

FISH BARRIER REMOVAL BOARD

# MEETING MATERIALS

MARCH 15, 2016

## **Watershed Pathway**

Watershed Pathway Update Presentation

## **Coordinated Project Pathway**

Project Ranking Criteria - Tier 1 and 2

Workflow timeline for finalized project list

## **Funding and Match**

Match Requirements in RCW

Frequently Asked Questions

# Watershed Pathway

# Watershed Pathway Updates

3/15/2016

Fish Barrier Removal Board

Presented by WDFW Staff

# Watershed Pathway Updates

- Progress on identifying focus reaches
  - Coast HUC 10 – Cade Roler
  - Columbia River Regions – Dave Collins/Cade Roler
  - Puget Sound – Gina Piazza

# Approved HUC10 Nominations

## Statewide

- Lower Columbia
  - Lower Cowlitz
- Yakima River
  - Wilson/Cherry
- Snake River
  - Grande Ronde Tribs
  - Snake River Tribs
- Upper Columbia
  - Okanogan

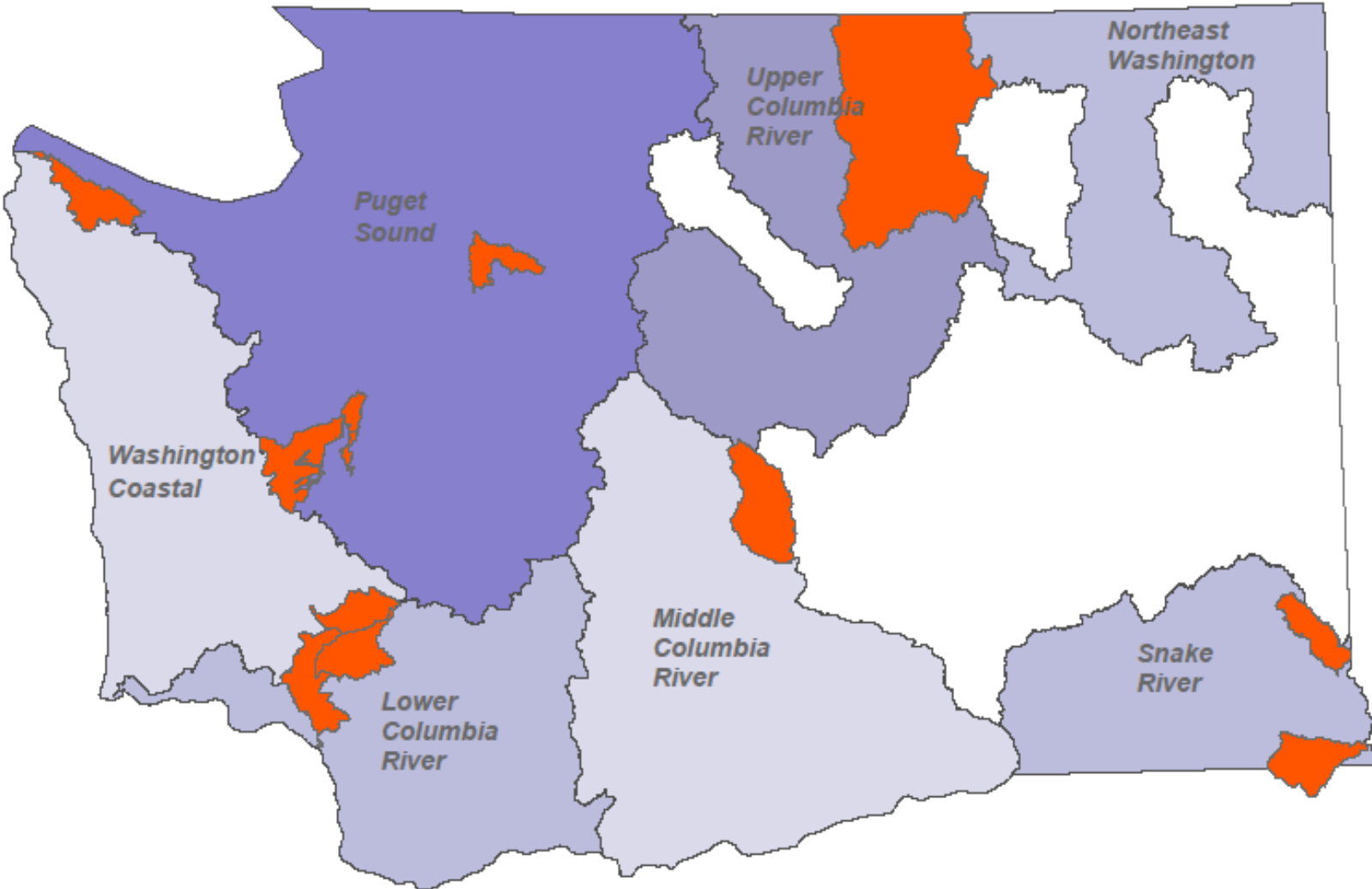
## Puget Sound

- Pilchuck Creek
- Goldsborough Creek
- Pysht River

## Coast

- Newaukum

**FBRB-Statewide Approved Watersheds  
December 15th, 2015**



# Washington Coast Recovery Region

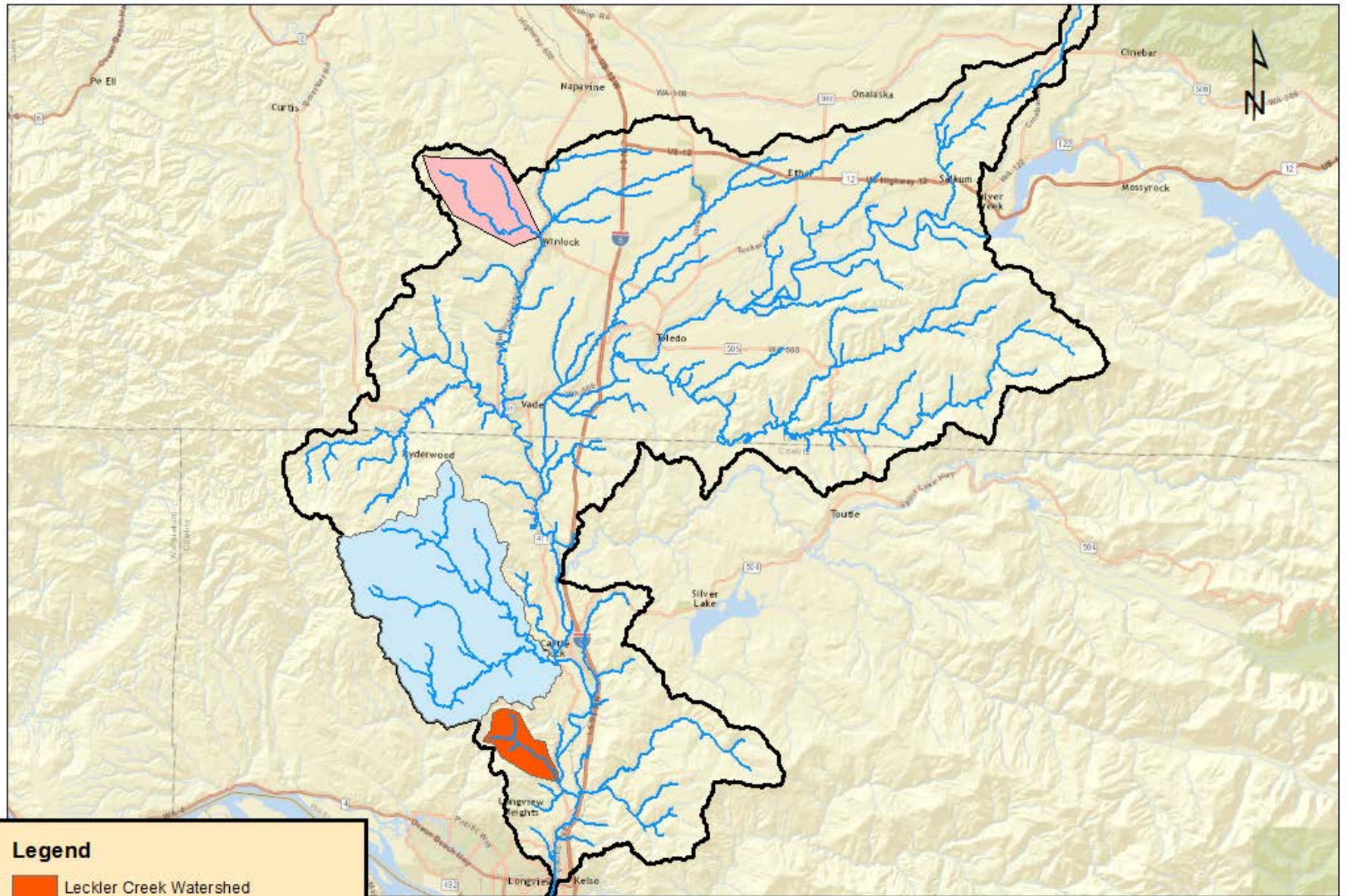
- Priority Sub-Watershed
  - Middle Fork Newaukum River
- Next Steps:
  - Downstream barrier checks
  - Habitat surveys upstream and downstream
  - Cost estimates
  - Continued coordination with the Habitat Work Group

