**Forest Practices Application/Notification**  
**Office Checklist Page 1**  
**Northwest Region**

<table>
<thead>
<tr>
<th>FPA/N CLASSIFICATION: [ ] II [ ] III [ ] IV [ ] IVS</th>
<th>Biomass [ ]</th>
<th>FFFPP [ ]</th>
<th>20-acre exempt [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landowner Name: <strong>DNR</strong></td>
<td>Project Name: <strong>Corner</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WRIA:</th>
<th>WAU:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spokomish</strong></td>
<td><strong>Woods Creek</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WRIA:</th>
<th>WAU:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Sultan River</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Legal Description:</th>
<th>County:</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>3,816.17-28-7E:28-37</em>8</td>
<td><strong>Spokonish</strong></td>
</tr>
<tr>
<td><em>8,419,10-29-3</em>8*4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activity Type:</th>
<th>Harvest 813.3 ac</th>
<th>Spray</th>
<th>Stream Crossing(s)</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road</td>
<td>Road</td>
<td>Rock Pit</td>
<td>1.4 ac</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>10,704 ft</td>
<td>Abandonment</td>
<td>13,193 ft</td>
<td>Spoons</td>
</tr>
</tbody>
</table>

**ALTERNATIVE PRESCRIPTIONS**

- [ ] Alternate Plan
- [ ] Ten-Year Forest Management Plan
- [ ] Columbia River Gorge National Scenic Area
- [ ] Watershed Analysis:

**RESOURCE REVIEW**

- [ ] Unstable Slopes (Risk: Highway, Water;)
- [ ] Soils Map (Highly Erodible & Very Unstable)
- [ ] LSPSTAB
- [ ] Landslide Hazard Zonation
- [ ] Landslide Inventory Polygon
- [ ] Rain-on-Snow and Outside Approved WA
- [ ] Hydric Soils
- [ ] Wetland [A], [B] Forested, [C], [D], [E], [F], [G] N water
- [ ] Water Verification

**ASSOCIATED NON-SCANNED DOCUMENTS** – On file with the FPA/N at the Region office.

- [ ] Habitat Conservation Plan
- [ ] Landowner Option Plan for Northern Spotted Owl
- [ ] Cooperative Habitat Enhancement Agreement
- [ ] Bull Trout Overlay
- [ ] HCP Bull Trout Population
- [ ] Bald Eagle nest or roost within 660 feet
- [ ] Group A or B Water Supply
- [ ] Hatchery (Name:____________________)
- [ ] Even-Aged Harvest greater than 120 Acres
- [ ] Ground-based Equipment on Slopes greater than 40%
- [ ] Road Construction on Slopes greater than 65%
- [ ] Saltwater Islands (Name:____________________)
- [ ] Over Type Water
- [ ] Volume greater than 5 mbf per acre

**ASSOCIATED SCANNED DOCUMENTS**

- [ ] Conversion Option Harvest Plan
- [ ] FPHP Plans & Specifications
- [ ] Qualified Expert Report; Type:____________________
- [ ] Natural Regeneration Plan
- [ ] Shoreline Permit
- [ ] Marbled Murrelet Form
- [ ] FPBM Appendix(s)
- [ ] Small Landowner RMAP Checklist
- [ ] CMZ Assessment Form

**EARR Tax Credit** [ ] Yes [ ] No

**ADDITIONAL COMMENTS:**

Form completed by **Steve**  
October, 2016 Version
Forest Practices Application/Notification  
Western Washington  

PLEASE USE THE INSTRUCTIONS TO COMPLETE THIS APPLICATION. TYPE OR PRINT IN INK.

1. Landowner, Timber Owner and Operator

<table>
<thead>
<tr>
<th>Legal Name of LANDOWNER</th>
<th>Legal Name of TIMBER OWNER (if different than Landowner)</th>
<th>Legal Name of OPERATOR (if different than Landowner)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Natural Resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mailing Address: 919 N. Township St.</td>
<td>Mailing Address:</td>
<td>Mailing Address:</td>
</tr>
<tr>
<td>City, State, Zip Sedro-Woolley, WA 98284</td>
<td>City, State, Zip</td>
<td>City, State, Zip</td>
</tr>
<tr>
<td>Phone (360) 856-3500</td>
<td>Phone ( )</td>
<td>Phone ( )</td>
</tr>
<tr>
<td>Email:</td>
<td>Email:</td>
<td>Email:</td>
</tr>
</tbody>
</table>

2. Contact Person

<table>
<thead>
<tr>
<th>Contact Person:</th>
<th>Phone (360) 856-3500</th>
<th>Email:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laurie Bergvall</td>
<td><a href="mailto:Laurie.bergvall@dnr.wa.gov">Laurie.bergvall@dnr.wa.gov</a></td>
<td></td>
</tr>
</tbody>
</table>

3. Landownership information: See instructions

a. ☒ No ☐ Yes Are you a small forest landowner per RCW 76.09.450?
   If yes, continue to b.

b. ☐ No ☐ Yes Is your entire proposed harvest area on a single contiguous ownership consisting of one or more parcel?

4. If you are harvesting timber, enter the Forest Tax Reporting Account Number of the Timber Owner:

For tax reporting information or to receive a tax number, call the Department of Revenue at 1-800-548-8829.

5. Are you substituting prescriptions from an approved state or federal conservation agreement or watershed analysis?

☐ No ☒ Yes Write 'HCP' or 'Using Prescriptions' in tables that apply. Attach or reference prescriptions and/or crosswalks on file at the Region office.
6. What is the legal description of your forest practices?

<table>
<thead>
<tr>
<th>Section</th>
<th>Township</th>
<th>Range</th>
<th>E/A</th>
<th>Tax Parcel Number</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>3, 8</td>
<td>28</td>
<td>07</td>
<td>E</td>
<td>------</td>
<td>Snohomish</td>
</tr>
<tr>
<td>16, 17</td>
<td>28</td>
<td>07</td>
<td>E</td>
<td>------</td>
<td>Snohomish</td>
</tr>
<tr>
<td>3, 4</td>
<td>28</td>
<td>08</td>
<td>E</td>
<td>------</td>
<td>Snohomish</td>
</tr>
<tr>
<td>9, 10</td>
<td>28</td>
<td>08</td>
<td>E</td>
<td>------</td>
<td>Snohomish</td>
</tr>
<tr>
<td>28</td>
<td>29</td>
<td>08</td>
<td>E</td>
<td>------</td>
<td>Snohomish</td>
</tr>
</tbody>
</table>

*Does not include legal description for pre-haul maintenance; it is not a Forest Practices activity.*

7. When are you planning to begin work on the proposed activity? In 6+ months

8. Is the taxpayer eligible for the EARR Tax Credit?
   - [ ] No  [x] Yes

9. Have you reviewed this forest practices activity area to determine whether it may involve historic sites and/or Native American cultural resources? Read the instructions before answering this question.
   - [ ] No  [x] Yes [See FPA Narrative]

10. Do you have a DNR approved Road Maintenance and Abandonment Plan (RMAP)?
    a. [ ] No  [x] Yes List the RMAP number: R2800010L
       If no, continue to b.
    b. [ ] No  [ ] Yes Is a Checklist RMAP required (see instructions)?

11. Are there potentially unstable slopes or landforms in the area of your forest practices activity?
    - [x] No  [ ] Yes – attach Slope Stability Informational Form. If applicable, attach geotechnical report, the SEPA Environmental Checklist, HCP, or Watershed Analysis prescriptions.

12. Are there potentially unstable slopes or landforms around the area of your forest practices activity?
    - [ ] No  [x] Yes – attach Slope Stability Informational Form. If applicable, attach geotechnical report, HCP, or Watershed Analysis prescriptions.

13. Is this forest practice application/notification (answer every question):
    a. [x] No  [ ] Yes Within city limits or inside an urban growth area? If yes, see instructions for additional required documents.
    b. [ ] No  [x] Yes For road work that is included in an approved Road Maintenance and Abandonment Plan (RMAP)?
    c. [x] No  [ ] Yes Within a public park? If yes, include SEPA Environmental Checklist or SEPA Determination - except for harvest/salvage of less than 5,000 board feet within a developed public park.
    d. [x] No  [ ] Yes Within 500 feet of a public park? Park name: ____________________
    e. [x] No  [ ] Yes In an approved Conversion Option Harvest Plan (COHP) from the local government? If yes, include a copy. This only applies to proposals within urban growth areas.
    f. [x] No  [ ] Yes Within 200’ of the Ordinary High Water Mark (OHWM) or floodway of Type S water? If yes, check with the county or city to determine whether a substantial development permit is required under the local shorelines master plan.
    g. [x] No  [ ] Yes A request for a multi-year permit? If yes, length requested: [ ] 4 years or [ ] 5 years. Not everyone qualifies for a multi-year permit. See instructions for details.
h. [No] [Yes] An Alternate Plan? If yes, include a copy.

i. [No] [Yes] Within 50 miles of saltwater and do you own more than 500 acres of forest land in Washington State? If yes, include Marbled Murrelet Form or attach/reference HCP prescriptions.

j. [No] [Yes] In or directly adjacent to a potential Channel Migration Zone (CMZ)? If yes, include CMZ Assessment Form. Attach/reference applicable HCP and/or Watershed Analysis prescriptions.

**** If not working in or over typed waters, skip to Question 18 ****

You are required to verify Type Np and Ns water types within 200 feet of your proposed forest practices activities prior to submitting a Forest Practices Application / Notification. Use the Additional Information section, additional pages, the Water Type Classification Worksheet, and/or a Water Type Modification form to explain how you verified water types. See Water Typing Requirements in the instructions.

Prior to answering Questions 14-17 in this section please refer to the Forest Practices Application Instructions and Forest Practices Board Manual Section 5.

14. Are you proposing any of the following projects NOT permitted by current HPAs from WDFW?

a. [No] [Yes] Installing, replacing, or repairing a culvert at or below the bankfull width of Type S or F water(s) that exceeds a five percent gradient?

b. [No] [Yes] Constructing, replacing, or repairing a bridge at or below the bankfull width of unconfined streams in Type S or F water(s)?

c. [No] [Yes] Placing fill material within the 100-year flood level of unconfined streams in Type S or F water(s)?

15. Have you consulted with DNR and/or WDFW about the proposed hydraulic project(s) in or over Type S or F water? [No] [Yes]

16. If installing, replacing, removing, or maintaining structures in or over any typed water, complete the table below. Type S and F waters require detailed plan information. Provide plan details in Question 31 or attach plan to the FPA/N. Provide crossing locations and identifiers on your Activity Map. A detailed plan with profiles may also be required for more complex hydraulic projects in Type N Waters per WAC 222-24-042(2).

<table>
<thead>
<tr>
<th>Crossing Identifier (letter and/or number)</th>
<th>Water Type (S, N, F, D)</th>
<th><em>Existing HPA Number</em> (if applicable)</th>
<th>HPA Expiration Date (if applicable)</th>
<th>Planned Activity (install, replace, remove, temporary maintenance)</th>
<th>Structure (culvert, bridge, ford, pier, etc.)</th>
<th>Proposed Size (dimensions of structure)</th>
<th>Culvert Design Method (no slope, stream-sim, hydraulic, etc.) (S and N only)</th>
<th>Channel Bed Width (ft) (S and N only)</th>
<th>Stream Gradient (% (S and N only)</th>
<th>RMFP Project (Y or N)</th>
<th>FFPPP Project (Y or N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WC-01</td>
<td>5</td>
<td>N/A</td>
<td>N/A</td>
<td>Temp</td>
<td>Culvert</td>
<td>24 X 36</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>WC-01</td>
<td>6+98</td>
<td>N/A</td>
<td>N/A</td>
<td>Temp</td>
<td>Culvert</td>
<td>24 X 40</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>WC-04</td>
<td>3+55</td>
<td>N/A</td>
<td>N/A</td>
<td>Temp</td>
<td>Culvert</td>
<td>30 X 36</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>WC-04</td>
<td>29+50</td>
<td>N/A</td>
<td>N/A</td>
<td>Temp</td>
<td>Culvert</td>
<td>24 X 36</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

*Existing HPAs issued by WDFW will be complied and enforced by WDFW until expiration. Plan details are not required for hydraulic projects permitted with an existing HPA (see instructions).

** Fords and equipment crossings on Type S and F Waters may result in an unauthorized incidental take of certain endangered or threatened fish species. For more information, see 'Background for the State's Incidental Take Permits for certain endangered and threatened fish species' following Question 24 of the FPA/N Instructions.
17. If conducting any of the following activities in or over typed water, complete the table below. Some activities will require identifiers on the Activity map and/or more information in Question 31. See instructions.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Type S Water</th>
<th>Type F Water</th>
<th>Type Np Water</th>
<th>Type Ns Water</th>
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<tbody>
<tr>
<td>Equipment Crossing**</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Suspending Cables</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>Cable Yarding</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>LWD Placement/Removal</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Beaver Dam Removal</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Felling and Bucking</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Other (describe in Question 31)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

*Existing HPAs issued by WDFW will be complied and enforced by WDFW until expiration. Plan details are not required for hydraulic projects permitted with an existing HPA (see instructions).

** Fords and equipment crossings on Type S and F Waters may result in an unauthorized incidental take of certain endangered or threatened fish species. For more information, see ‘Background for the State’s Incidental Take Permits for certain endangered and threatened fish species’ following Question 24 of the FPA/N Instructions.

18. If constructing or abandoning forest roads, complete the table below. Show the road locations and identifiers on the Activity Map. Include abandonment plans for temporary roads and abandonment projects.

<table>
<thead>
<tr>
<th>Road Identifier (name, number)</th>
<th>Road Construction</th>
<th>Road Abandonment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length (feet)</td>
<td>Steepest Side-slope (%)</td>
</tr>
<tr>
<td>Total Construction</td>
<td>10,704</td>
<td>45</td>
</tr>
</tbody>
</table>

See FPA Narrative

19. If depositing spoils and/or expanding or developing a rock pit for forestry use, complete the table below. Show locations and identifiers on the Activity Map.

<table>
<thead>
<tr>
<th>Spoil Area Identifier (letter, number)</th>
<th>Amount of Spoils Deposited (cubic yards)</th>
<th>Rock Pit Identifier (name, number or letter)</th>
<th>Acres of New Rock Pit Developed</th>
<th>Acres of Existing Rock Pit Expanded</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>WC-11 Hardrock Pit</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TL-01 Hardrock Pit</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MC-3102 Hardrock Pit</td>
<td>0.2</td>
<td></td>
</tr>
</tbody>
</table>

20. If operating in or within 200 feet of a wetland, complete the table below. Show the boundaries of each wetland, along with its identifier, and WMZ on the Activity Map. See instructions for information.

See Aquatics Addendum

***** If not harvesting or salvaging timber, skip to Question 29 *****
21. If harvesting or salvaging timber, complete the table below. Show all harvest areas and unit numbers on the Activity Map. For even-aged harvest units, also show surrounding stand information on the Activity Map.

<table>
<thead>
<tr>
<th>Unit Number</th>
<th>Harvest Type (Even-aged, Uneven-aged, Salvage, Right-of-Way)</th>
<th>Biomass Harvest (Y/N)</th>
<th>Harvest Method (Rubber Tired Skidder, Tracked Skidder, Dozer, Shovel, Full Suspension Cable, Lead-end Suspension Cable, Helicopter, Animal, Chipper-forwarder, Slash Bundler)</th>
<th>Acres to be Harvested</th>
<th>Volume to be Harvested (bf)</th>
<th>Volume to be Harvested (biomass tonnage)</th>
<th>Volume to be Harvested (%)</th>
<th>Steepest Slope in Harvest Unit (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ground/Cable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>See FPA Narrative</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Totals</strong></td>
<td></td>
<td></td>
<td>313.3</td>
<td>2,560</td>
<td></td>
<td></td>
<td>68</td>
</tr>
</tbody>
</table>

22. Reforestation. Check the appropriate box(es).

☐ Planting. Tree Species: ________________________

☐ Natural. Include a Natural Regeneration Plan

☐ Not required because of one or more of the following:

☐ I am converting some or all of this land to non-forest land in the next 3 years or lands are exempted under WAC 222-34-050.

☐ Individual dead, dying, down, or wind-thrown trees will be salvaged.

☐ Trees are removed under a thinning program reasonably expected to maximize the long-term productivity of commercial timber.

☒ I am leaving at least 100 vigorous, undamaged, and well-distributed saplings or merchantable trees per acre.

☐ An average of 190 tree seedlings per acre are established on the harvest area and my harvest will not damage it.

☐ Road right-of-way or rock pit development harvest only.

**** If you own MORE than 80 forested acres in Washington, skip to Question 27. ****

23. Are you using the exempt 20-acre parcel riparian management zone (RMZ) rule on type S, F, or Np waters?

☐ No  If no, continue to Question 27.

☐ Yes  If yes, continue to Question 24. See instructions for qualifications and information.

24. Choose the answer below that best fits your situation. Show all RMZs on the Activity Map.

☐ a. ALL of the following apply to me and my land: (If no, answer b.)

- Between June 5, 2006 and today’s date I have always owned less than 80 acres of forestland in Washington.
- Between June 5, 2006 and today’s date this parcel has always been 20 acres or less of contiguous ownership. See RCW 76.09.020 for definition of ‘contiguous’.
- Between June 5, 2006 and today’s date this parcel has always been owned by me or someone else that has owned less than 80 acres of forestland in Washington.
b. ONE OR MORE of the following apply to me and/or my land (check all that apply):

☐ I currently own more than 80 acres of forestland in Washington.

☐ Between June 5, 2006 and today’s date I have owned more than 80 acres of forestland in Washington.

☐ Between June 5, 2006 and today’s date this parcel has been a part of more than 20 acres of contiguous ownership. See RCW 76.09.020 for definition of ‘contiguous’.

☐ Between June 5, 2006 and today’s date this parcel has been owned by someone that has owned more than 80 forested acres in Washington.

If any of the statements in (b) above apply AND you use the 20-acre exempt RMZ rule, you are NOT authorized under the State’s Incidental Take Permits (see explanation in FPA instructions under Questions 24).

25. If harvesting within 115 feet of a Type S or F water on an exempt 20-acre parcel, complete the table below. **Show RMZs and stream segment identifiers on the Activity Map.** If you are harvesting within 75 feet or within the maximum RMZ (whichever is less), stream shade must be assessed and met following harvest. Describe how stream shade was determined to be met, using the ‘Stream Shade Assessment Worksheet’ if necessary.

<table>
<thead>
<tr>
<th>Stream Segment Identifier (letter)</th>
<th>Water Type (S, F)</th>
<th>Segment Length (feet)</th>
<th>Bankfull Width (feet)</th>
<th>Maximum RMZ Width (feet)</th>
<th>Are you harvesting within the maximum RMZ? (Y or N)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
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<td></td>
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</tr>
</tbody>
</table>

26. Are you harvesting within 29 feet of a Type Np water on a 20-acre exempt parcel?

☐ No  Continue to Question 29.

☐ Yes  See instructions and describe leave tree strategy in Question 31. Then continue to Question 29.

27. If harvesting within 200 feet of any of Type S or F water, complete the table below. Include DFC for all inner zone harvests unless you have an HCP prescription. **Show RMZs, CMZs, and stream segment identifiers on the Activity Map.** If you are harvesting within 75 feet or within the maximum RMZ (whichever is less), stream shade must be assessed and met following harvest. Describe how stream shade was determined to be met, using the ‘Stream Shade Assessment Worksheet’ if necessary.

