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/segp. 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: **Q MUDDY BASIN**
   Agreement # **30-101980**

2. Name of applicant: Washington Department of Natural Resources

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

   Robert Hechinger
   225 S. Silke Rd.
   Colville, WA 99114
   (509) 684-7474

4. Date checklist prepared: 10/05/2021

5. Agency requesting checklist: Washington Department of Natural Resources

6. Proposed timing or schedule (including phasing, if applicable):
   a. Auction Date:
      05/24/2022
   b. Planned contract end date (but may be extended):
      10/31/2024
   c. Phasing:
      None planned.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
   □ No, go to question 8. ☒ Yes, identify any plans under A-7-a through A-7-d:

   a. Site Preparation:
      Slash at harvest landings may be burned. Herbicide treatment is planned in Unit 2 to control brush competition prior to planting.

   b. Regeneration Method:
      Planting is planned for all units with western larch as the primary species. Western redcedar may be planted in high moisture microsites. Natural seeding of Douglas-fir, western white pine and lodgepole pine are expected from reserve trees.

   c. Vegetation Management:
      Grass seeding is planned near stream crossings and on exposed road surfaces. Additional grass seeding will occur as part of skid trail maintenance to control erosion.
d. Other:
Landing slash may be piled and burned, or if economically feasible chipped for biomass.
Firewood cutting may take place after harvest activities have concluded
Application of herbicides may occur to assist with site preparation and to control road side weeds.
Prescribed fire may be utilized to achieve future silvicultural, forest health, fuel reduction, or fire hazard abatement objectives.
Ongoing road maintenance assessments will be conducted and may include periodic road grading, ditch and culvert cleanout, as necessary.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. Note: All documents are available upon request at the DNR Region Office.
   ☒ 303 (d) – listed water body in WAU:
      ☒ temp
      □ sediment
      □ completed TMDL (total maximum daily load)
   One stream adjacent to Unit 8 has 303(d) listed water downstream. The stream flows into Meadow Lake during the winter and spring runoff season. Much of the stream dries up during the summer and fall months. Meadow Creek is listed for temperature 7.2 miles downstream from Meadow Lake. The proposal will have no effect on the 303(d) listed water.
   □ Landscape plan:
   □ Watershed analysis:
   □ Interdisciplinary team (ID Team) report:
   ☒ Road design plan: WADNR Draft Road Plan dated 12/07/2020
   □ Wildlife report:
   □ Geotechnical report:
   □ Other specialist report(s):
   □ Memorandum of understanding (sportsmen’s groups, neighborhood associations, tribes, etc.):
   □ Rock pit plan:
   □ Other:
   GIS generated WAU maps reporting: Soil types, mass wasting potential, erosion potential, soil stability, and habitat typing; Policy for Sustainable Forests; DNR Smoke Management Plan;
   DNR 20-Year Forest Health Strategic Plan; DNR State Lands Forest Health Plan.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known.

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

   ☒ FPA # 3025631   □ FPHP   ☒ Board of Natural Resources Approval
   ☒ Burning permit   □ Shoreline permit □ Existing HPA
   □ Other:
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:**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Proposal Acres (gross)</th>
<th>RMZ/WMZ Acres</th>
<th>Potentially Unstable Slope Acres</th>
<th>Existing Road Acres (within unit)</th>
<th>Sale Acres</th>
<th>Leave Tree Clump Acres</th>
<th>Net Harvest Acres</th>
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<tr>
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<td>0.1</td>
<td>2.4</td>
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</tr>
</tbody>
</table>

The proposal is located in a Tier 2 high priority Hydrologic Unit Code (HUC) 5 watershed of the DNR 20-Year Forest Health Strategic Plan.
b. Describe the stand of timber pre-harvest (include major timber species and origin date), type of harvest and overall unit objectives.

Pre-harvest Stand Description:

<table>
<thead>
<tr>
<th>Unit</th>
<th>Origin Date</th>
<th>Major Timber Species</th>
<th>Type of Harvest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1930</td>
<td>Douglas-fir, western larch</td>
<td>Final Rotational Harvest</td>
</tr>
<tr>
<td>2</td>
<td>1930</td>
<td>lodgepole pine, western larch</td>
<td>Final Rotational Harvest</td>
</tr>
<tr>
<td>3</td>
<td>1930</td>
<td>lodgepole pine, western larch</td>
<td>Final Rotational Harvest</td>
</tr>
<tr>
<td>4</td>
<td>1930</td>
<td>lodgepole pine, western larch</td>
<td>Final Rotational Harvest</td>
</tr>
<tr>
<td>5</td>
<td>1930</td>
<td>western larch, Douglas-fir</td>
<td>Final Rotational Harvest</td>
</tr>
<tr>
<td>6</td>
<td>1930</td>
<td>western larch, Douglas-fir</td>
<td>Final Rotational Harvest</td>
</tr>
<tr>
<td>7</td>
<td>1930</td>
<td>western larch, Douglas-fir</td>
<td>Final Rotational Harvest</td>
</tr>
<tr>
<td>8</td>
<td>1930</td>
<td>western larch, Douglas-fir</td>
<td>Final Rotational Harvest</td>
</tr>
<tr>
<td>U3</td>
<td>1930</td>
<td>western larch, western redcedar</td>
<td>Land Use Conversion New Road RW</td>
</tr>
<tr>
<td>U4</td>
<td>1930</td>
<td>western larch, lodgepole pine</td>
<td>Land Use Conversion New Road RW</td>
</tr>
<tr>
<td>U5</td>
<td>1930</td>
<td>western hemlock, western larch</td>
<td>Land Use Conversion New Road RW</td>
</tr>
<tr>
<td>U5B</td>
<td>1930</td>
<td>western redcedar, western hemlock</td>
<td>Land Use Conversion New Road RW</td>
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<tr>
<td>U6</td>
<td>1930</td>
<td>western redcedar, western hemlock</td>
<td>Land Use Conversion New Road RW</td>
</tr>
<tr>
<td>U7</td>
<td>1930</td>
<td>lodgepole pine</td>
<td>Land Use Conversion New Road RW</td>
</tr>
<tr>
<td>U8</td>
<td>1930</td>
<td>western larch, lodgepole pine</td>
<td>Land Use Conversion New Road RW</td>
</tr>
</tbody>
</table>

Overall Unit Objectives:

1) Produce revenue for the Common School Trust (03) through the production of saw logs and pulp material.
2) Final Rotational Harvests to prevent catastrophic loss from future fires.
3) Re-establish seral species with western larch as the primary species.
4) Retain legacy trees and older trees as retention trees.
c. Describe planned road activity. Include information on any rock pits that will be used in this proposal. See associated forest practice application (FPA) for maps and more details.

