

FISH BARRIER REMOVAL BOARD

MEETING MATERIALS

APRIL 19, 2016

Watershed Pathway

Watershed Pathway update presentation

Coordinated Project Pathway

Project Ranking Criteria

Tier 2 Ranking Criteria

Top 30 Ranked Projects

Match Requirement Guidance (draft)

Watershed Pathway

Watershed Pathway Updates

4/19/2016

Fish Barrier Removal Board

Presented by WDFW Staff

Approved HUC10 Nominations

Lower Columbia

- Lower Cowlitz

Yakima River

- Wilson/Cherry

Snake River

- Grande Ronde Tribs
- Snake River Tribs

Upper Columbia

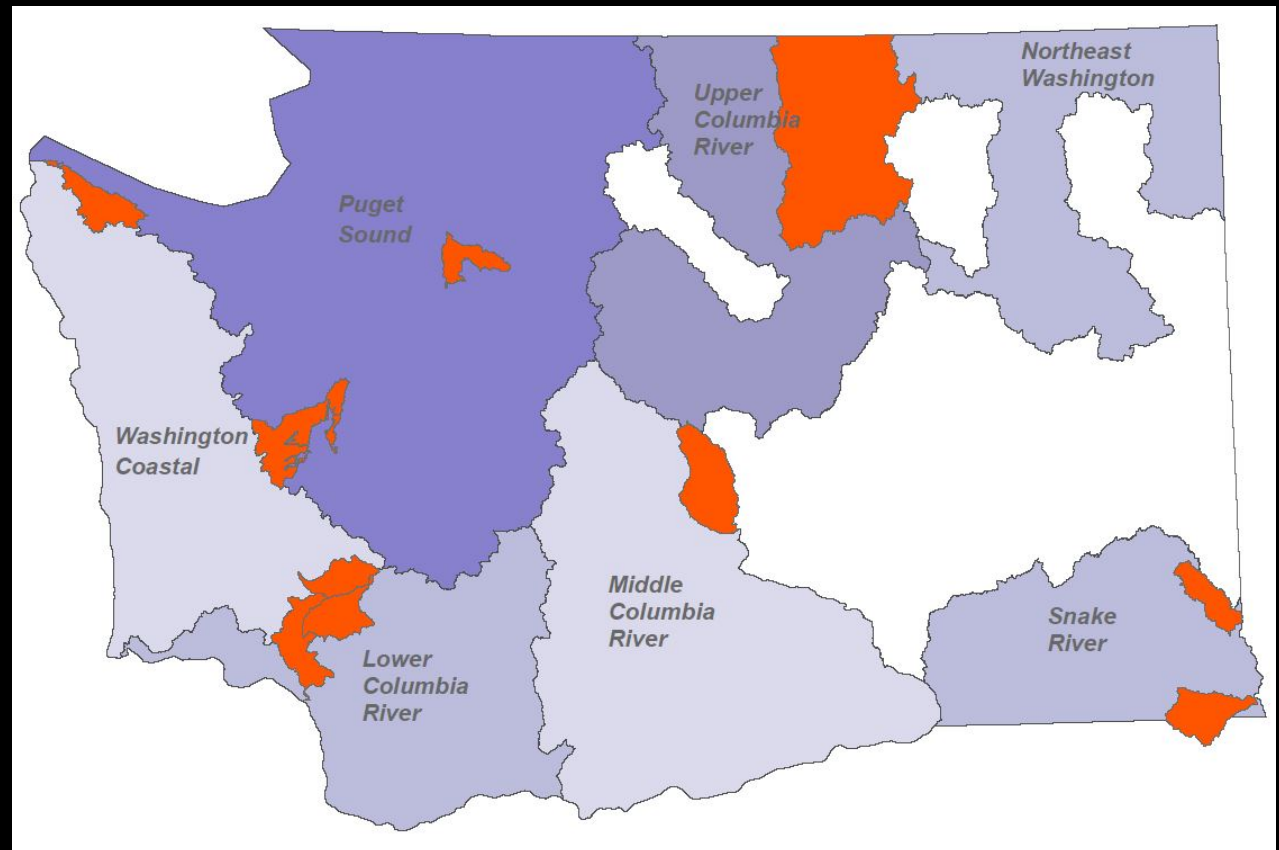
- Okanogan

Puget Sound

- Pilchuck River
- Goldsborough Creek
- Pysht River

Coast

- Newaukum



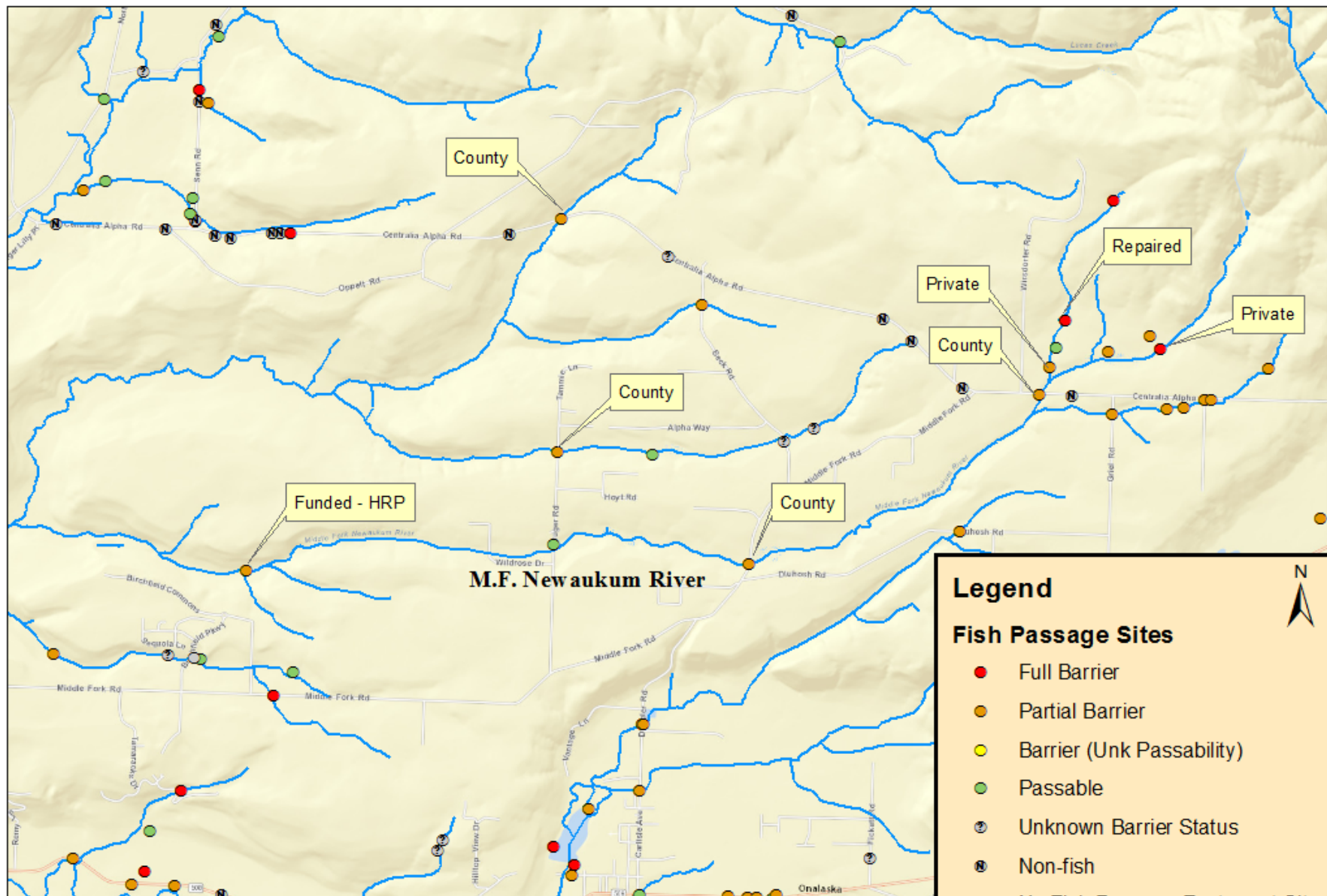
Watershed Pathway Updates

- Progress and updates
 - Washington Coast Region – Cade Roler
 - Columbia River Regions – Cade Roler/Dave Collins
 - Puget Sound – Gina Piazza