# Lower Columbia Recovery Region




- Met with the Lower Columbia Fish Recovery Board to identify priorities
- Narrowed to 3 sub-watersheds in the Lower Cowlitz Watershed.
  - Delemeter/Arkansas Creek Sub-Watershed
  - King Creek Sub-Watershed
  - Leckler Creek
- Providing the region additional data to prioritize top three sub-watersheds



# Lower Cowlitz: Identified Priority Sub-Watersheds



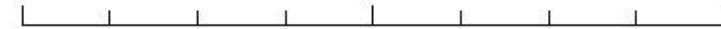
## Legend

-  Leckler Creek Watershed
-  Delemeter-Arkansas Creek Watershed
-  King Creek Watershed

Author: Cade Roler

Draft Date: 3/2/2016

0 5 10 20 Miles



# Snake River Recovery Region

- Priority Sub-Watersheds:
  - Grande Ronde River
    - Cougar Creek: Approximately 2 miles of gain. Asotin County ownership.
    - Buford Cr: Approximately 1.7 miles of gain. DFW conducted a full physical survey in 2010. WSDOT Ownership. Nez Perce currently doing design work for replacement.
    - Cottonwood Cr: Approximately 2.5 miles of gain. WSDOT ownership.
  - Snake River Tributaries
    - Steptoe #1: Approximately 5.3 miles of gain. Whitman County ownership.
    - Steptoe #2: Approximately 3.7 miles of gain. Whitman County ownership.
    - Stewart Ford Cr: Approximately 2.2 miles of gain. Privately owned.

## Next Steps:

- Meet with Regional group and finalize/approve the Barrier Packages
- Downstream barrier checks
- Habitat surveys upstream and downstream
- Cost estimates
- Continued coordination with the Habitat Work Group

# Puget Sound Watershed Updates

## Pilchuck River

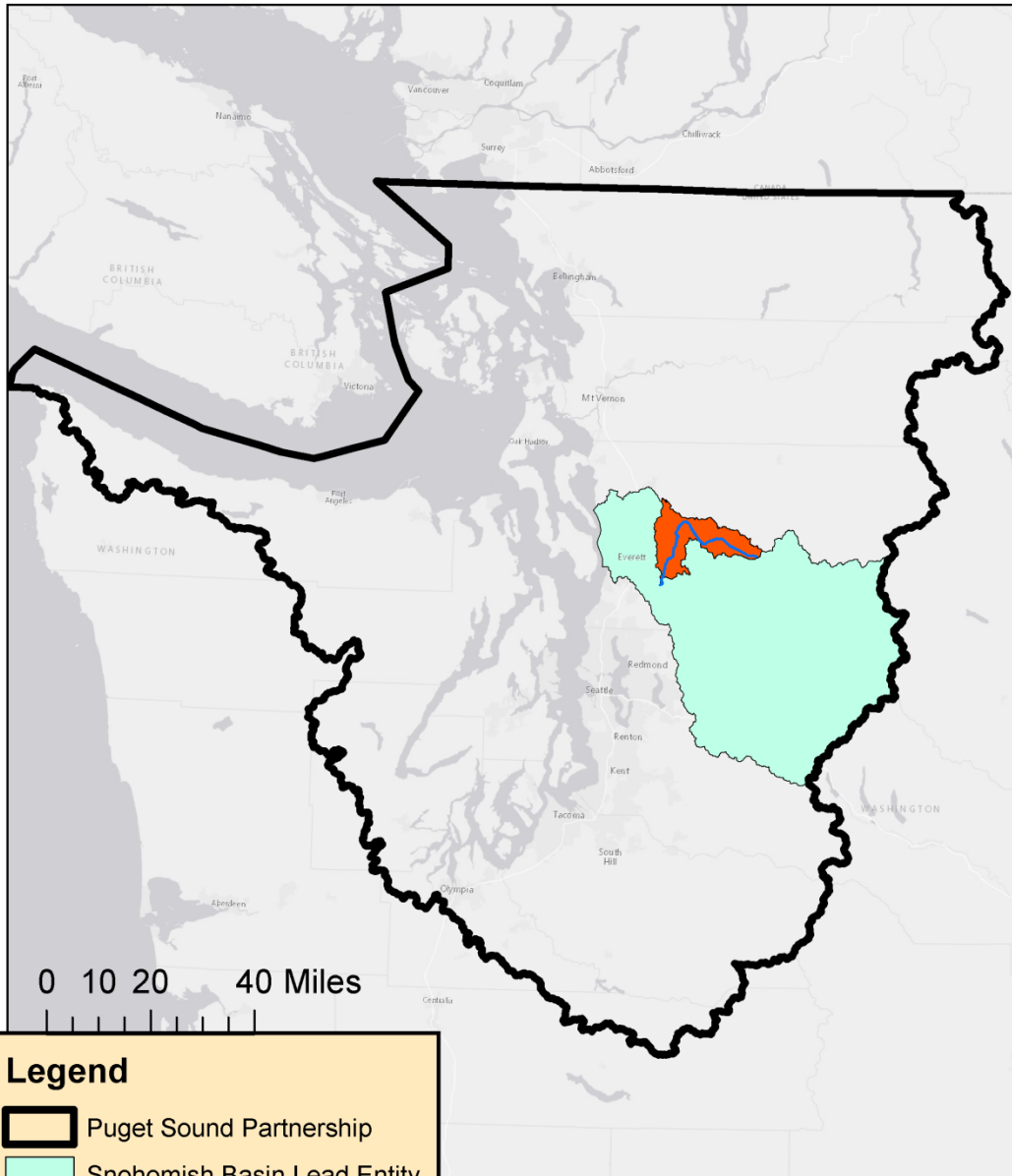
### Priority #1

Little Pilchuck Creek (6 structures)





### Priority #2

Catherine Creek (3 culverts)

