A. BACKGROUND

1. Name of proposed project, if applicable:

   Timber Sale Name: GALAXY
   Agreement # 30-100455

2. Name of applicant: Washington Department of Natural Resources

3. Address and phone number of applicant and contact person:
   Jason Emsley, Forest Operations District Manager
   713 Bowers Road
   Ellensburg, WA 98926
   (509) 925-8510

4. Date checklist prepared: 01/05/2022

5. Agency requesting checklist: Washington Department of Natural Resources

6. Proposed timing or schedule (including phasing, if applicable):
   a. Auction Date:
      10/27/2022
   
   b. Planned contract end date (but may be extended):
      10/31/2024
   
   c. Phasing:
      None

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
   ☐ No, go to question 8. ☒ Yes, identify any plans under A-7-a through A-7-d:
   
   a. Site Preparation: None.
   
   b. Regeneration Method: Natural.
   
   c. Vegetation Management: None.
   
   d. Other:
      • Slash will be piled on the landings and may be burned in the winter.
      • Road maintenance assessments will be conducted and may include periodic ditch and culvert cleanout, and grading 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)

☐ Landscape plan:
☐ Watershed analysis:
☐ Interdisciplinary team (ID Team) report:
☒ Road design plan: 2/9/2022
☐ Wildlife report:
☐ Geotechnical report:
☐ Other specialist report(s):
☐ Memorandum of understanding (sportsmen’s groups, neighborhood associations, tribes, etc.):
☐ Rock pit plan:
☒ Other: Policy for Sustainable Forests; Environmental Impact Statement (EIS) adopted July 31, 1992 & DNR Habitat Conservation Plan (HCP), adopted January 30, 1997; HCP Amendment #1 for the Klickitat HCP Planning Unit April 2004, with associated maps, Forest Practices Board Manual and activity maps, Road Maintenance and Abandonment Plan (RMAP) #R270086L, DNR Geologist remote review.

Referenced documents may be obtained at the Washington State Department of Natural Resources Southeast region office.

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 # 2707300 ☐ FPHP ☒ Board of Natural Resources Approval 7/
☒ 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:

This proposal is a 426 acre variable density thinning (VDT) and shelterwood harvest of approximately 4,495 MBF of merchantable timber on State Trust land in Klickitat County. The sale is located off the B-7000 road system in the Husum sub-landscape, which is managed for northern spotted owl (NSO) nesting, roosting, and foraging (NRF) habitat. The
stands in the sale are all currently classified as non-habitat. There is a wetland complex comprised of two (2) Forested Wetlands and one (1) Type B Wetland adjacent to Unit 1.

<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>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>377</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>376</td>
<td>-</td>
<td>376</td>
</tr>
<tr>
<td>2</td>
<td>38.5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>38.5</td>
<td>0.5</td>
<td>38</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>12</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td>Totals</td>
<td>427.5</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>426.5</td>
<td>0.5</td>
<td>426</td>
</tr>
</tbody>
</table>

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>1941</td>
<td>Douglas-fir / grand fir</td>
<td>Variable Density Thinning</td>
</tr>
<tr>
<td>2</td>
<td>1964</td>
<td>Douglas-fir / grand fir</td>
<td>Variable Density Thinning</td>
</tr>
<tr>
<td>3</td>
<td>1961</td>
<td>Douglas-fir / grand fir</td>
<td>Shelterwood</td>
</tr>
</tbody>
</table>

Unit 1 is comprised of stands approximately 79 – 80 years old but also contains a minor component of 60 year old timber. Elevation in the unit ranges from 1,380’ – 2,160’ and has an average 50 year site index of 105 for Douglas-fir. Species composition by basal area/acre (BA/ac) for this unit is 76% Douglas-fir, 15% grand fir, 5% ponderosa pine, 3% bigleaf maple, and <1% western redcedar and Oregon white oak. General forest health issues for the stands in the unit consist of density dependent mortality as well as mortality from pathogens such as root rot and Douglas-fir beetle. The stands are generally uniform in structure with a homogenous closed canopy and nearly 78% of the 109 TPA below 22” DBH. Isolated pockets of larger diameter trees and a mosaic understory of shrubs exist throughout the stand, which provide some habitat components of structural and vertical diversity. In addition to the 109 TPA >8” DBH shown in the cruise, RS-FRIS shows a component of 73 TPA in the 4 – 8” diameter classes.