Washington Coast Region

- Final Lead Entity approval of the two priority Newaukum Sub-Watersheds.
 - Priority 1: Middle Fork Newaukum and Tribs
 - 6 Barrier Culverts
 - 4 County and 2 Privates
 - Lewis County doing cost estimates and landowners agreement forms
 - Field Scoping completed by WDFW
 - Priority 2: South Fork Newaukum Tribs (Gheer Creek and Lost Creek)
 - 7 Barrier Culverts
 - 3 County and 4 Private
 - Lewis County doing cost estimates and landowner agreement forms
 - Field Scoping completed by WDFW
- Next Steps: Complete Cost Estimates, finalize maps and barrier package reports

Priority 1: Proposed M.F. Newaukum Barrier Package



Legend

Fish Passage Sites

- Full Barrier
- Partial Barrier
- Barrier (Unk Passability)
- Passable
- Unknown Barrier Status
- ⊗ Non-fish
- No Fish Passage Feature at Site
- Fish Bearing Streams

Author: Cade Roler
 Draft Date: April 18th, 2016



Priority 2: Proposed S.F. Newaukum Tribs Barrier Package



Author: Cade Roler
Draft Date: April 18th, 2016



Legend

Fish Passage Sites

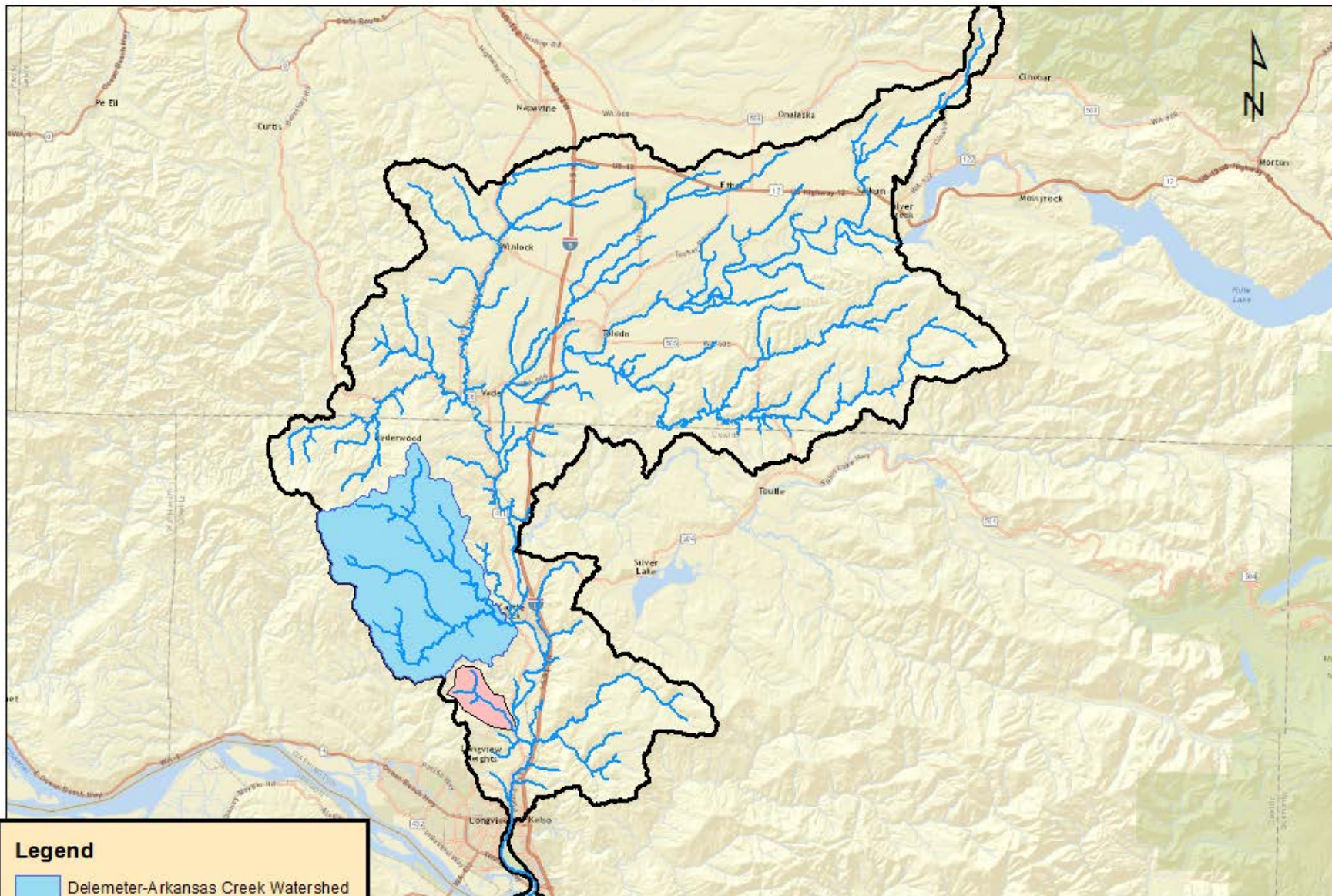
- Full Barrier
- Partial Barrier
- Barrier (Unk Passability)
- Passable
- Unknown Barrier Status
- Non-fish
- No Fish Passage Feature at Site
- Fish Bearing Streams

N




Lower Columbia Fish Recovery Board

- Recovery Region approval of top 2 priority Sub-Watersheds.
 - Priority 1: Delemeter/Arkansas Watershed
 - Priority 2: Leckler Creek Watershed
- Field scoping completed by WDFW
- Waiting on feedback/final approval of barrier packages in two sub-watersheds
- Next Steps:
 - Finalize packages in priority areas after receiving feedback from the region.
 - Cost estimates

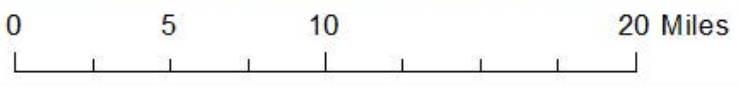
Lower Cowlitz Priority 1 and 2 Sub-Watersheds