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>How Many</th>
<th>Length (feet) (Estimated)</th>
<th>Acres (Estimated)</th>
<th>Fish Barrier Removals (#)</th>
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</thead>
<tbody>
<tr>
<td>Construction</td>
<td></td>
<td>20,062</td>
<td>16</td>
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<tr>
<td>Reconstruction</td>
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<td>2,712</td>
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<td>0</td>
</tr>
<tr>
<td>Maintenance</td>
<td></td>
<td>75,509</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Abandonment</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bridge Install/Replace</td>
<td></td>
<td>0</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Stream Culvert Install/Replace</td>
<td></td>
<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>(fish)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stream Culvert Install/Replace</td>
<td></td>
<td>5</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>(no fish)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross-Drain Install/Replace</td>
<td></td>
<td>36</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There may be up to 599 feet of additional new road construction within the sale area, in the form of short spurs to facilitate access to landings, protect public resources, maintain ingress and egress, or provide for safety. Two rock pits were previously developed to provide road rock. The primary pit and stockpiles are located within the proposal area south of Unit 2.

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 (See “WUA Map(s)” and “Timber Harvest Unit Adjacency Map(s)” as referenced on the DNR website: http://www.dnr.wa.gov/sepa. Click on the DNR region of this proposal under the Topic “Current SEPA Project Actions - Timber Sales.” Proposal documents also available for review at the DNR Region Office.)

a. Legal description: T37-ON R42-0E S07,08,09,17,18,20

b. Distance and direction from nearest town:

Unit 1: From the Hwy 395 and Hwy 20 junction in Colville, travel east on Hwy 20, 30.8 miles to Hanks Butte road. Turn left onto Hanks Butte and travel 0.3 miles to USFS 501 road. Turn left onto USFS 501 and travel 0.5 miles to a main road split. Stay left on USFS 702 and travel 2.4 miles to road E374229E (USFS 550). Turn right onto E374229A and travel 0.4 miles to road E374220F. Turn right onto E374220F and travel 1.2 miles to road E374216M. Turn left onto E374216M and travel 0.06 miles to Unit 1 on the left side of the road.

Unit 1-2: From the E374229A and road E374220F junction, stay left on the E374229A and travel 0.2 miles to road E374220G. Stay right on E374220G and travel 0.8 miles to the upper portion of Unit 1. Continue 0.1 mile on E374220G to road E374217J. Turn left onto E374217J and travel 0.5 miles to road E374229A (mainline). Turn right onto E374229A and travel 0.05 miles to road E374218E. Turn left onto road E374218E and travel 0.7 miles to Unit 2.
Units 3-8: From the Hwy 395 and Hwy 20 junction in Colville, travel 1.1 miles east on Hwy 20 to Aladdin Road. Turn left onto Aladdin and travel 19.4 miles to Meadow Creek road. Turn right onto Meadow Creek and travel 9.4 miles to USFS 462. Turn right onto USFS 462 and travel 0.5 miles. Stay right on the main route that is now the USFS 466 (E374209G) and travel 1.7 miles to road E374216A. Turn right onto E374216A and travel 0.7 miles to where the required construction road E374208G leaves the road to the right. Walk the orange ribbon line approximately 300 feet to Unit 5 and 3400 feet to Unit 6.

Continue to travel 0.5 miles on E374216A to where the required construction road E374208F leaves the road to the left. Walk the ribbon line approximately 200 feet to Unit 4.

Continue to travel 0.2 miles on E374216A to where the required road E374208E leaves the road to the right. Walk the orange ribbon line approximately 175 feet to Unit 7 and 3,550 feet to Unit 8.

Continue to travel 0.6 miles on the E374216A to where the required construction road E374217H leaves the road to the right, entering Unit 3. Walk the orange ribbon line approximately 1,425 feet to the upper portion of Unit 7.

13. Cumulative Effects

a. Briefly describe any known environmental concerns that exist regarding elements of the environment in the associated WAU(s). (See WAC 197-11-444 for what is considered an element of the environment).

Cooper's hawks have been seen throughout the sale area, numerous times hunting the road corridors. No nests were found within the sale units. The nest is most likely uphill of Unit 8 where two juvenile birds were often encountered.

Gray wolves travel through the proposal area. The Smackout Pack frequents the area each fall. The current den site for the Smackout Pack is not near the proposal. In Washington State, gray wolves are listed as a state endangered species. They were delisted by the federal government in 2011, in the eastern 1/3 of WA. No forest management restrictions are anticipated for wolves as they are tolerant of disturbance.

b. Briefly describe existing plans and programs (i.e. the HCP, DNR landscape plans, retention tree plans) and current forest practice rules that provide/require mitigation to protect against potential impacts to environmental concerns listed in question A-13-a.

- Forest Practice Rules regulate any activity related to growing, harvesting and processing timber. The Rules also regulate road construction and hydraulic projects in typed water.
- Forest Practice Rules established Riparian Management Zones (RMZ) along streams to maintain riparian functions.
- The DNR Policy for Sustainable Forests (2006) guided the development and layout of the proposal.
- Identifying Old Trees and Forests in Eastern Washington, by Robert Van Pelt, September
2008, was utilized in the identification and protection of old growth trees.

- Retention and Perpetuation of Biological Legacies and Green Trees (Eastern Washington, PR14-006-091)
- Sale layout follows the Washington State Department of Natural Resources Policy number PO14-009 regarding wildlife habitat pertaining to federal or state listed species.
- The Smoke Management Plan (SMP) regulates activities associated with pile burning or prescribed fire.
- DNR 20-Year Forest Health Strategic Plan.
- DNR State Lands Forest Health Plan

c. Briefly describe any specific mitigation measures proposed, in addition to the mitigation provided by plans and programs listed under question A-13-b.