Unit 2 is a more homogeneous stand of 57 year old timber. Elevation in the unit ranges from 2,400’ – 2,560’ with a 50 year site index of 103 for Douglas-fir. Species composition by basal area/acre (BA/ac) in this unit is 83% Douglas-fir and 17% grand fir. There is a lot of decadence occurring in the stand with over 22 snags/acre recorded in the cruise, however, the size range is limited and only 1.4 snags/acre are of 20” DBH or larger.
Unit 3 is approximately 60 years old. Elevation in the unit ranges from 3,280’ – 3,600’ with a 50 year site index of 85 for Douglas-fir. Species composition by basal area/acre (BA/ac) for this unit is 74% Douglas-fir, 26% grand fir. The non-habitat designation in Unit 3 is because of the severe overstocking and stagnation, as the stand is in the stem exclusion phase with significant loss in live crown ratio and a simplified single cohort stand structure with little to no understory regeneration.

*Overall Unit Objectives:*

The goal is to promote a healthy and viable stand of timber that can sustain itself in order to generate revenue for the trusts well into the future. Objectives will reduce stocking and develop sustainable NRF habitat by increasing structural complexity and diversity while protecting the legacy components within the stand. This treatment will promote natural regeneration through created gaps and move the uniform stands toward a complex forest that supports the development of multi-structural cohorts.

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>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td></td>
<td>600</td>
<td>&lt;.25 acres</td>
<td></td>
</tr>
<tr>
<td>Reconstruction</td>
<td></td>
<td>7,365</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance</td>
<td></td>
<td>7,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abandonment</td>
<td></td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Bridge Install/Replace</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stream Culvert Install/Replace (fish)</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stream Culvert Install/Replace (no fish)</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross-Drain Install/Replace</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 “WAU Map(s)” and “Timber Harvest Unit Adjacency Map(s)” as referenced on the DNR website: [http://www.dnr.wa.gov/sepa](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:* T5-0N R10-0E S16, T5-0N R10-0E S15, T5-0N R10-0E S14, T5-0N R10-0E S13, T5-0N R10-0E S11, T5-0N R10-0E S10

b. *Distance and direction from nearest town:* Approximately 15 miles north from White Salmon, Washington. Accessed by Highway 141 to the B7000 road system and directly to the sale area.
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).

This timber harvest is located within the Elmer Creek Watershed Administrative Units (WAUs).

The low to mid elevation lands in the WAU are a mixture of agricultural land, home sites and forest land, whereas the uplands are mainly managed for timber production. Ownership includes industrial forests, United States Forest Service, small private, and DNR managed forests. Forested stands within the WAU are primarily second and third growth stands. The numbers of forest practices shown on the WAU map along with observations within the WAU indicate that the WAU is intensively managed for timber production, including regeneration harvests and partial cuts.

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.

The DNRs landscape evaluations for the 20-year Forest Health Strategic Plan for DNR managed forests in eastern Washington identified the Husum area as high priority for restoration. This determination was due to the forest health conditions (i.e. overstocked stands) and values at risk associated with this landscape.

The Department of Natural Resources has a multi-species Habitat Conservation Plan (HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service concerning threatened and endangered species and their habitats, which requires the Department to manage landscapes to provide and sustain long-term habitat in exchange for an Incidental Take Permit. This agreement substantially helps the Department to mitigate for cumulative effects related to management activities.