# Pilchuck River Vicinity Map



## Legend

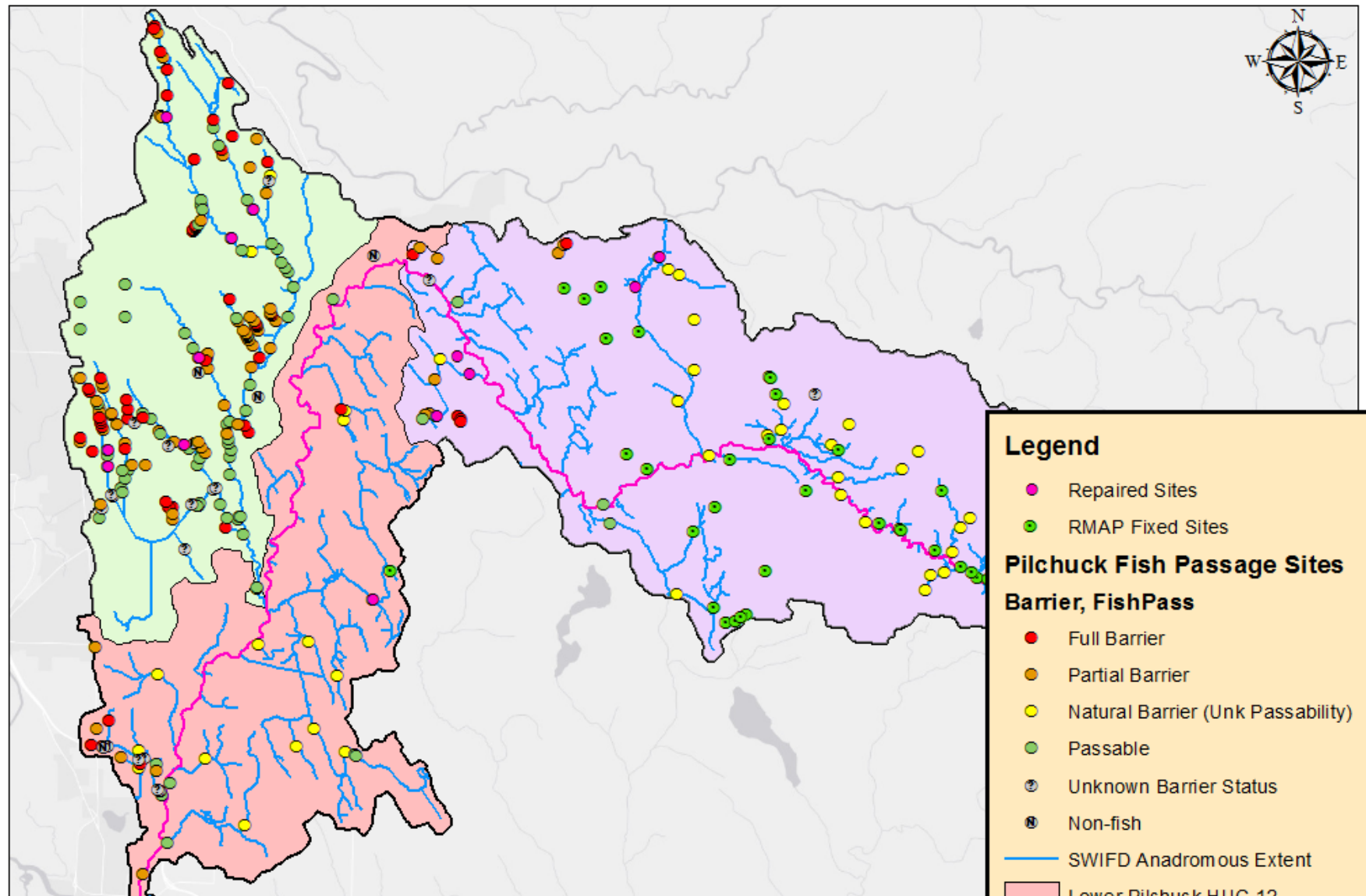
-  Puget Sound Partnership
-  Snohomish Basin Lead Entity
-  Pilchuck River HUC 10
-  Pilchuck River Mainstem



Author: Cade Roler



# Pilchuck River HUC 10 Fish Passage Sites



## Legend

● Repaired Sites

● RMAP Fixed Sites

## Pilchuck Fish Passage Sites

### Barrier, FishPass

● Full Barrier

● Partial Barrier

● Natural Barrier (Unk Passability)

● Passable

● Unknown Barrier Status

● Non-fish

— SWIFD Anadromous Extent

Lower Pilchuck HUC 12

Little Pilchuck HUC 12

Upper Pilchuck HUC 12



0 2 4 8 Miles

Author: Cade Roler

# Little Pilchuck Package Priority #1



## Fish Barrier Removal Board

County: Snohomish

WRIA: 7

Streams:  
Little Pilchuck creek,  
Star creek, and  
unnamed tributaries  
to Pilchuck River

Fish Species: Coho,  
Winter Steelhead,  
Summer Steelhead,  
Bull Trout,  
Cutthroat Trout,  
Resident Trout

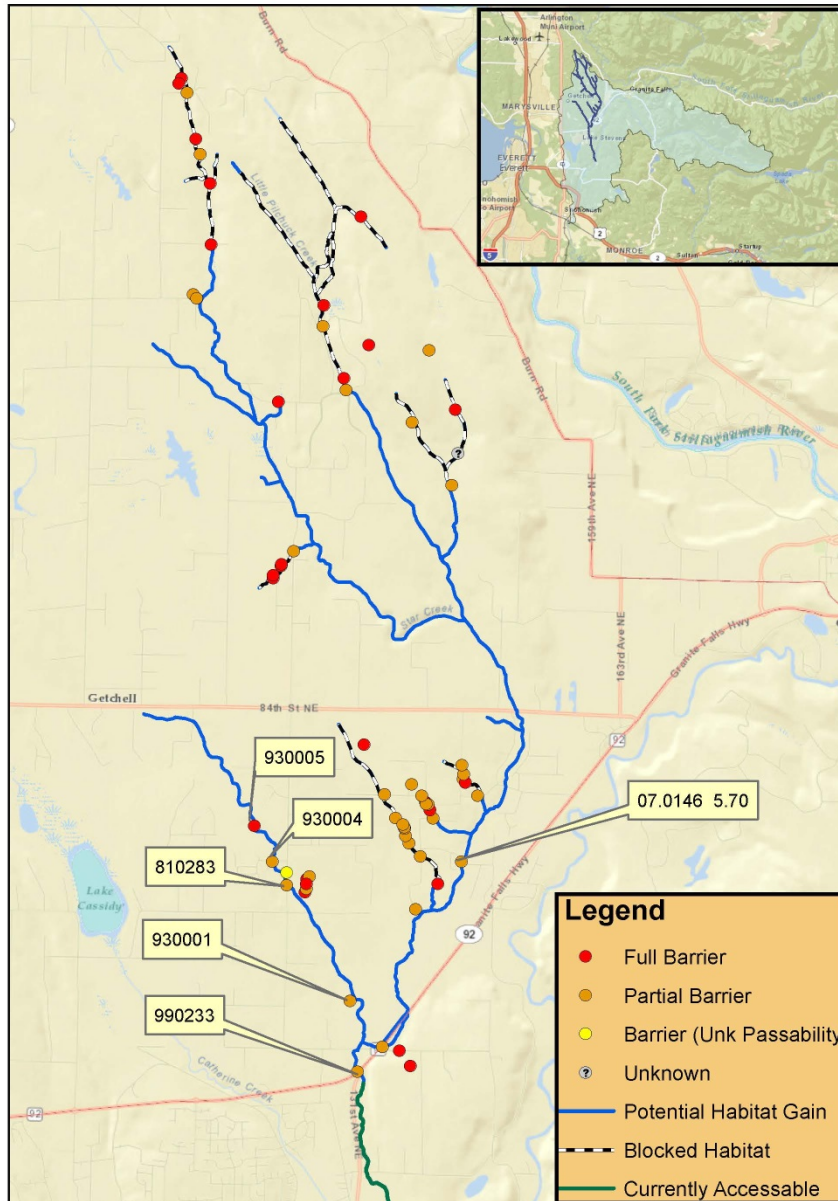
Net Habitat Gain:  
16.94 miles

US Barrier(s): 85

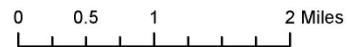
DS Barrier(s): 0

Map Made: 3/4/16

Gina Piazza



Snohomish Basin Lead Entity  
Pilchuck River HUC 10



# Little Pilchuck Package Priority #1



## Fish Barrier Removal Board

County: Snohomish

WRIA: 7

Streams:  
Little Pilchuck creek,  
Star creek, and  
unnamed tributaries  
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Fish Species: Coho,  
Winter Steelhead,  
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Cutthroat Trout,  
Resident Trout