- No harvest within the core and inner zone of Type F and Type Np riparian management zones except to the extent necessary for road construction.
- No harvest within average width wetland management zones except to the extent necessary for road construction.
- Retaining at least six trees per acre chosen from the largest diameter classes available, dispersed and aggregated throughout the harvest units.
- Planting of tree seedlings on harvest units to supplement natural regeneration and ensure adequate reforestation occurs.
- Coordinated skidding patterns and landing locations, effective contract administration, and normal road maintenance will minimize erosion potential.
- No felling, skidding, or other hauling activities will occur during spring break-up unless approved by the contract administrator (CA).
- Harvest and haul activities will be monitored and activities will be restricted where needed to prevent sediment delivery to streams.
- Roads have been designed to minimize erosion potential and conduct water onto naturally vegetated forest floors utilizing drivable dips, in or out-sloping of road surfaces, crowning, ditching, and installation of cross drains.
- Energy dissipating structures will be placed at the outfall of cross drains where necessary to prevent erosion. Culvert headwalls will be armored where necessary.
- Skid trails will be grass seeded, water barred, or have slash placed where necessary to prevent erosion. Grass seeding will also occur on cut and fill slopes where necessary.
- Road Plan has been designed by a forest engineer and reviewed and approved by a licensed engineer.
- Proposal review by DNR wildlife biologist.
- A DNR State Lands geologist remotely reviewed all units of the sale utilizing historic aerial photographs and GIS data from the DNR corporate database.
- Potential unstable landforms were identified near the bottom of Unit 2 and bound out of the sale area (see A-13-b).
d. Based on the answers in questions A-13-a through A-13-c, is it likely potential impacts from this proposal could contribute to any environmental concerns listed in question A-13-a?

No.

e. Complete the table below with the reasonably foreseeable future activities within the associated WAU(s) (add more lines as needed). Future is generally defined as occurring within the next 7 years. This data was obtained from DNR's Land Resource Manager System on the date of processing this checklist and may be subject to change.

<table>
<thead>
<tr>
<th>WAU Name</th>
<th>Total WAU Acres</th>
<th>DNR-managed WAU Acres</th>
<th>Acres of DNR proposed even-aged harvest in the future</th>
<th>Acres of DNR proposed uneven-aged harvest in the future</th>
<th>Acres of proposed harvest on non-DNR-managed lands currently under active FP permits</th>
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<tbody>
<tr>
<td>MUDDY CREEK</td>
<td>38,693</td>
<td>3,264</td>
<td>489</td>
<td>0</td>
<td>1,539</td>
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<td>RUBY CREEK</td>
<td>43,934</td>
<td>1,156</td>
<td>118</td>
<td>0</td>
<td>175</td>
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<td>ALADDIN</td>
<td>50,411</td>
<td>2,141</td>
<td>124</td>
<td>0</td>
<td>2,861</td>
</tr>
</tbody>
</table>

Other management activities, such as stand and road maintenance, will likely occur within the associated WAUs.

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 associated WAU(s) or sub-basin(s) within the proposal (landforms, climate, elevations, and forest vegetation zone).

   **WAU:** MUDDY CREEK
   - WAU Acres: 38,693
   - Elevation Range: 2030 - 5443 ft.
   - Mean Elevation: 3013 ft.
   - Average Precipitation: 29 in./year
   - Primary Forest Vegetation Zone: Western Hemlock

   **WAU:** RUBY CREEK
   - WAU Acres: 43,934
   - Elevation Range: 2030 - 5456 ft.
   - Mean Elevation: 3456 ft.
   - Average Precipitation: 30 in./year
   - Primary Forest Vegetation Zone: Western Hemlock
WAU: ALADDIN
WAU Acres: 50,411
Elevation Range: 1919 - 5769 ft.
Mean Elevation: 3471 ft.
Average Precipitation: 32 in./year
Primary Forest Vegetation Zone: Douglas-fir

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

This proposal is a representative example of the WAUs at the same elevation and aspect except for tree species. The primary tree species is western larch, followed by Douglas-fir and lodgepole pine.

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 an overview of general soils information for the soils found in the sale area. The actual soil conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors.*

<table>
<thead>
<tr>
<th>State Soil Survey #</th>
<th>Soil Texture</th>
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<td>LOAM</td>
</tr>
<tr>
<td>0251</td>
<td>LOAM</td>
</tr>
<tr>
<td>4639</td>
<td>SILT LOAM</td>
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<tr>
<td>4809</td>
<td>SILT LOAM</td>
</tr>
<tr>
<td>4769</td>
<td>GRAVELLY LOAM</td>
</tr>
</tbody>
</table>

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

☐ No, go to question B-1-e.
☒ Yes, briefly describe potentially unstable slopes or landforms in or around the area of the proposal site. For further information, see question A-8 for related slope stability documents and question A-10 for the FPA number(s) associated with this proposal.

Inner gorges were identified along multiple streams near the bottom of Unit 2. The inner gorges were excluded from the harvest unit.
Unit 6 extends onto two relic deep-seated landslides and their topographic ground water recharge areas.

1) Does the proposal include any management activities proposed on potentially unstable slopes or landforms?

☐ No ☑ Yes, describe the proposed activities:

Unit 6 extends onto two relic deep-seated landslides and their topographic ground water recharge areas. The first relic slide is 4.6 acres. The water recharge area includes the landslide body plus 0.9 acres, for a total of 5.5 acres. Harvest will occur on 1.1 acres of the water recharge area that includes 0.4 acres of the landslide body. The second relic slide is 4.1 acres. The water recharge area includes the landslide body plus 1.5 acres, for a total of 5.6 acres. Harvest will occur on 4.1 acres of water recharge area within Unit 6 that includes 2.6 acres of the landslide body. A road will be constructed within the water recharge area.

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

Inner gorges along Unit 2 were excluded from the harvest unit.

A geologic site review was completed and found no instability associated with the relic landslides. It was determined that the harvest operations and roadbuilding would have no anticipated effects. The most recent stand-replacing fire event in the late 1920's removed all tree cover with no effects on the landslides. No operations will occur on the toe of the landslides. Big Muddy Creek runs along the north side of the landslides. There is no stream movement adjacent to the landslide toes.

New road construction within the water recharge area of Unit 6 will be located mainly on the opposite side of the ridge from the landslide. It will be outsloped to drain surface water away from the landslide area.

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: 16
Approx. acreage new landings: 10
Fill Source: Natural fill is available on site from areas of full bench road construction. Rock for fill will come from rock pits described in A-11-c.