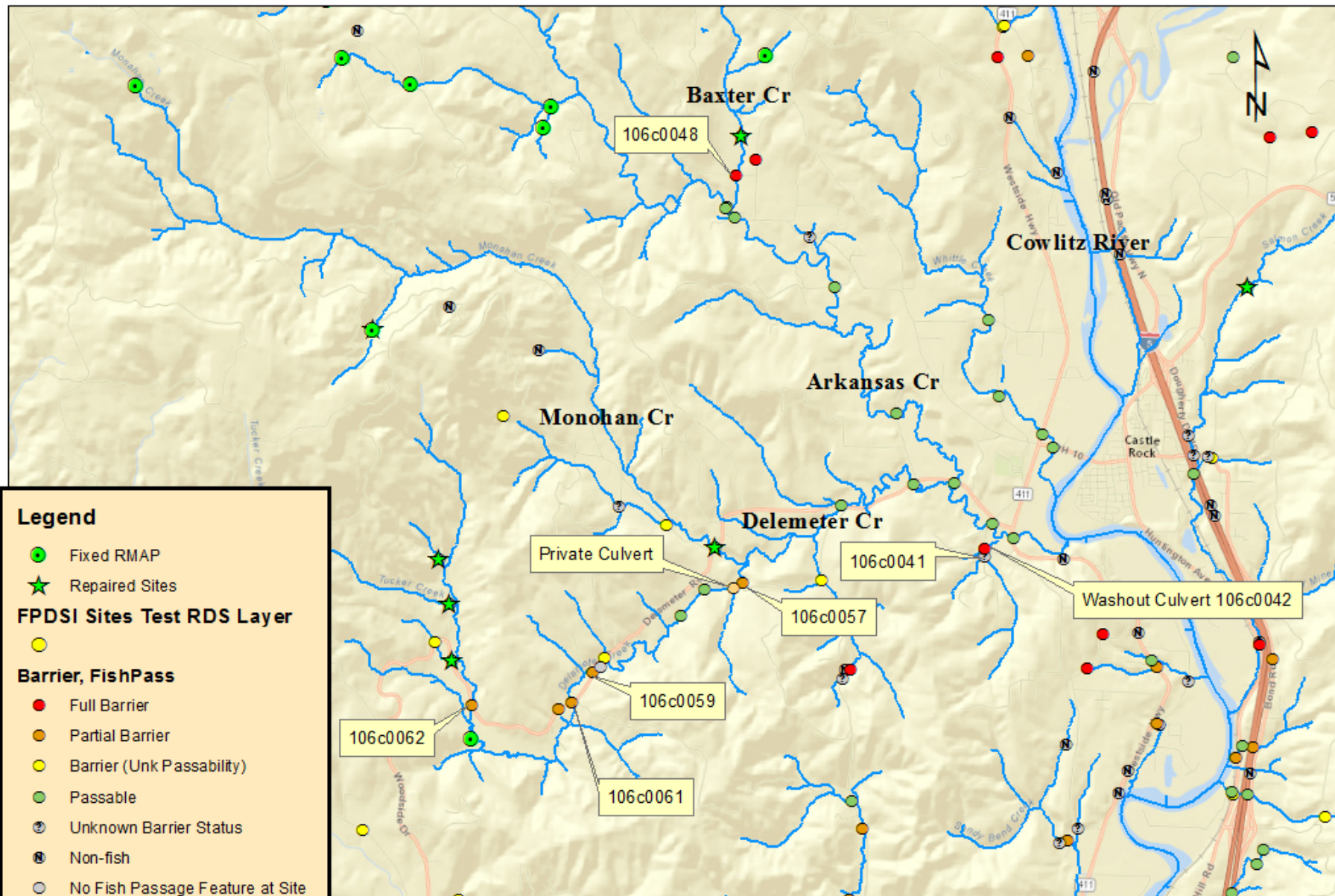
Legend

-  Delemeter-Arkansas Creek Watershed
-  Leckler Creek Watershed
-  Lower Cowlitz Nomination

Author: Cade Roler
Draft Date: 4/13/2016



Proposed Delemeter/Arkansas Barrier Package



Legend

- Fixed RMAP
- Repaired Sites
- FPDSI Sites Test RDS Layer**
- FPDSI Sites Test RDS Layer
- Barrier, FishPass**
- Full Barrier
- Partial Barrier
- Barrier (Unk Passability)
- Passable
- Unknown Barrier Status
- Non-fish
- No Fish Passage Feature at Site
- Privately Owned Culvert
- DNR Stream Layer Type S and F

Author: Cade Roler

Draft Date: 4/13/2016

0 0.75 1.5 3 Miles



Yakima Fish and Wildlife Recovery Board

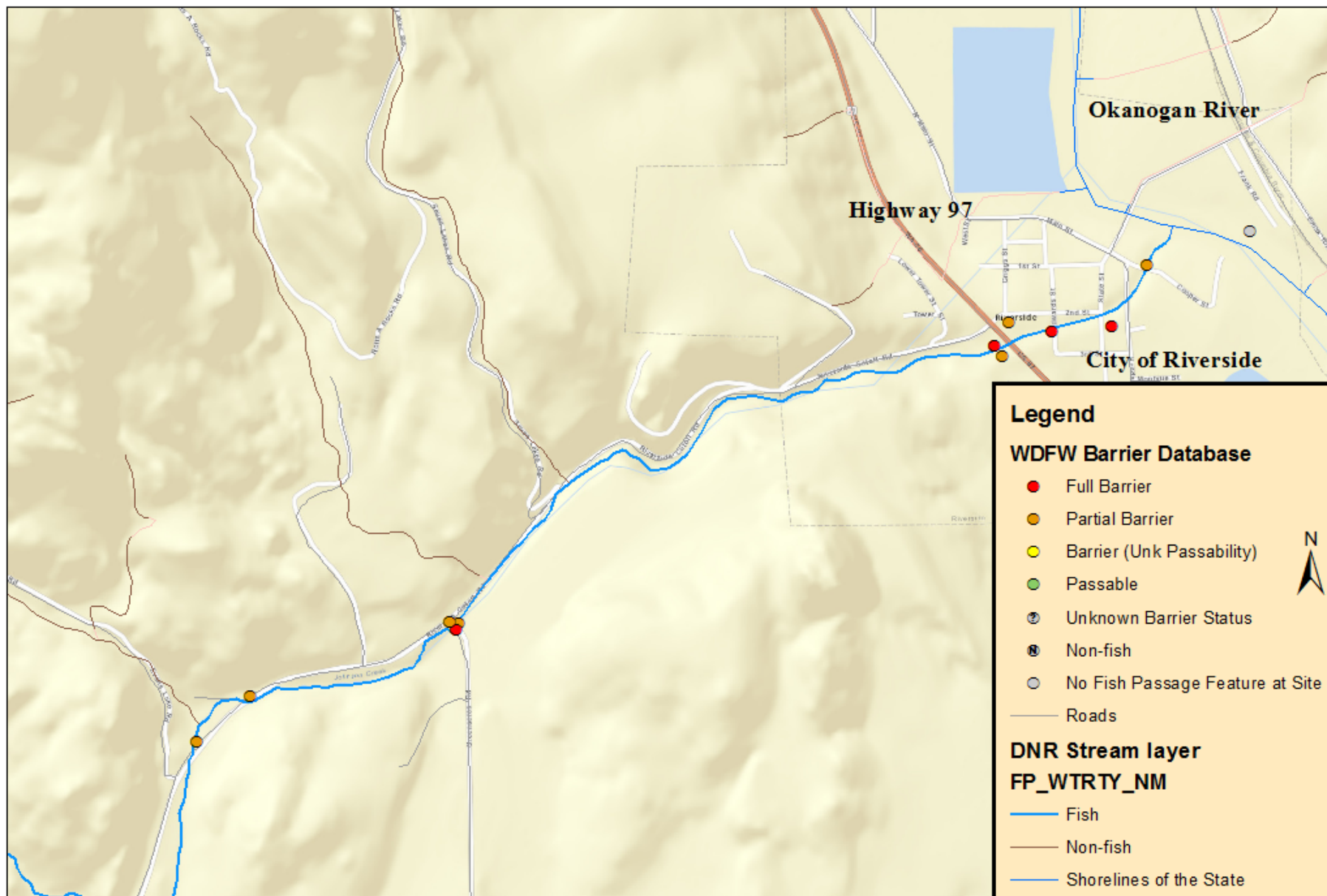
Upper Columbia River Recovery Region

- Priority Sub-Watershed:
 - Okanogan River
 - Johnson Cr: Approximately 10 miles of habitat gain from the lowest barrier in the watershed upstream to the end of fish use.
 - Okanogan CD conducted a SRFB funded fish passage inventory in 2001.
 - All crossings reassessed and database updated April 2016.
 - Mix of city owned barriers downstream of the US 97 WSDOT barrier and county owned barriers upstream of US 97.
 - Stream reaches on private property inaccessible due to landowners denial of access to the stream.
 - High probability of additional barriers and irrigation diversions located on privately owned stream sections.