The Administrative Amendment strategy for the Klickitat HCP Planning Unit is to manage these stands on a sustainable trajectory toward Nesting, Roosting, and Foraging (NRF) habitat for the northern spotted owl. NRF habitat is defined in the Klickitat Amendment as mature forest condition with 40 percent Douglas-fir or grand fir; canopy closure of at least 70%; tree density of 110 – 260; tree height of 90 feet or vertical diversity of two or more canopy layers; three (3) or more snags or cavity trees per acre 20 inches DBH or greater; and five (5) percent ground cover of dead and downed wood averaged over the stand. As the current designation for these stands is non-habitat, the management will focus on developing these mature forests into near-NRF within 30 years through a mix of Variable Density Thinning and Shelterwood harvests. Near-NRF stands are defined in the amendment as a mature forest condition but lacking one component of the existing NRF definition.

Washington State Forest Practices:
- Equipment Limitation Zone (ELZ) of 30 feet established from bankfull width of Ns creek.
- Proposal was evaluated for potential unstable slopes. The entire sale area was reviewed remotely by a State Lands geologist and field verified by a State Lands forester.
c. Briefly describe any specific mitigation measures proposed, in addition to the mitigation provided by plans and programs listed under question A-13-b. Natural regeneration of grand fir and Douglas-fir are expected to become established post-harvest. Competing understory vegetation will be disturbed and reduced within the proposed harvest area as a result of scarification from timber harvesting and skidding activities which will expose mineral soil to encourage natural regeneration.

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>
</tr>
</thead>
<tbody>
<tr>
<td>ELMER CANYON</td>
<td>19403</td>
<td>7837</td>
<td>0</td>
<td>427</td>
<td>556</td>
</tr>
</tbody>
</table>

Other management activities, such as stand and road maintenance, will likely occur within the associated WAU(s).

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).

<table>
<thead>
<tr>
<th>WAU:</th>
<th>ELMER CANYON</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAU Acres:</td>
<td>19403</td>
</tr>
<tr>
<td>Elevation Range:</td>
<td>1154 - 4289 ft.</td>
</tr>
<tr>
<td>Mean Elevation:</td>
<td>2237 ft.</td>
</tr>
<tr>
<td>Average Precipitation:</td>
<td>46 in./year</td>
</tr>
<tr>
<td>Primary Forest Vegetation Zone:</td>
<td>Grand Fir</td>
</tr>
</tbody>
</table>
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.

b. What is the steepest slope on the site (approximate percent slope)?
   48%

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>
</tr>
</thead>
<tbody>
<tr>
<td>1043</td>
<td>LOAM</td>
</tr>
<tr>
<td>1044</td>
<td>LOAM</td>
</tr>
<tr>
<td>3906</td>
<td>STONY LOAM</td>
</tr>
<tr>
<td>0116</td>
<td>CINDERY LOAM</td>
</tr>
<tr>
<td>8244</td>
<td>STONY 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.

   1) Does the proposal include any management activities proposed on potentially unstable slopes or landforms?
      ☐ No    ☐ Yes, describe the proposed activities:

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

   No Rule Identified Landforms (RILs) exist in or around the timber sale boundary.

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: <0.25 acres.
Approx. acreage new landings: <1 acre.
Fill Source: Commercial Source.

Note: It is expected that the new landings will become dense thickets of natural regeneration from the processing of logs.

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 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; these are existing roads. New construction will not use gravel or ballast but will rely on the native soil as a running surface.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: (Include protection measures for minimizing compaction or rutting.)
Operational timing restrictions will limit wet weather compaction and rutting. Road drainage structures will be improved and maintained during the logging operation. The road plan contract includes post-haul maintenance of cleaning culvert inlets and outlets and the installation of drivable water bars to lessen the runoff effects of the road network.

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:
   If landing debris is burned, it will be in accordance with Washington State’s Smoke Management Plan. A burn permit will be obtained before burning occurs.

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](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: Unnamed Ns creek, White Salmon River, Columbia River, and then to the Pacific Ocean.