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

Yes. Some erosion could occur as a result of building new roads, installing culverts, and hauling timber.
g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*

Approximately 1% of the site will remain as 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.)*

- Coordinated skidding patterns and landing locations, effective contract administration, and normal road maintenance can minimize erosion potential.
- No felling, skidding, or other hauling activities will occur during spring break-up unless approved by the CA.
- Harvest and haul activities will be monitored and activities will be restricted where needed to prevent sediment delivery to streams.
- Roads have been designed to minimize erosion potential and conduct water onto naturally vegetated forest floors utilizing drivable dips, in or out-sloping of road surfaces, crowning, ditching, and installation of cross drains.
- Energy dissipating structures will be placed at the outfall of cross drains where necessary to prevent erosion. Culvert headwalls will be armored where necessary.
- Skid trails will be grass seeded, water barred, or have slash placed where necessary to prevent erosion. Grass seeding will also occur on cut and fill slopes where necessary.
- Road Plan has been designed by a forest engineer and reviewed and approved by a licensed engineer.

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.

Minor amounts of engine exhaust from logging and road construction equipment and dust from vehicle traffic on roads will be emitted during proposed activities. If landing debris is burned after harvest is completed, smoke will be generated. There will be no emissions once the proposal is complete.

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

None known.

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

Dust abatement will occur on selected roads as needed between June 1st and October 30th, or as directed by the CA. Pile burning and prescribed fire will adhere to the requirements of the Smoke Management Plan (SMP). The SMP provides regulatory
direction, operating procedures, and advisory information regarding the management of smoke and fuels on the forestlands of Washington State. The goals of the SMP are to protect human health and safety from the effects of outdoor burning. The SMP is administered by DNR under authority described in the WA Clean Air Act.

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 “WAU Map(s)” and “Timber Harvest Unit Adjacency Map(s)” as referenced on the DNR website: http://www.dnr.wa.gov/sepa. Click on the DNR region of this proposal under the Topic “Current SEPA Project Actions - Timber Sales.” Proposal documents also available for review at the DNR Region Office.)

☐ No  ☒ Yes, describe in 3-a-1-a through 3-a-1-c below

a. Downstream water bodies: Big Muddy Creek, Pend Oreille River, Meadow Lake

b. Complete the following riparian & wetland management zone table:

<table>
<thead>
<tr>
<th>Wetland, Stream, Lake, Pond, or Saltwater Name (if any)</th>
<th>Water Type</th>
<th>Number (how many?)</th>
<th>Avg RMZ/WMZ Width in feet (per side for streams)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Muddy Creek (multiple forks)</td>
<td>F</td>
<td>3</td>
<td>85</td>
</tr>
<tr>
<td>Un-named</td>
<td>Np</td>
<td>14</td>
<td>50</td>
</tr>
<tr>
<td>Un-named</td>
<td>Ns</td>
<td>4</td>
<td>30</td>
</tr>
<tr>
<td>Un-named</td>
<td>Ns</td>
<td>5</td>
<td>30 ELZ</td>
</tr>
</tbody>
</table>

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

There are three forks of Big Muddy Creek, a Type F water, adjacent to sale units. Two forks run along the south and east sides of Unit 4 and come together at the eastern tip of the unit. The third fork is adjacent to the eastern tip of Unit 5 and on the north side of Unit 6. No harvest will occur within the inner zones. There is a yellow ribbon line referencing the inner and outer zone common boundary at 75 feet. Harvest will occur in the Outer Zone, leaving at least 15 dominant and co-dominant trees per acre.

There are Type Np streams adjacent to Units 2 through 8. All Type Np streams have been excluded from the sale units with 50 feet no harvest RMZ’s.

There are two Type Ns streams adjacent to Unit 2, one adjacent to Unit 4, and one within the Type Np RMZ along Unit 8. All were excluded from the sale boundaries due to operability issues.
There are five Type Ns streams within Units 2, 4, 5 and 6, that have 30 foot equipment limitation zones (ELZ's). Leave trees are clumped within 15 feet of the streams. Clumping provides greater protection to the streams by limiting mechanized equipment from entering the ELZ.

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 maps which are available on the DNR website: http://www.dnr.wa.gov/sepa. Timber sale maps are also available at the DNR region office.)

Description (include culverts): New roads will have 5 Type Np crossings installed adjacent to Units 3, 5, 6, and 7. There will also be a crossing installed downhill from an isolated Type Np stream on the new road accessing the bottom of Unit 4. Overland flow occurs each spring, making it necessary for the culvert install. An optional skid trail will cross a Type Np stream between Unit 5 and 6. The skid trail will cross where the channel is barely visible and it dries up each year. Another skid trail will cross between isolated Type Np channels along Unit 6.

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:

Water may be withdrawn from local sources during operations to facilitate dust abatement activities. Contractor is required to obtain all necessary permits.

Water diversions may occur during installation of Type Np culvert installations on new roads. Most stream crossing areas are dry during late summer.

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

☒ No
☐ Yes, describe activity and 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.

It is not likely that any waste materials will be discharged into the surface water(s). However, minor amounts of oil, fuel, and other lubricants may inadvertently be
discharged to the adjacent surface water(s) as a result of heavy equipment use or mechanical failure. No lubricants will be disposed of on-site.

7) Is there a potential for eroded material to enter surface water as a result of the proposal considering the protection measures incorporated into the proposal’s design?

☐ No ☒ Yes, describe:

Area soils are granitic sand. Proper road building and maintenance are necessary to prevent eroded material from entering streams.

Any cut side hill skid trails on slopes greater than 40% will require full pull back during skid trail maintenance unless otherwise approved by the contract administrator.

Soils and terrain susceptible to surface erosion are generally located on slopes steeper than 70%. The potential for eroded material to enter surface water is minimized due to the erosion control measures and operational procedures outlined in B-1-h.

8) What are the approximate road miles per square mile in the associated WAU(s)?

MUDDY CREEK = 3.1 (mi./sq. mi.), RUBY CREEK = 1.8 (mi./sq. mi.), ALADDIN = 3.8 (mi./sq. mi.)

9) Are there forest roads or ditches within the associated WAU(s) that deliver surface water to streams, rather than back to the forest floor?

☐ No ☒ Yes, describe:

It is likely some roads or road ditches on non-DNR managed lands within the WAUs intercept sub-surface flow and deliver surface water to streams, however current road construction, reconstruction, and/or maintenance standards will be applied that address this issue by installing cross-drains to deliver ditch water to stable forest floors on DNR-managed lands.

10) Is there evidence of changes to channels associated with peak flows in the proposal area (accelerated aggradations, surface erosion, mass wasting, decrease in large organic debris (LOD), change in channel dimensions)?

☐ No ☒ Yes, describe observations:

There is evidence of changes to channels across the WAUs. These changes are a result of natural events such as spring runoff from snowmelt and significant storm events. Channel migration, scouring, and deposition of material can be seen in channels across the WAUs; this indicates those channels historically experience higher water levels and peak flows.