Next Steps:

- Final approval of barrier package by regional groups/partners.
- Outreach to City and County feature owners.
- Engage with WSDOT on correction of US 97 barrier.
- Cost estimates completed.
- Continued coordination with the Habitat Work Group.

Lower Johnson Barrier Package - City of Riverside



Legend

WDFW Barrier Database

- Full Barrier
- Partial Barrier
- Barrier (Unk Passability)
- Passable
- ⊙ Unknown Barrier Status
- ⊙ Non-fish
- ⊙ No Fish Passage Feature at Site

— Roads

DNR Stream layer

FP_WTRTY_NM

- Fish
- Non-fish
- Shorelines of the State
- Unknown
- Waters with no type designation

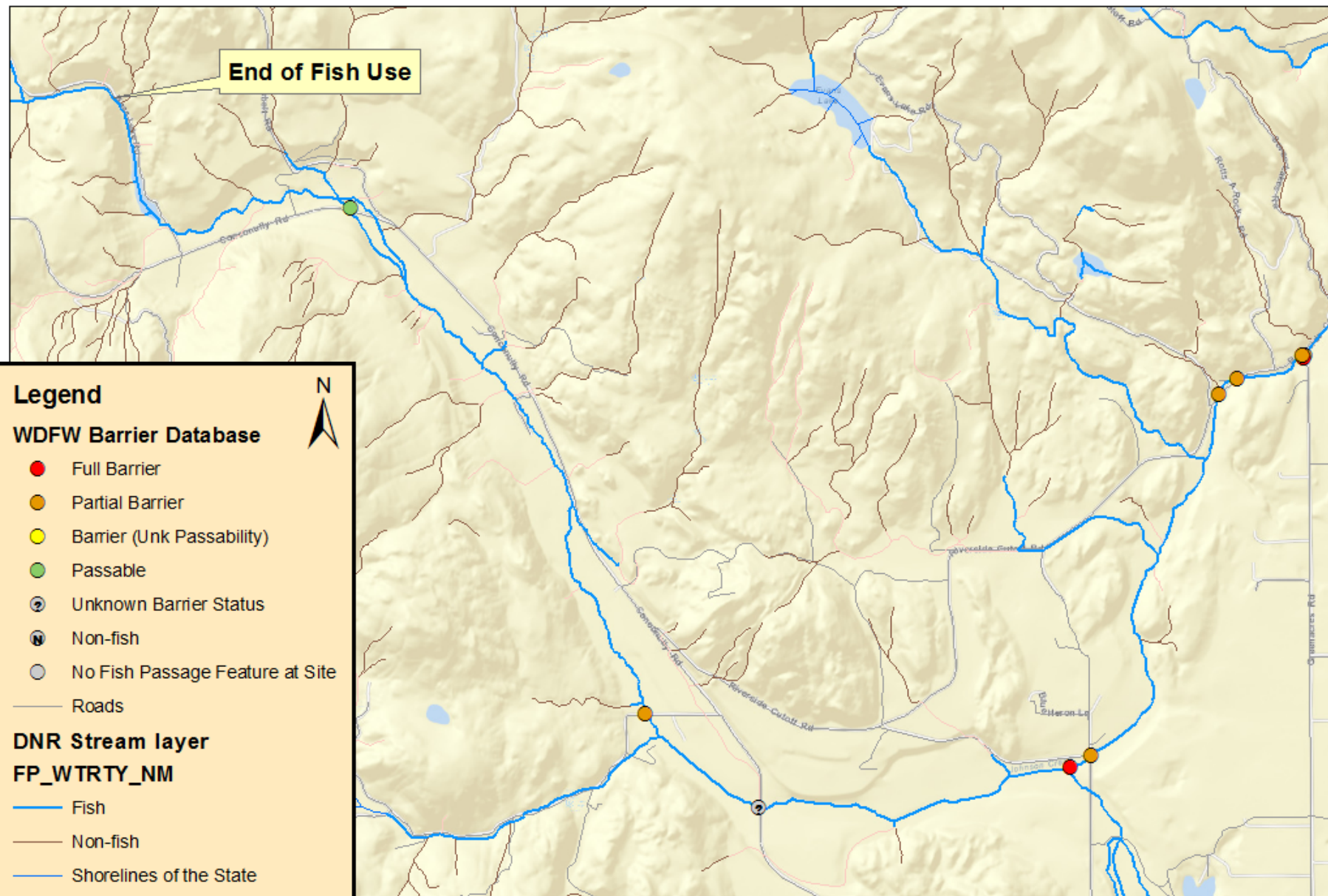


Author: Dave Collins
Draft Date: 4/19/2016

0 0.125 0.25 0.5 Miles



Upper Johnson Barrier Package



Legend

WDFW Barrier Database

- Full Barrier
- Partial Barrier
- Barrier (Unk Passability)
- Passable
- ⊙ Unknown Barrier Status
- ⊙ Non-fish
- ⊙ No Fish Passage Feature at Site

— Roads

DNR Stream layer

FP_WTRTY_NM

- Fish
- Non-fish
- Shorelines of the State
- Unknown
- Waters with no type designation