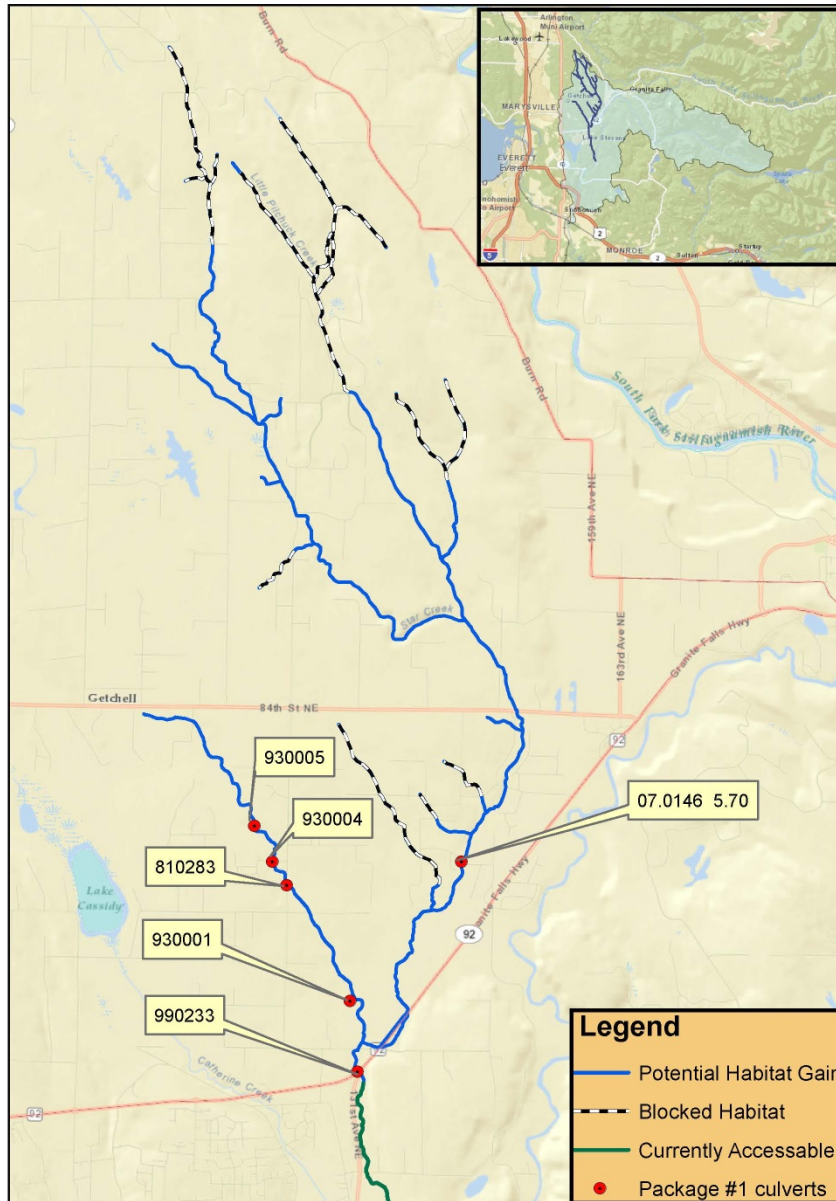
Net Habitat Gain:  
16.94 miles

US Barrier(s): 85

DS Barrier(s): 0

Map Made: 3/4/16

Gina Piazza



Snohomish Basin Lead Entity  
Pilchuck River HUC 10





# 07.0146 5.70, 66<sup>th</sup> St NE, Little Pilchuck Creek



- Ownership: Private
- Passability: 33% due to WS drop
- Species: Coho, Steelhead, SeaRun Cutthroat, Resident Trout
- Gain to next barrier: 59,324ft (11.24 miles)
- BFW: 22.6ft
- Existing Structure: Concrete Dam (92.5ft long/10.5ft high) with a concrete weir-pool fishway. Culvert located directly DS of dam. It is a CPC bottomless arch having a 18.7ft span
- Habitat: Creek has several significant tribs that enter upstream.



# 07.0146 5.70, 66<sup>th</sup> St NE, Little Pilchuck Creek

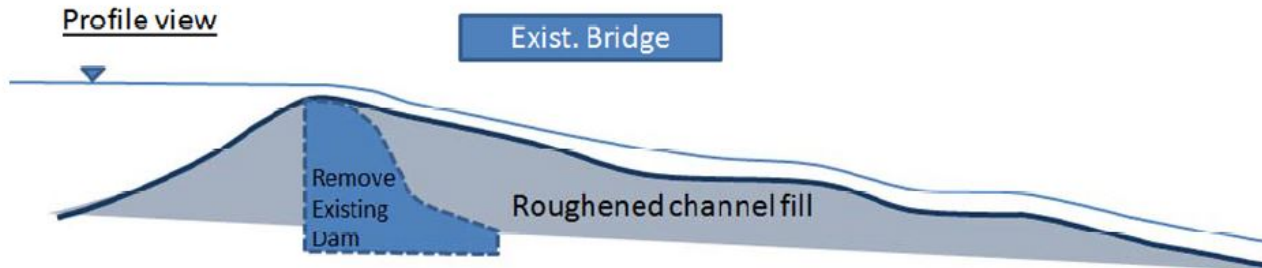
Little Pilchuck Ck at Bridge 601  
Roughened channel alternative

Plan view



Roughened channel

Profile view



Exist. Bridge

Remove Existing Dam

Roughened channel fill

# Catherine Creek Package Priority #2



## Fish Barrier Removal Board

County: Snohomish

WRIA: 7

Streams:  
Catherine Creek,  
tributary to Little  
Pilchuck Creek

Fish Species: Coho,  
Winter Steelhead,  
Summer Steelhead,  
Bull Trout,  
Cutthroat Trout,  
Resident Trout