11) Describe any anticipated contributions to peak flows resulting from this proposal’s activities which could impact areas downstream or downslope of the proposal area.
It is not likely the proposed activity will change the timing, duration, or volume of water during a peak flow event. This proposal limits harvest unit size and proximity to other recent harvests, minimizes the extent of the road network, incorporates road drainage disconnected from stream networks, and implements wide riparian buffers, which all have mitigating effects on the potential for this proposal to increase peak flows that could impact areas downstream or downslope of the proposal area.

12) Is there a water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity?

☐ No      ☐ Yes, describe the water resource(s):

a. Is it likely a water resource or an area of slope instability listed in B-3-12 (above) will be affected by changes in amounts, quality or movements of surface water as a result of this proposal?

☐ No      ☐ Yes, describe possible impacts:

13) Describe any protection measures, in addition to those required by other existing plans and programs (i.e. the HCP, DNR landscape plans) and current forest practice rules included in this proposal that mitigate potential negative effects on water quality and peak flow impacts.

See B-1-h for protection measures and haul restrictions.

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 groundwater will be withdrawn or discharged.

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.

Minor amounts of oil, fuel, and other lubricants may inadvertently be discharged to the ground as a result of heavy equipment use or mechanical failure. No lubricants will be disposed of on-site. All spills are required to be contained and cleaned-up. This proposal is expected to have no impact on groundwater.
3) Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity?

☑ No    ☐ Yes, describe:

a. Is it likely a water resource or an area of slope instability listed in B-3-b-3 (above) could be affected by changes in amounts, timing, or movements of groundwater as a result this proposal?

☑ No    ☐ Yes, describe possible impacts:

Note protection measures, if any:

See B-1-d-1 and B-1-d-2.

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.

Water runoff, including storm water, from road surfaces will be collected by roadside ditches and diverted onto the forest floor via ditch-outs and cross drain culverts.

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

☐ No    ☑ Yes, describe:

Waste materials, such as sediment or slash, may enter non-typed surface water.

Note protection measures, if any:

No additional protection measures will be necessary to protect these resources beyond those described in B-1-d-2, B-1-h, B-3-a-2, and B-3-a-13.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No changes to drainage patterns are expected.

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-13, B-3-b-3, and B-3-c-2.
4. Plants

a. Check the types of vegetation found on the site:
   - Deciduous tree:
     - ☑ Alder ☑ Aspen ☑ Birch ☑ Cottonwood ☑ Maple ☑ Western Larch
     - ☑ Other:
   - Evergreen tree:
     - ☑ Douglas-Fir ☑ Engelmann Spruce ☑ Grand Fir ☑ Lodgepole Pine
     - ☑ Mountain Hemlock ☑ Noble Fir ☑ Pacific Silver Fir ☑ Ponderosa Pine
     - ☑ Sitka Spruce ☑ Western Hemlock ☑ Western Redcedar ☑ Yellow Cedar
     - ☑ Other: Western White Pine
   - Shrubs:
     - ☑ Huckleberry ☑ Rhododendron ☑ Salmonberry ☑ Salal
     - ☑ Other: Buffalo Berry, Tag Alder
     - ☑ Ferns
     - ☑ Grass
     - ☑ Pasture
     - ☑ Crop or Grain
       - ☑ Orchards ☑ Vineyard ☑ Other Permanent Crops
   - Wet Soil Plants:
     - ☑ Bullrush ☑ Buttercup ☑ Cattail ☑ Devil’s Club ☑ Skunk Cabbage
     - ☑ Other:
   - Water plants:
     - ☑ Eelgrass ☑ Milfoil ☑ Water Lily
     - ☑ Other:
   - ☑ Other types of vegetation:
   - ☑ Plant communities of concern:

b. What kind and amount of vegetation will be removed or altered? (Also see answers to questions A-11-a, A-11-b and B-3-a-2).

   All conifers are designated to be removed as part of this harvest proposal, except legacy trees, wildlife reserve trees, and green recruitment trees. This proposal will remove approximately 9,618 thousand board feet (MBF) of mature conifer timber. The proposal was marked to leave at least six trees per acre, selected from amongst the largest available. Understory vegetation will be disturbed and/or reduced within the proposed harvest area as a result of timber harvest and site preparation activities. It is expected that vegetation will re-establish within two to three years after harvest activities are complete.

   Reserve trees were selected in accordance with DNR’s Retention and Perpetuation of Biological Legacies and Green Trees Procedure and Forest Practices Rules. Trees were left individually and in clumps in order to be conducive to safe operations and allowing distribution of wildlife trees throughout the proposal. Additional reserve trees were selected throughout the stands, with a higher priority given to trees with
unique structural characteristics, evidence of bird usage, large diameters, and full
crowns. Species preference for reserve trees; Douglas-fir, western larch, and western
white pine. Diameter of reserve trees range from 16 inches in diameter to 30 inches
in diameter. Average reserve tree diameter is approximately 20 inches. Trees within
the proposal area were marked with a blue band of paint identifying reserve trees.

The Department of Natural Resources Legacy Tree Procedure (PR14-006-091) and
Forest Practice requirements will be met with this proposal.

1) *Describe the species, age, and structural diversity of the timber types immediately
adjacent to the removal area. (See "WAU Map(s)" and "Timber Harvest Unit
Adjacency Map(s)" on the DNR website: http://www.dnr.wa.gov/sepa. Click on the
DNR region of this proposal under the Topic "Current SEPA Project Actions -
Timber Sales." Proposal documents also available for review at the DNR Region
Office.)*

A stand replacement fire burned through the Muddy Basin area in the late 1920's.
Very few trees survived the fire. The current stands within the basin are 85 to 90
years old with western larch the predominant species, Douglas-fir as the secondary
species, and lodgepole pine as the third species. Western hemlock, western redcedar,
Engelmann spruce, western white pine, grand fir, and subalpine fir are also present in
smaller amounts. Most stands are overstocked with closed canopies. Stands are at
high risk for another stand replacement fire.

Unit 1: A commercial thinning harvest was completed in 2013 along the west
boundary. Small dense understory was removed leaving a western larch overstory.
There is a mature stand along the northeast boundary. There are rocky bluffs with
pockets of lodgepole pine along the south.

Unit 2: A commercial thinning harvest was completed in 2013 along the north and
east boundaries. Small dense understory was removed leaving a western larch
overstory. Mature stands on USFS land border the west and south boundaries.

