impacts on the environment.

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).*

Sekiu WAU

Elevation Range: 0'-1948' with a Mean elevation of 617'

Weighted average precipitation: 97 inches/year

Forest Vegetation Type: Western Hemlock (TSHE)

Peak Rain on Snow Zone: 0.8%

Hoko WAU

Elevation Range: 0'-2,655' with a Mean elevation of 698'

Weighted average precipitation: 111 inches/year

Forest Vegetation Type: Western Hemlock (TSHE)

Peak Rain on Snow Zone: 4.7%

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

The proposal is located in two different WAU's. Units 1-4, 7 and 8, and portions of 5 and 6 are associated with the Sekiu WAU with an elevation range of 330-1040 ft. Portions of units 5 and 6 are associated with the Hoko WAU with an elevation range of 360-1040 ft. There are no portions of the timber sale located within the peak Rain-on-Snow zone of either WAU.

- b. What is the steepest slope on the site (approximate percent slope)? **70%**
- c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

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

State Soil Survey #	Soil Texture	% Slope	Acres	Mass Wasting Potential	Erosion Potential
5733	SILT LOAM	5-35	136	LOW	LOW

6001	LOAM	30-65	99	MEDIUM	HIGH
0120	GRAVELLY SILT LOAM	50-80	0	HIGH	HIGH

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

1) *Surface indications:*

This proposal is located on relatively flat to moderate gradient slopes. It is immediately adjacent to incised stream channels with actively slumping banks evidenced by over steepened slopes and exposed bare soil. All areas of potential slope instability associated with this proposal were appropriately buffered and have been deferred from harvest.

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:

The sub-basin associated with this sale express shallow rapid landslides and debris flows. These are typically associated with over steepened slopes, convergent headwalls, and incised stream (inner gorge) channels.

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:

Potential failures associated with the current proposal are associated with incised streams and headwall areas. All potentially unstable slopes and rule identified features have been excluded from the harvest.

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.*

A review of the statewide landslide inventory (LSI) screening tool indicates that there are no mapped polygons within the harvest area. This landslide database is maintained by the Washington Department of Natural Resources, Forest Practices Division. The LSI includes landslides mapped during many different projects including large-scale geologic mapping, watershed analyses, landscape planning, and landslide hazard zonation, in addition to other case studies and mapping efforts.

Remote and field reviews of the timber sale area were conducted by both a State Lands Forester and two State Lands Geologist. After review all potentially unstable slopes were excluded from the sale area using the timber sale boundary location.

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

Approx. acreage new roads: 1 *Approx. acreage new landings: <0.1* *Fill Source:*
Mary Clark Pit

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
Yes. A small amount of incidental surface erosion could occur during the course of road construction and harvest activities. However, prudent road location, construction, and maintenance, as well as the mitigating measures outlined in question B.1.h. below will minimize and control any possible erosion.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):* **Less than 1 percent in gravel roads.**

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)

Timber harvest, timber haul, rock haul, and road construction activities will be restricted during periods of heavy rainfall when rutting and surface erosion are more likely to occur. Roads will be constructed with properly located ditches, ditch outs, and cross drains to divert water flow onto stable forest floor and/or into stable natural drainages.

Ground based operations will be suspended during periods of wet weather or wet soil conditions when rutting of skid or shovel roads begins. No rubber tired skidders will be allowed unless authorized by the contract administrator. All units will be reforested within one growing season of the contract expiration date.

Timber and rock haul restrictions will be in place for Units 4 and 5 from October 15-April 15 unless written permission is given by the Contract Administrator to do otherwise.

2. Air

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Engine exhaust from logging equipment and dust from passage of log trucks is the only foreseeable emissions to the air. Logging slash, if burned, will be burned adhering to the State's smoke management plan.

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 Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. (see timber sale map available at DNR region office, or forest practice application base maps.)

a. Downstream water bodies:

Unnamed perennial streams, Carpenter Creek, Sekiu River, Hoko River, and the Pacific Ocean.

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)
Stream	3	18	A variable width interior core buffer with an average 150' no harvest buffer on all type 3 waters.
Stream	4	33	A variable width interior core buffer and an average 50' no harvest buffer on all type 4 waters.
Stream	5	101	Type 5 streams have a 30 foot equipment limitation zone. Unstable type 5's have a variable width interior core buffer 1' to 30' and an average 50' exterior wind buffer.

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

In accordance with the Habitat Conservation Plan, on typed waters, all floodplains and unstable slopes were protected with variable width interior core buffers based on site specific conditions.

Type 3 streams have an average 150' no harvest exterior wind buffer. Type 4 streams have a 50' no harvest wind buffer. Type 5 streams have 30 foot equipment limitation zones. Road construction and logging operations will be in compliance with the HCP and Forest Practice rules to mitigate possible adverse effects on RMZs.