<table>
<thead>
<tr>
<th>Stream Segment Identifier (letter)</th>
<th>Water Type (S or F)</th>
<th>Site Class (I - V)</th>
<th>Stream Width (feet)</th>
<th>Is there a CMZ? (Y/N)</th>
<th>RMZ Harvest Code(s) (see instructions)</th>
<th>DFC Run Number</th>
<th>Total width of RMZ (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

See Aquatics Addendum
28. If harvesting within 50 feet of Type Np water, complete the table(s) below. Show RMZs and stream segment identifiers on the Activity Map.

<table>
<thead>
<tr>
<th>Stream Segment Identifier (letter)</th>
<th>Total Stream Length in Harvest Unit (feet)</th>
<th>Length of No-Harvest, 50-foot Buffers in Harvest Unit (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

See Aquatics Addendum

<table>
<thead>
<tr>
<th>Stream Segment Identifier (letter)</th>
<th>Total Stream Length in Harvest Unit (feet)</th>
<th>Length of No-Harvest, 50-foot Buffers in Harvest Unit (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

29. How are the following marked on the ground? (Flagging, paint, road, fence, etc.)

Harvest Boundaries: White Timber Sale Boundary Tags, RoadsWC-04, WC-0403, MC-05, MC-06, MC-12, MC-1205-01

Clumped Wildlife Reserve Trees/Green Recruitment Trees: N/A

Right-of-way limits/road centerlines: Centerlines marked with wooden stakes, limits tagged out with Orange ROW tags.

Stream Crossing Work: To be flagged by operator, then approved by State lands Contract Administrator with consultation of FP Forester.

Riparian Management Zone Boundaries and Leave/Take Trees: White Timber Sale Boundary Tags

Channel Migration Zone: N/A

Wetland Management Zone Boundaries and Leave/Take Trees: White Timber Sale Boundary Tags

30. Are you converting the land to non-forestry use within 3 years of harvest?

☐ No  ☐ Yes  If yes, include your SEPA Determination and/or SEPA checklist.

31. Additional Information (attach additional pages if necessary): For hydraulic projects in or over Type S, F, or complex N water(s) see instructions for required plan information.

See FPA Narrative
32. We acknowledge the following:

- The information on this application/notification is true.
- We understand this proposed forest practice is subject to:
  - The Forest Practices Act and Rules AND
  - All other federal, state or local regulations.
- Compliance with the Forest Practices Act and Rules does not ensure compliance with the Endangered Species Act or other federal, state or local laws.
- If we said that we would not convert the land to non-forestry use, the county or city may deny development permits on this parcel for the next 6 years.
- The following may result in an unauthorized incidental take of certain endangered or threatened fish species:
  - Conversion of land to non-forestry use.
  - Harvesting within the maximum RMZ on a 20-acre exempt parcel that was acquired after June 5, 2006.
  - Equipment Crossings/Fords in or over Type S and F Waters.
- Inadvertent Discovery – Chapters 27.44, 27.53, 68.50 and 68.60 RCW
  - If you find or suspect you have found an archaeological object or Native American cairn, grave, or glyptic record, immediately cease disturbance activity, protect the area and promptly contact the Department of Archaeology and Historic Preservation at 360 586-3077.
  - If you find or suspect you have found human skeletal remains, immediately cease disturbance activity, protect the area, and contact the County Coroner or Medical Examiner and local law enforcement as soon as possible. Failure to report human remains is a misdemeanor.

The landowner understands that by signing and submitting this FPA, he/she is authorizing the Department of Natural Resources to enter the property in order to review the proposal, inspect harvest operations, and monitor compliance for up to three years after its expiration date. RCW 76.09.150

<table>
<thead>
<tr>
<th>Signature of LANDOWNER</th>
<th>Signature of TIMBER OWNER*</th>
<th>Signature of OPERATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daniel Hohl</td>
<td>(If different than landowner)</td>
<td>(If different than landowner)</td>
</tr>
<tr>
<td>Print Name:</td>
<td>Print Name:</td>
<td>Print Name:</td>
</tr>
<tr>
<td>Daniel Hohl</td>
<td>Date:</td>
<td>Date:</td>
</tr>
</tbody>
</table>

*NOTE: If you are a “Perpetual Timber Rights Owner,” and are submitting this without the Landowner’s Signature, provide written evidence the landowner has been notified.

Please make a copy of this FPA/N for your records. If this FPA/N contains a hydraulic project requiring WDFW concurrence review, it will not be available online for public review until after the WDFW concurrence review period.
FPA Narrative

This proposed activity is being conducted on lands covered by the Department’s multi-species HCP. These planned activities are consistent with our approved HCP dated September 1997 and associated Incidental Take Permits. See the attached HCP checklist for habitats and species both covered by our HCP agreement and specifically addressed with this proposal. Additionally, attached are DNR proprietary HCP/FPA substitute Addendums for Aquatic Resources, Northern Spotted Owl and Marbled Murrelets. This proposal also complies with the letter of agreement dated February 23, 2007 between DNR state lands and the US Fish and Wildlife Service.

Question #9:
A field review was conducted by a DNR Archaeologist on portions of the timber sale area on May 30, 2017. Remnants of old logging railroad grades were found on portions of this sale. The condition and location of the grades were determined to not be of high quality. Sections of the grades were bound out of the sale in order to provide protection. No conflicts with any known archaeological or historic sites exist. The Tulalip Tribes, Stillaguamish Tribe of Indians, and Snoqualmie Indian Tribe were contacted on February 15, 2016. No response has been received.

If any cultural resources are discovered during forest activity operations, a DNR archaeologist will be notified and will follow the department’s “Cultural Resources Inadvertent Discovery Guidelines” procedure.

Question #17:
Further information relating to question 17:
Type 5 stream crossings by ground-based equipment shall be as close to perpendicular as possible and may require log cribbing, culvert installation, or other approved methods to be in place to protect channels and banks. Timber will be fallen and yarded away from all streams when possible.

Question #18:
Any roads to be built then abandoned (also know as temporary road) that are listed in the table for Question #18, are “optional construction roads”. Of the length listed in the table, zero feet up to the entire length listed may be built. For further information please see the road plan associated with the timber sale, on file at the Northwest Region Office.
<table>
<thead>
<tr>
<th>Road Identifier (Name, Number)</th>
<th>Road Construction</th>
<th>Abandonment Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>WC-01</td>
<td>2955</td>
<td>2955</td>
</tr>
<tr>
<td>WC-0102</td>
<td>312</td>
<td>312</td>
</tr>
<tr>
<td>WC-04</td>
<td>3879</td>
<td>3879</td>
</tr>
<tr>
<td>WC-08</td>
<td>1100</td>
<td>1100</td>
</tr>
<tr>
<td>WC-13</td>
<td>165</td>
<td>165</td>
</tr>
<tr>
<td>MC-1200</td>
<td>905</td>
<td>905</td>
</tr>
<tr>
<td>MC-1201</td>
<td></td>
<td>2089</td>
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<td>MC-1203</td>
<td>424</td>
<td>424</td>
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<tr>
<td>MC-1205</td>
<td>700</td>
<td>1100</td>
</tr>
<tr>
<td>MC-1205-0101</td>
<td>264</td>
<td>264</td>
</tr>
</tbody>
</table>

**Additional Q.18 Road Abandonment**

*Per the FPA Instructions:*

A written plan that shows how the road will be left to:

*Control erosion
*Maintain water movement within wetlands and other natural drainages, and
*Prevent four-wheeled highway vehicles from entering the point of closure.

The following will be accomplished as applicable to meet the on-site conditions during the course of road abandonment work:

* Remove all ditch relief culverts. The resulting slopes will be 1:1 or flatter. Place and compact the removed fill material in a location that will not erode into any typed waters or wetlands.
* Remove all culverts in natural drainages. The resulting slopes will be 1 ½ :1 or flatter. Strive to match the existing native stream bank gradient. The natural streambed width will be re-established. Place and compact the removed fill material in a location that will not erode into any typed waters or wetlands.
* Transport all removed culverts off site.
* Construct non-drivable waterbars at natural drainage points and at a spacing that will produce a vertical drop of no more than 20 feet between waterbars and with a maximum horizontal spacing of 400 feet.
* Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
* Key waterbars into the cut-slope to intercept the ditch. Waterbars will be out sloped to provide positive drainage. Outlets will be on stable locations.
* Inslope or outslope the road as appropriate.
* Remove bridges and other structures as applicable.
* Pull back unstable fill that has potential of failing and entering any typed waters or wetlands. Place and compact removed material in a stable location.
* Remove berms except as designed.
* Block the road by constructing an aggressive barrier of dense interlocked large woody debris (logs, stumps, root wads, etc.) so that four wheel highway vehicles cannot pass the point of abandonment. Typical barrier dimensions are 10 feet high by 20 feet deep, spanning the entire road prism from top of cutslope to toe of fillslope. Long term effectiveness is the primary objective. If necessary construct a vehicular turn-around near the point of abandonment.
* Apply grass seed to all exposed soils resulting from the abandonment work.
* May provide a protective cover for seed if revegetation occurs between July 1 and March 31. The protective cover may consist of dispersed straw, jute matting, or clear plastic sheets.

**Question #19:**
Additional pit(s) may be developed/utilized along haul route or constructed roads. These will be less than 0.5 acre, and located outside RMZ's or sensitive areas.

**Question #21:**
Ground-based equipment operations will be limited to slopes less than 35%. Tethered/self-leveling equipment may be utilized on sustained slopes up to 50% in areas as approved by the Contract Administrator.

<table>
<thead>
<tr>
<th>Unit Number</th>
<th>Harvest Type</th>
<th>Biomass Harvest (Ton)</th>
<th>Harvest Method</th>
<th>Acres to be Harvested</th>
<th>Volume to be Harvested (MBF)</th>
<th>Volume to be Harvested (Biomass Tonnage)</th>
<th>Volume to be Harvested (%)</th>
<th>Steepest Slope Harvested in Harvest Unit (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Uneven-aged</td>
<td>N</td>
<td>Ground/Cable</td>
<td>14.6</td>
<td>100</td>
<td>--</td>
<td>33</td>
<td>55</td>
</tr>
<tr>
<td>2</td>
<td>Uneven-aged/ ROW*</td>
<td>N</td>
<td>Ground/Cable</td>
<td>90.8</td>
<td>690</td>
<td>--</td>
<td>35</td>
<td>68</td>
</tr>
<tr>
<td>3</td>
<td>Uneven-aged/ ROW*</td>
<td>N</td>
<td>Ground/Cable</td>
<td>15.9</td>
<td>115</td>
<td>--</td>
<td>34</td>
<td>68</td>
</tr>
<tr>
<td>4</td>
<td>Uneven-aged/ ROW*</td>
<td>N</td>
<td>Ground/Cable</td>
<td>5.5</td>
<td>50</td>
<td>--</td>
<td>34</td>
<td>68</td>
</tr>
<tr>
<td>5</td>
<td>Uneven-aged/ ROW*</td>
<td>N</td>
<td>Ground/Cable</td>
<td>168.7</td>
<td>1480</td>
<td>--</td>
<td>35</td>
<td>68</td>
</tr>
<tr>
<td>6</td>
<td>Uneven-aged/ROW*</td>
<td>N</td>
<td>Ground/Cable</td>
<td>17.8</td>
<td>125</td>
<td>--</td>
<td>35</td>
<td>55</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>313.3</strong></td>
<td><strong>2560</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Unit 2 includes 1.8 acres of ROW, Unit 3 includes 0.2 acres of ROW, Unit 4 includes 0.1 acres of ROW, Unit 5 includes 3.6 acres of ROW and Unit 6 includes 2.0 acres of ROW.
All units include corridor acres.

**Question #31:**
Streams V, T, Q, and Z were protocled surveyed and have water type modification forms submitted under DNR region reference number NW-07-17-0027.

Variable density thinning, within riparian and wetland management zone buffers, will be implemented with a target density post thinning of approximately 100-130 trees per acre.
Forest Practices
Informal Conference Note

ICN No. 135545
Legal Subdivision SW 1/4
Section 3
TWP 28
R3E E/W 8E
Application / Notification #: Same as landowner
Class:

Landowner
Department of Natural Resources – Daniel Hohl

Timber Owner
Mailing Address
919 N. Township St.
Mailing Address

Operator
Mailing Address

Same as landowner

City, State (Province), Zip /Postal Code
Sedro-Woolley, WA 98284
City, State (Province), Zip /Postal Code

Meeting Location
on site

Telephone

Conference

Date
10/18/2017

Time
0900

Region
NW

Subjects Discussed:

Landowner representatives requested a pre-application review of the proposed "Mero Corner" timber sale. Units 1, 2 and 3 are mostly in sections 3 and 4 of T28N, R8E in the Marsh Creek area of Sultan Basin. Units 4, 5, and 6 are mostly in section 16 and 17, T28N, R7E, in the Mero Creek area.

Landowner representatives had identified a possible glacial deep seated landslide area adjacent to units 2 and 3. The request for the pre-application review was to determine if the feature and the groundwater recharge area were properly delineated and bounded out of the proposed harvest units. The glacial deep-seated landslide is located near the Jackson Pipeline, a buried municipal water supply conveyance for the City of Everett. In addition, two LSI polygons are present between units 1 and 2.

For units 4, 5, and 6, several inner gorge features were identified along the west fork of Woods Creek that were bounded well away from the proposed units 5 and 6.

Decisions Made:

For the deep seated landslide between units 2 and 3, field review concurred that the deep seated landslide and its groundwater recharge area were correctly identified and bounded out of the proposed harvest units.

For the LSI polygons between units 1 and 2, it was determined that the two polygons are located on a discontinuous ridge as a possible moraine. LHZ mapping characterizes the proposal area as having low to moderate instability potential with low ability to deliver sediment to a resource or cause a safety concern. Moderate instability areas are identified as being sensitive to road building. No new roads are proposed for these units. The proposed harvest is located on hummocky, low-angle slopes to flat areas.

For units 4, 5, and 6. The inner gorge features along the west fork of Woods Creek were located well away from the proposed harvest units.

PRINT Participants' Names
Daniel Hohl
Jennifer Parker
Neil Shea
Aaron McMichael

*SIGNATURES of Participants
Representing
landowner
landowner
Tulalip Tribes
DNR FP

Copies Mailed:

Position No.
Signature & Title of DNR Representative
2925
Steven Huang
Skykomish PFP

Date
10/27/2017

Work Phone
(360)770-8806

* (Participant signature means Note is correct for subjects discussed and decisions made at the meeting.)

Did not attend – mail copies to: WFPARM, FPDM, FPCOORD, SKY30, USFS
Timber Owner
Landowner
Others: SNOCO, ECY, DPW, DOR, TULALIP

E-MAILED 10/27/17
Rev. 1/1/04
Page 1 of 1
Watershed Analysis Worksheet
(Use a separate worksheet for each Watershed Analysis Unit)

Watershed Administrative Unit Name: Woods Creek

Check all of the following that apply:
☐ I have reviewed the Watershed Analysis Prescription documents. My proposal is not located on or adjacent to any of the described features. Prescriptions do not effect my proposal.
☒ I have reviewed the descriptions and maps for all prescriptions.
   My proposal is located on or adjacent to the following prescription areas:
☒ Surface Erosion Prescriptions
☐ Mass Wasting Prescriptions
☐ Hydrology Prescriptions
☒ Water Quality
☐ Water Supply / Public Works
☐ Riparian – applicable to landowners using the 20 acre exempt RMZ rule

Complete the following information for each prescription that affects your proposal or is adjacent to your proposal. Identify the resource sensitivity name and if you are implementing the prescriptions or not. Attach required reports and additional information as necessary.

<table>
<thead>
<tr>
<th>Resource Sensitivity Name/No: Basin wide road erosion (P.16)</th>
<th>Implementing Prescription: Yes or No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe harvest techniques proposed</td>
<td>Prescription 1: Pioneering shall not extend more than 500 feet beyond completed construction between October 15 and May 1.</td>
</tr>
<tr>
<td>Describe road techniques proposed</td>
<td>Prescription 2: All exposed soil areas resulting from road construction will be grass seeded within one month of exposure unless otherwise approved by the contract administrator. A protective cover of straw or some other suitable material will be used if disturbance occurs between July 1 and March 31.</td>
</tr>
<tr>
<td>Describe other techniques proposed</td>
<td>Prescription 3: Drainage shall be provided on all uncompleted construction as approved by contract administrator. All ditch water will be diverted onto forest floor by means of cross drain culverts or ditchouts in order to avoid delivery of sediments to streams. Purchaser shall spread a 6-inch layer of straw to all exposed soils within 30 feet of a stream. Soils may not sit exposed during any rain event.</td>
</tr>
<tr>
<td>Purchaser shall ensure the growth of a uniform and dense crop (at least 50% coverage) of 3 inch tall grass.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resource Sensitivity Name/No: DD-2/FF-5 LOD recruitment (P.2)</th>
<th>Implementing Prescription: Yes or No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe harvest techniques proposed</td>
<td>Current HCP management procedures exceed protection defined in WAU prescription. Thinning prescription for current proposal includes requirements for LOD recruitment. When thinning RMZs equipment will stay 50 feet back from the 100-year flood plain.</td>
</tr>
</tbody>
</table>

DNR USE ONLY

Reviewed by:_________ Date:_________
Describe road techniques proposed

Describe other techniques proposed

Resource Sensitivity Name/No: BB-1 (High Soil Erosion Potential) Fine sediment input into streams. (P. 18, 20) Implementing Prescription: Yes or No

| Describe harvest techniques proposed | No skidder yarding will occur with this proposal. All ground based yarding and harvesting will be done by tracked equipment. All trees will be felled perpendicular to and away from streams. Type 5 stream crossings will incorporate temporary crossing measures to protect stream channel integrity. Harvesting operations will avoid exposing mineral soil within 50 feet of Type 3, 4, and 5 waters. Type 5 streams will be protected with 30 foot equipment limitation zones. Type 4 streams will be protected with 100 foot buffers. Type 3 streams will be protected with 188ft site index buffers. These buffers and equipment restrictions will help to prevent any potential surface erosion that might result from ground based harvesting from entering surface waters. |
| Describe road techniques proposed |
| Describe other techniques proposed |
Appendix D. Slope Stability Informational Form

Complete and attach this form to your FPA if you answered ‘Yes’ to FPA Question 11 or 12. Refer to WAC 222-16-050(1)(d) and Forest Practices Board Manual Section 16—Guidelines for Evaluating Potentially Unstable Slopes for definitions and descriptions of potentially unstable slopes or landforms.

1. What screening tools were used? ☒ Aerial Photo, ☒ LiDAR, ☒ Landslide Inventory, ☒ Landslide Hazard Zone Polygon, ☒ GIS/Other (describe):
   State lands geologist office reviewed and field reviewed areas in and around timber sale.

2. Were there any features identified using the screening tools in #1 that did not exist in the field? If yes, describe:
   Yes. LSI polygon 13676 and LSI polygon 28904 were visited by a state lands geologist and no evidence of landsliding was observed. LSI polygon 28906 was reviewed by a state lands geologist and evidence of shallow debris sliding was observed. No harvest activity are proposed on these features. Additional information about the geologic review are included in the slope stability memorandum, dated August 14, 2017.