Unit 3: A variable retention harvest leaving six trees per acre was completed in 2014
along the west boundary. The planted regeneration is approximately seven feet tall.
There are mature timber stands along the north and east sides. A tree stand
improvement and pre-commercial thinning was recently completed along the
southern boundary. The thinned trees are approximately 25 years old.

Unit 4: Mature timber stands are adjacent to the west, north, and south boundaries.
A variable retention harvest leaving six trees per acre was completed in 2014 along
the east boundary. The planted regeneration is approximately 10 feet tall. It is
separated from the unit by a stream buffer.

Unit 5: Mature timber stands border the west and east boundaries. A variable
retention harvest leaving six trees per acre was completed in 2014 along the east
boundary. The planted regeneration is approximately 10 feet tall. A stream buffer
separates Unit 5 from Unit 6 along the north boundary.
Unit 6: Mature timber stands border the west, north, and east boundaries. A stream buffer separates Unit 6 from Unit 5 along the south boundary.

Unit 7: The unit is surrounded by mature timber stands.

Unit 8: The unit is surrounded by mature timber stands.

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

None found in corporate database

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Individual leave trees and clumps are identified across the harvest areas. Reserve trees will contribute to the site as a natural seed source, which will complement the future plantation. Native tree species will be planted on site after harvest and site preparation activities. Roads associated with this proposal will be seeded with natural grasses and forbs after harvest.

e. List all noxious weeds and invasive species known to be on or near the site.

Plumeless thistle

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:
☐ eagle ☐ hawk ☐ heron ☑ owls ☑ songbirds
☐ other: Cooper’s hawk

mammals:
☑ bear ☐ beaver ☑ coyote ☑ cougar ☐ deer ☑ elk
☐ other: moose, wolves, bobcat

fish:
☐ bass ☐ herring ☐ salmon ☐ shellfish ☑ trout
☐ other:

amphibians/reptiles:
☑ frog ☐ lizard ☐ salamander ☐ snake ☐ turtle
☐ other:

unique habitats:
☐ balds ☐ caves ☐ cliffs ☐ mineral springs ☐ oak woodlands ☐ talus slopes
☐ other:
b. List any threatened and endangered species known to be on or near the site (include federal- and state-listed species).

Units 2, 7, and 8 are located within a designated Lynx Analysis Unit (LAU). Travel corridors and denning areas were incorporated into the sale layout. No lynx are known to use the area.

The sale area is located within the Bull Trout recovery area. WDFW has been attempting to remove brook trout from streams in Pend Oreille County. It is unknown if WDFW will attempt to remove brook trout from the Big Muddy Creek stream system.

The proposal is within the Smackout wolf pack territory. Pack members cycle through the area according to GPS collar data. Wolf sightings have occurred on and near the proposal. Tracks have been observed during the fall and winter. The Smackout wolf pack den site is not near the proposal.

c. Is the site part of a migration route? If so, explain.
   ☑ Pacific flyway  ☐ Other migration route:
   Explain:
   All of Washington State is considered part of the Pacific Flyway. No impacts are anticipated as a result of this proposal.

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

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

   Species /Habitat: Cooper’s hawk          Protection Measures: Two juvenile birds were seen on numerous occasions uphill from Unit 8. The nest site was not located but is most likely in the area of the sightings. If found, the nest tree will be protected. Adult Cooper’s hawks have been seen throughout the proposal area.

   Species /Habitat: Deer, Elk, Moose       Protection Measures: Forage areas are limited due to the heavily over stocked timber stands created by the stand replacement fire in the late 1920’s. Deer numbers have increased with feeding areas created from timber harvests in the past 10 years. A few elk have also started using the area.

   Harvest areas grow in quickly, within 15 to 20 years. This is evidenced in surrounding USFS clearcuts where heavy areas of Snowbrush ceanothus (shade intolerant species) has died due to shade. Scouler’s willow along with Snowbrush ceanothus are important winter food sources for moose. Both species may come in after harvest.

   Species /Habitat: Bear                   Protection Measures: Huckleberry brush is in all proposed units. Huckleberry production increases with exposure to sunlight. There are two previous harvest units where large huckleberry patches along with black raspberries increased after harvest. These two brush species do not compete with newly planted trees and are excellent summer forage for bears.
e. List any invasive animal species known to be on or near the site.

None known.

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.

Petroleum fuel (diesel or gasoline) will be used for heavy equipment during active road building, timber harvest operations, and for transportation. No energy sources will be needed following project completion.

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

No.

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

None.

7. Environmental health

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

1) Describe any known or possible contamination at the site from present or past uses.

None known.

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 known.

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.

Petroleum-based fuel and lubricants may be used and stored on site during the operating life of this project.
4) Describe special emergency services that might be required.

The Department of Natural Resources, private, and fire protection district suppression crews may be needed in case of wildfire. In the event of personal injuries, emergency medical services may be required. Hazardous material spills may require Department of Ecology and/or county assistance.

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

No petroleum-based products will be disposed of on site. If a spill occurs, containment and cleanup will be required. Spill kits are required to be onsite during all heavy equipment operations. To mitigate hazards from petroleum products, all equipment will be inspected for leaks, spill kits are contractually required and will be readily available. A spill response plan will be in place. The cessation of operations may occur during periods of increased fire risk. Fire tools and equipment, including pump trucks and/or pump trailers, will be required on site during fire season.

NOTE: If contamination of the environment is suspected, the proponent must contact the Department of Ecology.

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.

There will be short term, low level and high level noise created by the use of harvesting equipment and hauling operations within the proposal area. This type of noise has been historically present in this geographical area.

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? 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.)

Current use of site and adjacent land types: Timber production and recreation.
This proposal will not change the use of or affect the current/long term land use of areas associated with this sale.

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?

This proposal site has been used as working forest lands. This proposal will retain the site in working forest lands.

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.

   None.

d. Will any structures be demolished? If so, what?

   No.

e. What is the current zoning classification of the site?

   Classified as forest land.

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

   Designated as forest land.

g. If applicable, what is the current shoreline master program designation of the site?

   Not applicable.

h. Has any part of the site been classified as a critical area by the city or county? 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:

This project is consistent with current comprehensive plans and zoning classifications.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, 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.

c. Does not apply.

d. Proposed measures to reduce or control housing impacts, if any:

None.

10. Aesthetics

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

Does not apply.

b. What views in the immediate vicinity would be altered or obstructed?

1) Is this proposal visible from a residential area, town, city, recreation site, major transportation route or designated scenic corridor (e.g., county road, state or interstate highway, US route, river or Columbia Gorge SMA)?