The work detailed in the road plan has been designed to improve surfacing on the haul roads, and provide for better drainage by installing additional, and replacing inadequate, culverts that will divert storm water onto stable forest floor. These actions will minimize the potential for delivery of sediment to streams. Soils exposed during road construction activities will be protected from erosion by grass seeding and mulching with hay.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No Yes (See RMZ/WMZ table above and timber sale map available at DNR region office.)

Description (include culverts):

Timber felling, bucking, yarding, and road construction will occur within 200 feet of all the described waters above. All activities will be done in accordance with the HCP and Forest Practice rules.

- 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.

N/A

- 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:

Water will be diverted under the guidelines of the FPA at Type 3 stream pipe replacement.

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No Yes, describe location:

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No Yes, type and volume:

- 7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?

The potential for eroded material entering surface water is low. The possibility for eroded material entering surface water has been minimized due to the fact that unstable slopes adjacent

to the sale areas have been appropriately buffered and the measures listed in B. 1. h.

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:

Yes, areas within the WAUs show evidence of changes to stream channels. Some steep drainages in the WAU show evidence of debris torrent events which have increased the dimensions of affected drainage channels, exposed native bedrock which now forms the floor along segments of channels, and decreased the overall amount of large woody debris in the streams. These events may be attributed to past road construction techniques, inherently unstable slopes, soil composition or significant amounts of precipitation in short time periods.

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

No Yes, explain:

This proposal will have minimal effects on water quality. Measures described in B 1-h, wet weather restrictions on road work and logging operations will all contribute to reducing the potential of affecting water quality

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

Sekiu Land Owner	Miles of Road	Miles per Square Mile	Hoko Land Owner	Miles of Road	Miles per Square Mile
Non-DNR	244.7	5.3	Non-DNR	311.0	4.3
DNR	33.2	0.7	DNR	83.6	1.2
Total	278.0	6.1	Total	394.6	5.5

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:

It is likely some road or road ditches within the WAU intercept sub-surface flow and deliver surface water to streams. However, current standards for road construction address this issue by installing cross drains to deliver ditch water to stable forest floors.

11) *Is the proposal within a significant rain-on-snow (ROS) zone? If not, STOP HERE and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*

No Yes, approximate percent of sub-basin(s) in significant ROS zone:

Or, approximate percent of WAU:

12) If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature? N/A

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

No Yes, describe observations in the WAU and in the sub-basin(s):

There is evidence of slope failures that caused shifts in stream channels. Also, some stream segments show cutting and scouring which can be attributed to the natural erosion of the soil type, and peak flow events; Refer to B3a8.

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 proposal should not measurably change timing, duration, or volume of water during a peak flow event. The harvest prescription, unit size, and buffering will minimize potential impact(s) to peak flow.

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.

Restricting timber harvest and road activities during peak rain events will allow for increased resource protection. Road development and maintenance standards will minimize impacts by using cross drains to release ditch water onto stable forest floors where flow energy can dissipate prior to reaching stream channels. Maintaining large RMZ's on streams will aid bank stability, hydrologic functions and provides recruitment of LWD. See B.1.d.5, B.1.h, B.3.a.1, and A.13 for additional protection measures.

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose,

and approximate quantities if known. 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. N/A

- 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.* N/A

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. **Storm water will be collected by roadside ditches. Ditch-outs and culvert cross-drains will divert storm water onto stable forest floor. This water will percolate through the soil and ultimately flow into streams which drain the area.**

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

No Yes, describe:

a. *Note protection measures, if any.*

- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe. No.

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

(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)

4. Plants

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

- deciduous tree:
- evergreen tree:
- shrubs:
- wet soil plants:
- other types of vegetation: sword fern, bracken fern, common horsetail
- alder,
- Douglas fir, Pacific silver fir, western hemlock, Sitka spruce,
red cedar,
- huckleberry, salmonberry, salal,
- skunk cabbage, devil's club,
other: sedges

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

Approximately 6,763 MBF of 40-48 year old timber will be harvested with this proposal.

- 1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See color landscape/WAU and adjacency maps on the DNR website:

<http://www.dnr.wa.gov/ResearchScience/sepa/Pages/Home.aspx>

(Click on the DNR region under the Topic "Current SEPA Project Actions - Timber Sales.")

Unit 1: is bordered by private timber to the north; 45 year old conifer state timber to the east, and a 47 year old RMZ of state timber to the west and south.

Unit 2: is bordered by 47 year old conifer state timber to the north, 45 year old conifer state timber to the east, and a 47 year old RMZ of state timber to the west and south.