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>Stream</td>
<td>Ns</td>
<td>1</td>
<td>30’ equipment limitation zone.</td>
</tr>
<tr>
<td>Forested Wetland</td>
<td>FW</td>
<td>2</td>
<td>105’</td>
</tr>
<tr>
<td>Type B Wetland</td>
<td>B</td>
<td>1</td>
<td>105’</td>
</tr>
</tbody>
</table>

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

The wetlands listed above exist within a wetland complex and because of their size require an average buffer that’s based on the height that an adjoining conifer stand would be expected to reach at 100 years of age. The average buffer of the delineated wetlands is 105’ from the wetland edge. Management activities within the associated forest buffer is allowed given the activity maintains and perpetuates a wind firm stand with a minimum basal area of 120 square feet per acre. Additionally, the management will enhance the buffer by improving the health and resilience of the residual stand in a manner that adequately protects the wetland ecosystem function. An inventory of the trees within the 0.6 acre buffer overlap in Unit 1 reveal a surplus of 155 square feet of basal area per acre within trees that don’t meet the cutting prescription and are outside of the operational limits east of the Ns ditch. Generally only the last 80 – 105’ of the buffer are operational as the Ns ditch and Carr Road have an average distance of 70 – 80 feet from the wetland edge, preventing any risk of accidental entry.

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

Description (include culverts): Cutting of timber that meets the prescription will occur up to the edge of the Ns creek but equipment will be excluded by the 30 ft. equipment exclusion zone from bankfull width.
3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. (Include diversions for fish-passage culvert installation.)

☒ No ☐ Yes, description:

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

☒ No ☐ Yes, describe 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:

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)?

ELMER CANYON = 5.6 (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 within the WAU 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.

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 WAU(s). 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 WAU(s); 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.
In order to reduce the impact of the timber sale on water quality, there will be no thinning within the forested wetland or associated wetland buffers.

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 water 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 ground water.

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:

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 surface water. Forest Practice
Rules and Best Management Practices will be followed to mitigate the potential to
deliver sediment.

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: Pacific Dogwood
   ☒ 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:
   ☒ Shrubs:
   □ Huckleberry □ Rhododendron □ Salmonberry □ Salal
   ☒ Other: Ocean Spray, California Hazelnut, vine maple, and Douglas maple.
   □ 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).

The proposed timber harvest will remove a total of 4,495 MBF of merchantable timber comprised of approximately 3,284 MBF of Douglas-fir, 990 MBF of grand fir, and 223 MBF of ponderosa pine from 426 acres. Variable Density Thinning (VDT) is recommended for Unit 1 and Unit 2 to proportionally thin suppressed trees from 8” – 30” DBH and reduce overstocking. The VDT in Unit 1 will remove 45% of the Trees Per Acre (TPA) and 40% of the Basal Area (BA) per acre to release regen. Observable growth characteristics with RS-FRIS data and FVS modeling indicate the strong potential for losing the developing cohort of advanced regen with no action. The VDT in Unit 2 will remove 49% of the TPA and 43% of the BA per acre to grow. By thinning the high density trees between 10 – 20 inches we expect to accelerate development of habitat. A Shelterwood harvest is recommending in Unit 3 and will leave a residual stand of 23 TPA and 43 BA per acre. FVS modeling of the current stand basal area stocking shows a significant increase in mortality in the near term with no action. For all three (3) units, tree tops, limbs, and cull logs will
be brought back into the units and placed over the skid trails as well as being piled and burned on the landings after harvest.

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.)

Unit 1 is bordered by a stand 60 – 70 year old timber to the north, stands of 36 – 75 year old timber to the west, private industrial forestland to the south with a mix of 10 year old plantation and a reserved 0.7-mile owl circle from the Dry Creek Owl, and by the Carr Road to the east.

Unit 2 is bordered by a stand of 55 year old timber to the north, a stand of 82 year old timber to the west, a stand of 75 year old timber to the south, and a stand 8 year old plantation to the east that is from the Supernova VRH in 2014.

Unit 3 is bordered by a stand of 91 year old timber to the north, a stand of 44 – 62 year old timber to the west, which is part of Elba timber sale in 2019, and a stand of 57 year old timber to the south and east.

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: The harvester will skip areas with large pieces of downed wood and low stocking, which will help the timber sale objective of retaining some of the understory composition and structure.