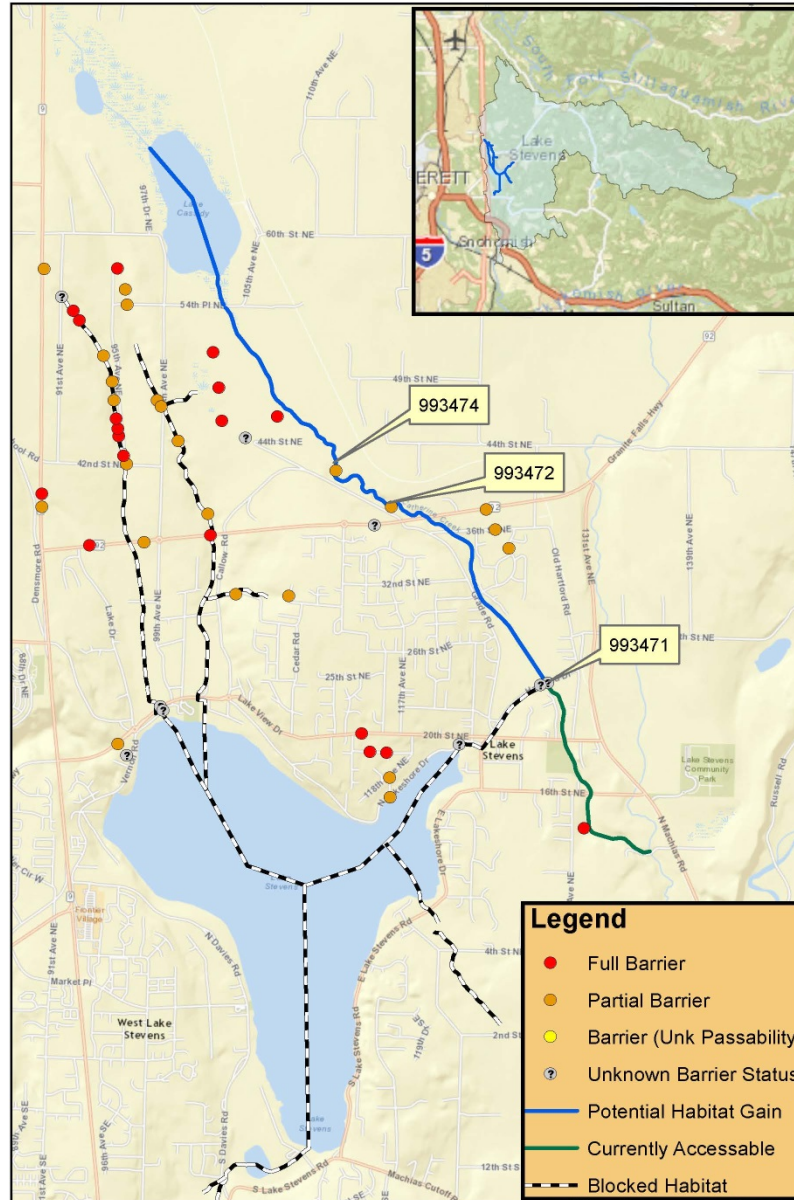
Net Habitat Gain:  
3.4 miles

US Barrier(s): 9

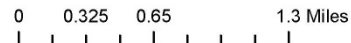
DS Barrier(s): 1

Map Made: 3/8/16

Gina Piazza



Snohomish Basin Lead Entity



# Catherine Creek Package Priority #2



## Fish Barrier Removal Board

County: Snohomish

WRIA: 7

Streams:  
Catherine Creek,  
tributary to Little  
Pilchuck Creek

Fish Species: Coho,  
Winter Steelhead,  
Summer Steelhead,  
Bull Trout,  
Cutthroat Trout,  
Resident Trout

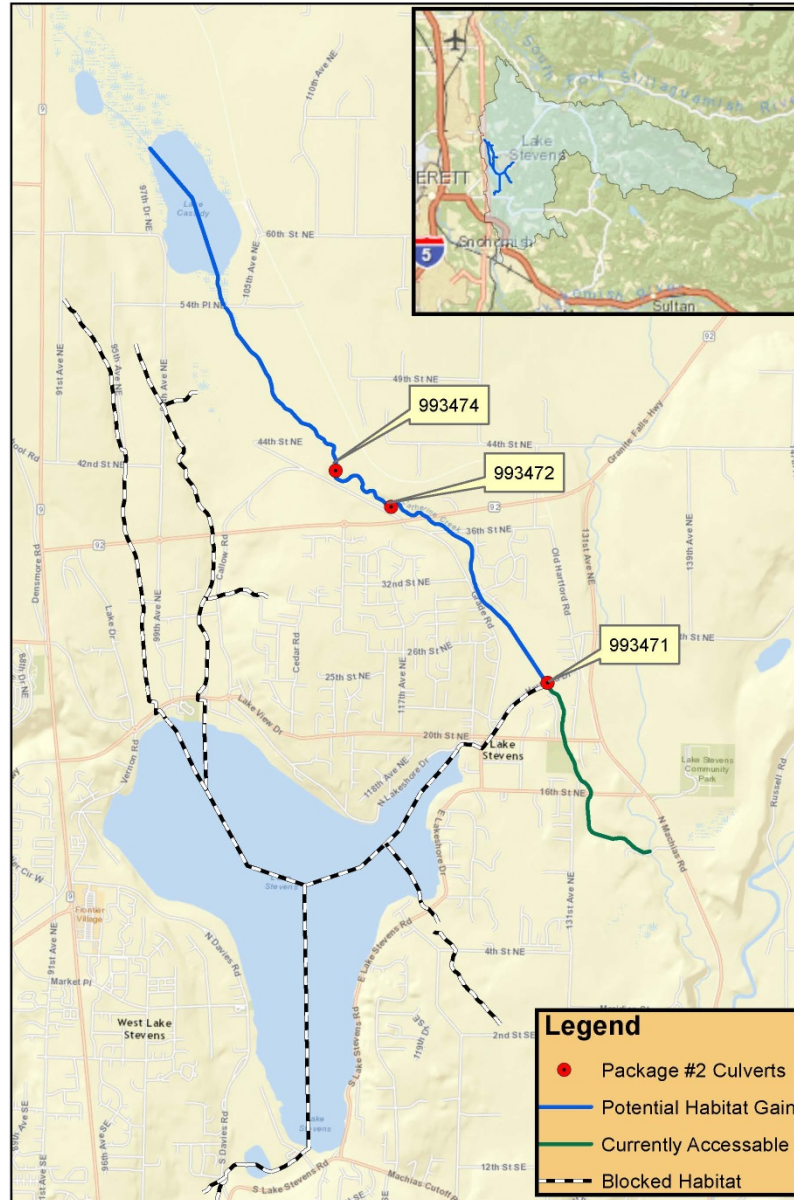
Net Habitat Gain:  
3.4 miles

US Barrier(s): 9

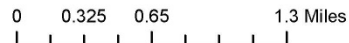
DS Barrier(s): 1

Map Made: 3/8/16

Gina Piazza



Snohomish Basin Lead Entity



# Puget Sound Watershed Updates

## Pysht River

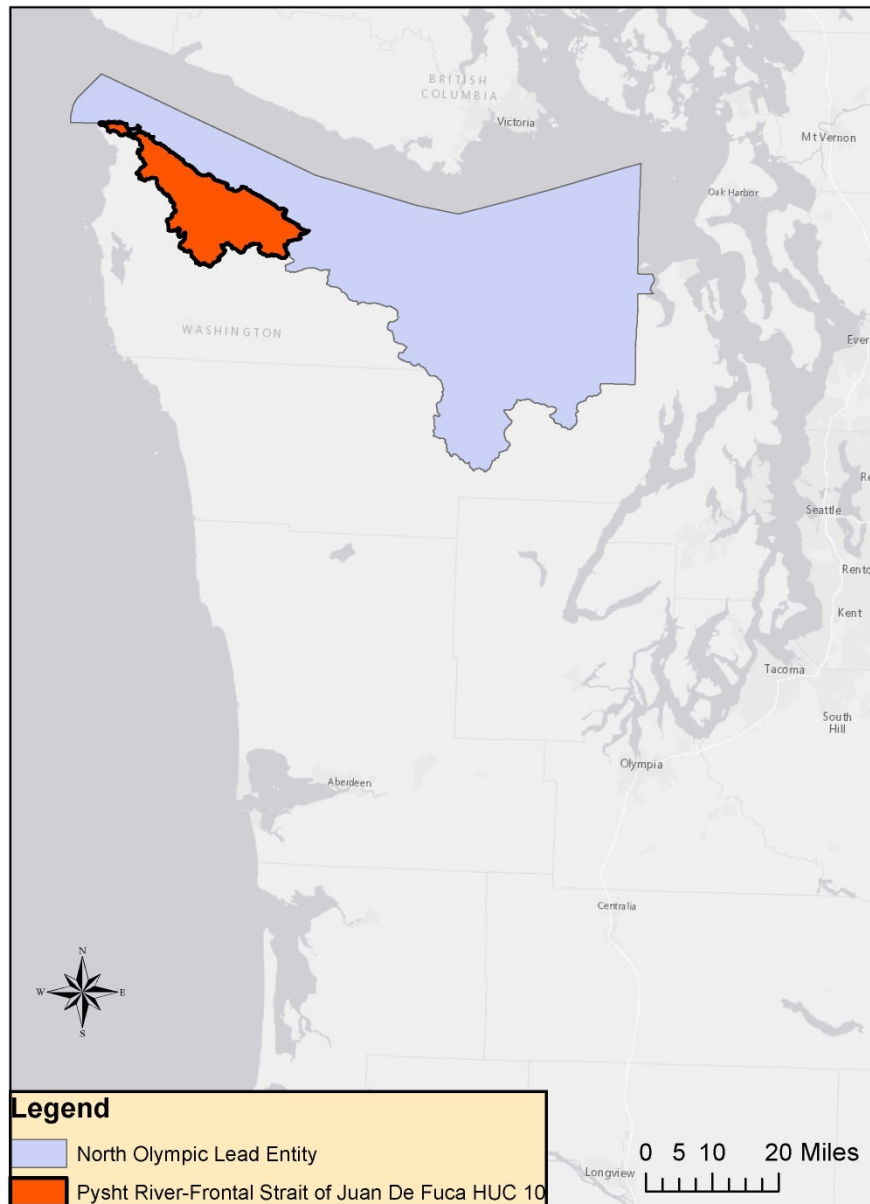
### Priority #1

Upper Hoko HUC 12 (3 culverts)