Unit 3: is bordered by a 40 year old RMZ of state timber to the north and west, and 45 year old conifer state timber to the east and south.

Unit 4: is bordered by a 40 year old RMZ of state timber to the north, east and west, and 40 year old conifer state timber to the south

Unit 5: is bordered by a 40 year old RMZ of state timber to the north, 40 year old conifer state timber to the east and west, and a 33, 34 and 40 year old RMZ of state timber to the south.

Unit 6: is bordered by 5 and 48 year old conifer state timber to the north; a 48 year old RMZ of state timber to the east, 7 year old conifer state timber to the west; and a 48 year old RMZ, and a 55 year old conifer state timber stand to the south.

Unit 7: is bordered by a 55 year old RMZ of state timber to the north and east; and 5 year old conifer state timber to the west and south.

Unit 8: is bordered by 55 year old conifer state timber to the north and east, private timber to the

west, and 5 year old conifer state timber to the south.

2) *Retention tree plan:*

All units will retain eight trees per harvestable acre chosen pursuant to guidelines set in PR 14-006-090 in the DNR HCP.

Unit #	# of Individually Marked Trees	# of Clumps	# of Trees Clumped	Total # of Leave Trees
1	30	2	34	64
2	47	2	153	200
3	8	3	132	140
4	11	1	91	102
5	180	4	510	690
6	90	3	154	244
7	46	1	69	115
8	90	1	55	145

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

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

a. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: **Native conifer species will be planted in units 1-8 following regeneration harvest. Other native conifer and deciduous species may regenerate naturally on the site. Native grass seed will also be used on areas of exposed mineral soil during road building operations. Eight leave trees per acre will be scattered and/or clumped throughout the regeneration harvest areas. See A.7.a.b.c.d. and B.4.b.2, above.**

b. List all noxious weeds and invasive species known to be on or near the site.
English Holly, Himalayan blackberry, Scotch broom

5. **Animals**

a. List any birds and other animals *or unique habitats* which have been observed on or near the site or are known to be on or near the site. Examples include:

birds: hawk, heron, eagle, songbirds, pigeon, other: Grouse

mammals: deer, bear, elk, mountain beaver, other:

fish: bass, salmon, trout, herring, shellfish, other:

unique habitats: talus slopes, caves, cliffs, oak woodlands, balds, mineral springs

Eagles were observed in flight, however no nests are known within 660 feet of the proposal.

- b. List any threatened and 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 flyway Other migration route: Explain if any boxes checked:

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

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

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

Species /Habitat: Spotted Owl - The DNR mitigates for the potential of significant adverse environmental impacts to northern spotted owls in the OESF by implementing the HCP strategy. This strategy established threshold percentages for spotted owl habitat on DNR-managed lands for Landscape Planning Units (LPU). Each LPU is managed to achieve and maintain at least 20% Old Forest Habitat and at least 40% of Old and Young Forest (or Structural) Habitat types taken together according to a schedule of habitat enhancement and harvest activities developed within the Forest Land Plan (FLP). Forest Land Planning has been initiated but not implemented. Currently only 4% of the Sekiu LPU is habitat. The FLP will integrate forest and landscape inventory, growth and harvest modeling, conservation and revenue objectives to develop a schedule and pattern for achieving the threshold targets for owl habitat. The sale area is considered non-habitat according to the OESF HCP definitions for NSO habitat. There are no acres within the sale that are at or over the age of 50 and therefore not subject to the acreage limits with in the Sekiu LPU.

Species /Habitat: Marbled Murrelet- The timber sale and surrounding areas were evaluated for marbled murrelet protection. However, no specific protection measures were taken because no murrelet habitat was involved, and there are no occupied sites within ¼ mile of the site.

Species/Habitat: Riparian Species- Specific objectives include riparian protection, protection of unstable slopes, protection of soils and habitat conservation for riparian areas including threatened and endangered species. Riparian protection measures were designed for all waters in and adjacent to this proposal in accordance with DNR's OESF Riparian strategy. No-harvest buffers have been applied to all Type 3, and 4 waters as well as, Type 5 waters associated with unstable slopes that were found in or adjacent to the sale boundary described in B.3.a.1.b. and c. Buffers are designed to protect the unstable portions of the stream banks, help

to protect waters from sedimentation, and to maintain water temperatures by providing shade and cover. Buffers also allow the natural occurrence of woody debris that provides pools and eddies for fish habitat along stream banks. Furthermore, these buffers provide habitat for riparian obligate species and these buffers may develop old-forest characteristics that, in combination with the owl and murrelet strategies, will help support old-forest dependent wildlife.