3. a. What potentially unstable slopes or landforms were identified in the area of your forest practices activity? Check all that apply:
   - ☐ Inner Gorge
   - ☐ Groundwater recharge areas for glacial deep-seated landslides
   - ☐ Bedrock Hollow
   - ☐ Convergent Headwall
   - ☐ Toe of deep-seated landslide
   - ☐ Outer edges of meander bends
   - ☐ Other (Deep-seated landslides or other features of potentially unstable slopes). Describe:
     No rule identified landforms were observed in the boundaries of the forest practice activity.

   b. What activities may occur in potentially unstable slopes or landforms? Check all that apply:
     - ☐ Timber harvest
     - ☐ Road construction
     - ☐ Suspending cables
     - ☐ Yarding
     - ☐ Tailholds

4. a. What potentially unstable slopes or landforms were identified around the area of your forest practices activity?
   Check all that apply:
   - ☐ Inner Gorge
   - ☒ Groundwater recharge areas for glacial deep-seated landslides
   - ☐ Bedrock Hollow
   - ☐ Convergent Headwall
   - ☐ Toe of deep-seated landslide
   - ☐ Outer edges of meander bends
   - ☐ Other (Deep-seated landslides or other features of potentially unstable slopes). Describe:
     Additional information about the glacial deep-seated landslide and the methods used to delineate the groundwater recharge area are included in the slope stability memorandum, dated August 14, 2017.

   b. What activities may occur around potentially unstable slopes or landforms? Check all that apply:
     - ☒ Timber harvest
     - ☒ Road construction
     - ☐ Suspending cables
     - ☒ Yarding
     - ☐ Tailholds
5. If any features identified in #3.a. and /or #4.a. were bounded out, describe the manner in which the boundary was determined:

Ground water recharge area boundary was determined on the ground by State Land Geologist. White timber sale boundary tags were used to bound out feature.

6. Were areas of public use (which may include, but are not limited to: public roads, utilities, designated recreation areas, occupied structures, etc.) identified in or around the area of your proposed forest practices activity? Show these locations on the map in #8.

Jackson Powerhouse pipeline lies around the area of the proposed forest activity. DNR managed land is open to informal, dispersed, non-motorized public use.

7. Date of field review: 1/17/17, 3/20/17, 5/9/17

Person(s) that conducted field review: Daniel Hohl and John VanHolibeke

Name: Daniel Hohl and John VanHolibeke

Title/position: NRS 2

Name: Jennifer Parker

Title/position: State Lands Geologist

8. Show all field reviewed areas for potentially unstable slopes or landforms on a map (may use a forest practices activity map, harvest map or GIS map – See example below). Show locations where areas of public use exist. **This map is intended to be developed by the field practitioner.**
August 14, 2017

TO: Dan Hohl, Forester, Cascade District, Northwest Region

FROM: Jennifer Parker, LEG #2892, Forest Resources Division
       Casey Hanell, LEG #2771, Forest Resources Division

SUBJECT: Slope stability information for the proposed Mero Corner Small Wood Thin, Snohomish County, Washington

This memorandum documents potentially unstable slopes around the proposed Mero Corner small wood thin (SWT) to supplement the forest practices application (FPA) to the Washington State Department of Natural Resources (DNR). The sale is located in two distinct areas, separated by about 7 miles (Figure 1).

Units 1 and 2 are located around a shallow fill failure documented in the Forest Practices Landslide Inventory (LSI). Portions of Units 2 and 3 are located around a possible glacial deep-seated landslide and its groundwater recharge area. The glacial deep-seated landslide is located near the Jackson Pipeline, a buried municipal water supply conveyance for the City of Everett. Four LSI polygons are present to the east of Units 5 and 6. The shallow failure, LSI polygons, the possible glacial deep-seated landslide, and the associated groundwater recharge area have all been excluded from the proposed harvest area. Since no management activities are proposed on any of these landforms, it is our opinion that this proposal has a low likelihood of contributing to an increase in landslide frequency or severity that could deliver sediment and debris to a public resource or threaten public safety.

The scope of our services included:

- Review of DNR GIS data including:
  - Light detection and ranging (LiDAR) data.
  - Forest Practices Landslide Inventory (LSI) mapping.
  - Forest Practices Landslide Hazard (LHZ) mapping.
- Review of pertinent published geologic maps.
- Review of historical aerial photographs:
- Field reconnaissance around Units 1 through 3 by Jennifer Parker (LEG) and John Van Hollebeke (Forester) on March 20, 2017.
- Field reconnaissance around Units 2 and 3 by Jennifer Parker (LEG) and John Van Hollebeke (Forester) and field discussion with Mark Flury (Snohomish County Public
Utility District (PUD)) and Dave Williams (LEG for ZipperGeo Consultants) on May 9, 2017.

- Field reconnaissance around Units 5 and 6 by Jennifer Parker (LEG), John McKenzie (LEG, QE), Dan Hohi (Forester), Greg Morrow (GIT), and John Moon (Forester) on January 17, 2017.

- Preparation of this memorandum.

The proposed sale is within the Sultan River Watershed Administration Unit (WAU) and the Woods Creek WAU.

Jennifer Parker, a licensed engineering geologist (LEG #2892) prepared this memorandum under the direct supervision of Casey Hanell (LEG #2771). Casey Hanell is a “qualified expert” for timberland slope stability evaluation, as designated by the DNR.

**Site and Project Description**

The proposed sale is a small wood thin located in the Sultan Basin. Ground based logging methods will be used to harvest this sale. The sale is located on smooth to hummocky, glaciated surfaces.

Units 1 through 3 are located about 1 mile east of the Sultan River, and 4 ½ miles northeast of Sultan, Washington. These units are in Sections 3, 4, 9, and 10, T28N, R08E, Willamette Meridian and Baseline (Figures 1 and 2). Units 2 and 3 are located around the margin of a groundwater recharge area to a dormant-indistinct to relict glacial, deep-seated landslide. The landslide is discussed in more detail below. For the purpose of this report, the area within and surrounding Units 1 through 3 is referred to as Area A (Figure 2).

Units 4 through 6 are located near West Fork Woods Creek, about 5 miles northwest of Sultan, Washington. The sale is located in Sections 8, 9, 16, and 17 of T28, R7E, Willamette Meridian and Baseline (Figure 1). Units 5 and 6 are located around Forest Practices Landslide Inventory (LSI) polygons (Figure 3). We did not find evidence of unstable slopes in or around Unit 4, therefore Unit 4 is not discussed in this memorandum. For the purpose of this report, the area within and surrounding Units 4 through 6 is referred to as Area B (Figure 3).

**Units 1 through 3 – Area A**

**Geologic Setting**

We used the Dragovich and others (2014)\(^1\), 1:24,000 scale geologic map to review the proposed sale (Figure 4). The geology in the area consists of complex, layered glacial deposits overlying low- to medium-grade metamorphic rocks of the western mélange belt of Tabor and others.

---

\(^1\) Dragovich, Joe D.; Frattali, Christina L.; Anderson, Megan L.; Mahan, Shannon A.; MacDonald, James H., Jr.; Stoker, Bruce A.; Smith, Daniel T.; Koger, Curtis J.; Cakir, Rcep; DuFran, S. Andrew; Sauer, Kirsten B., 2014, Geologic map of the Lake Chaplain 7.5-minute quadrangle, Snohomish County, Washington: Washington Division of Geology and Earth Resources Map Series 2014-01, 1 sheet, scale 1:24,000, with 51 p. text.
(1993)2. The surficial glacial soil includes layers of patchy, recessional deposits typically composed of sand and gravel with cobbles and boulders. Recessional deposits include ice-contact (Qgic), kame (Qgik), and outwash (Qgos and Qgog). Glacially-overridden deposits include till (Qgt(v)) and lacustrine (Qgl(v)).

LSI and LHZ Polygon Discussion
Two LSI polygons are present around the proposed sale, #28904 and #28906 (Figure 2). The two polygons are located on a discontinuous ridge, described by Dragovich and others (2014)3 as a possible moraine. Polygon data indicate that the failures are associated with a forest road that extends along the ridge. In the field, we observed a 2 to 5-foot deep, about 40-foot wide, shallow fill failure at polygon #28906. We did not observe evidence of a landslide at polygon #28904 in the field.

LHZ mapping characterizes the proposal area as having low to moderate instability potential with low ability to deliver sediment to a resource or cause a safety concern (Figure 5). Moderate instability areas are identified as being sensitive to road building. No new roads are proposed for this forest practice application. The proposed harvest is located on hummocky, low-angle slopes to flat areas.

Glacial Deep-seated Landslide
During our office review of the sale we identified a possible glacial, deep-seated landslide (Figure 6). Naming terminology for the DSLS is based on definitions of Cruden and Varnes4 and activity levels using Keaton and DeGraff,5 as modified by the Washington Forest Practices Board Manual. The possible landslide and its topographically-delineated groundwater recharge area have been excluded from the sale. Thinning prescriptions for Units 1 through 3 require the residual stand must average 115 square feet of basal area per acre.

The landslide is located adjacent to the Jackson Pipeline, owned by the City of Everett. The pipeline conveys drinking water from Spada Lake. We understand that the pipeline is critical infrastructure, and therefore alignment information is sensitive. We do not know the pipeline depth. Based on conversations with Mark Flury (Snohomish County PUD) and Dave Williams (PUD consultant), we understand that the landslide was not recognized in geotechnical reports for pipeline construction.

We delineated the landslide based on LiDAR and field review. The landslide appears to have a combination of rotational and earthflow modes of sliding. In the field we observed evidence of a

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landslide, however the lateral margins were difficult to follow. Our observations in the area include:

- We did not observe evidence of deep-seated landslide movement in the historical imagery reviewed for this area (Figures 7 through 10).
- Wet, loose, hummocky sandy and gravelly soil at the ground surface on the landslide body.
- An open, active road with a cutslope and sidecast fill extends across the scarp. Old growth stumps adjacent to the road are partially buried by sidecast fill (Photograph 1). There is a very slight dip in the road that crosses the headscarp (Photograph 1). In our opinion, the dip was caused by road settlement, not deep-seated landsliding.
- Sidecast fill on the landslide head scarp has locally slumped where it was undermined by a seep (Photograph 2). However, the road is open and in good shape.
- Water in the ditchline that crosses the landslide head disappears as it infiltrates into the subsurface.
- We observed a large slash pile that was sidecast from the road. The slash pile shows up in the 1998 imagery (Figure 9) and in LiDAR (Figure 6).
- Exposures in the road cut are very dense till.
- Very large (5 to 10+ -foot diameter) vertical old growth stumps on the landslide body, toe, and head.
- We observed stream piping throughout the landslide body.
- We observed disturbance vegetation including alder and salmonberry within the landslide body. The vegetation difference is visible in aerial imagery (Figure 10). In our opinion, the different vegetation is a result of wet soil from springs and seeps, not from landslide movement.
- The toe is approximately 10 feet high with a 25% to 30% slope. Trees on the toe are primarily hemlock and are the same age and type as the trees on in-place ground beyond the toe. We did not observe evidence of bulging in the toe.
- The landslide toe extends onto relatively flat ground at the edge of the Jackson pipeline right-of-way. We did not observe evidence of recent deposits or movement within the Jackson Pipeline right-of-way (Photograph 3).
- The lateral margins are difficult to trace in the field and with LiDAR.
- We observed evidence of one shallow landslide below the road. The failure was about 20 feet wide and about 5 feet deep. The area is now covered in forest duff and is vegetated with straight and slightly curved trees. The failure is outside the proposed harvest.
- Based on the initial office review, we interpreted that there was an additional landslide between the landslide mapped on Figure 6 and the pipeline right-of-way. In the field we were not able to delineate lateral margins or a toe of this additional landslide. Like the mapped landslide, the area has very large, vertical old growth stumps. Unlike the mapped landslide, the area is primarily vegetated with hemlock and has fewer seeps and springs. The area that appears to be a topographic division between two landslides is a slash pile. The entire area that we originally mapped as a possible landslide that extends to the pipeline right-of-way, and the associated groundwater recharge area, are excluded from the proposed harvest.
Based on our observations, we classify the landslide as dormant-indistinct to relict. The landslide is in glacial deposits, therefore we delineated a topographic GWRA using a combination of field reconnaissance and LiDAR data. The soil in the groundwater recharge area is composed of hummocky, ice-contact deposits with a low-slope angle. We followed surface water drainages as a proxy to groundwater flow. The topographic GWRA is bound out of the sale.

Photograph 1: The red arrow points to slight dip in the road. In our opinion, the dip was caused by road settlement, not deep-seated landsliding. Exposures in the road cut are very dense till. The yellow arrows point to partially-buried old growth stumps. A green arrow on Figure 6 marks the location and direction of photograph 1.

Photograph 2: Slight set-down in side-cast fill. The fill is loose and has animal burrows at this location. A green arrow on Figure 6 marks the location and direction of photograph 2.
Units 5 and 6 – Area B

Based on our remote review and field reconnaissance, Units 5 and 6 are located on stable ground. We found four LSI polygons that are located downslope, but outside the proposed harvest (Figure 3). Based on the information in the LSI database, the landslides documented in the LSI database are from 1990’s imagery. Our observations at the polygon locations include:

#13761: We found evidence of a possible shallow debris slide near LSI #13761, including convergent and inner gorge topography. We did not observe evidence of a landslide at this location in the aerial imagery (Figure 11).

#13674: We did not observe evidence of landsliding at this location in the aerial imagery (Figure 11). The forester observed an inner gorge but did not observe evidence of landsliding in the field at this location.

#13675: We observed an approximately 10-foot wide, 2-foot deep debris slide and inner gorge topography in the field.

#13676: We found wet, loose soil in the low areas within LSI #13676. We did not observe evidence of landsliding within this area.
Forest Practice Rule Statements

The following are the Forest Practice Rule statements addressing WAC 222-10-030 (1) (a,b,c). These responses are based on the data and discussion presented above.

(a) *The likelihood that the proposed forest practices will cause movement on the potentially unstable slopes or landforms, or contribute to further movement of a potentially unstable slope or landform:*

A portion of the sale is located around a dormant-indistinct to relict, glacial deep-seated landslide. No harvest is proposed in the topographically delineated groundwater recharge area of the landslide. Thinning prescriptions require that the residual stand must average 115 square feet of basal area per acre. We did not observe evidence that previous timber harvest on the landslide and its recharge area caused the landslide to reactivate. Fewer trees are proposed for removal in the area than witnessed from past clear-cut harvests. In addition, excavation for the Jackson pipeline may have extended through the landslide toe. Excavation did not cause the landslide to reactivate. In our opinion, there is a low likelihood the proposed sale will cause deep-seated landslide reactivation as described above.

Timber harvest will not occur within the LSI polygons around Units 5 and 6, described above, and therefore there is a low likelihood the proposed forest practices will cause movement on these landforms.

(b) *The likelihood of delivery of sediment or debris to a public resource, or in a manner that would threaten public safety:*

In our opinion there is a low likelihood for sediment or debris delivery to a public resource, including the Jackson pipeline, or in a manner that would threaten public safety. There are no homes located downslope of the proposed harvest. Our conclusion is based on our opinion that there is a low likelihood the proposed forest practices will cause movement on potentially unstable slopes.

(c) *Any possible mitigation for the identified hazards and risks:*

The primary mitigation measure for the identified hazards and risks is avoidance. Features that were recognized in the geologic evaluation as potentially unstable with the potential to deliver to a public resource have been bound out of the proposed harvest.

Limitations

This memorandum is intended to be additional information submitted with the forest practices application (FPA) for the Mero Corner SWT to document licensed engineering geologist involvement in the timber sale process. The conclusions presented in this memorandum are based on observed site conditions as they existed at the time of the field visit. It is not possible to fully define the geologic conditions of the site based on this limited investigation; however, the work was performed using practices consistent with geologic and geotechnical industry
standards in the region for forest slope stability. It is not possible to predict slope movement with certainty with the available scientific knowledge.

ATTACHMENTS:
Figure 1, Vicinity Map
Figure 2, Area A Site Map
Figure 3, Area B Site Map
Figure 4, Area A Geologic Map
Figure 5, Area A Landslide Hazard Zonation
Figure 6, Area A Geomorphology Map
Figure 7, Area A 1954 Imagery
Figure 8, Area A 1985 Imagery
Figure 9, Area A 1998 Imagery
Figure 10, Area A 2015 Imagery
Figure 11, Area B 1998 Imagery

Jennifer Parker, LEG #2892
Northwest Region State Lands Geologist

Casey Hanell, LEG #2771
Earth Sciences Program Manager
Forest Resources Division
Area B Site Map
Slope Stability Information for the Mero Corner SWT

- Proposed Harvest Units
- Forester-Delineated Streams
- Wetlands
- Rock Pit
- >70% Slope
- Geologist Tracks
- GIS Water Layer

Active and Unknown Roads
- 1: Active
- 9: Unknown

Scale: 1:12,000
1,000 Feet

Figure 3
Area A Geomorphology Map

Slope Stability Information for the Mero Corner SWT

- Proposed Harvest Units
- Possible Deep-Seated Landslide
- Shallow Landslide
- Groundwater Recharge Area
- Wetlands
- Streams
- Spring/Seep
- Jackson Pipeline
- >70% Slope
- Photograph location and direction

1:4,800 Scale

Figure 6
Please refer to the DNR Proprietary HCP Substitution Agreement for Aquatic Resources, 2008. Please check all HCP prescriptions and/or activities, which are relevant to this proposal and describe the management prescriptions and final stand composition at the end of this checklist.

**NOTE:** When assessing hydrologic maturity for each sub-basin inside the rain-on-snow zone, DNR staff will use the most updated data layer delineating Watershed Administrative Units as designated by Forest Practices.

- Assessing Hydrologic Maturity in the Rain-On-Snow (ROS) Zone (Refer to item A in the Agreement Memo). If the activity lies within the ROS zone and subbasin will be managed for ROS, fill out the following table. If within ROS zone, but subbasin will not be managed for ROS, describe why in additional information section below.

<table>
<thead>
<tr>
<th>1. SUB-BASIN NAME</th>
<th>2. TOTAL ROS ACRES (DNR) WITHIN SUB-BASIN</th>
<th>3. HYDRO MATURE TARGET ACRES (2/3 of Column 2)</th>
<th>4. CURRENT DNR SUB-BASIN ACRES IN HYDRO MATURE FOREST IN ROS</th>
<th>5. ACRES OF HYDRO MATURE FOREST TO BE REMOVED AFTER ACTIVITY</th>
<th>6. SUPRLUS (+) OR DEFICIT (-) ACRES</th>
</tr>
</thead>
</table>

- Wetlands Protection, road construction within wetlands or wetland buffers, requires mitigation. (Refer to item B in the Agreement Memo). If this activity will include road construction within a wetland or WMZ, describe the type of wetland, potential loss of wetland function and how and where the loss of function will be mitigated.

- Harvesting within Forested Wetlands. (Refer to items C & E in the Agreement Memo). Describe the remaining stand characteristics within the wetland and map any forested wetlands greater than 3 acres.

- Wetland Management Zones. (Refer to item D in the Agreement Memo). Describe the site index and WMZ width. If harvesting within the WMZ, describe the remaining stand characteristics within the WMZ.

