Expanded Barrier Evaluation Form

Project Information

Project Name: Chumstick 2018 Fish Passage | *PRISM Project #:* | *Date: 3-29-18*

Evaluator Information

Evaluator Name: **Jennifer Hadersberger** Affiliation: **CCNRD**

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Watershed Information

Amount of Habitat Upstream: 9 (m) ☒ Map Measure ☐ Hip Chain 82.7 Basin Area (square miles above culvert):

Stream Flow: ☒ Perennial ☐ Intermittent ☐ Unknown Source of Information:

Has a Barrier Inventory Been Conducted in the Watershed? ☐ Yes (road) ☒ Yes (stream survey) ☐ No ☐ Unknown

If Yes, List Source and Date Completed: CCFEG 2017

Distance Walked DS: < 1 (m) Walked to: ☐ Known Anadromous ☐ Natural Barrier ☐ Human-made Barrier ☐ Other: To the confluence of the Wenatchee river

List Downstream Culverts, Dams, Bridges, and Natural Barriers. Include Passable Features. Attach Additional Pages if Needed.

Distance DS: 0.3 mile % Passable: 100 Site ID#: 603524 Location: North Road

Distance DS: 0.1 mile % Passable: 100 Site ID#: 603525 Location: Motteler road bridge

Distance walked US: >9 (m) Walked to: ☐ Physical End of Fish Use ☐ Natural Barrier ☐ Human-made Barrier ☐ Other: To a site in Merry Canyon where access was denied

List Upstream Culverts, Dams, Bridges and Natural Barriers. Include Passable Features. Attach Additional Pages if Needed.

See attached xls spreadsheet

Fish Species/Habitat Quality

What Species are Currently Blocked, at Least Partially, by this Barrier? Include Juvenile Life Stages.

☐ Sockeye ☐ Chum ☐ Pink ☐ Coho ☒ Chinook ☒ Steelhead ☐ Searun Cutthroat ☐ Resident Cutthroat

☐ Anadromous Bull ☐ Resident Bull ☒ Rainbow Trout ☐ Brook Trout ☐ Brown Trout ☒ Resident Trout

Information Source (including on-site observations): The % passability of the Motteler road crossing is 67%. The Motteler road barrier is most likely passable by adult steelhead and spring Chinook but it is likely mostly a partial barrier for juvenile fish passage.

Range of Gradient Downstream: 2-4% Range of Gradient Upstream: 2-12% Size of any US Lake/Wetlands: (sq. m)

Predominant Land Use: ☒ Forest ☐ Agriculture ☒ Rural residential ☐ Urban % Canopy Cover: >60% riparian cover

In-stream Cover: ☒ High ☐ Medium ☐ Low Channel Stability: ☐ High ☒ Medium ☐ Low

Rearing Quality: ☐ Excellent ☒ Good ☐ Poor (near confluence) Spawning Quality: ☐ Excellent ☐ Good ☒ Poor

Describe Habitat Upstream from Barrier: See response to Habitat Quality Question in application

Expanded Barrier Evaluation Form Instructions

This form will be used by the Fish Passage Team to assess the potential benefit of correcting the barrier. Primary factors are the number and type of fish species using the stream, the number, passability and location of other barriers, and the quality and amount of upstream habitat. Following are definitions, descriptions, and standards for information to be included in the Expanded Barrier Evaluation Form.

Project Information

Project Name – This is the landowner's last name followed by the creek name. If more than one site per landowner is evaluated on the same creek, designate each site with a letter, e.g. Franklin – Boulder Creek A.

RCO/SRFB Project Number – This will be provided by PRISM database.

Evaluator Information – Provide contact information for the person completing the Expanded Barrier Evaluation Form.

Watershed Information

Amount of Habitat – Length of fish-bearing habitat, in meters, that would be made available by barrier correction.

Basin Area – This is the area, in square miles, that drains into this tributary upstream from the project.

Stream Flow – Indicate whether stream is perennial or intermittent, if known. Include source of information.

Barrier Inventory – This is an inventory conducted using Washington Department of Fish and Wildlife's *Fish Passage Barrier and Surface Water Diversion Screening Assessment and Prioritization Manual*, Washington Department of Fish and Wildlife, August 2000. It may cover a county or watershed, and be road or stream-based (indicating the stream was walked and all other barriers located).

Stream Walked to – Indicate end point of the upstream and downstream surveys. *Plot the main stem and tributary end points on the map provided.*

Known Upstream and Downstream Barriers – Record the distance, passability, and site idenitification numbers of other culverts, dams, bridges, and natural barriers upstream and downstream of the site, in meters. Location can be a road or private landowner name. Discuss any scheduled corrections and time frames. List information source.

Fish Species and Habitat Quality

Species Present at the Site – Identify fish species known to reach the site. Include source of information. If species are blocked by a human-made structure downstream, please describe.

Range of Gradient Downstream – Some species are limited by gradient. This information may explain why some species are not present.

Range of Gradient Upstream – Gradient may limit which species can use upstream habitat.

Upstream Lakes and Wetlands – Estimate the size, in square meters, of any upstream lakes or wetlands.

Predominant Land Use – Land use impacts habitat, and helps describe spawning and rearing habitat quality.

Canopy Cover – Estimate the overall percentage of canopy cover for the upstream habitat.

In-stream Cover – Estimate the overall amount of in-stream cover from boulders, overhanging vegetation and woody material for the upstream habitat as low, medium, or high.

Channel Stability – Estimate the overall channel stability for upstream habitat as low, medium, or high. Signs of instability include numerous debris jams, subsurface flows, streambed material piled up on the banks, braiding, incisement, dredging spoils, lack of large woody materials, excess fines in the spawning gravel, scour, and fill.

Rearing Quality – Based on flow duration, off-channel areas, water quality and temperature, shade, cover, riffle and pool ratio, large woody materials, channel complexity and stability.

Spawning Quality – Quality is based on the amount of fines present in spawning gravels. Some low gradient streams are naturally high in fines, which reflects quantity of fines, rather than spawning quality. An unstable stream is likely to have poor quality.

Describe Habitat Upstream from Barrier – Include any significant features not captured in the above questions.