Species/Habitat: Upland – All areas of potential slope instability have been identified in the field and deferred from harvest. Wind-firm, dominant, and structurally unique trees were targeted for retention. A minimum of eight trees per acre were retained individually and in clumps to provide habitat structures for wildlife species. Timber removal will temporarily create open environments that provide valuable foraging and potential habitat for a variety of wildlife species associated with early-stage forest environments.

e. List any invasive animal species known to be on or near the site. **None.**

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.

N/A

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

N/A

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:

N/A

7. Environmental health

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

If so, describe.

N/A

1) Describe any known or possible contamination at the site from present or past uses. **None.**

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity. **None.**

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project. **None.**

4) Describe special emergency services that might be required. **Fire suppression,**

hazardous waste cleanup, and emergency medical services.

5) Proposed measures to reduce or control environmental health hazards, if any:

The timber sale contract requires purchaser to minimize risk of fire, spills, and does not allow for disposal of any waste on State or any other lands. Pump trucks and/or pump trailers will be required on site during fire season. Spill cleanup kits for hazardous materials must be on site. If any toxic or hazardous chemical spills occur or if past contamination is discovered the Department of Ecology will be notified.

b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? **None.**
- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site. **Noise from chainsaws, heavy equipment, and log truck traffic will be perceptible while the sale is active.**
- 3) Proposed measures to reduce or control noise impacts, if any: **N/A**

8. Land and shoreline use

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. (*Site includes the complete proposal, e.g. rock pits and access roads.*) **Commercial Forest Lands are adjacent to the sale. The proposal will not impact any current land uses nearby or on adjacent properties.**
- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? **The current use of the project site is working forest. No portion of this proposal will be converted to non-forest use.**
 - 1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how: **No**
- c. Describe any structures on the site. **N/A**
- d. Will any structures be demolished? If so, what? **No**
- e. What is the current zoning classification of the site? **Commercial Forest Land**
- f. What is the current comprehensive plan designation of the site? **Commercial Forest Land**
- g. If applicable, what is the current shoreline master program designation of the site? **N/A**

- h. Has any part of the site been classified as a critical area by the city or county? If so, specify. N/A
- i. Approximately how many people would reside or work in the completed project? N/A
- j. Approximately how many people would the completed project displace? N/A
- k. Proposed measures to avoid or reduce displacement impacts, if any: N/A
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: **The DNR's long-term strategy for State lands within and adjacent to this sale is to maintain it as commercial forest land. The design of this project is consistent with current comprehensive plans and procedures pertaining to DNR's Habitat Conservation Plan and the State Forest Practices Act.**
- m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any: **See 8 L. above.**

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. N/A
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. N/A
- c. Proposed measures to reduce or control housing impacts, if any: N/A

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? N/A
- b. What views in the immediate vicinity would be altered or obstructed?
 - 1) *Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?*
 - No Yes, viewing location:
 - 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?* **N/A**

- c. Proposed measures to reduce or control aesthetic impacts, if any: **The site will reforested within one year of contract expiration.**

11. Light and glare

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

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity? **Dispersed informal recreation in the form of hunting, hiking, fishing, berry picking, sightseeing, and more similar activities.**
- 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: **N/A**

13. Historic and cultural preservation

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe. **No.**
- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. **No.**
- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.
- A review of the Department of Archaeology and Historic Preservation database and TRAX using a Planning and Tracking Special Concerns report shows no known cultural resources on or near the site. A review of the cultural resources layer on the State Upland viewing tool shows no cultural resources on or near the site. During timber sale preparation, trained foresters found nothing on or near the site to indicate any potential cultural resources.**

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required. **N/A**

14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

US Highway 101, WA SR-112, S-1000 and Mary Clark Rd

- 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 the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? **No**
- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? **N/A**
- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). **Yes, approximately 3,355 feet of new construction, 2,035 feet of reconstruction and 32,446 feet of pre-haul maintenance are proposed to meet the needs of the sale.**
- 1) *How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?*
The proposal will have no additional impacts on the overall transportation system in the area.
- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. **No**
- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? **Approximately 5-15 trips per day thru peak harvest times. Peak harvest times are morning through early afternoon. Estimates are based on harvest traffic of similar sales.**
- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. **N/A**
- h. Proposed measures to reduce or control transportation impacts, if any: **Roads will be constructed in compliance with HCP and Forest Practice requirements and will divert storm water onto stable forest floor.**

15. Public services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. **No**

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

16. Utilities

a. Check utilities currently available at the site: N/A

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

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

C. SIGNATURE

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

Signature: Andrew J. Gorbett

Name of signee: Andrew Gorbett

Position and Agency/Organization: Unit Forester - Department of Natural Resources

Date Submitted: 12/9/15