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

Knapweed (Centaurea spp.) is known to be present on the B7100. Scotch Broom (Cytisus scoparius) is known to be in the area.

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:

mammals:
☒ bear ☐ beaver ☒ coyote ☒ cougar ☒ deer ☐ elk
☐ other:

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).*

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<thead>
<tr>
<th>TSU Number</th>
<th>Common Name</th>
<th>Federal Listing Status</th>
<th>State Listing Status</th>
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<tr>
<td>GALAXY U1</td>
<td>Northern Spotted Owl</td>
<td>Threatened</td>
<td>Endangered</td>
</tr>
<tr>
<td>GALAXY U2</td>
<td>Northern Spotted Owl</td>
<td>Threatened</td>
<td>Endangered</td>
</tr>
</tbody>
</table>

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: All Protection Measures: The timber sale is within the Husum Sub-landscape, which is managed for northern spotted owl (NSO) nesting, roosting, and foraging (NRF) habitat. The stands in Unit 1 and Unit 2 are all currently classified as non-habitat and exhibit a homogenous stand structure with isolated pockets of habitat components. The Variable Density Thinning will move the uniform stands toward a complex forest that supports the development of multi-structural cohorts and ingrowth of natural regeneration. The stand in Unit 3 is classified as Non-habitat and lacks the crown structure to increase Quadratic Mean Diameter (QMD) with no action. The Shelterwood harvest will select to leave the most dominant and structurally significant trees of individuals and in small clumps and individuals to provide structure and seed source for the future stand.

The timber sale prescription identifies all legacy trees to be retained, as well as high quality wildlife trees with forks, mistletoe, and larger diameter snags and downed wood.

Unit 1 includes a 75 acre timing restriction prohibiting timber harvest and road construction from March 1st – August 31st.

Northern goshawks have been observed in the vicinity of Units 1 and 3. Clause H-140 of the timber sale contract requires any observations of goshawks during
harvest activities to be reported immediately and to cease operations in that area until reviewed by the Region Biologist.

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.
   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. 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: Forestry and private residence.

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?
Forest Resources.

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

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.
   
   Does not apply.

c. 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: State Highway 141.

   2) How will this proposal affect any views described above?

      Unit 1 of this proposal will be visible from State Highway 141, however, because of the variable thinning prescription 61 trees per acre will be left. Additionally, the area between Unit 1 and the highway is not included in this proposal and will further break up the views into the harvest.

   c. Proposed measures to reduce or control aesthetic impacts, if any: The decision to leave this area out of the sale reflects the lack of need for treatment and the additional benefit of filtering the visual depth into the harvest.

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?  
**White water kayaking, hunting, hiking, and foraging.**

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.**

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:  
**Roads in the project area will remain open to recreationists during the harvest. Signs informing of felling and hauling will be posted. The operation is expected to progress quickly and disruptions will be temporary.**

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.  
**None.**

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.  
**None.**

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 DNR CRT and a DNR Archaeologist have reviewed historic maps and GIS data. No cultural resources were identified on site during sale layout and timber cruising.**

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.  
**State Highway 141 and the Carr Road.**

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. Nearest transit spot is approximately 5 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-passerger 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: 

Name of signee: Bryan Inglis

Position and Agency/Organization: Forester
Washington State Department of Natural Resources
Southeast Region

Date Submitted: 05/10/2022
# Timber Sale Map

**Sale Name:** GALAXY  
**Agreement #:** 30-100455  
**Township(s):** T5R10E  
**Trust(s):** Common School and Indemnity (3), State Forest Transfer (1)  
**Region:** Southeast Region  
**County(s):** Klickitat  
**Elevation Rge:** 1400' - 3640'

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<th>Section</th>
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- **Variable Density Thinning**
- **Existing Roads**
- **Required Construction**
- **Required Pre-Haul Maintenance**
- **Required Reconstruction**
- **Survey Monument**
- **DNR Managed Lands**
- **Public Land Survey Townships**
- **Public Land Survey Sections**

Prepared By: bing490  
Modification Date: bing490 2/9/2022