- Riparian Management Zones for Type 1, 2 and 3 Waters (Refer to item F and Appendix 1 in the Agreement Memo). Describe the site index, RMZ width and if a wind buffer was applied. Describe if the RMZ begins from the outer edge of a CMZ or 100-year floodplain and how they were typed.

- Riparian Management Zones for Type 4 and 5 Waters (Refer to item G and Appendix 1 in the Agreement Memo). Describe any special protection for Type 5 waters.

- Harvesting or Salvaging within Type 1, 2, 3 and 4 Riparian Management Zones. (Refer to item F-J and Appendix 3 in the Agreement Memo). If harvesting, describe the general...
HCP Riparian Forest Restoration Strategy management scenario under which the proposal’s riparian stand will be managed. Describe stand treatment including removals, down wood and snag recruitment and type of activities. Describe post-harvest stand; how it meets the management parameters of the general management scenario, what species composition and diameter classes will remain, trees per acre, basal area, relative density. If salvaging, describe how you will be meeting the RDFC conditions, what you will retain and removals and other salvage/restoration conditions described within the Ecosystem Services Section approved site specific restoration plan (and/or attach plan).

Please provide any requested additional information below. If varying from standard HCP guidance, attach concurrence/variance approval from Land Management Division and/or Federal Services and discuss below (e.g. research).

Wetlands Protection, Road Construction within Wetland Buffers:
There is approximately 1.9 acres of wetland buffer within road right-of-ways on two WMZs of Unit 2B. One WMZ is associated with a forested wetland the other is associated with an open wetland. There is no loss of wetland function. Approximately 2.0 acres have been added to the WMZ of wetland #11 and #12 as mitigation. There is approximately 0.5 acres of wetland buffer within a road right-of-ways in Unit 3A. Approximately 0.5 acres have been added to the WMZ of wetland #4 as mitigation.

Wetland Management Zones:
Buffers will be thinned using a variable density thinning technique with a target density post thinning of approximately 100 – 130 trees per acre.

Riparian Management Zones Type 1, 2 and 3 Waters:
All stream buffers were calculated using the 100-year site index buffer for Douglas-fir on the specific site they are located. All stream buffers begin from the 100-year flood plain except when superseded by stream associated wetlands. No wind buffers are applied to any of the stream buffers based on the low susceptibility to wind throw in this area. Low susceptibility was determined by making visual observations of the area and reviewing soil maps of the units.

Riparian Management Zones Type 4 and 5 Waters:
All Type-4 waters have a 100-foot buffer measured from the outer edge of the 100-year flood plain except when superseded by a stream associated wetland.

All Type-5 waters will have a 30-foot equipment limitation zone. All trees are to be felled and yarded perpendicular to and away from streams where feasible.

Harvesting or Salvaging within Type 1, 2, 3, and 4 Riparian Management Zones: All RMZs that fall within the unit boundaries represent areas to be thinned. See attached table for streams that will have managed RMZ buffers. Buffers will be thinned using a variable density thinning technique with a target density post thinning of approximately 100-130 trees per acre.

All prescriptions were designed to accelerate stands to the RDFC targets.
See attached table.
<table>
<thead>
<tr>
<th>Stream Segment Identifier or Wetland Identifier</th>
<th>Water Type or Wetland “forested or open water”</th>
<th>Site Class FP Base Map / Other source</th>
<th>Stream Width (feet) or Wetland Size</th>
<th>Is there a CMZ? Yes or No</th>
<th>Thinning RMZ/WMZ Yes or No</th>
<th>Total Width of RMZ/WMZ FP width / Actual width (feet)</th>
<th>Wind Buffer? Yes, No (for T-3, 2, 1) or N/A</th>
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<td>E</td>
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<td>No</td>
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<td>II</td>
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<td>0’30-foot equipment limitation zone.</td>
<td>N/A</td>
</tr>
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<td>No</td>
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<td>W1</td>
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<td>III</td>
<td>&gt; ¼ acre but &lt; 1 acre</td>
<td>N/A</td>
<td>Yes</td>
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<td>II</td>
<td>&gt; ¼ acre but &lt; 1 acre</td>
<td>N/A</td>
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<td>W3</td>
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<td>II</td>
<td>&gt; ¼ acre but &lt; 1 acre</td>
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<td>Yes</td>
<td>0/100</td>
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<td>W4</td>
<td>Forested Wetland</td>
<td>III</td>
<td>&gt; ¼ acre but &lt; 1 acre</td>
<td>N/A</td>
<td>Yes</td>
<td>0/100</td>
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<tr>
<td>W5</td>
<td>Open Wetland</td>
<td>II</td>
<td>&gt; 1 acre</td>
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<td>W8</td>
<td>Forested Wetland</td>
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<tr>
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<td>II</td>
<td>&gt; 1 acre</td>
<td>N/A</td>
<td>Yes</td>
<td>0/188</td>
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<tr>
<td>W11</td>
<td>Forested Wetland</td>
<td>II</td>
<td>&gt; ¼ acre but &lt; 1 acre&gt; ¼</td>
<td>N/A</td>
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<td>W12*</td>
<td>Open Wetland</td>
<td>II</td>
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<td>N/A</td>
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<tr>
<td>W13</td>
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<tr>
<td>W14</td>
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<tr>
<td>W15</td>
<td>Forested Wetland</td>
<td>II</td>
<td>&gt; ¼ acre but &lt; 1 acre</td>
<td>N/A</td>
<td>Yes</td>
<td>0/100</td>
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*Wetlands 7, 10, 12 are F waters
DNR Trust Forestland HCP Water Typing Key
ADDITIONAL INSTRUCTIONS FOR COMPLETING THE FOREST PRACTICE APPLICATION

STREAM(S) ID Q, AF, AC (May Creek), AP (Marsh Creek) ________________________________ DATE 7/17/2017

Within your road construction and harvest area, you need to physically review these streams on the ground to determine if they meet the criteria of Type 3 water. Refer to DNR Trust Forestland HCP Water Typing System to determine Type 1 and 2 waters.

1. Were any fish observed in the stream segment, or are fish known to use this stream segment?
   ___ Yes. Type 3 stream.
   _____ No. Go to question # 2.

2. Has the stream been surveyed?
   _____ Yes. Attach the survey data to the Application/Notification.
   _____ Fish found. Type 3 stream.
   _____ No fish. Is the average width of the stream segment two feet (2') or wider between the ordinary high water marks?

   _____ Yes. Type 4 stream.
   _____ No. Type 5 stream.
   _____ No. Go to question # 3.

3. Is the average width of the stream segment two feet (2') or wider between the ordinary high water marks?
   _____ Yes. Go to question # 4.
   _____ No. Type 5 Stream.

4. Is the gradient of the stream segment 16% or less?
   (Example: 16' fall in elevation over 100 feet of stream = 16/100 = .16 or 16%).
   _____ Yes. Type 3 stream.
   _____ No. Go to question # 5.

5. Is the average gradient of the stream segment greater than 16% and less than or equal to 20%?
   _____ Yes. Go to question # 6.
   _____ No. Type 4 stream.

6. Is the contributing basin (watershed) size to the stream segment greater than 50 acres?
   _____ Yes. Type 3 stream.
   _____ No. Type 4 stream.

Definitions:

Stream Width: To determine the Ordinary High Water Mark (OHWM) of the stream(s), observe the break between the water influence zone and upland vegetation on the stream bank; this is usually the spring high water mark. Then measure stream width between the OHWMs on either side of the stream at 50 feet intervals along the stream bank for a minimum distance of 500 feet. This determines the average width of the stream. For further information see page M-11 of the board manual.

Stream Gradient: The gradient of a stream is defined as the inclination or rate of fall of a stream bed, expressed as a percentage. The average gradient of a stream is determined by calculating the inclination of individual sub-reaches over a minimum distance of 500 feet along a stream or to a point where distinct gradient changes occur. For further information see page M-14 of the board manual (only use the method for field measurements; do not use the mapping method).

Note: Streams with widths of twenty feet (20') or greater or lakes, ponds, or impoundments having a surface area of 1 acre or greater at seasonal low water, may be type 2 waters.

1-14-08
DNR Trust Forestland HCP Water Typing Key
ADDENDUM TO INSTRUCTIONS FOR COMPLETING THE FOREST PRACTICE APPLICATION

STREAM(S) ID H, U, Z, AG, AM, AN, AO, AQ

DATE 7/17/2017

Within your road construction and harvest area, you need to physically review these streams on the ground to determine if they meet the criteria of Type 3 water. Refer to DNR Trust Forestland HCP Water Typing System to determine Type 1 and 2 waters.

1. Were any fish observed in the stream segment, or are fish known to use this stream segment?
   - Yes. Type 3 stream.
   - X No. Go to question # 2.

2. Has the stream been surveyed?
   - Yes. Attach the survey data to the Application/Notification.
     - Fish found. Type 3 stream.
     - X No fish. Is the average width of the stream segment two feet (2') or wider between the ordinary high water marks?
       - Yes. Type 4 stream.
       - No. Type 5 stream.
     - X No. Go to question # 3.

3. Is the average width of the stream segment two feet (2') or wider between the ordinary high water marks?
   - X Yes. Go to question # 4.
   - No. Type 5 Stream.

4. Is the gradient of the stream segment 16% or less?
   (Example: 16' fall in elevation over 100 feet of stream = 16/100 = .16 or 16%).
   - X Yes. Type 3 stream.
   - No. Go to question # 5.

5. Is the average gradient of the stream segment greater than 16% and less than or equal to 20%?
   - Yes. Go to question # 6.
   - No. Type 4 stream.

6. Is the contributing basin (watershed) size to the stream segment greater than 50 acres?
   - Yes. Type 3 stream.
   - No. Type 4 stream.

Definitions:

Stream Width: To determine the Ordinary High Water Mark (OHWM) of the stream(s), observe the break between the water influence zone and upland vegetation on the stream bank; this is usually the spring high water mark. Then measure stream width between the OHWMs on either side of the stream at 50 feet intervals along the stream bank for a minimum distance of 500 feet. This determines the average width of the stream. For further information see page M-11 of the board manual.

Stream Gradient: The gradient of a stream is defined as the inclination or rate of fall of a stream bed, expressed as a percentage. The average gradient of a stream is determined by calculating the inclination of individual sub-reaches over a minimum distance of 500 feet along a stream or to a point where distinct gradient changes occur. For further information see page M-14 of the board manual (only use the method for field measurements; do not use the mapping method).

Note: Streams with widths of twenty feet (20') or greater or lakes, ponds, or impoundments having a surface area of 1 acre or greater at seasonal low water, may be type 2 waters.
DNR Trust Forestland HCP Water Typing Key

ADDENDUM TO INSTRUCTIONS FOR COMPLETING THE FOREST PRACTICE APPLICATION

STREAM(S) ID R,  DATE 7/17/2017

Within your road construction and harvest area, you need to physically review these streams on the ground to determine if they meet the criteria of Type 3 water. Refer to DNR Trust Forestland HCP Water Typing System to determine Type 1 and 2 waters.

1. Were any fish observed in the stream segment, or are fish known to use this stream segment?
   _____ Yes. Type 3 stream.
   __X__ No. Go to question # 2.

2. Has the stream been surveyed?
   _____ Yes. Attach the survey data to the Application/Notification.
   ______ Fish found. Type 3 stream.
   ______ No fish. Is the average width of the stream segment two feet (2') or wider between the ordinary high water marks?
   ______ Yes. Type 4 stream.
   ______ No. Type 5 stream.
   __X__ No. Go to question # 3.

3. Is the average width of the stream segment two feet (2') or wider between the ordinary high water marks?
   __X__ Yes. Go to question # 4.
   _____ No. Type 5 Stream.

4. Is the gradient of the stream segment 16% or less?
   (Example: 16' fall in elevation over 100 feet of stream = 16/100=.16 or 16%).
   _____ Yes. Type 3 stream.
   __X__ No. Go to question # 5.

5. Is the average gradient of the stream segment greater than 16% and less than or equal to 20%?
   _____ Yes. Go to question # 6.
   __X__ No. Type 4 stream.

6. Is the contributing basin (watershed) size to the stream segment greater than 50 acres?
   _____ Yes. Type 3 stream.
   _____ No. Type 4 stream.

Definitions:

Stream Width: To determine the Ordinary High Water Mark (OHWM) of the stream(s), observe the break between the water influence zone and upland vegetation on the stream bank; this is usually the spring high water mark. Then measure stream width between the OHWMs on either side of the stream at 50 feet intervals along the stream bank for a minimum distance of 500 feet. This determines the average width of the stream. For further information see page M-11 of the board manual.

Stream Gradient: The gradient of a stream is defined as the inclination or rate of fall of a stream bed, expressed as a percentage. The average gradient of a stream is determined by calculating the inclination of individual sub-reaches over a minimum distance of 500 feet along a stream or to a point where distinct gradient changes occur. For further information see page M-14 of the board manual (only use the method for field measurements; do not use the mapping method).

Note: Streams with widths of twenty feet (20') or greater or lakes, ponds, or impoundments having a surface area of 1 acre or greater at seasonal low water, may be type 2 waters. 1-14-08
DNR Trust Forestland HCP Water Typing Key
ADDENDUM TO INSTRUCTIONS FOR COMPLETING THE FOREST PRACTICE APPLICATION


DATE 7/17/2017

Within your road construction and harvest area, you need to physically review these streams on the ground to determine if they meet the criteria of Type 3 water. Refer to DNR Trust Forestland HCP Water Typing System to determine Type 1 and 2 waters.

1. Were any fish observed in the stream segment, or are fish known to use this stream segment?
   ______ Yes. Type 3 stream.
   X____ No. Go to question # 2.

2. Has the stream been surveyed?
   ______ Yes. Attach the survey data to the Application/Notification.
   ______ Fish found. Type 3 stream.
   ______ No fish. Is the average width of the stream segment two feet (2') or wider between the ordinary high water marks?
   ______ Yes. Type 4 stream.
   ______ No. Type 5 stream.
   X____ No. Go to question # 3.

3. Is the average width of the stream segment two feet (2') or wider between the ordinary high water marks?
   ______ Yes. Go to question # 4.
   X____ No. Type 5 Stream.

4. Is the gradient of the stream segment 16% or less?
   (Example: 16' fall in elevation over 100 feet of stream = 16/100= .16 or 16%).
   ______ Yes. Type 3 stream.
   ______ No. Go to question # 5.

5. Is the average gradient of the stream segment greater than 16% and less than or equal to 20%?
   ______ Yes. Go to question # 6.
   ______ No. Type 4 stream.

6. Is the contributing basin (watershed) size to the stream segment greater than 50 acres?
   ______ Yes. Type 3 stream.
   ______ No. Type 4 stream.

Definitions:

Stream Width: To determine the Ordinary High Water Mark (OHWM) of the stream(s), observe the break between the water influence zone and upland vegetation on the stream bank; this is usually the spring high water mark. Then measure stream width between the OHWMs on either side of the stream at 50 feet intervals along the stream bank for a minimum distance of 500 feet. This determines the average width of the stream. For further information see page M-11 of the board manual.

Stream Gradient: The gradient of a stream is defined as the inclination or rate of fall of a stream bed, expressed as a percentage. The average gradient of a stream is determined by calculating the inclination of individual sub-reaches over a minimum distance of 500 feet along a stream or to a point where distinct gradient changes occur. For further information see page M-14 of the board manual (only use the method for field measurements; do not use the mapping method).

Note: Streams with widths of twenty feet (20') or greater or lakes, ponds, or impoundments having a surface area of 1 acre or greater at seasonal low water, may be type 2 waters.
DNR Trust Forestland HCP Water Typing Key
ADDENDUM TO INSTRUCTIONS FOR COMPLETING THE FOREST PRACTICE APPLICATION

STREAM(S) ID T.V

DATE 7/17/2017

Within your road construction and harvest area, you need to physically review these streams on the ground to determine if they meet the criteria of Type 3 water. Refer to DNR Trust Forestland HCP Water Typing System to determine Type 1 and 2 waters.

1. Were any fish observed in the stream segment, or are fish known to use this stream segment?
   - Yes. Type 3 stream.
   - x No. Go to question # 2.

2. Has the stream been surveyed?
   - x Yes. Attach the survey data to the Application/Notification.
     - x Fish found. Type 3 stream.
     - No fish. Is the average width of the stream segment two feet (2') or wider between the ordinary high water marks?
       - x Yes. Type 4 stream.
       - No. Type 5 stream.

   - x No. Go to question # 3.

3. Is the average width of the stream segment two feet (2') or wider between the ordinary high water marks?
   - x Yes. Go to question # 4.
   - No. Type 5 Stream.

4. Is the gradient of the stream segment 16% or less?
   (Example: 16’ fall in elevation over 100 feet of stream = 16/100= .16 or 16%).
   - x Yes. Type 3 stream.
   - No. Go to question # 5.

5. Is the average gradient of the stream segment greater than 16% and less than or equal to 20%?
   - x Yes. Go to question # 6.
   - No. Type 4 stream.

6. Is the contributing basin (watershed) size to the stream segment greater than 50 acres?
   - x Yes. Type 3 stream.
   - No. Type 4 stream.

Definitions:

Stream Width: To determine the Ordinary High Water Mark (OHWM) of the stream(s), observe the break between the water influence zone and upland vegetation on the stream bank; this is usually the spring high water mark. Then measure stream width between the OHWMs on either side of the stream at 50 feet intervals along the stream bank for a minimum distance of 500 feet. This determines the average width of the stream. For further information see page M-11 of the board manual.

Stream Gradient: The gradient of a stream is defined as the inclination or rate of fall of a stream bed, expressed as a percentage. The average gradient of a stream is determined by calculating the inclination of individual sub-reaches over a minimum distance of 500 feet along a stream or to a point where distinct gradient changes occur. For further information see page M-14 of the board manual (only use the method for field measurements; do not use the mapping method).

Note: Streams with widths of twenty feet (20') or greater or lakes, ponds, or impoundments having a surface area of 1 acre or greater at seasonal low water, may be type 2 waters.

1-14-08
Forest Practices Application/Notification Addendum
DNR Trust Lands HCP Implementation Checklist for the Marbled Murrelet, 2014
North Puget Planning Unit Only

Refer to the DNR Trust Lands HCP Implementation Summary for the Marbled Murrelet, 2014 and North Puget Planning Unit (NPPU) memos dated 02/23/2007 and 06/12/2009. Marbled Murrelet GIS habitat and occupied site delineation is available at on the Quick Data Loader and State Uplands Viewing Tool titled “State Lands – Marbled Murrelet – HCP Policy”.

1. Is the proposed Forest Practices activity within potential habitat, occupied site, Criteria 3 newly identified habitat or suitable habitat not available for release?  
   □ Yes, proposal is inconsistent with current HCP strategy. Stop Proposed Activity or document in Question #6 specifics of proposal and Forest Resources Division approval if intending to proceed.
   ☒ No, not within suitable habitat not available for release, potential, occupied, or Criteria 3 newly identified habitat. Go to Question #2.

2. Is the proposed activity within releasable1 suitable habitat according to the NPPU memo (dated 6/12/2009)?
   □ Yes, document in Question #6 the WAU name, total suitable MM habitat acres allowed to be harvested within the WAU and the total acres to date of suitable MM habitat harvested within the WAU after this proposed harvest. Go to Question #3.
   ☒ No, proposal is not within releasable suitable habitat. Go to Question #3.