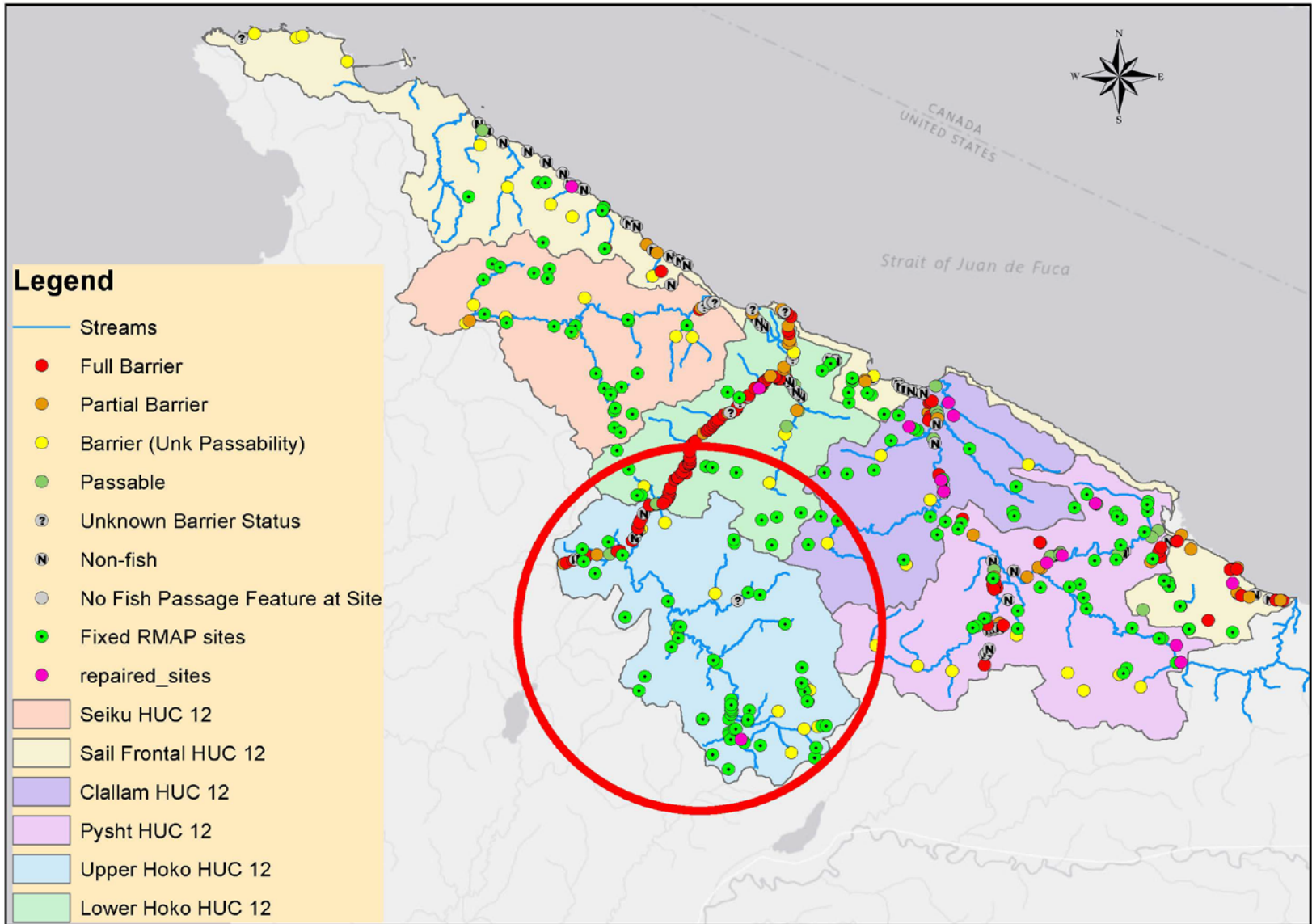
### Priority #2

Lower Hoko HUC 12 (8 culverts)