☐ No ☒ Yes, name of the location, transportation route or scenic corridor:

Meadow Lake County road runs north of the proposal. USFS Big Meadow Lake campground is also north of the proposal.
2) How will this proposal affect any views described above?

Units 7 and 8 will be visible to the Meadow Lake area. The heavy timber canopy will be removed and it will alter the view. It will take 15 to 20 years for the new trees to lessen the visual impact. USFS is also planning additional harvest units along Meadow Lake road and the 462 and 466 roads accessing the proposal.

The timber stands in the Meadow Lake and Muddy Basin areas are at high risk for fire loss. Unbroken timber canopies are in place to support large crown fire runs. Both DNR and USFS harvests, along with pre-commercial thinnings, are creating canopy breaks and reducing fuels. The views will reflect common management practices by other large industrial landowners in the area.

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

None.

11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Windshield glare during daylight hours; light from equipment and vehicle headlamps during darkness.

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?

USFS Big Meadow Lake and campground are north of Unit 8. The lake provides fishing opportunities. The campground also has a walking trail system around the lake with a wildlife viewing area.

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Dispersed camping occurs along the 462 and 466 road, both on USFS and DNR land. The area has seen increased use in the past five years from Memorial Day through the fall hunting seasons. Along with camping and hunting, there is increased ATV and UTV use.

The proposal area has become a popular huckleberry picking area. The last sale created a new mainline road and open canopy harvests. The harvest increased accessibility and improved huckleberry production.

A groomed snowmobile route goes through the proposal area.

b. Would the proposed project displace any existing recreational uses? If so, describe.

There may be some disruptions to recreational use during periods of harvesting and hauling. Road closures may happen to prevent vehicle versus logging truck encounters. Warning signs will be posted during active operations.

For safety reasons, the snowmobile route may be closed if harvesting occurs during the winter. The area receives heavy snow, making winter harvest operations difficult.

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 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? 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.

During boundary layout, a square hole in the ground was found near a stream, near the proposal area. There were also some stove remnants near it. An 85 year old tree was growing in the hole, indicating that if there was a small cabin, it probably burned in the late 1920's fire. The DNR archeologist viewed the site and recommended a small buffer. The site is outside the sale unit, inside the no-harvest RMZ.

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.
The DNR archeologist assessed the sale area and completed a site visit. No other areas of importance were found.

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.

If a presently-unknown cultural resource is discovered during project operations, DNR will comply with the Cultural Resources Inadvertent Discovery Guidance dated March 2010 or its successor procedure.

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.

The proposal area is accessed from the north and south by USFS roads. North roads connect to Meadow Lake County Road. South roads connect to State Highway 20.

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. The nearest transit spot is approximately 35 miles away.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

None.

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, see A-11-c.

1) How does this proposal impact the overall transportation system/circulation in the surrounding area and any existing safety problem(s), if at all?

This project will have minimal to 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 non-passenger vehicles). What data or transportation models were used to make these estimates?

Approximately 10 to 15 truck trips per day while the operation is active. Peak volumes would occur during the yarding and loading activities between 4:00 a.m. and 4:00 p.m. of the operating period. The completed project will generate less than one vehicular trip per day. Estimates are based on the observed harvest traffic of past projects.

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.

No.

h. 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, 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.

None.

16. Utilities

a. Check utilities currently available at the site:

☐ 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.

None.
C. SIGNATURE

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

Signature: [Signature]

Name of signee: Robert Hechinger

Position and Agency/Organization: Northeast Region Management Forester, WADNR

Date Submitted: 3/22/00
**DRIVING DIRECTIONS:**

Unit 1: From the Hwy 395 and Hwy 20 junction in Colville, travel east on Hwy 20, 30.8 miles to Hanks Butte road. Turn left onto Hanks Butte and travel 0.3 miles to USFS 501. Turn left onto USFS 501 and travel 0.5 miles to a main road split. Stay left on USFS 702 and travel 2.4 miles to E374229E (USFS 550). Turn right onto E374229A and travel 0.4 miles to road E374220F. Turn right onto road E374220F and travel 1.2 miles to road E374216M. Turn left onto road E374216M and travel 0.06 miles to Unit 1 on the left side of the road. Unit 1-2: From the E374229A and road E374220F junction, stay left on the E374229A and travel 0.2 miles to road E374220G. Stay right on road E374220G and travel 0.8 miles to the upper portion of Unit 1. Continue 0.1 mile on road E374220G to road E374217J. Turn left onto road E374217J and travel 0.5 miles to road E374229A (mainline). Turn right onto road E374229A and travel 0.05 miles to road E374218E. Turn left onto road E374218E and travel 0.7 miles to Unit 2. Units 3-8: From the Hwy 395 and Hwy 20 junction in Colville, travel 1.1 miles east on Hwy 20 to Aladdin Road. Turn left onto Aladdin road and travel 19.4 miles to Meadow Creek road. Turn right onto Meadow Creek and travel 9.4 miles to USFS 462. Turn right onto USFS 462 and travel 0.5 miles. Stay right on the main route that is now the USFS 466 (E374209G) and travel 1.7 miles to the E374216A. Turn right onto the E374216A and travel 0.7 miles to where the required construction road E374208G leaves the road to the right. Walk the orange ribbon line approximately 300 feet to Unit 5, 3400 feet to Unit 6. Continue to travel 0.5 miles on the E374216A to where the required construction road E374208F leaves the road to the left. Walk the ribbon line approximately 200 feet to Unit 4. Continue to travel 0.2 miles on the E374216A to where the required road E374208E leaves the road to the right. Walk the orange ribbon line approximately 175 feet to Unit 7, 3550 feet to Unit 8. Continue to travel 0.6 miles on the E374216E to where the required construction road E374217H leaves the road to the right, entering Unit 3. Walk the orange ribbon line approximately 1425 feet to the upper portion of Unit 7.

Prepared By: mil490

Modification Date: mil490 10/11/2021
DRIVING DIRECTIONS:

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Timber Sale Cultural Resource Screening & Documentation

As with other concerns which could impact a timber sale (wildlife, geology, etc.), the Department has a legal and ethical obligation to document and manage cultural resources on State Trust Lands. In order to efficiently screen all planned timber sales for potential cultural resource concerns, this screening checklist and review documentation form has been developed for statewide usage. When planning a timber sale, Cultural Resource Technicians (CRT) and Archaeologist(s) should be provided adequate time to review information collected during sale screening and to complete all appropriate subsequent steps prior to sale finalization. Cultural resources work should be completed on your timber sale six months prior to the planned auction date. *It is imperative a CRT is involved as early as possible during this review process to ensure proposed sales do not get delayed.*

This flow chart provides a simplified depiction of the cultural resources screening process. When applicable, boxes shown in the right column will lead to information needed for both the FPA and SEPA Checklist. Staff are advised to follow the SEPA Checklist guidance linked on the next page and to work with a CRT or archaeologist to determine appropriate language when necessary.