3. Is the proposed activity located within unsurveyed Criteria 1 newly identified habitat that is within 0.25 miles of an occupied site, or unsurveyed Criteria 2 newly identified habitat?
   □ Yes, proposal is inconsistent with the current HCP strategy. Stop Proposed Activity or document in Question #6 specifics of proposal and Forest Resources Division approval if intending to proceed.
   ☒ No, go to Question #4.

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1 Some suitable habitat may be available for harvest (releasable) if 50% of the habitat will remain within the WAU and it is greater than 0.5 miles from an occupied site and identified per NPPU memo dated 6/12/2009. Criteria 1 habitat is: Habitat ≥ 5 acres but ≤ 10 acres with ≤ 10 platforms per acre OR Habitat > 10 acres but ≤ 20 acres with ≤ 5 platforms per acre. Criteria 2 habitat is: Habitat ≥ 5 acres but ≤ 10 acres with > 10 platforms per acre OR Habitat > 10 acres but ≤ 20 acres with > 5 platforms per acre OR Habitat > 20 acres with ≤ 15 platforms per acre. Criteria 3 is: Habitat ≥ 20 acres with >15 platforms per acre.
4. Is the proposed activity located within surveyed and unoccupied Criteria 1 or 2 newly identified habitat, or unsurveyed Criteria 1 that is greater than 0.25 miles from an occupied site and is the activity only for operational access (roads or yarding corridors) through this habitat type?

☐ Yes, proposal is consistent with the current HCP. Timing restrictions are applied when operating within this habitat and remaining habitat is deferred from harvest. Consult with Region biologist/specialist for recommendations on minimizing platform tree removal. Document in Question #6 the type of operational access, but first go to Question #5.

☒ No, go to Question #5.

5. Is the proposed harvest activity within ¼ mile of any marbled murrelet occupied site(s), Criteria 3 newly identified habitat or unsurveyed suitable MM habitat?

☒ Yes, consult with Region biologist/specialist for recommendations on buffers and timing restrictions. Go to Question #6 and document type of buffer of occupied site or suitable habitat.

☐ No, proceed with activity; go to Question #6 if any documentation is required.

6. This question or section is for additional information the checklist suggested you provide in previous questions or any additional information you think is relevant to the proposal. If you were able to answer the previous questions without a “Stop Proposed Activity” notification then your proposal is consistent with the HCP and may proceed. Otherwise, more documentation is required here. If varying from current HCP guidance, attach consultation agreement from Forest Resources Division and/or USFWS and discuss below.

Please reference the Wildlife Memo for more information.

There is revised suitable habitat located to the north of Mero Corner Unit 1 and northwest of Unit 2 that resulted in the expansion of previously-identified habitat. The habitat expansion is a result of incomplete survey coverage and therefore it has been provided with a 300-foot managed buffer. Approximately 6.7 acres of habitat buffer will be thinned. No timing restrictions are required per the NPPU Interim Marbled Murrelet Strategy.

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3 “Unsurveyed suitable habitat” refers to potential habitat identified per the NPPU 2007 memo that has been field verified as suitable, but not yet surveyed.
Forest Practices Application/Notification Addendum DNR
State Trust Lands HCP Implementation Checklist for the
Northern Spotted Owl, 2017 (all HCP planning units & OESF)

Refer to the DNR State Trust Lands HCP Implementation Agreement for the NSO, 2017.

1. Is the Forest Practice activity within a NRF Management Area?
   ☑ Yes, Go to #2.
   ☑ No, Go to #6.

2. Is the Forest Practice activity within a designated 500-acre Nest Patch?
   ☑ Yes, Harvesting within a nest patch is inconsistent with HCP without consultation, refer to Substitution Agreement, Section I.A. Stop Proposed Activity or document in Question #17 the specifics of proposal and Forest Resources Division concurrence if intending to proceed. Maintenance of existing roads is permitted, describe road maintenance activity in Question #17. If able to proceed, go to #3.
   ☑ No, Go to #3.

3. Is the Forest Practice activity within 0.7 miles of a spotted owl nest site (status 1 or 2)?
   ☑ Yes, Apply timing restrictions; refer to Substitution Agreement, Section I. Go to #4.
   ☑ No, Go to #4.

4. Is the SOMU where the Forest Practice activity is located above the target amount of 50% NRF habitat?
   ☑ Yes, Proceed with the activity, ensuring that habitat within the SOMU will not fall below the target amount of 50% and no more than 5% of sub-mature or better habitat within the SOMU is harvested within two years. Please describe in Question #17; if the activity will be harvesting habitat or non-habitat, whether it is an enhancement activity or even-age harvest and how many acres or percentage of NRF habitat will remain within the SOMU after harvest. Go to #16.
   ☑ No, Go to #5.

5. Is the Forest Practice activity within suitable sub-mature habitat or better or “next best”?
   ☑ Yes, Ensure NRF habitat remains after completion of the harvest activity or that the activity will not increase the length of time for the target amount to reach a suitable habitat condition. Please describe in Question #17, type of activity, how habitat will be maintained or next best stands enhanced and what the final stand condition will be. Go to #16.
   ☑ No, Ensure that target amount of habitat within the SOMU will not take longer to achieve after activity. Please describe in Question #17 how management activity will maintain and/or achieve the NRF target amount. Go to #16.

6. Is the Forest Practice activity within a Dispersal or DFC Management Area?
   ☑ Yes, Go to #7.
   ☑ No, Go to #10.

7. Is the Forest Practice activity within 0.7 miles of a spotted owl nest site (status 1 or 2)?
   ☑ Yes, Apply timing restrictions; refer to Substitution Agreement, Section I. Go to #8.
   ☑ No, Go to #8.

8. Is the SOMU where the Forest Practice activity is located, above the target amount of 50% dispersal habitat?
   ☑ Yes, Proceed with the activity, ensuring that habitat within the SOMU will not fall
below the target amount of 50%. Please describe in Question #17; if the activity will be harvesting habitat or non-habitat, whether it is an enhancement activity or even-age harvest and how many acres or percentage of dispersal habitat will remain within the SOMU after harvest. Go to #16.

☐ No, Go to #9.

9. Is the Forest Practice activity within suitable dispersal habitat or better or “next best”?  
☐ Yes, Ensure dispersal habitat remains after completion of the harvest activity or that the activity will not increase the length of time for the target amount to reach a suitable habitat condition. Please describe in Question #17, type of activity, how habitat will be maintained or next best stands enhanced and what the final stand condition will be. Go to #16.

☐ No, Ensure that target amount of habitat within the SOMU will not take longer to achieve after activity. Please describe in Question #17 how management activity will maintain and/or achieve the dispersal target amount. Go to #16.

10. Is the Forest Practice activity located within the OESF?  
☐ Yes, Go to #11.  
☒ No, Go to #16.

11. Is the Forest Practice Activity within Young Forest Habitat, Old Forest Habitat, or a Pathways Management Candidate Stand?  
☐ Yes, Go to #12.  
☐ No, Proceed with the activity, Please describe in Question #17; whether it is an enhancement activity or even-age harvest and how many acres. Describe percentage of suitable habitat will remain within the SOMU after harvest. Go to #16.

12. Is the Forest Practice activity in a SOMU in the maintenance and enhancement phase?  
☐ Yes, Activity can proceed if it ensures commitments to OESF Forest Land Plan as described within the Substitution Agreement, Section II and that habitat within the SOMU will not fall below the target amount. For Old Forest Habitat both the 20% Old Forest and 40% Young Forest and Better thresholds must be maintained. Active and Passive Pathways Management Candidate Stands are available if thresholds are maintained. Please describe in Question #17 how management activity will maintain habitat thresholds and how any candidate stands will be managed in accordance with the pathway prescription. Go to #16.

☐ No, Go to #13.

13. Is the Forest Practice activity in Old Forest Habitat in a SOMU that is in the Restoration Phase?  
☐ Yes, No harvesting of Old Forest Habitat is allowed during the Restoration Phase.

☐ No, Go to #14.

14. Is the Forest Practice activity a regeneration harvest of Young Forest Habitat in a SOMU that is in the Restoration Phase?  
☐ Yes, No regeneration harvest of Young Forest Habitat in a SOMU during the Restoration Phase without consultation with the HCP and Scientific Consultation Section. Describe in #17 how many acres or percentage of suitable habitat will remain within the SOMU after harvest. Document the reasons for harvest of young forest habitat and provide documentation of approval. Go to #16.

☐ No, Go to #15.
15. Is the Forest Practice activity in an Active or Passive Pathways Management Candidate Stand in a SOMU that is in the Restoration Phase?
   ☐ Yes, No harvesting of Passive Pathways Management Candidate Stand is allowed during the Restoration Phase. Active Pathways Management Candidate Stands can only have thinning activities. Please describe in Question # 17 how management activity will maintain habitat thresholds or how thinning activities will enhance habitat. Describe in #17 how many acres or percentage of suitable habitat will remain within the SOMU after harvest.
   ☐ No, Proceed with the activity, if commitments to the OESF Forest Land Plan as described within the Substitution Agreement and the SOMU are maintained and habitat does not fall below the minimum threshold. Please describe in Question # 17 how management activity will maintain habitat thresholds or how thinning activities will enhance habitat. Describe in #17 how many acres or percentage of suitable habitat will remain within the SOMU after harvest. Go to #16.

16. Is the Forest Practice activity located within a Status 1 or 2 spotted owl management circle based on the WDFW database?
   ☐ Yes, Apply harvest timing restrictions to activities within the best 70-acre core around the site center; refer to Substitution Agreement, Section III. Include location of best 70-acre core on Forest Practices Map. Go to #17.
   ☒ No, Go to #17.

17. Provide any additional information or details requested from previous questions on the following lines. If no additional information is required, simply state “not applicable” below. Otherwise, include the SOMU name(s) when necessary if activity is within NRF or dispersal management areas or OESF and how habitat will be maintained or enhanced, etc. If varying from standard HCP guidance, attach concurrence/variance approval from Land Management Division and/or Federal Services and discuss below.

End checklist.

Not applicable.
August 4, 2017

TO: Dan Hohl, Forester

FROM: Lisa Egtvedt, Wildlife Biologist

SUBJECT: Wildlife Review of the Proposed Mero Corner SWT Timber Sale

This memo serves as documentation of a region biologist review of the proposed Merc Corner SWT Timber Sale in sections 8, 16, and 17 of Township 28 North, Range 7 East, and sections 3, 4, 9, and 10 of Township 28 North, Range 8 East. This proposal is comprised of small wood thinning harvest in stands that are approximately 30-42 years old, with no variable retention harvest included.

I conducted a field review of areas to the north of Unit 1, and northwest and south of Unit 2 on April 21, May 8, and May 15, 2017 when these units were originally part of another timber sale proposal (Hawk Portal), and I conducted a field review of an area to the northeast of Unit 5 on May 19, 2017. The purpose of these visits was to verify previously-identified marbled murrelet habitat, which included some additional delineation work that was conducted by Hollis Crapo, John Van Hollebeke, and Dan Hohl (presales foresters who have been trained to conduct such delineation).

Field reviews were also conducted of several streams associated with Units 4 and 5, including electrofishing surveys in several of these streams on May 3, 2017 (accompanied by Chris Danilson, NW Region biologist) and June 19, 2017 (accompanied by Dan Hohl and Dan Allen, presales foresters). Please see the report titled "Mero Corner TS_StreamSurveyReport" for more information on the electrofishing results.

I did not feel it necessary to make additional trips to walk through the actual units, due to the age of these stands, in addition to information that I was provided by presales foresters regarding the stand conditions (i.e., there is a general lack of potential murrelet nesting platforms, as well as any other HCP habitat features).

Based on the site visits and a GIS review, I have the following input:

- None of the units contain suitable marbled murrelet habitat or platform trees. Based on my field review, there is revised suitable murrelet habitat located to the north of Unit 1 and northwest of Unit 2 that resulted in the expansion of previously-identified habitat. Because the full habitat block was not surveyed, this habitat must now be provided with a management buffer (but not a timing restriction), per the NPPU Interim Marbled Murrelet Strategy (Step 4a).

- A GIS review of other habitat that is located to the southeast of Unit 3 determined that it is also previously-identified habitat that was expanded following field delineation and verification (by John Moon - presales forester, and Tom Bloxton - former NW Region Biologist, respectively) in association with the Over There Timber Sale. This habitat was also incompletely surveyed, so it also requires a management buffer (but no timing restriction).
• There are four platform trees located to the northeast of Unit 5, but they are not part of a suitable habitat block. There was a previously-identified habitat polygon mapped by the model at this location, but field delineation and verification (by Dan Hohl and Lisa Egtvedt, respectively) has determined that the western 2/3 of the original polygon does not contain suitable habitat. According to old field notes, there may be more platform trees that were part of the eastern 1/3 of the original polygon (which would be located along the West Fork of Woods Creek). This could feasibly comprise a habitat block that was not fully delineated. However, this stand is very far removed from the proposal (1,200 feet at its closest point), without management implications for the current proposal, so that area was not field-verified at this time.

**General Proposal Area**

Following a GIS review of WDFW and DNR wildlife & habitat databases, it was determined:

• The nearest known occupied marbled murrelet site is located approximately 0.7 mile to the north of Units 1-3 (with no known occupied sites for many miles of Units 4-6). There have also been occupied detections made on non-DNR land approximately 1.3 miles to the northwest of Units 1-3 that likely involves habitat that is closer, on adjacent DNR land. However, this habitat is still located far enough away from the proposal (closest possible distance is 0.9 mile) that they do not warrant mitigation measures.

Besides those mentioned above, no other occurrences of habitats or species of concern are reported within or near the proposal area.

Thank you for the opportunity to review and provide input for this proposal.
<table>
<thead>
<tr>
<th>Name of Reviewers</th>
<th>Concur</th>
<th>Non-Concur</th>
<th>Date Comment Received</th>
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<tr>
<td>USFWS:</td>
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</table>

[ ] DNR Concur  [ ] DNR Non-Concur  [ ] Withdrawn

Justification:

Reviewer's Name: ____________________  Position: ____________________  Date: ________________

Proponent and Reviewers notified of decision by ____________________ on ____________________

(Name)  (Date)

Revised 2/12/2016
WATER TYPE MODIFICATION FORM
(For changes to the Water Type Map)

<table>
<thead>
<tr>
<th>Proponent Name and Organization</th>
<th>Proponent/Organization Address</th>
<th>Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daniel Hohl</td>
<td>Department of Natural Resources 919 N. Township St. Sedro-Woolley, W</td>
<td>(360) 856-3500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Email Address</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:daniel.hohl@dnr.wa.gov">daniel.hohl@dnr.wa.gov</a></td>
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<tbody>
<tr>
<td>Lisa Egtvedt</td>
<td>Same as above</td>
<td>(350) 856-3500</td>
</tr>
<tr>
<td>[ ] Same as Proponent</td>
<td></td>
<td>Email Address</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:lisa.egtvedt@dnr.wa.gov">lisa.egtvedt@dnr.wa.gov</a></td>
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<td>Department Of Natural Resources</td>
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<tr>
<td>[ ] Same as Proponent</td>
<td></td>
<td>Email Address</td>
</tr>
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Landowner Notified: [x] Yes [ ] No

Check Applicable Boxes:
[ ] Adding Typed Waters
[ ] Removing Typed Waters
[x] Changing Location of Typed Waters

[ ] Changing Water Type
[ ] Other; Describe: __________________________

(1) Water Segment ID
(2) Name of Water
(3) Tributary To
(4) Legal Description
(5) County
(6) Water Type Shown on Map
(7) Proposed Water Type
(8) Date(s) of Field Assessment
(9a) Forest Practices Application
(9b) Enforcement Document Number
(10) Change is based on the following (check all that apply):

[ ] Water type does not meet WAC 222-16-031 definition. Describe: __________________________

Survey Method:
[x] Electrofishing Protocol Survey (attach survey information)
[ ] ID Team (attach Informal Conference Note)
[ ] Visual Observation
[ ] Incremental Measurements
[ ] Physical Characteristics

Fish Found: [x] Yes [ ] No

List Species (if known):

Distance from Diversion:

Water Right Reference Number:

Hatchery Name:

Distance from Hatchery:

Revised 2/12/2016
(11) Water Levels in the Survey Area were:  [ ] Above Normal  [x] Normal  [ ] Below Normal

Was there a drought warning issued by DNR?  [ ] Yes  [x] No
If yes, describe how stream flows and fish use determinations were unaffected by drought conditions (attach pictures and other relevant information).

(12) Channel Characteristics (Use Stream Tally sheet for multiple stream segments)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Number of Bankfull Width Measurements</td>
<td>8</td>
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<tr>
<td>Widest Bankfull Width Measurement</td>
<td>9.4</td>
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<tr>
<td>Lowest Gradient</td>
<td>4</td>
</tr>
<tr>
<td>Average Gradient</td>
<td>6</td>
</tr>
<tr>
<td>Ponds and Impoundments &gt; 0.5 acre</td>
<td>[x] Yes</td>
</tr>
<tr>
<td>Narrowest Bankfull Width Measurement</td>
<td>2.8</td>
</tr>
<tr>
<td>Average Bankfull Width</td>
<td>4.4</td>
</tr>
<tr>
<td>Steepest Gradient</td>
<td>9</td>
</tr>
<tr>
<td>Average Wetted Width</td>
<td>N/A</td>
</tr>
<tr>
<td>Number of Protocol Pools</td>
<td>0</td>
</tr>
</tbody>
</table>

(13) Water Type Break was determined by (check all that apply; use Stream Tally sheet for multiple stream segments):

- [x] Electrofishing Protocol Survey (attach survey information)
- [ ] End of Harvest or Property Boundary
- [ ] Uppermost Point of Perennial Flow (describe in Block 16)
- [ ] Last Fish Observed
- [ ] Upper Extent of Fish Habitat
- [ ] Physical Characteristics
- [ ] Other: ____________________________

Provide a description of water type break, how it was marked in the field, and if available, latitude and longitude of type break location: Water Type Break was predetermined from protocol survey and water type modification form NW07216.

Do Type F physical characteristics occur above surveyed segment?  [ ] Yes  [x] No

(14) Are there any fish passage barriers downstream of the surveyed stream segment(s)?

- [ ] No. Continue to Block 15.  [x] Yes
  - [x] Natural Barrier
    - Type:  [ ] Falls  [ ] Cascades  [ ] Bedrock Chutes  [x] Other: 29% Bedrock Cascade
    - Length: ____________________________  Height: ____________________________  Gradient: ____________________________
    - [ ] Temporary Barrier  Describe: ____________________________
    - [ ] Man-made Barrier  Describe: ____________________________
  - Fish Observed Above the Barrier?  [ ] Yes  [x] No
  - Fish Passage Barriers were identified by: [x] Maps; specify: Maps On Form NW07216  [ ] Field Observations

Describe Location of Barrier(s) Downstream:
Barrier is referenced from Water Type Modification Form Region Reference Number NW07216. Div. Doc. No. 070152. This form approved 12/13/2007 is attached as reference.

(15) Is there evidence of recent mass wasting (filling in the stream channel) or scouring events?
[x] No  [ ] Yes; estimate when the event occurred: ____________________________
Describe how this affected current stream channel conditions and fish distribution in the stream:

(16) Provide any additional clarifying information and list attachments (survey cards, photos of type break, field notes, expert report, stationing, etc).