0 0.5 1 2 Miles

Author: Dave Collins
Draft Date: 4/19/2016



Puget Sound Watershed Updates

Pilchuck River

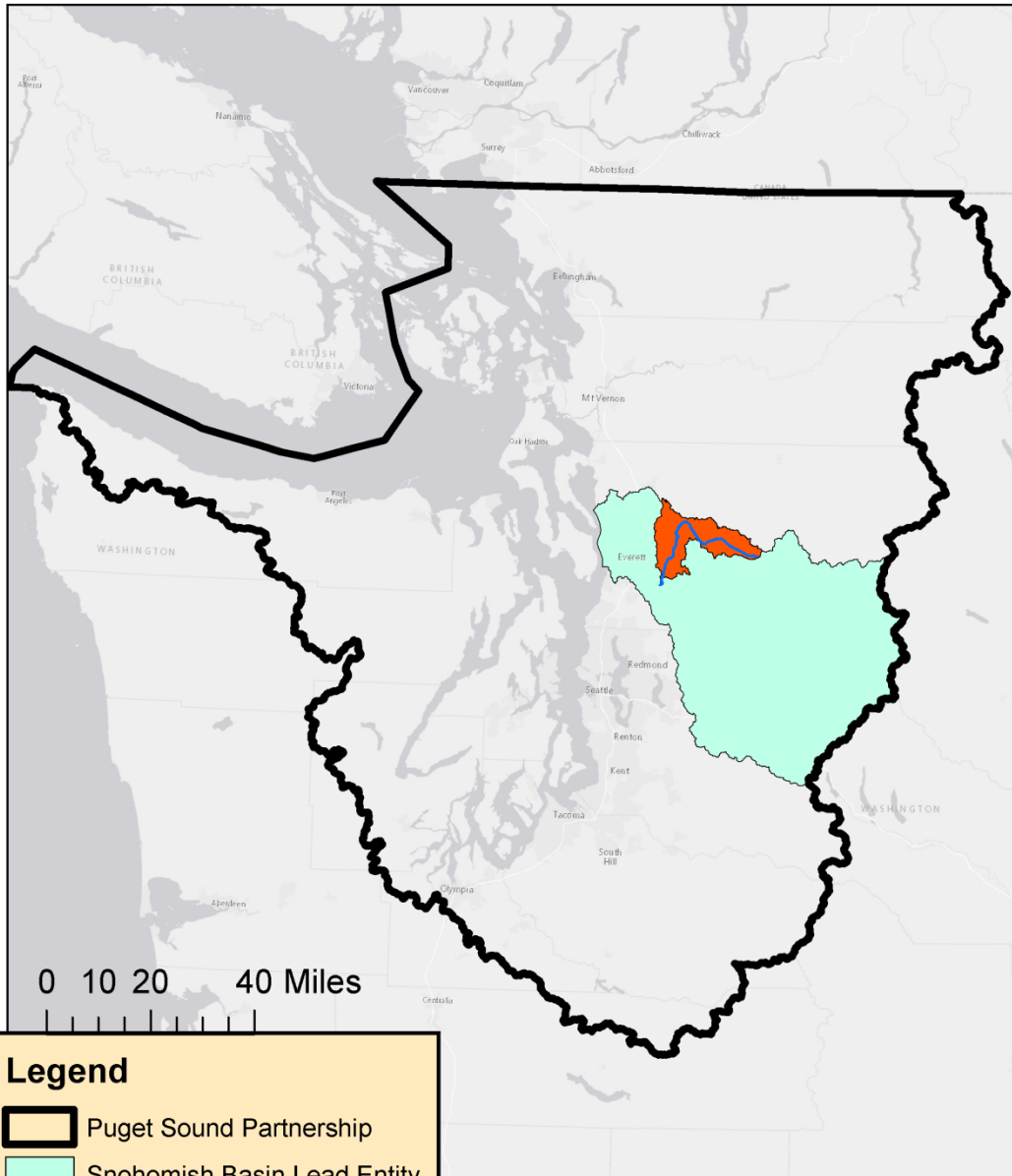
- Priority #1

Little Pilchuck Creek (6 structures)





- Priority #2

Catherine Creek (3 culverts)

Pilchuck River Vicinity Map



Legend

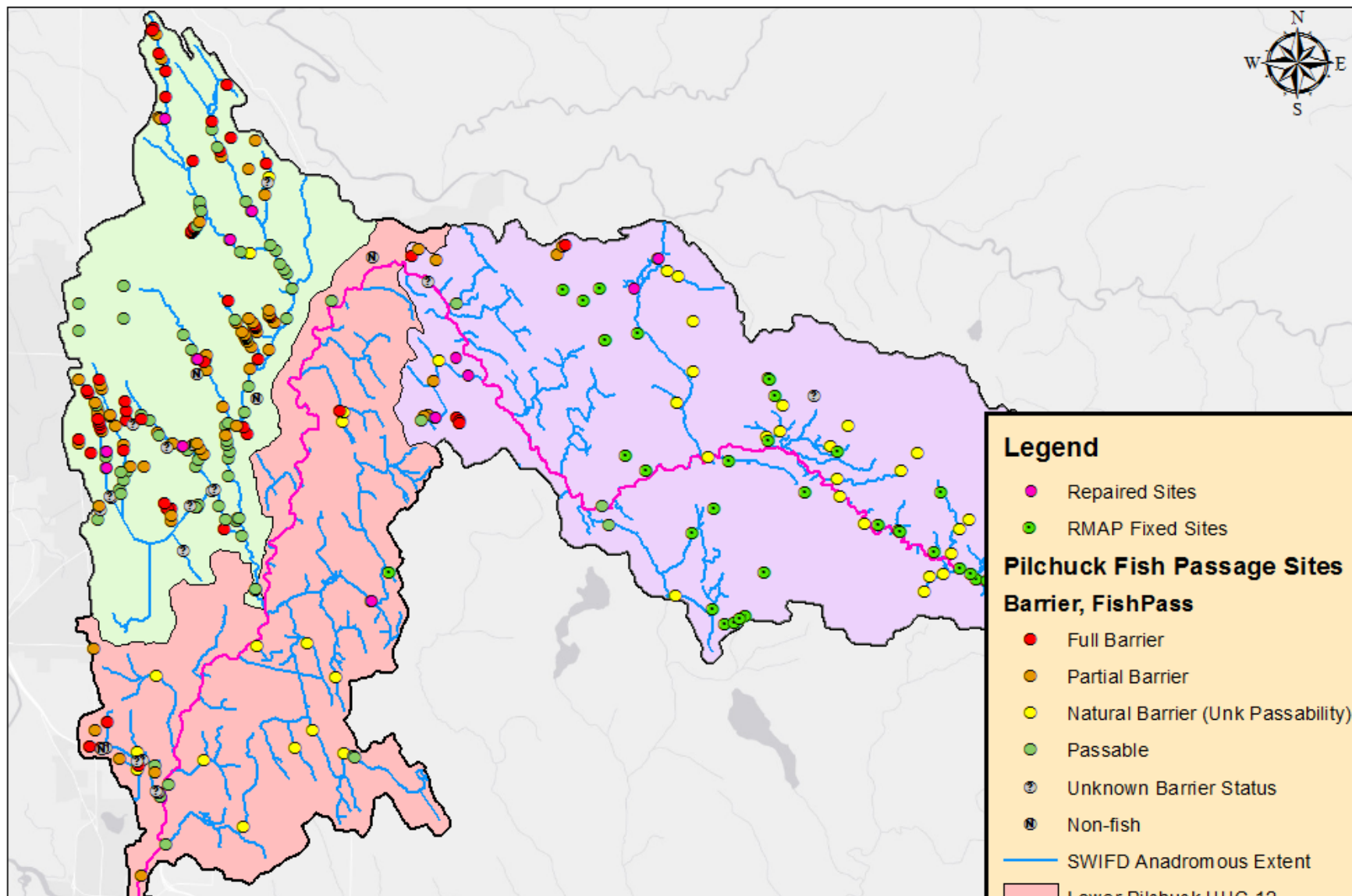
-  Puget Sound Partnership
-  Snohomish Basin Lead Entity
-  Pilchuck River HUC 10
-  Pilchuck River Mainstem