# Pysht River-Frontal Strait of Juan De Fuca HUC 10 Vicinity Map



# Pysht River-Frontal Strait of Juan De Fuca HUC 10 Barriers



0 1.75 3.5 7 Miles



# Upper Hoko Package Priority #1



## Fish Barrier Removal Board

County: Clallam

WRIA: 19

Streams:  
Johnson Creek  
unnamed tributary  
to Hoko River

Fish Species: Coho,  
Winter Steelhead,  
Cutthroat Trout,  
Resident Trout

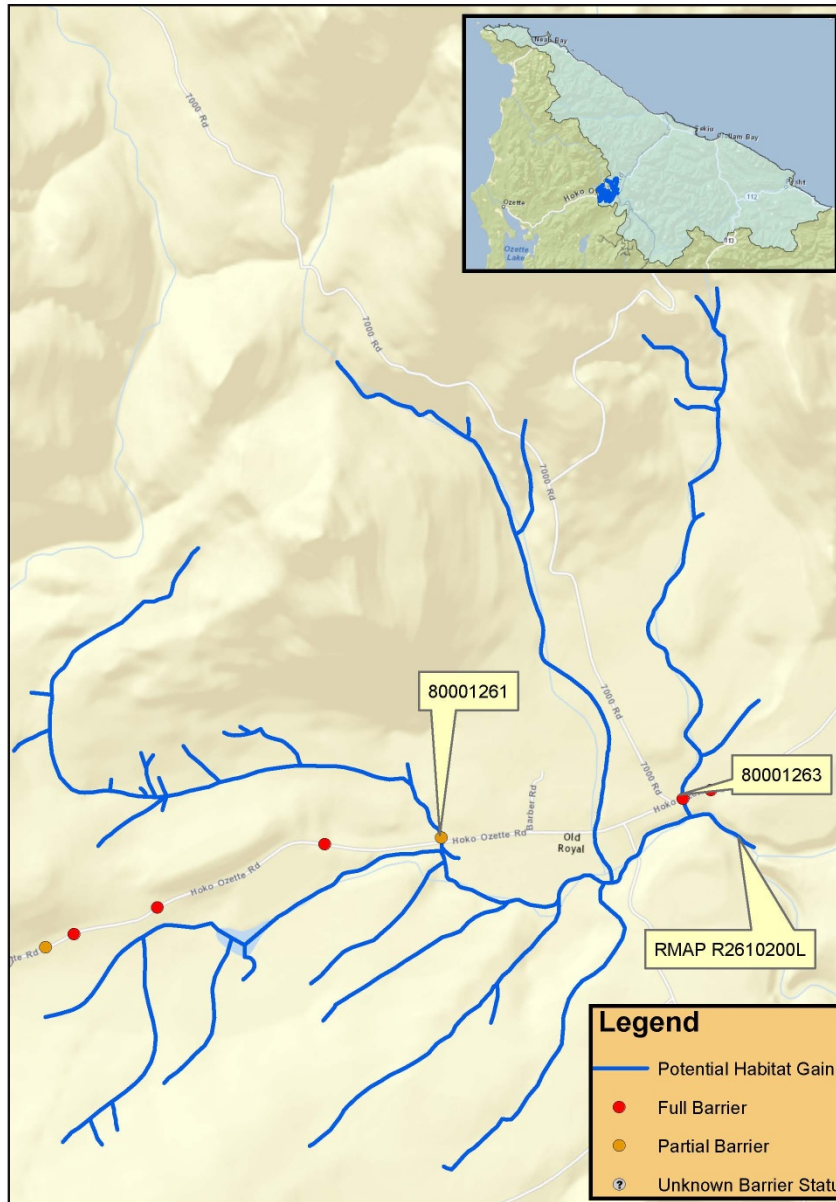
Net Habitat Gain:  
13.21 miles

US Barrier(s): 8

DS Barrier(s): 0

Map Made: 3/14/16

Gina Piazza



North Olympic Lead Entity

Pysht River-Frontal Strait of Juan De Fuca HUC 10

0 0.15 0.3 0.6 Miles



# Upper Hoko Package Priority #1



## Fish Barrier Removal Board

County: Clallam

WRIA: 19

Streams:  
Johnson Creek  
unnamed tributary  
to Hoko River

Fish Species: Coho,  
Winter Steelhead,  
Cutthroat Trout,  
Resident Trout

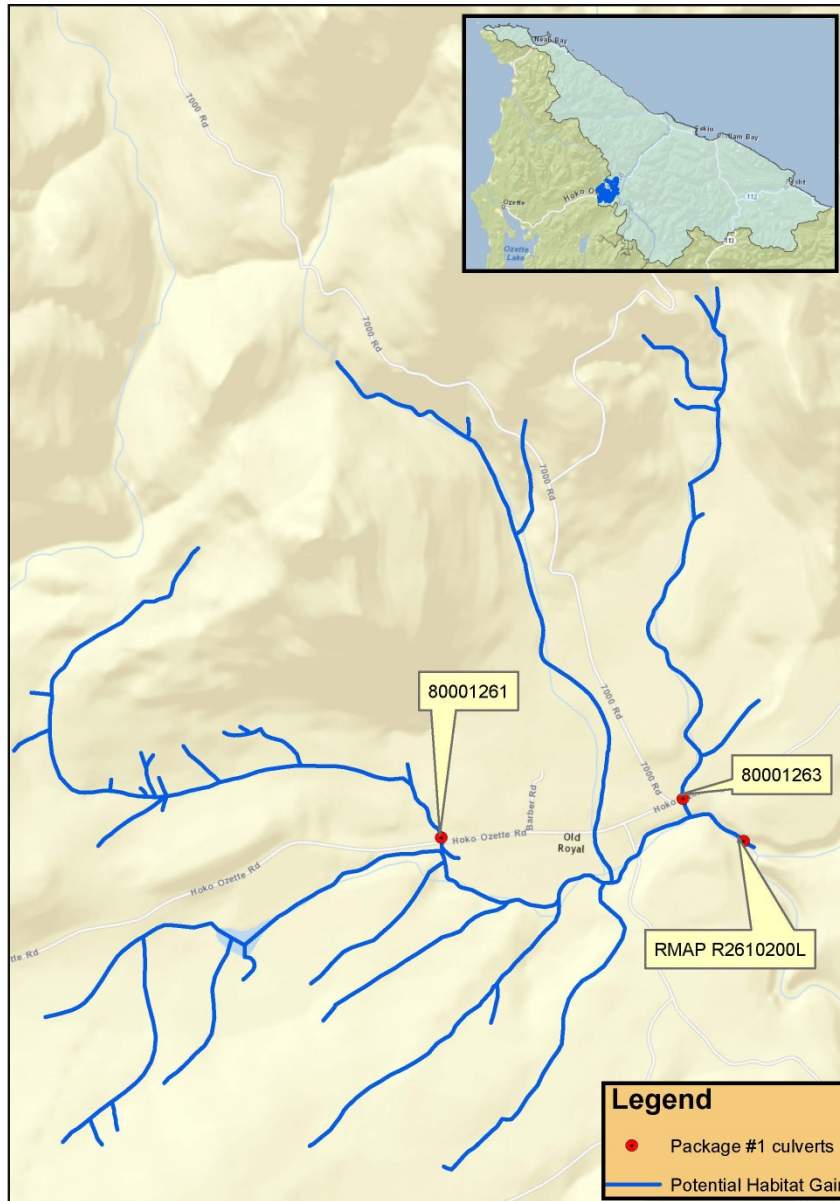
Net Habitat Gain:  
13.21 miles

US Barrier(s): 8

DS Barrier(s): 0

Map Made: 3/14/16

Gina Piazza



North Olympic Lead Entity

Pysht River-Frontal Strait of Juan De Fuca HUC 10



# Puget Sound Watershed Updates

## Goldsborough Creek

### Priority #1

Goldsborough (9 culverts)

### Priority #2

Independent tributaries- no proposed at this time

# Coordinated Project Pathway

# Coordinated Project Pathway Project Ranking Criteria

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## Tier 1 Ranking - Top 50 projects with highest linear gain

### 1. **Linear Gain** (10 points)

- 0.00 – 0.99 miles – 1 point
- 1.00 – 1.49 miles – 2 points
- 1.50 – 1.99 miles – 3 points
- 2 – 2.99 miles – 4 points
- 3 – 3.99 miles – 5 points
- 4 – 4.99 miles – 6 points
- 5 – 5.99 miles – 7 points
- 6 – 7.99 miles – 8 points
- 8 – 10.99 miles – 9 points
- ≥11 miles – 10 points

### 2. **Project Readiness** (8 points)

- Score of 1 – 1 point
- Score of 2 – 3 points
- Score of 3 – 5 points
- Score of 4 – 6 points
- Score of 5 – 8 points

### 3. **Barrier Status** (8 points)

- Total barrier – 8 points
- 33% passable – 6 points
- 67% passable – 3 points
- Unknown passability – 2 points
- 100% passable – 0 points

### 4. **Number of anadromous species/stock** (4 points)

- 1 point for each anadromous species

5. **Status Rating** – Highest level of protection for a present species (4 points)

Unwarranted – 1 point

Species of Concern/Candidate – 2 points

Threatened – 3 points

Endangered or >1 threatened species – 4 points

6. **Level of Coordination** - Restoration within the last 5 years (5 points)

No recent restoration – 0 points

1 project – 1 point

2 projects – 2 points

3-4 projects – 3 points

5-6 projects – 4 points

≥7 projects – 5 points

**Tier 2 Ranking** - Top 30 projects

1. **Habitat Quality** - weighted net gain using WDFW rapid assessment protocol

2. **Cost** - cost per linear mile of habitat opened

## Workflow Timeline for Finalized FBRB Project List

<b>FBRB Grant Program Project List Timeline</b>			
<b>Action:</b>	<b>Start Date:</b>	<b>Delivery Date:</b>	<b>Responsibility:</b>
Outreach and coordinating with Salmon Recovery Regions		July-15	WDFW and FBRB Members
Send out call for watersheds and coordinated projects to Salmon Recovery Regions and Puget Sound Lead Entities.	July-15		WDFW and FBRB
Recovery Regions and Puget Sound L.E.s assess and nominate focus watersheds	July-15	August-15	Salmon Recovery Regions and Puget Sound L.E.s
Review and analyze L.E. nominated HUC 10s in Puget Sound and Recovery Region's nominated watersheds	August-15	Sept-15	WDFW
Approve nominated focus watersheds and HUC 10s	September '15 Board Meeting		FBRB
Rank nominated Coordinated Approach Projects	Sept-15	Dec-15	WDFW
Assess and Determine project areas within selected focus watersheds: Includes external review and coordinating with Regions	Sept-15	Dec-15	WDFW
Approval of project areas and initial ranking of Coordinated Approach Projects	December '15 Board Meeting		FBRB
Initial pre-scoping and landowner permissions of both grant pathways (watershed and coordinated)	Jan-16	May-16	WDFW
Initial approval of projects of both grant pathways	May '16 Board Meeting		FBRB
Feasibility, cost-estimates, additional scoping – includes engineering review	Mar-16	Jul-16	WDFW
Approval of project list	August '16 Board Meeting		FBRB
Finalized project list for Governor's office	Aug-16	Sep-16	WDFW and FBRB Members
Briefing materials provided to Legislature as required in HB 2251	Dec-16		FBRB and WDFW

# Funding and Match

## **RCW 77.95.160**

### **Fish passage barrier removal board—Membership—Duties.**

(1) The department shall maintain a fish passage barrier removal board. The board must be composed of a representative from the department, the department of transportation, cities, counties, the governor's salmon recovery office, tribal governments, and the department of natural resources. The representative of the department must serve as chair of the board and may expand the membership of the board to representatives of other governments, stakeholders, and interested entities.