Please see attached Mero Corner Timber Sale - Electrofishing Protocol Survey Report August 10, 2017. Also attached is water type modification form NW07126, DIV. Doc. No 070152.
WATER TYPE MODIFICATION FORM
(For changes to the Water Type Map)

<table>
<thead>
<tr>
<th>Proponent Name and Organization</th>
<th>Proponent/Organization Address</th>
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<tbody>
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<td>Daniel Hohl</td>
<td>Department of Natural Resources 919 N. Township St.</td>
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<td>Telephone Number</td>
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<tr>
<td>Lisa Egtvedt</td>
<td>Same as above</td>
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</table>

[ ] Same as Proponent

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<td>Email Address</td>
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<td></td>
<td></td>
<td>N/A</td>
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</table>

Landowner Notified: [x] Yes  [ ] No

Check Applicable Boxes:
[ ] Adding Typed Waters
[ ] Removing Typed Waters
[ ] Changing Location of Typed Waters
[ ] Changing Water Type
[ ] Other; Describe: ____________________________

(1) Water Segment ID T
(2) Name of Water
   Unnamed
(3) Tributary To
   Does not flow into any water body
(4) Legal Description
   (Section, Township, Range E/W)
   NE1/4 of Section 17, T28, R07E
(5) County
   Snohomish
(6) Water Type Shown on Map
   Not Typed
(7) Proposed Water Type
   N / Type 4
(8) Date(s) of Field Assessment
   June 19, 2017

(9a) Forest Practices Application
[ ] Yes  [x] No
Number: ____________________________

(9b) Enforcement Document Number
[ ] Yes  [x] No
Number: ____________________________

(10) Change is based on the following (check all that apply):
[ ] Water type does not meet WAC 222-16-031 definition. Describe: ____________________________

Survey Method:
[ ] Electrofishing Protocol Survey (attach survey information)
[ ] ID Team (attach Informal Conference Note)
[ ] Visual Observation
[ ] Incremental Measurements
[ ] Physical Characteristics

Fish Found  [ ] Yes  [x] No
List Species (if known): ____________________________

[ ] Channel is a Public Water Diversion
Distance from Diversion: ____________________________
Water Right Reference Number: ____________________________
Hatchery Name: ____________________________
Distance from Hatchery: ____________________________

Revised 2/12/2016
(11) Water Levels in the Survey Area were: [ ] Above Normal [x] Normal [ ] Below Normal

Was there a drought warning issued by DNR? [ ] Yes [x] No
If yes, describe how stream flows and fish use determinations were unaffected by drought conditions (attach pictures and other relevant information).

(12) Channel Characteristics (Use Stream Tally sheet for multiple stream segments)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<tr>
<td>Number of Bankfull Width Measurements</td>
<td>OHWM -10</td>
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<tr>
<td>Widest Bankfull Width Measurement</td>
<td>OHWM - 3.2</td>
</tr>
<tr>
<td>Lowest Gradient</td>
<td>10</td>
</tr>
<tr>
<td>Average Gradient</td>
<td>14.4</td>
</tr>
<tr>
<td>Ponds and Impoundments &gt; 0.5 acre</td>
<td>[ ] Yes [x] No</td>
</tr>
<tr>
<td>Narrowest Bankfull Width Measurement</td>
<td>OHWM - 1.0</td>
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<tr>
<td>Average Bankfull Width</td>
<td>OHWM - 2.0</td>
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<tr>
<td>Steepest Gradient</td>
<td>17</td>
</tr>
<tr>
<td>Average Wetted Width</td>
<td>N/A</td>
</tr>
<tr>
<td>Number of Protocol Pools</td>
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(13) Water Type Break was determined by (check all that apply; use Stream Tally sheet for multiple stream segments):

[ ] Electrofishing Protocol Survey (attach survey information)
[ ] End of Harvest or Property Boundary
[ ] Uppermost Point of Perennial Flow (describe in Block 16)
[ ] Last Fish Observed
[ ] Upper Extent of Fish Habitat
[ ] Physical Characteristics
[ ] Other:

Provide a description of water type break, how it was marked in the field, and if available, latitude and longitude of type break location: Stream "T" flows out of an approximately 1/10th acre wetland.

Do Type F physical characteristics occur above surveyed segment? [ ] Yes [x] No

(14) Are there any fish passage barriers downstream of the surveyed stream segment(s)?

[ ] No. Continue to Block 15.
[ ] Unable to Access [x] Yes
[ ] Natural Barrier
  Type: [ ] Falls [x] Cascades [ ] Bedrock Chutes [ ] Other: subsurface flow / no connectivity
  Length: 150 feet
  Height: Gradient:
[ ] Temporary Barrier
  Describe:
[ ] Man-made Barrier
  Describe:
  Fish Observed Above the Barrier? [ ] Yes [x] No
  Fish Passage Barriers were Identified by: [ ] Maps; specify:
  Describe Location of Barrier(s) Downstream:
  [x] Field Observations

See attached Fish Sampling Report for map and description.

(15) Is there evidence of recent mass wasting (filling in the stream channel) or scouring events?

[x] No [ ] Yes; estimate when the event occurred:

Describe how this affected current stream channel conditions and fish distribution in the stream:

(16) Provide any additional clarifying information and list attachments (survey cards, photos of type break, field notes, expert report, stationing, etc).

Question (12)- Measurements were taken at ordinary high water mark (OHWM).

Stream T flows approximately 600 feet before going subsurface. It flows out of an approximately 1/10th acre wetland. Please see attached Mero Corner Timber Sale Electrofishing Protocol Survey Report dated August 10, 2017 for additional clarifying information and stream profile.
WATER TYPE MODIFICATION FORM
(For changes to the Water Type Map)

<table>
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<tr>
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<tbody>
<tr>
<td>Lisa Egertted</td>
<td>Same as above</td>
<td>(360) 856-3500</td>
</tr>
</tbody>
</table>

[ ] Same as Proponent

<table>
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<td>Department Of Natural Resources</td>
<td>Same as above</td>
<td>(360) 856-3500</td>
</tr>
</tbody>
</table>

[ ] Same as Proponent

Landowner Notified: [x] Yes [ ] No

Check Applicable Boxes:
[ ] Changing Water Type
[ ] Other; Describe: 

[ ] Adding Typed Waters
[ ] Removing Typed Waters
[ ] Changing Location of Typed Waters

(1) Water Segment ID Q

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<th>(2) Name of Water</th>
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<tr>
<td>Unnamed</td>
<td>West Fork Woods Creek</td>
<td>NE 1/4 of Section 17, T28, R07E</td>
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(5) County

| Snohomish |

<table>
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<tr>
<th>(6) Water Type Shown on Map</th>
<th>(7) Proposed Water Type</th>
<th>(8) Date(s) of Field Assessment</th>
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<tbody>
<tr>
<td>Unknown</td>
<td>Type F / Type 3</td>
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</table>

(9a) Forest Practices Application

| [ ] Yes | [x] No |

Number: 

(9b) Enforcement Document Number

| [ ] Yes | [x] No |

Number: 

(10) Change is based on the following (check all that apply):

[ ] Water type does not meet WAC 222-16-031 definition. Describe: 

Survey Method:

[ ] Electrofishing Protocol Survey (attach survey information)
[ ] ID Team (attach Informal Conference Note)
[ ] Visual Observation
[ ] Incremental Measurements
[ ] Physical Characteristics

Fish Found

| [x] Yes | [ ] No |

List Species (if known):

[ ] Channel is a Public Water Diversion

Distance from Diversion: 

Water Right Reference Number: 

[ ] Channel is a Fish Hatchery Diversion

Hatchery Name: 

Distance from Hatchery: 

Revised 2/12/2016
(11) Water Levels in the Survey Area were: [ ] Above Normal [x] Normal [ ] Below Normal

Was there a drought warning issued by DNR? [ ] Yes [x] No
If yes, describe how stream flows and fish use determinations were unaffected by drought conditions (attach pictures and other relevant information).

(12) Channel Characteristics (Use Stream Tally sheet for multiple stream segments)

| Number of Bankfull Width Measurements: 8 | Narrowest Bankfull Width Measurement: 1.7 |
| Widest Bankfull Width Measurement: 5.7 | Average Bankfull Width: 3.2 |
| Lowest Gradient: 6 | Steepest Gradient: 9 |
| Average Gradient: 7.8 | Average Wetted Width: N/A |
| Ponds and Impoundments > 0.5 acre: [x] Yes [ ] No | Number of Protocol Pools: 0 |

(13) Water Type Break was determined by (check all that apply; use Stream Tally sheet for multiple stream segments):

[ ] Electrofishing Protocol Survey (attach survey information)
[ ] End of Harvest or Property Boundary
[x] Uppermost Point of Perennial Flow (describe in Block 16)
[ ] Last Fish Observed
[ ] Upper Extent of Fish Habitat
[ ] Physical Characteristics
[ ] Other: __________________________________________

Provide a description of water type break, how it was marked in the field, and if available, latitude and longitude of type break location:

Do Type F physical characteristics occur above surveyed segment? [ ] Yes [x] No

(14) Are there any fish passage barriers downstream of the surveyed stream segment(s)?

[ ] No. Continue to Block 15. [ ] Unable to Access [x] Yes

[x] Natural Barrier

Type: [x] Falls [x] Cascades [x] Bedrock Chutes [ ] Other: __________________________________________

Length: ___________________________ Height: ___________________________ Gradient: ___________________________

[ ] Temporary Barrier Describe: __________________________________________

[ ] Man-made Barrier Describe: __________________________________________

Fish Observed Above the Barrier? [x] Yes [ ] No
Fish Passage Barriers were Identified by: [ ] Maps; specify: ___________________________

[x] Field Observations

Describe Location of Barrier(s) Downstream:

Barriers were located on Stream "Z" at several points keeping fish from migrating upstream. See attached table of natural barrier measurements. However, fish were found above these barriers in pools on the wetland edge near the inlet of Stream "Q".

(15) Is there evidence of recent mass wasting (filling in the stream channel) or scouring events?

[x] No [ ] Yes; estimate when the event occurred: __________________________

Describe how this affected current stream channel conditions and fish distribution in the stream:

(16) Provide any additional clarifying information and list attachments (survey cards, photos of type break, field notes, expert report, stationing, etc).

* Question 13: Stream "Q" drains a linear wetland. The water type break was determined by making visual observations where wetland ended and stream channel began.

WATER TYPE MODIFICATION FORM
(For changes to the Water Type Map)

<table>
<thead>
<tr>
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<td>Department of Natural Resources 919 N. Township Dr.</td>
<td>(360) 856-3500</td>
</tr>
<tr>
<td>[ ] Same as Proponent</td>
<td>Same as above</td>
<td></td>
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<td>Same as above</td>
<td>(360) 856-3500</td>
</tr>
<tr>
<td>[ ] Same as Proponent</td>
<td>Same as above</td>
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<tr>
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</tr>
<tr>
<td>[ ] Same as Proponent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Landowner Notified: [x] Yes  [ ] No

Check Applicable Boxes:
[ ] Adding Typed Waters  [x] Changing Water Type
[ ] Removing Typed Waters  [ ] Other; Describe: _____________________________
[ ] Changing Location of Typed Waters

<table>
<thead>
<tr>
<th>(1) Water Segment ID Z</th>
<th>(2) Name of Water</th>
<th>(3) Tributary To</th>
<th>(4) Legal Description (Section, Township, Range E/W)</th>
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<tbody>
<tr>
<td></td>
<td>Unnamed</td>
<td>West Fork Woods Creek</td>
<td>NW 1/4 of Section 16, T28, R07E</td>
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</table>

<table>
<thead>
<tr>
<th>(5) County</th>
<th>(6) Water Type Shown on Map</th>
<th>(7) Proposed Water Type</th>
<th>(8) Date(s) of Field Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snohomish</td>
<td>N</td>
<td>Type F / Type 4</td>
<td>June 19</td>
</tr>
</tbody>
</table>

(9a) Forest Practices Application: [x] Yes  [ ] No
Number: _____________________________

(9b) Enforcement Document Number:
[ ] Yes  [x] No
Number: _____________________________

(10) Change is based on the following (check all that apply):
[ ] Water type does not meet WAC 222-16-031 definition. Describe: _____________________________

Survey Method:
[ ] Electrofishing Protocol Survey (attach survey information)
[ ] ID Team (attach Informal Conference Note)
[ ] Visual Observation
[ ] Incremental Measurements
[ ] Physical Characteristics

Fish Found: [x] Yes  [ ] No
List Species (if known): _____________________________
Distance from Diversion: _____________________________
Water Right Reference Number: _____________________________
Hatchery Name: _____________________________
Distance from Hatchery: _____________________________

Revised 2/12/2016
(11) Water Levels in the Survey Area were: [ ] Above Normal [x] Normal [ ] Below Normal

Was there a drought warning issued by DNR? [ ] Yes [x] No

If yes, describe how stream flows and fish use determinations were unaffected by drought conditions (attach pictures and other relevant information).

(12) Channel Characteristics (Use Stream Tally sheet for multiple stream segments)

| Number of Bankfull Width Measurements OHWM - 15 | Narrowest Bankfull Width Measurement OHWM - 3.7 |
| Widest Bankfull Width Measurement OHWM - 14.8 | Average Bankfull Width OHWM - 8.2 |
| Lowest Gradient 6° | Steepest Gradient 48° |
| Average Gradient 22.9 | Average Wetted Width N/A |
| Ponds and Impoundments > 0.5 acre [x] Yes [ ] No | Number of Protocol Pools N/A |

(13) Water Type Break was determined by (check all that apply; use Stream Tally sheet for multiple stream segments):

[ ] Electrofishing Protocol Survey (attach survey information)
[ ] End of Harvest or Property Boundary
[ ] Uppermost Point of Perennial Flow (describe in Block 16)
[ ] Last Fish Observed
[ ] Upper Extent of Fish Habitat
[ ] Physical Characteristics
[ ] Other:

Provide a description of water type break, how it was marked in the field, and if available, latitude and longitude of type break location: "Z" flows out of wetland ...break is at the end of the stream. Type F physical characteristics occur above Z at Q

Do Type F physical characteristics occur above surveyed segment? [x] Yes [ ] No

(14) Are there any fish passage barriers downstream of the surveyed stream segment(s)?

[ ] No. Continue to Block 15. [ ] Unable to Access [x] Yes

[ ] Natural Barrier

Type: [x] Falls [x] Cascades [ ] Bedrock Chutes [x] Other: Increase in overall stream gradient

Length: __________________________ Height: __________________________ Gradient: __________________________

[ ] Temporary Barrier Describe: __________________________

[ ] Man-made Barrier Describe: __________________________

Fish Observed Above the Barrier? [x] Yes [ ] No

Fish Passage Barriers were identified by: [ ] Maps; specify: __________________________ [x] Field Observations

Describe Location of Barrier(s) Downstream:

Barriers are located at three specific points downstream on Stream Z. Electro fishing confirmed fish in Stream Q which is above Stream Z. Consequently despite natural barriers on Stream Z, all of Stream Z is Type F. Find Data and Maps Attached.

(15) Is there evidence of recent mass wasting (filling in the stream channel) or scouring events?

[x] No [ ] Yes; estimate when the event occurred: __________________________

Describe how this affected current stream channel conditions and fish distribution in the stream:

(16) Provide any additional clarifying information and list attachments (survey cards, photos of type break, field notes, expert report, stationing, etc).

Question (12) - Measurements were taken at ordinary high water mark (OHWM). Please see attached Mero Corner Timber Sale Electrofishing Protocol Survey Report dated August 10, 2017 for additional clarifying information and stream profile.
Stream = MELO Corner SW
<table>
<thead>
<tr>
<th>Natural Barrier 2</th>
<th>Natural Barrier 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>28% Slope for 55 feet</td>
<td>32 feet</td>
</tr>
<tr>
<td>Drops 2.8 feet (measured w/ tape) then runs to W. Fork Woods Creek</td>
<td>Step 3: 6.0 feet</td>
</tr>
<tr>
<td>Drops 3.6 feet (measured w/ tape) then runs 77 feet</td>
<td>Step 2: 5.2 feet</td>
</tr>
<tr>
<td>Drops 2.6 feet (measured w/ tape) then runs 77 feet</td>
<td>Step 1: 6.4 feet</td>
</tr>
<tr>
<td>19 feet from &quot;Natural Barrier 2&quot; stream drops 0.0 feet (estimated) then runs</td>
<td>Three steps</td>
</tr>
<tr>
<td>23 feet (measured w/ tape)</td>
<td>Channel &quot;B&quot; 2.1 feet</td>
</tr>
<tr>
<td>Feet drops 2.7 feet (measured w/ tape) flows for 7 feet and drops 3.5 feet</td>
<td>Channel &quot;A&quot; 3.9 feet</td>
</tr>
<tr>
<td>Channel &quot;B&quot; first flow measured 5.0 feet (estimated) flows 22</td>
<td>Channel &quot;A&quot; first flow measured 5.0 feet (estimated) flows 7 feet and</td>
</tr>
<tr>
<td>Channel has separate characteristics each</td>
<td></td>
</tr>
<tr>
<td>and &quot;A&quot; to distinguish the *Spills right above barrier. Strips right above barrier.</td>
<td></td>
</tr>
<tr>
<td>Potential Natural Barrier 2: Stream above barrier</td>
<td>Barrier Height and Stream Profile</td>
</tr>
</tbody>
</table>

Field Notes on Unnamed Tributary to West Fork Woods Creek
Electrofishing Protocol Survey Report  
Mero Corner Timber Sale  
August 10, 2017

**Background**

This report is intended to provide supporting documentation for a forest practice application for the proposed Mero Corner timber sale, which is being developed by DNR’s state lands timber sale program, and is located adjacent to and upstream of the areas sampled. The subject streams and units of interest (with respect to stream surveys) are located on DNR land, in Sections 8, 16, and 17 of Township 28 North, Range 7 East.

Stream Q flows from a beaver pond northeastward into a larger wetland complex, and Stream Z flows out of this wetland complex, generally eastward into the West Fork of Woods Creek (Figure 1). Stream Q was not previously modeled, and Stream Z is currently modeled as a Type 4 or N (non-fish bearing) water. A survey effort was conducted because these stream segments had not been previously verified, and physical criteria suggested that functional habitat exists above the wetland complex in Stream Q (Appendix A), which is located in the planning area for Unit 5A of the Mero Corner timber sale proposal.

Stream T was not previously modeled, but has been mapped using GPS (Figure 2). It flows out of an opening in the conifer forest that contains wet-facultative species (salmonberry, willow trees), but which has no overland flow into it. This stream flows for approximately 600 feet until it goes subsurface approximately 150 feet from the same wetland that Stream Q flows into. Although the physical criteria for this stream suggests that it could be considered to represent functional habitat (Appendix B), it does not have overland connection to the wetland or other streams. In addition, the data in Appendix B supports the additional observation that there are many stretches along this stream that are less than two feet wide. Therefore, it was not electrofished, and it is proposed to be a Type 4/N water. This stream is also associated with Unit 5A of the Mero Corner timber sale proposal.