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

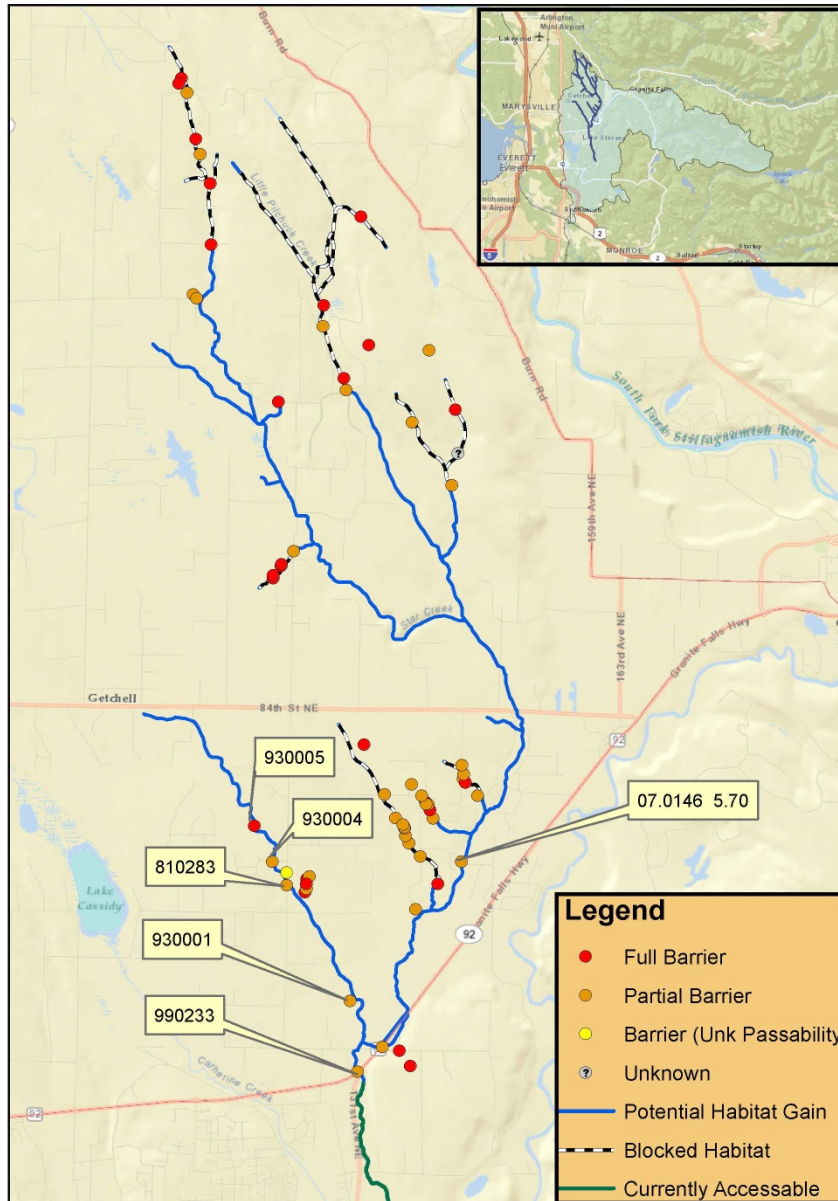
Net Habitat Gain:
16.94 miles

US Barrier(s): 85

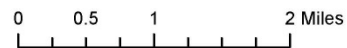
DS Barrier(s): 0

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
to Pilchuck River

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

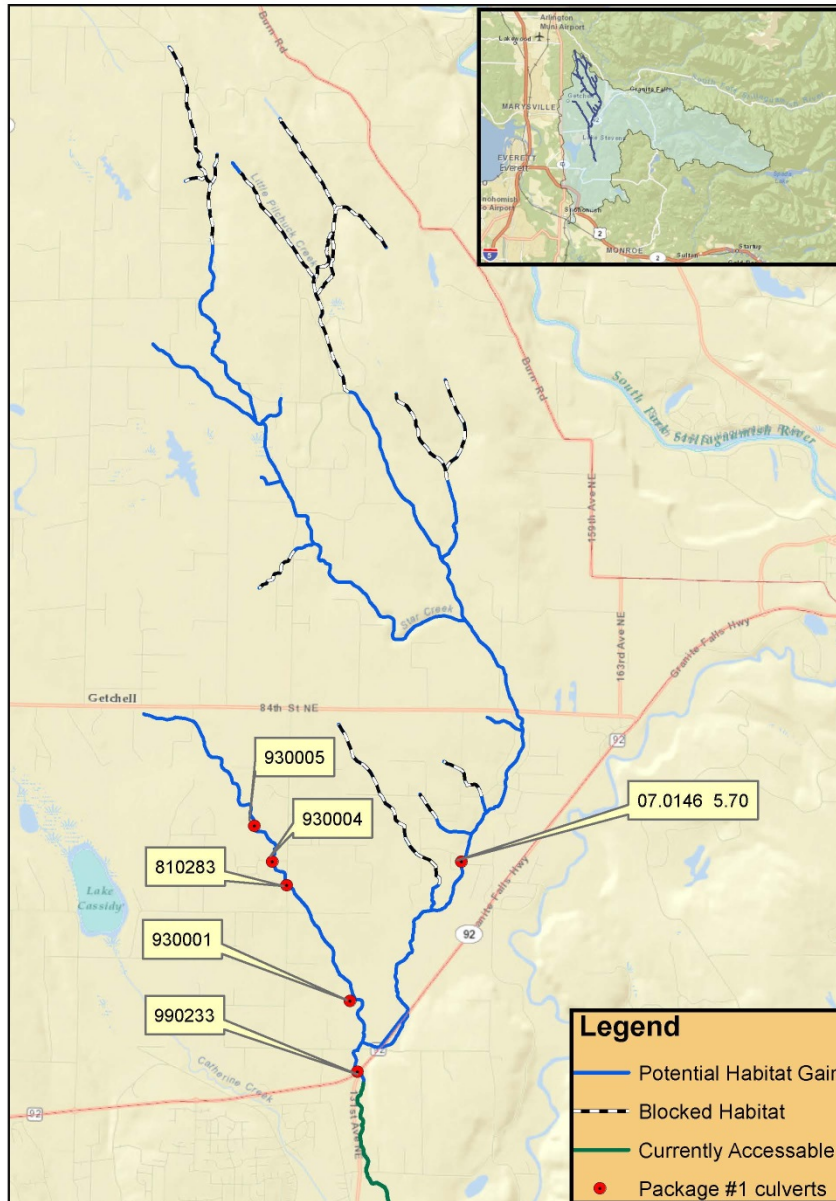
Net Habitat Gain:
16.94 miles

US Barrier(s): 85

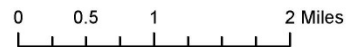
DS Barrier(s): 0

Map Made: 3/4/16

Gina Piazza



Snohomish Basin Lead Entity
Pilchuck River HUC 10



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

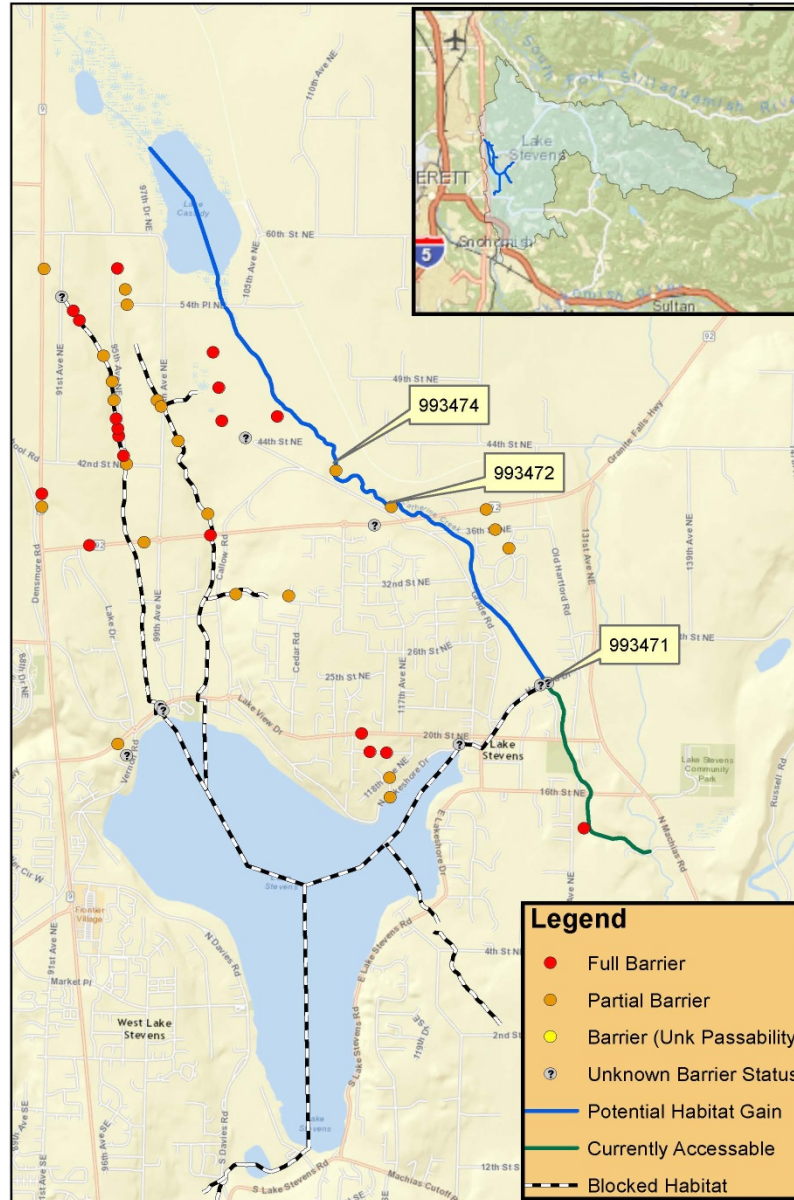
Net Habitat Gain:
3.4 miles

US Barrier(s): 9

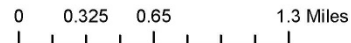
DS Barrier(s): 1