- **Run a Special Concerns Report for all sale units and review results. Are any cultural resources listed in report?**
  - **YES**
    - Contact local CRT for review and escalation to archaeologist if appropriate.
  - **NO**
    - Check with local CRT for desk review. Did CRT find anything during desk review?
      - **YES**
        - CRT should contact archaeologist if appropriate.
      - **NO**
    - Was anything of potential cultural resource concern discovered during sale recon or layout?
      - **YES**
        - Contact local CRT to review findings in the field. CRT will escalate to archaeologist if appropriate.
      - **NO**
    - Draft FPA and SEPA Checklist referencing current guidance.

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Planning/Desk Review Screening Steps

1. Contact anyone (forester, unit forester, district manager, etc.) who may have local knowledge or know the history of the area in which the planned activity is located. These knowledgeable people may have insights regarding the location of undocumented cultural resources or information about known cultural resources within the proposal area.

2. Run a Special Concerns Report or use the Special Concerns tool in ArcMap
   1. Note any concerns and record the site numbers (i.e. TN00402) or other relevant data in appropriate section below

3. Use TopoView Beta to view/review historical USGS topographic maps:
   1. Navigate to activity location
   2. Click on area to display available maps
   3. Click on desired map in right panel to display more options
      a) Down Arrows – download map as JPEG, GeoTiff, GeoPDF, or KMZ
      b) “Show” – displays selected map on overview map
      c) “Info” – displays map information (i.e. date)
      d) “Zoom” – goes to full selected map extent
      e) “Pan” – automatically pans to selected map at current scale
   4. Note any mapped concerns such as grades, trails, or structures and document in appropriate section below

4. Review the General Land Office (GLO) maps. These maps are often pre-1900 and will show various trails, grades, roads, structures, etc. GLO maps can be viewed either by:
   1. Going directly to the US Bureau of Land Management’s GLO Records document search
      a) Select applicable State, County, Township, Range
      b) Click “Search Surveys”
      c) Click “Plat Image” link to view map
   2. Adding the “Survey – GLO Plat Map Layers” from quick data loader (QDL) in ArcMap
      a) Add layer from QDL: core/Admin Boundaries & Survey (Cadastre)/ Survey - GLO Plat Map Layers
      b) Navigate to sale area
      c) Note any mapped concerns such as grades, trails, or structures and document in appropriate section below

5. If any potential concern(s) or area(s) of interest is identified within the proposal area from any of the sources listed above, contact a CRT and provide them notes of potential concerns. The CRT will complete further review and take appropriate next steps.

6. Standardized language exists for the cultural resource section of the SEPA Checklist and can be found here: Timber Sale SEPA Checklist Guidance

Modified March 2021
Cultural Resource Screening Documentation

Potential cultural resource concerns identified during remote reviews and all work completed as part of cultural resources review during sale planning and layout should be documented in the appropriate sections below. This form should be appropriately saved with other specialist documents to record the diligent efforts undertaken to review for and protect cultural resources.

Project Name: Q Muddy Basin Timber Sale
Region/District: NE, East Uplands, North Columbia

Desk Review

Special Concerns Report

Yes ☑️ No ☐
Completed By: Tony E. Flanagan
Date Completed: 01/03/2022
Remarks:
Archaeology sites listed within one mile: FS01065, FS01066, FS02088, FS01037, CF00010, CF00011, CF00012, CF00015, CF00016, CF00020, CF00021

Historical USGS Maps Review

Yes ☑️ No ☐
Completed By: Tony E. Flanagan, Nathaniel Morse
Date Completed: 01/03/2022-01/04/2022
Maps Reviewed (include titles, scales, and dates):
Colville, WA 1929 (HTMC 1958 ed.) 1:125,000; Aladdin Mtn, WA (HTMC 1969 ed.) 1:24,000
Colville, WA 1984 (HTMC, 1984 ed.) 1:100,000
Remarks:
The map shows the old road grade that runs parallel to the stream, outside the boundary along the south side of Unit 4. No buildings are shown within the units.

GLO Map Review

Yes ☑️ No ☐
Completed By: Nathaniel Morse
Date Completed: 01/03/2022-01/04/2022
Maps Reviewed (include date(s) and legal description(s)):
1901 Cadastral Survey Map of 37 North, 42 East
Remarks:
No cultural resources, roads, or trails are shown on the map.

CRT Review

Yes ☐ No ☑️
Completed By: ____________________________ Date Completed: ____________________________
Remarks:
None needed. Archaeologist conducted field review.
Cultural resource locational data is exempt from disclosure under the Public Records Act (RCW 42.56.300)

Field Review
Completed

Presales/Recon
Completed By: ____________________________________________________________________

CRT Reconnaissance
Yes [ ] No, explain below [ ]

Completed By: ___________________________ Date Completed: __________________________
Remarks:

Archaeologist Review Required
Completed By: Nathaniel Morse [ ] Date Completed: 1/4/2022 [ ]
Remarks:
Forester reported possible historic objects nearby Unit 5 during timber layout. Archaeologist conducted a field review on 5/18/2021 and recorded site 45PO00764 which is outside project areas. The special concerns report, USGS maps, and GLO maps were reviewed. No resources are within project areas.

Other Information and Documentation
Completed

Stakeholder Outreach (Tribes, local group(s), etc.)
Yes [ ] No [ ]

Completed By: ___________________________ Date Completed: __________________________
Remarks (with whom, method used, pertinent additional details, etc):

Additional Notes/Other Resources
List other sources used to identify potential cultural resource concerns during review including source citation (author(s), year created/written, location obtained, etc.).

Additional Sources:
A square hole was found where a small cabin may have existed prior to the late 1920's fire. It was found near the east end of Unit 5. It is outside the sale boundary within the RMZ along Big Muddy Creek. A piece of metal stove was found next to the hole. The discovery was made during timber sale boundary layout.

Save this form appropriately with other specialist documents to record the diligent efforts undertaken to review for and protect cultural resources.

Modified March 2021