Stream V flows out of a linear wetland that goes intermittently subsurface before forming a distinct channel (Figure 3). This stream flows for approximately 450 feet until it flows into a wetland with deeper and more open water than the wetland that Stream Q flows into. The physical criteria for this stream suggest that functional habitat could exist above the wetland (Appendix C). However, a protocol survey was conducted in 2007 for the stream flowing out of this wetland and determined that both that stream and the wetland do not contain fish, establishing them as Type 4/N waters. An electrofishing survey was conducted on Stream V to verify that the stream above these waters is also a non-fish bearing water. This stream is located near Unit 4 of the Mero Corner timber sale proposal.

In April and June of 2017, the Washington Department of Natural Resources (DNR) state lands program initiated consultation with fisheries representatives from The Tulalip Tribes and Washington Department of Fish & Wildlife (WDFW) regarding the Mero Corner timber sale and proposed stream typing work on tributaries to the West Fork of Woods Creek.
Electrofishing Survey

On June 19, 2017, electrofishing surveys were performed by biologist Lisa Egtvedt (DNR), accompanied by DNR foresters Dan Hohl and Dan Allen. The purpose of these surveys was to determine the presence/absence of fish for stream segments that had not been previously modeled by the water type model (Streams Q and T), as well as one stream that is currently mapped incorrectly (Stream V).

Water temperature and conductivity at the start of the surveys was measured as 11.7°C and 37µS, respectively. A Smith-Root LR-20 backpack electrofisher was used to conduct the surveys with the following settings: 400 volts, 30 Hertz, and 15% duty cycle. Water clarity was good throughout the surveys, allowing good visibility in all habitat surveyed.

Electrofishing for Stream Q was conducted beginning in pools on the edge of the wetland (Figures 4 and 5) near the inlet of Stream Q, and continuing up the stream until a beaver dam was reached. Beyond this dam there is deep ponded water that is not feasible to electrofish. Upon initiation of electrofishing, very small fish (~2-3 cm in length) were encountered in the pools near the inlet of Stream Q. It was not possible to obtain a photo of any of them, but they were assumed to be newly-emerged cutthroat trout, based on consultation with Derek Marks of the Tulalip Tribes.

See Figure 6 for a representation of general stream conditions of Stream Q. It was noted that flow was considerably reduced compared to previous observations on May 19, 2017. Some small (not “qualifying”) pools were encountered (Figure 7), and coastal giant salamanders were found in three of these pools. A total of 384 seconds of electrofishing effort was expended over approximately 420 feet of channel length. A total of four fish were observed, only in the wetland edge near the inlet of Stream Q. However, it is feasible that Stream Q could be accessible to fish during higher flows, and since a beaver dam is not considered to be a permanent natural barrier, it is assumed that fish could be present in the pond, as well.

For Stream V, electrofishing began near the inlet to the northern wetland, but it did not include any electrofishing within the wetland, as there is deeper water at the edge, which was deemed to be infeasible to electrofish effectively. As mentioned above, the wetland was sampled (using alternate methods) during the 2007 survey and found to not contain fish. During the survey of Stream V we sampled all available habitat in approximately 450 feet of stream, including two pools, neither of which met Forest Practices Board Manual criteria for “qualifying pools” (they both had three square feet in surface area, but had depths of three to five inches). See Figures 8 and 9 for representative photos of Stream V and an example of the intermittent subsurface areas that transition between the linear wetland and the stream channel, respectively. We expended 152 seconds of electrofishing effort, with no fish (or salamanders) detected during the entire survey. Based on these results, combined with the results of the previous survey downstream, this stream is proposed to be a Type 4/N water.

The physical characteristics of Stream Z (Appendix D) would normally establish it as a Type 4/N stream, with gradients over 20% for at least 300 feet (including a 150-foot reach with a sustained gradient in excess of 30%). Numerous permanent natural barriers (boulder and bedrock steps and cascades) also exist in this stream. However, the presence of fish in the wetland complex
above the stream now establishes this stream segment to be a Type 3/F (fish bearing) stream. During the review of the lower part of this stream, numerous small fish (~2.5-4 cm in length) were observed in pools in the floodplain, near the confluence of the stream with the West Fork of Woods Creek. All pools above this area were carefully studied (but not electrofished), with no more fish detected in the stream segment that flows between the wetland and the floodplain. It is unlikely that fish of this size could make it upstream past the barriers, but they could pass downstream from the wetland.
Figure 1. Proposed stream type changes associated with the Mero Corner timber sale (for Streams Q and Z).
Figure 2. Proposed stream addition associated with the Mero Corner timber sale (Stream T).
Figure 3. Proposed stream location change and stream type verification associated with the Mero Corner timber sale (for Stream V).
Figure 4. Pool on wetland edge, where fish were found near inlet of Stream Q.

Figure 5. Another pool on wetland edge where fish were found near inlet of Stream Q.
Figure 6. Typical conditions of Stream Q. This stream is currently not modeled.

Figure 7. Example of small (non-qualifying) pool in Stream Q where coastal salamanders were detected.
Figure 8. Typical conditions of Stream V.

Figure 9. Lack of surface water between linear wetland and beginning of Stream V.
**Appendix A. Profile measurements on Stream Q (Note: width was measured at BFW)**

<table>
<thead>
<tr>
<th>Stn. #</th>
<th>Width (ft)</th>
<th>% Slope</th>
</tr>
</thead>
<tbody>
<tr>
<td>0+00</td>
<td>1.7</td>
<td>8</td>
</tr>
<tr>
<td>0+50</td>
<td>2.8</td>
<td>6</td>
</tr>
<tr>
<td>1+00</td>
<td>4.2</td>
<td>8</td>
</tr>
<tr>
<td>1+50</td>
<td>2.7</td>
<td>9</td>
</tr>
<tr>
<td>2+00</td>
<td>2.1</td>
<td>8</td>
</tr>
<tr>
<td>2+50</td>
<td>2.2</td>
<td>8</td>
</tr>
<tr>
<td>3+00</td>
<td>3.5</td>
<td>6</td>
</tr>
<tr>
<td>3+50</td>
<td>6.7</td>
<td>8</td>
</tr>
</tbody>
</table>

**Appendix B. Profile measurements on Stream T (Note: width was measured at OHWM)**

<table>
<thead>
<tr>
<th>Stn. #</th>
<th>Width (ft)</th>
<th>% Slope</th>
</tr>
</thead>
<tbody>
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<td>14</td>
</tr>
<tr>
<td>0+50</td>
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<td>1+00</td>
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<td>17</td>
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<td>16</td>
</tr>
<tr>
<td>3+00</td>
<td>1.9</td>
<td>15</td>
</tr>
<tr>
<td>3+50</td>
<td>2.5</td>
<td>16</td>
</tr>
<tr>
<td>4+00</td>
<td>1.9</td>
<td>15</td>
</tr>
<tr>
<td>4+50</td>
<td>*</td>
<td>--</td>
</tr>
<tr>
<td>5+00</td>
<td>**</td>
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</tr>
<tr>
<td>5+50</td>
<td>***</td>
<td>--</td>
</tr>
<tr>
<td>6+00</td>
<td>3.2</td>
<td>11</td>
</tr>
</tbody>
</table>

* 3 channels noted, no measurements taken
** “overland flow fanning out”, no measurements taken
*** on road

NOTE: Stn 6+00 was located near a culvert

**Appendix C. Profile measurements on Stream V (Note: width was measured at BFW)**

<table>
<thead>
<tr>
<th>Stn. #</th>
<th>Width (ft)</th>
<th>% Slope</th>
</tr>
</thead>
<tbody>
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<td>3.5</td>
<td>5</td>
</tr>
<tr>
<td>0+50</td>
<td>4.3</td>
<td>7</td>
</tr>
<tr>
<td>1+00</td>
<td>3.8</td>
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<td>2+50</td>
<td>9.4</td>
<td>*</td>
</tr>
<tr>
<td>3+00</td>
<td>**</td>
<td>--</td>
</tr>
<tr>
<td>3+50</td>
<td>4.8</td>
<td>9</td>
</tr>
<tr>
<td>4+00</td>
<td>3.4</td>
<td>7</td>
</tr>
<tr>
<td>4+50</td>
<td>***</td>
<td>--</td>
</tr>
<tr>
<td>5+00</td>
<td>****</td>
<td>--</td>
</tr>
</tbody>
</table>

* culvert within 50 feet
** on road
*** braided
**** no channel
Appendix D. Profile measurements on Stream Z (Note: width was measured at OHWM)

<table>
<thead>
<tr>
<th>Stn. #</th>
<th>Width (ft)</th>
<th>% Slope</th>
</tr>
</thead>
<tbody>
<tr>
<td>0+00</td>
<td>10.0</td>
<td>10</td>
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<td>0+50</td>
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<td>6</td>
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<tr>
<td>1+50</td>
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<td>14</td>
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<tr>
<td>2+00</td>
<td>6.0</td>
<td>11</td>
</tr>
<tr>
<td>2+50</td>
<td>10.4</td>
<td>12</td>
</tr>
<tr>
<td>3+00</td>
<td>14.8</td>
<td>9</td>
</tr>
<tr>
<td>3+50</td>
<td>8.9</td>
<td>24</td>
</tr>
<tr>
<td>4+00</td>
<td>6.1</td>
<td>21</td>
</tr>
<tr>
<td>4+50</td>
<td>5.9</td>
<td>24</td>
</tr>
<tr>
<td>5+00</td>
<td>*</td>
<td>36</td>
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<td>5+50</td>
<td>*</td>
<td>38</td>
</tr>
<tr>
<td>6+00</td>
<td>*</td>
<td>27</td>
</tr>
<tr>
<td>6+50</td>
<td>7.4, 11.7</td>
<td>32</td>
</tr>
<tr>
<td>7+00</td>
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<tr>
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<td>3.7</td>
<td>24</td>
</tr>
<tr>
<td>8+50</td>
<td>10.3</td>
<td>22</td>
</tr>
</tbody>
</table>

*Stream split, no measurements taken

**Barriers (3.0 to 3.5-foot boulder steps)
Water Type Modification Form
(For changes to the Water Type Map)

Check all that apply
- [x] Adding streams/lakes
- [  ] Removing streams/lakes
- [  ] Changing location of streams/lakes
- [ ] Changing water type based on physical characteristics
- [ ] Changing water type based on protocol survey
- [ ] Other. Describe

<table>
<thead>
<tr>
<th>1. Water Reference Id</th>
<th>2. Name of Water Tributary</th>
<th>3. Tributary To Woods Creek</th>
<th>4. Legal Description (¼¾ Section, Township, Range, E/W) NE ¼ SE ¼ Sec. 8 T28N R7E</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td>West Fork</td>
<td></td>
</tr>
</tbody>
</table>

5. County Snohomish
6. Water Type Shown on Map
7. Proposed Water Type F
8. Date of Field Visit 5/8/07

9. Forest Practices Application Number(s) (if applicable)

10. Change is based on the following (check all that apply).
- [x] Fish found Public water diversion
- [ ] No fish found Fish hatchery diversion
- [ ] Physical characteristics – describe:
  (see Additional Block Text on attached sheet)

11. Water levels in the survey area were: [  ] Above Normal [x] Normal [  ] Below Normal
- Description:
  Discharge was estimated to be 0.1 cfs. Water clarity was good with the stream bottom visible in the deepest pools.

12. The water type break was determined by:
- [ ] Stopping at last observed fish
- [x] Stopping at upper extent of fish habitat
- [ ] Stopping at end of harvest or property boundary
- [ ] Other – describe:
  (see Additional Block Text on attached sheet)

13. Are there any fish passage barriers downstream of the surveyed stream segment(s):
- [ ] Natural barriers: [  ] Falls [  ] Cascades [  ] Bedrock chutes If yes, what is the height ______
- [ ] Temporary barriers (log jams)
- [ ] Man-made barriers (culverts)
  Fish passage barriers were identified by: [  ] Maps [x] Field observation [  ] Other – describe: n/a

14. Is there evidence of mass wasting or scouring events?
- [x] No
- [ ] Yes. Describe how these affected current stream channel conditions and fish distribution in the stream.

*Proponent name and signature

Print Name: Jason Stuart

Surveyor name

Kyle B Meier

Organization name and address
WA Department Natural Resources
919 North Township Street
Sedro-Woolley, Washington 98284

Telephone number 360.854.2807

Organization name and address
Forest and Channel Metrics, Inc.
P.O. Box 4455
Olympia, Washington 98501

Telephone number 360.753.0485
**Water Type Modification Form**  
*(For changes to the Water Type Map)*

**Check all that apply**

- *Adding streams/lakes
- *Removing streams/lakes
- *Changing location of streams/lakes
- Changing water type based on physical characteristics
- Changing water type based on protocol survey
- Other: Describe

**Region Name**: NW  
**Region Reference Number**: NW07A16

**WRIA #:** 7

<table>
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<tr>
<th></th>
<th></th>
<th></th>
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<tr>
<td></td>
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<td>Regional DNR Use Only</td>
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**5. *County**: Snohomish  
**6. Water Type Shown on Map**:  
**7. Proposed Water Type**:  
**8. *Date of Field Visit**: 5/8/07

**9. *Forest Practices Application Number(s) (if applicable)**

**10. Change is based on the following (check all that apply):**
- [ ] Fish found  
- [ ] No fish found  
- [ ] Physical characteristics – describe:

**11. Water levels in the survey area were:**
- [ ] Above Normal  
- [ ] Normal  
- [ ] Below Normal  

**12. The water type break was determined by:**
- [ ] Stopping at last observed fish  
- [ ] Stopping at upper extent of fish habitat  
- [ ] Stopping at end of harvest or property boundary  
- [ ] Other – describe:

**13. Are there any fish passage barriers downstream of the surveyed stream segment(s):**
- [ ] Natural barriers: [ ] Falls [ ] Cascades [ ] Bedrock chutes  
- [ ] Temporary barriers (log jams)  
- [ ] Man-made barriers (culverts)  

Fish passage barriers were identified by: [ ] Maps  
[ ] Field observation  
[ ] Other – describe:

**14. Is there evidence of mass wasting or scouring events?**
- [ ] No  
- [ ] Yes. Describe how these affected current stream channel conditions and fish distribution in the stream.

**Proponent name and signature**

Print Name: Jason Stuart  
Surveyor name: Kyle B Melor

**Organization name and address**

- WA Department Natural Resources  
919 North Township Street  
Sedro-Woolley, Washington 98284  
**Telephone number**: 360.854.2807

- Forest and Channel Metrics, Inc.  
P.O. Box 4455  
Olympia, Washington 98501  
**Telephone number**: 360.753.0485

*Form QQ 49 (05/05) revised 10/05*  
1 of 2
Water Type Modification Form
(For changes to the Water Type Map)

Check all that apply

- Adding streams/lakes
- Removing streams/lakes
- Changing location of streams/lakes
- Changing water type based on physical characteristics
- Changing water type based on protocol survey
- Other. Describe

1. Water Reference ID
2. Name of Water
3. Tributary To
4. Legal Description
(¼¼ Section, Township, Range, E/W)
NE ¼ SE ¼ Sec. 8 T28N R7E

5. County
Snohomish
6. Water Type Shown on Map
7. Proposed Water Type
8. Date of Field Visit
6/8/07

9. Forest Practices Application Number(s) (if applicable)

10. Change is based on the following (check all that apply):
- Fish found
  - Public water diversion
- No fish found
  - Fish hatchery diversion
- Physical characteristics – describe:

11. Water levels in the survey area were:
- Above Normal
- Normal
- Below Normal

12. The water type break was determined by:
- Stopping at last observed fish
- Stopping at upper extent of fish habitat
- Stopping at end of harvest or property boundary
- Other – describe:

13. Are there any fish passage barriers downstream of the surveyed stream segment(s):
- Natural barriers: [ ] Falls [ ] Cascades [ ] Bedrock chutes If yes, what is the height ______
- Temporary barriers (log jams)
- Man-made barriers (culverts)
Fish passage barriers were identified by: [ ] Maps [ ] Field observation [ ] Other – describe:

14. Is there evidence of mass wasting or scouring events?
[ ] No
[ ] Yes. Describe how these affected current stream channel conditions and fish distribution in the stream.

*PropONENT name and signature
Print Name: Jason Stuart

Surveyor name
Kyle B Meier

Organization name and address
WA Department Natural Resources
919 North Township Street
Sedro-Woolley, Washington 98284
Telephone number
360.854.2807

Organization name and address
Forest and Channel Metrics, Inc.
P.O. Box 4455
Olympia, Washington 98501
Telephone number
360.753.0485
# Water Type Modification Form

(For changes to the Water Type Map)

<table>
<thead>
<tr>
<th>Check all that apply</th>
<th>4. Legal Description</th>
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</thead>
<tbody>
<tr>
<td>*Adding streams/lakes</td>
<td>(¼¼ Section, Township, Range, E/W)</td>
</tr>
<tr>
<td>[ ] Removing streams/lakes</td>
<td>SE ¼ SE ¼ Sec. 8 T28N R7E</td>
</tr>
<tr>
<td>[ ] Changing location of streams/lakes</td>
<td></td>
</tr>
<tr>
<td>[ ] Changing water type based on physical characteristics</td>
<td></td>
</tr>
<tr>
<td>[ ] Changing water type based on protocol survey</td>
<td></td>
</tr>
<tr>
<td>[ ] Other, Describe</td>
<td></td>
</tr>
</tbody>
</table>

| 1. Water Reference ID D                                                                 |
| 2. Name of Water                                                                                   |
| 3. Tributary To Woods Creek                                                                        |
| 4. Legal Description (¼¼ Section, Township, Range, E/W)                                             |
| SE ¼ SE ¼ Sec. 8 T28N R7E                                                                         |

<table>
<thead>
<tr>
<th>5. County</th>
<th>6. Water Type Shown on Map</th>
<th>7. Proposed Water Type</th>
<th>8. Date of Field Visit</th>
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<tbody>
<tr>
<td>Snohomish</td>
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<td>5/18/07</td>
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<table>
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<tr>
<th>9. Forest Practices Application Number(s) (if applicable)</th>
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</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

| 10. Change is based on the following (check all that apply). |
| [ ] Fish found                                              |
| [ ] Public water diversion                                  |
| [ ] Fish hatchery diversion                                 |
| [ ] Physical characteristics — describe:                   |

Protocol survey conducted for Water Ref. ID A.

| 11. Water levels in the survey area were:                 |
| [ ] Above Normal                                         |
| [x] Normal                                               |
| [ ] Below Normal                                         |

Water flow estimated to be 0.1 cfs.

| 12. The water type break was determined by:               |
| [ ] Stopping at last observed fish                        |
| [x] Stopping at upper extent of fish habitat              |
| [ ] Stopping at end of harvest or property boundary       |
| [ ] Other — describe:                                     |

Segment is upstream of FIN type break proposed for break Water Ref. ID A.

| 13. Are there any fish passage barriers downstream of the surveyed stream segment(s): |
| [x] Natural barriers: [ ] Falls [x] Cascades [ ] Bedrock chutes |
| [ ] Temporary barriers (log jams)                         |
| [ ] Man-made barriers (culverts)                           |

Fish passage barriers were identified by: [ ] Maps [ ] Field observation [ ] Other — describe:

Segment is upstream from FIN type break described for Water Ref. ID A.

| 14. Is there evidence of mass wasting or scouring events? |
| [ ] No                                                   |
| [ ] Yes, Describe how these affected current stream channel conditions and fish distribution in the stream |

*Proponent name and signature*

Print Name: Jason Stuart

Surveyor name

Kyle B Meier

Organization name and address

WA Department Natural Resources
919 North Township Street
Sedro-Woolley, Washington 98284

Telephone number

360.854.2807

Organization name and address

Forest and Channel Metrics, Inc.
P.O. Box 4455
Olympia, Washington 98501

Telephone number

360.753.0485

Form QQ 49 (05/05) revised 10/05
Additional Block Text

Water Reference ID A: Unnamed Tributary of West Fork Woods Creek

Location: NE ¼ of the SE ¼ of Section 8 Township 28N Range 7E

Proposed Modification: Change location of Type N water based on field observations

Block 10
An electrofishing survey was conducted on May 8, 2007 on an unnamed tributary to West Fork Woods Creek. The survey followed guidance provided in the Washington Department of Natural Resources interim water typing rules (WAC 222-16-031(3), Chapter 13 Forest Practices Board Manual). The extent of our survey is delineated by the start and end of survey points on the accompanying map.