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

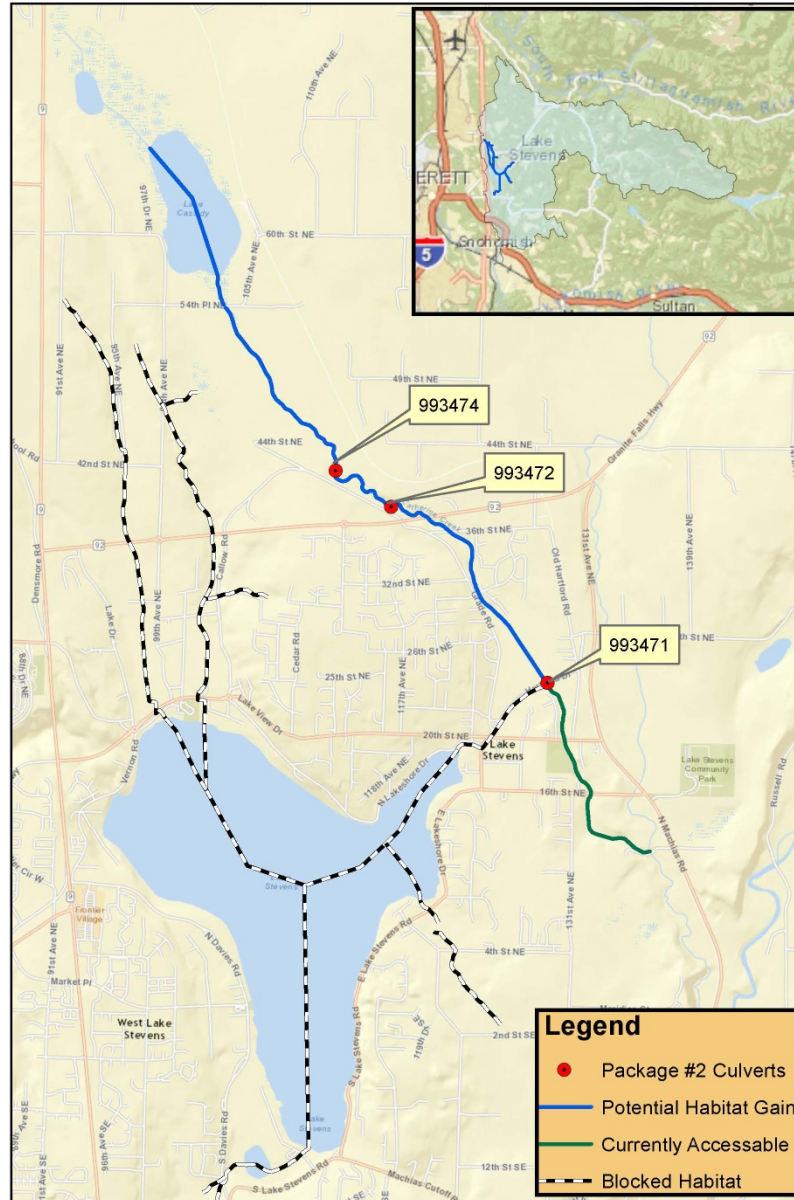
Net Habitat Gain:
3.4 miles

US Barrier(s): 9

DS Barrier(s): 1

Map Made: 3/8/16

Gina Piazza



Snohomish Basin Lead Entity

0 0.325 0.65 1.3 Miles



Puget Sound Watershed Updates

Pilchuck River

4/11/16 Pilchuck Working Group

Attendees: Adopt-a-stream, Tulalip tribe, Sound Salmon Solutions, Wild Fish Conservancy, Snohomish County, Snohomish Conservation District, WDFW, Washington Water Trust

- Little Pilchuck Dam- feasibility and design?
- Lake Stevens- Did not add to package

Next Steps

- Priority 2 field verification
- Cost estimates

Puget Sound Watershed Updates

Pysht River

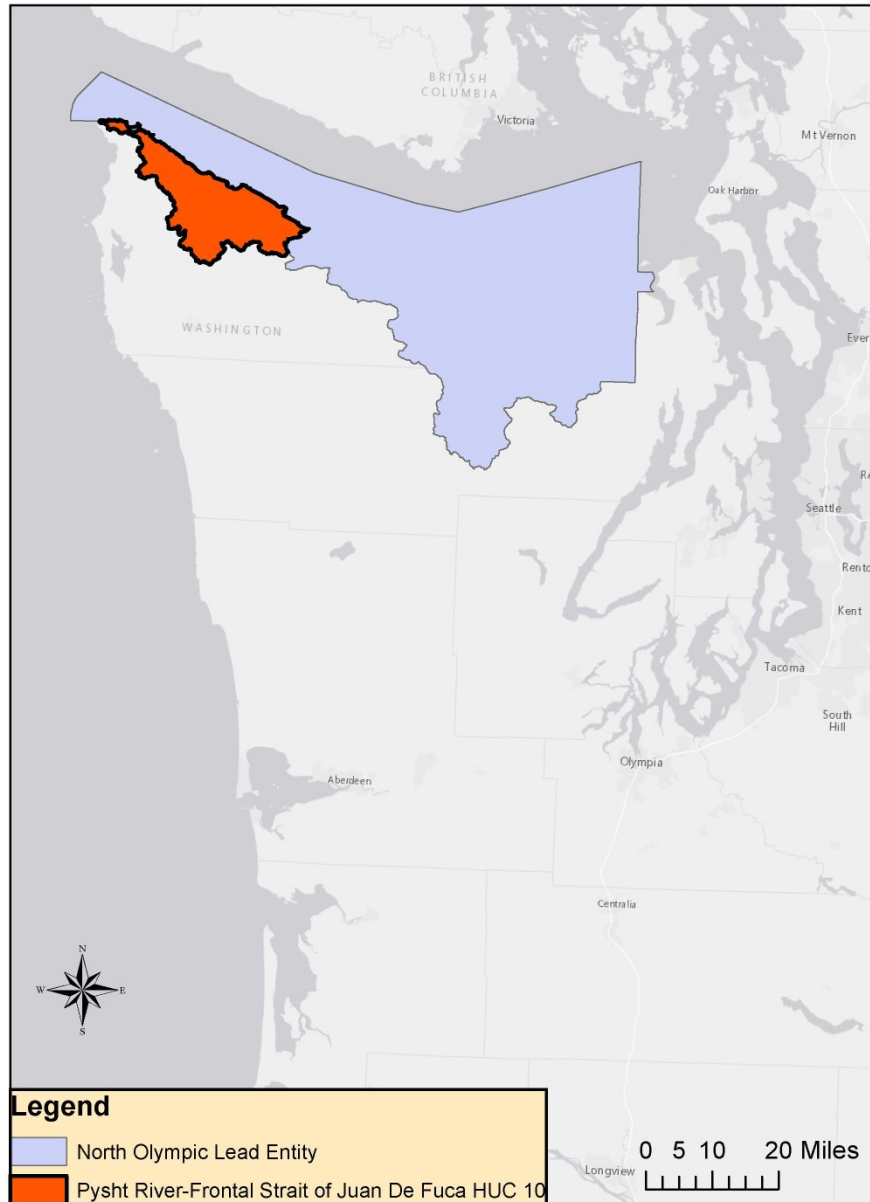
Priority #1

Upper Hoko HUC 12 (3 culverts)