(2)(a) The duty of the board is to identify and expedite the removal of human-made or caused impediments to anadromous fish passage in the most efficient manner practical through the development of a coordinated approach and schedule that identifies and prioritizes the projects necessary to eliminate fish passage barriers caused by state and local roads and highways and barriers owned by private parties.

(b) The coordinated approach must address fish passage barrier removals in all areas of the state in a manner that is consistent with a recognition that scheduling and prioritization is necessary.

(c) The board must coordinate and mutually share information, when appropriate, with:

(i) Other fish passage correction programs, including local salmon recovery plan implementation efforts through the governor's salmon recovery office;

(ii) The applicable conservation districts when developing schedules and priorities within set geographic areas or counties; and

(iii) The recreation and conservation office to ensure that barrier removal methodologies are consistent with, and maximizing the value of, other salmon recovery efforts and habitat improvements that are not primarily based on the removal of barriers.

(d) Recommendations must include proposed funding mechanisms and other necessary mechanisms and methodologies to coordinate state, tribal, local, and volunteer barrier removal efforts within each water resource inventory area and satisfy the principles of RCW [77.95.180](#). To the degree practicable, the board must utilize the database created in RCW [77.95.170](#) and information on fish barriers developed by conservation districts to guide methodology development. The board may consider recommendations by interested entities from the private sector and regional fisheries enhancement groups.

(e) When developing a prioritization methodology under this section, the board shall consider:

(i) Projects benefiting depressed, threatened, and endangered stocks;

(ii) Projects providing access to available and high quality spawning and rearing habitat;

(iii) Correcting the lowest barriers within the stream first;

(iv) Whether an existing culvert is a full or partial barrier;

(v) Projects that are coordinated with other adjacent barrier removal projects; and

(vi) Projects that address replacement of infrastructure associated with flooding, erosion, or other environmental damage. (f) The board may not make decisions on fish passage standards or categorize as impassible culverts or other infrastructure developments that have been deemed passable by the department.

## RCW 77.95.170

### Salmonid fish passage—Removing impediments—Grant program—Administration—Database directory.

(1) The department may coordinate with the recreation and conservation office in the administration of all state grant programs specifically designed to assist state agencies, private landowners, tribes, organizations, and volunteer groups in identifying and removing impediments to salmonid fish passage. The transportation improvement board may administer all grant programs specifically designed to assist cities, counties, and other units of local governments with fish passage barrier corrections associated with transportation projects. All grant programs must be administered and be consistent with the following:

(a) Salmonid-related corrective projects, inventory, assessment, and prioritization efforts;

(b) Salmonid projects subject to a competitive application process; and

(c) A minimum dollar match rate that is consistent with the funding authority's criteria. If no funding match is specified, a match amount of at least twenty-five percent per project is required. For local, private, and volunteer projects, in-kind contributions may be counted toward the match requirement.

(2) Priority shall be given to projects that match the principles provided in RCW [77.95.180](#).

(3) All projects subject to this section shall be reviewed and approved by the fish passage barrier removal board created in RCW [77.95.160](#) or an alternative oversight committee designated by the state legislature.

(4) Other agencies that administer natural resource-based grant programs shall use fish passage selection criteria that are consistent with this section when those programs are addressing fish passage barrier removal projects.

(5)(a) The department shall establish a centralized database directory of all fish passage barrier information. The database directory must include, but is not limited to, existing fish passage inventories, fish passage projects, grant program applications, and other databases. These data must be used to coordinate and assist in habitat recovery and project mitigation projects.

(b) The department must develop a barrier inventory training program that qualifies participants to perform barrier inventories and develop data that enhance the centralized database. The department may decide the qualifications for participation. However, employees and volunteers of conservation districts and regional salmon recovery groups must be given priority consideration.



## **RCW 77.95.180**

### **Fish passage barrier removal program.**

(1)(a) To maximize available state resources, the department and the department of transportation must work in partnership to identify and complete projects to eliminate fish passage barriers caused by state roads and highways.

(b) The partnership between the department and the department of transportation must be based on the principle of maximizing habitat recovery through a coordinated investment strategy that, to the maximum extent practical and allowable, prioritizes opportunities: To correct multiple fish barriers in whole streams rather than through individual, isolated projects; to coordinate with other entities sponsoring barrier removals, such as regional fisheries enhancement groups incorporated under this chapter, in a manner that achieves the greatest cost savings to all parties; and to correct barriers located furthest downstream in a stream system. Examples of this principle include:

(i) Coordinating with all relevant state agencies and local governments to maximize the habitat recovery value of the investments made by the state to correct fish passage barriers;

(ii) Maximizing the habitat recovery value of investments made by public and private forest landowners through the road maintenance and abandonment planning process outlined in the forest practices rules, as that term is defined in RCW [76.09.020](#);

(iii) Recognizing that many of the barriers owned by the state are located in the same stream systems as barriers that are owned by cities and counties with limited financial resources for correction and that state-local partnership opportunities should be sought to address these barriers; and

(iv) Recognizing the need to continue investments in the family forest fish passage program created pursuant to RCW [76.13.150](#) and other efforts to address fish passage barriers owned by private parties that are in the same stream systems as barriers owned by public entities.

(2) The department shall also provide engineering and other technical services to assist nonstate barrier owners with fish passage barrier removal projects, provided that the barrier removal projects have been identified as a priority by the department and the department has received an appropriation to continue that component of a fish barrier removal program.

(3) Nothing in this section is intended to:

(a) Alter the process and prioritization methods used in the implementation of the forest practices rules, as that term is defined in RCW [76.09.020](#), or the family forest fish passage program, created pursuant to RCW [76.13.150](#), that provides public cost assistance to small forest landowners associated with the road maintenance and abandonment processes; or

(b) Prohibit or delay fish barrier projects undertaken by the department of transportation or another state agency that are a component of an overall transportation improvement project or that are being undertaken as a direct result of state law, federal law, or a court order. However, the department of transportation or another state agency is required to work in partnership with the fish passage barrier removal board created in RCW [77.95.160](#) to ensure that the scheduling, staging, and implementation of these projects are, to [the] maximum extent practicable, consistent with the coordinated and prioritized approach adopted by the fish passage barrier removal board.

# Frequently Asked Questions

How many culverts per package should be nominated, or what is the target cost per package?

What types of projects are eligible (or ineligible)? Culverts, dams, flumes, automobiles?

How will the projects and funding be managed?

What is the outcome if a coordinated pathway project is chosen for funding, but is also part of a watershed pathway package?

What are the parameters for the match requirement?

If FBRB funds are good from July 2017-June 2019, do the matching funds need to be spent during this same time period?

Can non-fish passage projects occurring in the same watershed be used as match for proposed FBRB projects?

What is the match requirement? Still 25% or going with something else?