We sampled all available habitat in 1,334 feet of stream, including 36 pools, none of which met Forest Practices Board Manual, Section 13, criteria for high quality. We expended 731 seconds of electrofisher operation during the course of the survey. No fish were detected in the entire survey. Additional survey details are contained in the accompanying Protocol Survey Data Table.

Block 12
The water type break was determined by conducting a protocol field survey. We are proposing that the F/N water type break be located at a 29% bedrock outcrop in the channel 126 feet from the confluence with the West Fork Woods Creek. This feature is a natural and persistent control on upstream fish movement.
### Protocol Survey Data Table

#### Survey Data:

<table>
<thead>
<tr>
<th>Survey ID number</th>
<th>DNR_050807_02C_28N07E08J</th>
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</thead>
<tbody>
<tr>
<td>Date</td>
<td>May 8, 2007</td>
</tr>
<tr>
<td>Surveyors</td>
<td>KBM, SMH: Forest &amp; Channel Metrics, Inc.</td>
</tr>
<tr>
<td>WRIA</td>
<td>7</td>
</tr>
<tr>
<td>Starting point description</td>
<td>75 feet above confluence with West Fork Woods Creek</td>
</tr>
<tr>
<td>Ending point description</td>
<td>At outlet of pond, then 100 feet above road with Culvert #10</td>
</tr>
<tr>
<td>Total distance</td>
<td>1,334 feet</td>
</tr>
<tr>
<td>Total seconds shocked</td>
<td>731</td>
</tr>
<tr>
<td>Total pools (qualifying/total)</td>
<td>0 / 36</td>
</tr>
<tr>
<td>Weather</td>
<td>Clear</td>
</tr>
<tr>
<td>Discharge</td>
<td>0.1 cfs, Float-chip</td>
</tr>
<tr>
<td>Temperature</td>
<td>13 °C</td>
</tr>
<tr>
<td>Specific conductivity</td>
<td>22 μS/cm</td>
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</table>

#### Electrofisher Data:

<table>
<thead>
<tr>
<th>Shocker type</th>
<th>Smith-Root: LR-24</th>
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<tr>
<td>Setup</td>
<td>Manual</td>
</tr>
<tr>
<td>Volts</td>
<td>900</td>
</tr>
<tr>
<td>Duty cycle</td>
<td>12 %</td>
</tr>
<tr>
<td>Frequency</td>
<td>30 Hz</td>
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</tbody>
</table>

#### Physical Survey Data:

<table>
<thead>
<tr>
<th>Reach</th>
<th>Water Reference ID</th>
<th>Total Distance</th>
<th>Average Wetted Channel Width</th>
<th>Average Bankfull Channel Width</th>
<th>Average Valley Width</th>
<th>Confinement</th>
<th>Average Channel Slope</th>
<th>Dominant Channel Bedform</th>
<th>Total Pools (Qualifying/Total)</th>
<th>Pool Spacing</th>
<th>Average Wood Loading</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>128 feet</td>
<td>1.5 feet</td>
<td>2 feet</td>
<td>20 feet</td>
<td>Unconfined</td>
<td>11 %</td>
<td>Force step-pool</td>
<td>0 / 0</td>
<td>0</td>
<td>High</td>
</tr>
<tr>
<td>2</td>
<td>A, B</td>
<td>1,006 feet</td>
<td>2.2 feet</td>
<td>3.4 feet</td>
<td>10 feet</td>
<td>Highly confined</td>
<td>14 %</td>
<td>Force step-pool</td>
<td>0 / 33</td>
<td>9</td>
<td>Moderate</td>
</tr>
<tr>
<td>3</td>
<td>D</td>
<td>200 feet</td>
<td>0.8 feet</td>
<td>1.3 feet</td>
<td>8 feet</td>
<td>Moderately confined</td>
<td>5 %</td>
<td>Pool-riffle</td>
<td>0 / 3</td>
<td>53</td>
<td>Moderate</td>
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#### Features Limiting Fish Distribution:
The feature limiting fish distribution is a 29% bedrock outcrop at Sta. 1+26.

#### Culverts:
Forest road (Sta. 1+00, Reach 3): 30 inch CMP, no drop, retains gravel substrate

#### Catch Data:

<table>
<thead>
<tr>
<th>Fish species and age classes present</th>
<th>None detected</th>
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<tbody>
<tr>
<td>0+</td>
<td>0</td>
</tr>
<tr>
<td>1+</td>
<td>0</td>
</tr>
<tr>
<td>2+</td>
<td>0</td>
</tr>
<tr>
<td>3+</td>
<td>0</td>
</tr>
<tr>
<td>Last fish description</td>
<td>n/a</td>
</tr>
<tr>
<td>Amphibian species present</td>
<td>Pacific giant salamander: 1</td>
</tr>
<tr>
<td></td>
<td>Red-legged frog: 1</td>
</tr>
</tbody>
</table>
Protocol Survey Report

An electrofishing survey was conducted on May 8, 2007 on an unnamed tributary of West Fork Woods Creek in the NE ¼ of the SE ¼ of Section 8, Township 28N Range 7E. The purpose of the survey was to assess fish distribution and habitat conditions in the channel to provide information for validating or changing the current regulatory water type. Survey protocols followed guidance provided in the Washington State Department of Natural Resources interim water typing rules (WAC 222-16-031(3), Chapter 13 Forest Practices Board Manual). The extent of this survey is delineated by the start and end of survey points on the accompanying map.

Our survey started at the confluence between the subject tributary and West Fork Woods Creek, continuing upstream for 1,334 feet. The channel forms 4 distributary channels as it flows across the floodplain of the mainstem (Figure 1) and this condition may prevent fish from West Fork Woods Creek from utilizing the lower reach. However, at Sta. 1+26 there is a bedrock outcrop in the channel that is a certain limitation on upstream movement of fish into the subject tributary (Figure 2). Our lower survey progressed upstream encountering additional bedrock sections (Figure 3). The channel flattens to less than 10% gradient with low pool spacing, for the 300 feet leading to the outlet of the pond at Sta. 10+59 (Figure 4). No fish were detected in the channel leading up to the pond and we did not observe any fish rising to feed during our time at the pond.

We continued our survey in the vicinity of DNR pipe No. T28R07E-140 by sampling a 200 foot reach of stream centered on the culvert (Figure 5). There are significant limitations to the natural movement of fish into the upper reaches of this system. If the pond had been stocked with fish in the past, we would have expected their detection in either the inlet or the outlet streams during the course of this survey.

Figure 1. Start of survey near main West Fork Woods Creek, multiple channels under brush, Sta. 0+00.
Figure 2. Twenty-nine percent bedrock cascade at Sta. 1+26 limits upstream movement of fish.

Figure 3. Twenty-two percent bedrock cascade at Sta. 6+49.
Figure 4. Pond on subject tributary at Sta. 10+59.

Figure 5. DNR pipe No. T28R07E-10, retains gravel substrate throughout.
Reviewer Comments
Water Type Modification

Attention Reviewers: DNR will make a decision by the Comment Due Date. Your comments only will be considered if they are received on or before the Comment Due Date. Return this completed form by mail, fax, or e-mail to the appropriate DNR Region office.

Reviewers Name: ____________________________ Reviewer's Affiliation: ____________________________

Reviewers Phone Number: ____________________________ Reviewer's E-Mail: ____________________________

☐ Agree with proposed change(s) ☐ Disagree with proposed change(s)

Reasons for Agreement or Disagreement (add attachments if necessary):

Signature ____________________________ Date ____________________________
(Signatures are not necessary for e-mailed responses)

---

DNR Office Summary and Decision

<table>
<thead>
<tr>
<th>Name of Reviewers</th>
<th>Agree</th>
<th>Disagree</th>
<th>Date Comment Received</th>
<th>No Reply</th>
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<tr>
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<td>☒</td>
<td></td>
<td>12-13-07</td>
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<tr>
<td>WDFW: Walker</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>DOE: Sherwood/Tranab</td>
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<td></td>
<td></td>
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<tr>
<td>Tribe:</td>
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<tr>
<td>Other:</td>
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</tbody>
</table>

☐ Approve change ☐ Disapprove change

Reasons for disapproval

---

Signature ____________________________ Date 12/13/2007
Proponent and reviewers notified of decision by ____________________________ on 2-5-03
Change entered in GIS by ____________________________ on ____________________________
Division Document Number: 07152 ____________________________ on ____________________________
E-mailed 10-8-07 2:07 PM

Form QQ 49 (05/03) revised 10/05 2 of 2
Forest Practices Application/Notification
Notice of Decision

Decision

[ ] Notification
Operations shall not begin before the effective date.

[x] Approved
This Forest Practices Application is subject to the conditions listed below.

[ ] Disapproved
This Forest Practices Application is disapproved for the reasons listed below.

[ ] Closed
Applicant has withdrawn FPA/N.

FPA/N Classification

[ ] Class II  [x] Class III  [ ] Class IVG  [ ] Class IVS

Number of Years Granted on Multi-Year Request

[ ] 4 years  [ ] 5 years

Conditions on Approval / Reasons for Disapproval

No additional conditions.

FOR YOUR INFORMATION:

Please notify DNR Northwest Region Office (360-856-3500) 48 business hours before commencing timber harvest operations. Please provide the application number and legal description for your operation.

Issued By: __________________________ Steven Huang __________________________
Title: __________________________ Skykomish Forest Practice Forester
Region: __________________________ Northwest
Date: __________________________ 2/21/2018
Copies to:  [x] Landowner, Timber Owner and Operator.
Issued in person:  [ ] Landowner  [ ] Timber Owner  [ ] Operator

Washington State Department of Natural Resources • Notice of Decision • August 5, 2013
Appeal Information
You have thirty (30) days to appeal this Decision and any related State Environmental Policy Act determinations to
the Pollution Control Hearings Board in writing at the following addresses:
Physical address: 1111 Israel Rd. SW, Ste 301, Tumwater, WA 98501
Mailing address: P.O. BOX 40903, OLYMPIA, WA 98504-0903
Information regarding the Pollution Control Hearings Board can be found at: http://www.eluho.wa.gov/
At the same time you file an appeal with the Pollution Control Hearings Board, also send a copy of the appeal to the
Department of Natural Resources' region office and the Office of the Attorney General at the following addresses:

Office of the Attorney General
Natural Resources Division
1125 Washington Street SE
PO Box 40100
Olympia, WA 98504-0100

Department Of Natural Resources
Northwest Region
And
919 N Township St
Sedro-Woolley WA 98284

Other Applicable Laws
Operating as described in this application/notification does not ensure compliance with the Endangered Species
Act, or other federal, state, or local laws.

Transfer of Forest Practices Application/Notification (WAC 222-20-010)
Use the "Notice of Transfer of Approved Forest Practices Application/Notification" form. This form is available at
Notify DNR of new Operators within 48 hours.

Continuing Forest Land Obligations (RCW 76.09.060, RCW 76.09.070, RCW 76.09.390, and WAC 222-20-055)
Obligations include reforestation, road maintenance and abandonment plans, conversions of forest land to non-
forestry use and/or harvest strategies on perennial non-fish habitat (Type Np) waters in Eastern Washington.

Before the sale or transfer of land or perpetual timber rights subject to continuing forest land obligations, the seller
must notify the buyer of such an obligation on a form titled "Notice of Continuing Forest Land Obligation". The seller
and buyer must both sign the "Notice of Continuing Forest Land Obligation" form and send it to the DNR Region
Office for retention. This form is available at DNR region offices.

If the seller fails to notify the buyer about the continuing forest land obligation, the seller must pay the buyer’s costs
related to continuing forest land obligations, including all legal costs and reasonable attorneys’ fees incurred by the
buyer in enforcing the continuing forest land obligation against the seller.

Failure by the seller to send the required notice to the DNR at the time of sale will be prima facie evidence in an
action by the buyer against the seller for costs related to the continuing forest land obligation prior to sale.

DNR affidavit of mailing:

On this day_________________, I placed in the United States mail at_________________________, WA,
(date) (post office location)
postage paid, a true and accurate copy of this document. Notice of Decision FPA #2816226
L Utgard
(Printed name) (Signature)

Washington State Department of Natural Resources • Notice of Decision • August 5, 2013
Page 2
Revisions to FPA/N __2816226__

<table>
<thead>
<tr>
<th>DATE</th>
<th>DOCUMENT</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>6/26/2018</td>
<td>Transfer Form</td>
<td>Change of timber owner &amp; operator</td>
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Forest Practices Application/Notification

NOTICE OF TRANSFER

I/we transfer my/our rights, privileges, and obligations under this approved Forest Practices Application or Notification. I/we affirm that the information contained below is true and agree to comply with the rules authorized by the Forest Practices Act and be bound by all conditions on the approved application or notification.

30-095279 MERO CORNER SWT RMZ
FPA/N Number: 2816226  Section(s): 3,8,16,17,3,4,9,10,28  Township: 28;29N  Range: 07;08E

Original Landowner (Signature): [Signature]

Original Landowner (Printed): COURTNEY ABENDHOFF  Date: 6/25/18

New Operator – Complete this section only if you are:

☐ Changing an operator for: ☐ Road construction  ☐ Timber harvest  ☐ Aerial spray

✓ Adding an operator for:  ☑ Road construction  ☑ Timber harvest  ☐ Aerial spray

Legal Name of New Operator: (Print) HAMPTON TREE FARMS, LLC.

Mailing Address:

P.O. BOX 2315
SALEM, OR 97308

Phone: 503-365-8400

Email:

New Operator Signature: [Signature]  Date: [Date]

Doug Cooper  Vice President-Resources

New Landowner – Complete this section only if you are transferring your FPA to a new landowner

☐ No  ☑ Yes  Are you a small forest landowner per RCW 76.09.450 (if yes, continue to question below)

☐ No  ☑ Yes  Is your entire proposed harvest area on a single contiguous ownership consisting of one or more parcel(s)?

Legal Name of New Landowner: (Print)

Mailing Address:

Phone:

Email:

New Landowner Signature:

Date:

New Timber Owner – Complete this section only if you are transferring your timber rights

Legal Name of Timber Owner: (Print) HAMPTON TREE FARMS, LLC.

Mailing Address:

P.O. BOX 2315
SALEM, OR 97308

Phone: 503-365-8400

Email:

Forest Tax Reporting Account Number: (Contact Dept. of Revenue at: 1-800-543-8829)

800 005 843

New Timber Owner Signature: [Signature]  Date: [Date]

Doug Cooper  Vice President-Resources

☑ Received by:  Date: 6/28/18

(DNR Forest Practices Staff Signature)  11/01/2017
<table>
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<tr>
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<td>Change of timber owner &amp; operator</td>
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<td>12/10/19</td>
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<td>Change of operator</td>
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Forest Practices Application/Notification

NOTICE OF TRANSFER

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FPA/N Number: 3816226
Section(s): 38 16 34 10
Township: __________
Range: ___

Original Landowner (Signature): ____________
Original Landowner (Printed): ____________
Date: 11/28/18

New Operator – Complete this section only if you are:
☐ Changing an operator for: ☐ Adding an operator for:
☐ Road construction ☐ Road construction
☐ Timber harvest ☐ Timber harvest
☐ Aerial spray ☐ Aerial spray

Legal Name of New Operator: (Print) ____________
Phone: 360-671-9078
Email: david_nielson@comcast.net
New Operator Signature: ____________
Date: 11/27/20

New Landowner – Complete this section only if you are transferring your FPA to a new landowner
☐ No ☐ Yes Are you a small forest landowner per RCW 76.09.450 (if yes, continue to question below)
☐ No ☐ Yes Is your entire proposed harvest area on a single contiguous ownership consisting of one or more parcel(s)?

Legal Name of New Landowner: (Print) ____________
Mailing Address: 100 E. Pine St.
Bellingham, WA 98225
Phone: ____________
Email: ____________
New Landowner Signature: ____________
Date: ____________

New Timber Owner – Complete this section only if you are transferring your timber rights

Legal Name of Timber Owner: (Print) ____________
Mailing Address: P.O. Box 2315
Salem, OR 97308
Phone: 503-365-8400
Email: kris.mccall@hamptonlumber.com
Forest Tax Reporting Account Number: (Contact Dept. of Revenue at: 1-800-548-8829)
900 005 843
New Timber Owner Signature: ____________
Date: 11/27/18

Received by: ____________
(DNR Forest Practices Staff Signature) 11/01/2017
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<th>DOCUMENT</th>
<th>DESCRIPTION</th>
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<td>Transfer Form</td>
<td>Change of timber owner &amp; operator</td>
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<td>&quot; &quot;</td>
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<tr>
<td>7-3-19</td>
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Forest Practices Application/Notification

NOTICE OF TRANSFER

I/we transfer my/our rights, privileges, and obligations under this approved Forest Practices Application or Notification. I/we affirm that the information contained below is true and agree to comply with the rules authorized by the Forest Practices Act and be bound by all conditions on the approved application or notification.

FPA/N Number: 2816226  Section(s): 9, 16, 17  Township: 28N  Range: R7E

Original Landowner (Signature):  [Signature]

Original Landowner (Printed):  Annette Messmer  Date: 07/03/19

<table>
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<tbody>
<tr>
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</tr>
<tr>
<td>□ Adding an operator for:  □ Road construction  □ Timber harvest</td>
</tr>
<tr>
<td>□ Aerial spray  □ Aerial spray</td>
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</tbody>
</table>

Legal Name of New Operator: (Print)  [Name]

Phone:  [Phone]  Date: 07/03/19

Email:  [Email]

Mailing Address:  PO Box 250  Darrington WA 98241

New Operator Signature:  [Signature]

New Landowner – Complete this section only if you are transferring your FPA to a new landowner

□ No  □ Yes  Are you a small forest landowner per RCW 76.09.450 (if yes, continue to question below)

□ No  □ Yes  Is your entire proposed harvest area on a single contiguous ownership consisting of one or more parcel(s)?

Legal Name of New Landowner: (Print)  [Name]

Phone:  [Phone]

Email:  [Email]

Mailing Address:  [Address]

New Landowner Signature:  [Signature]

New Timber Owner – Complete this section only if you are transferring your timber rights

Legal Name of Timber Owner: (Print)  [Name]

Phone:  [Phone]

Email:  [Email]

Forest Tax Reporting Account Number: (Contact Dept. of Revenue at: 1-800-548-8829)

New Timber Owner Signature:  [Signature]

Received by:  [Signature]  Date: 07/03/19

(DNR Forest Practices Staff Signature)  11/01/2017