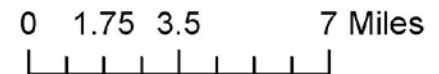
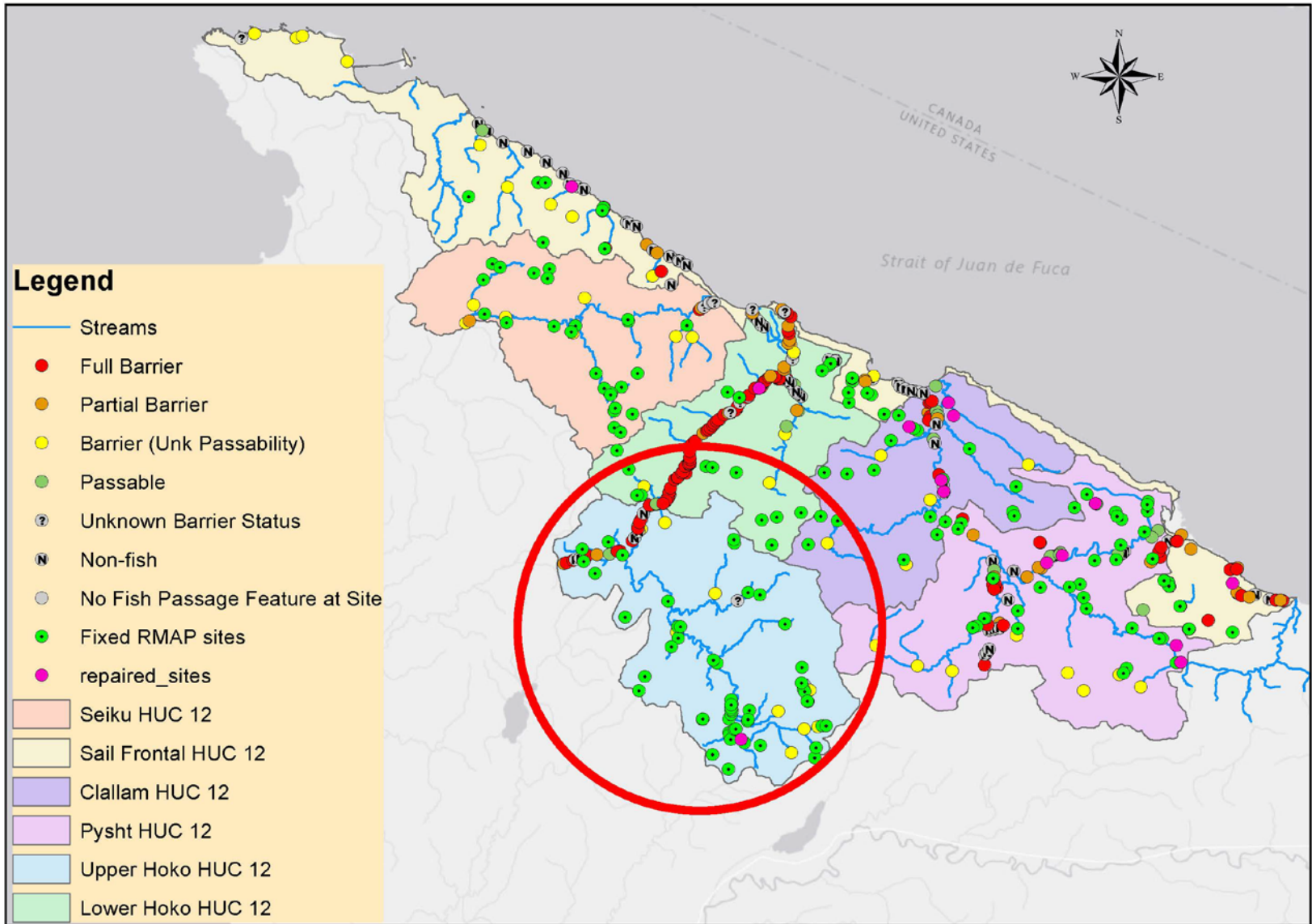
Priority #2

Lower Hoko HUC 12 (9 culverts)

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



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



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

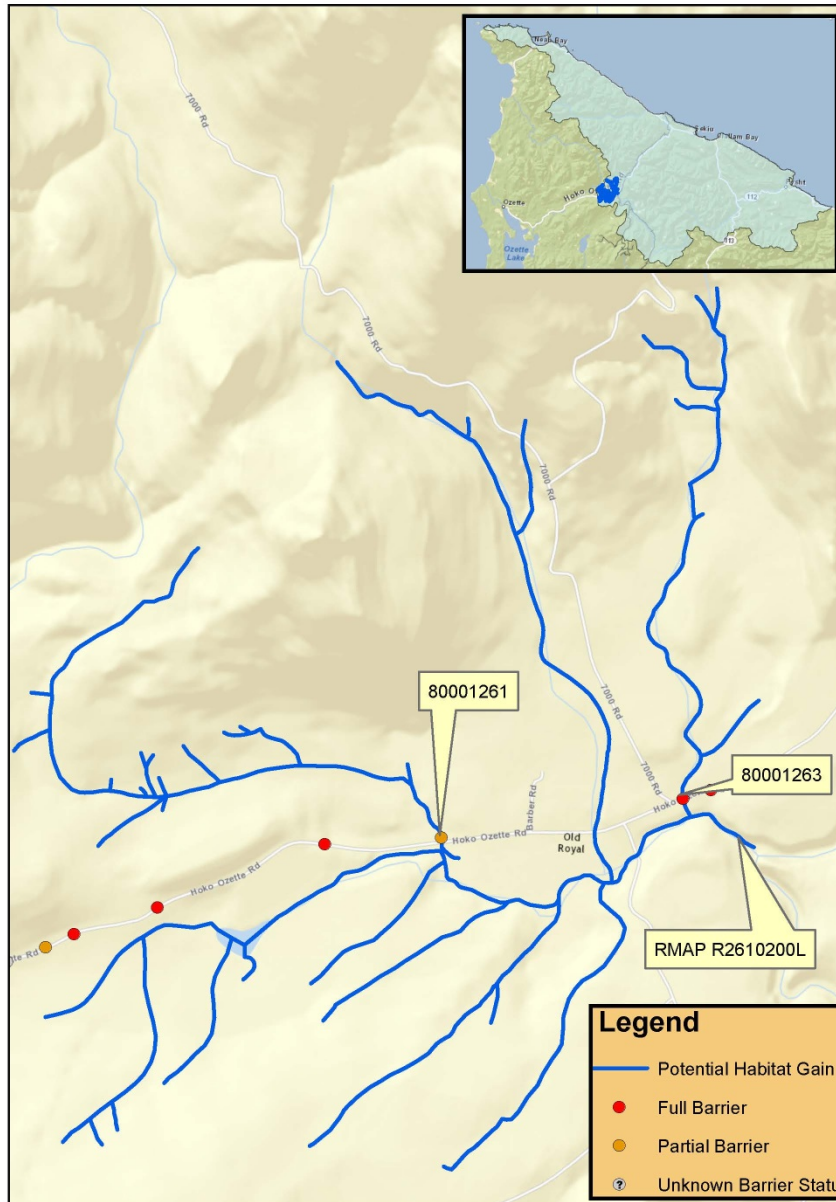
Net Habitat Gain:
13.21 miles

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

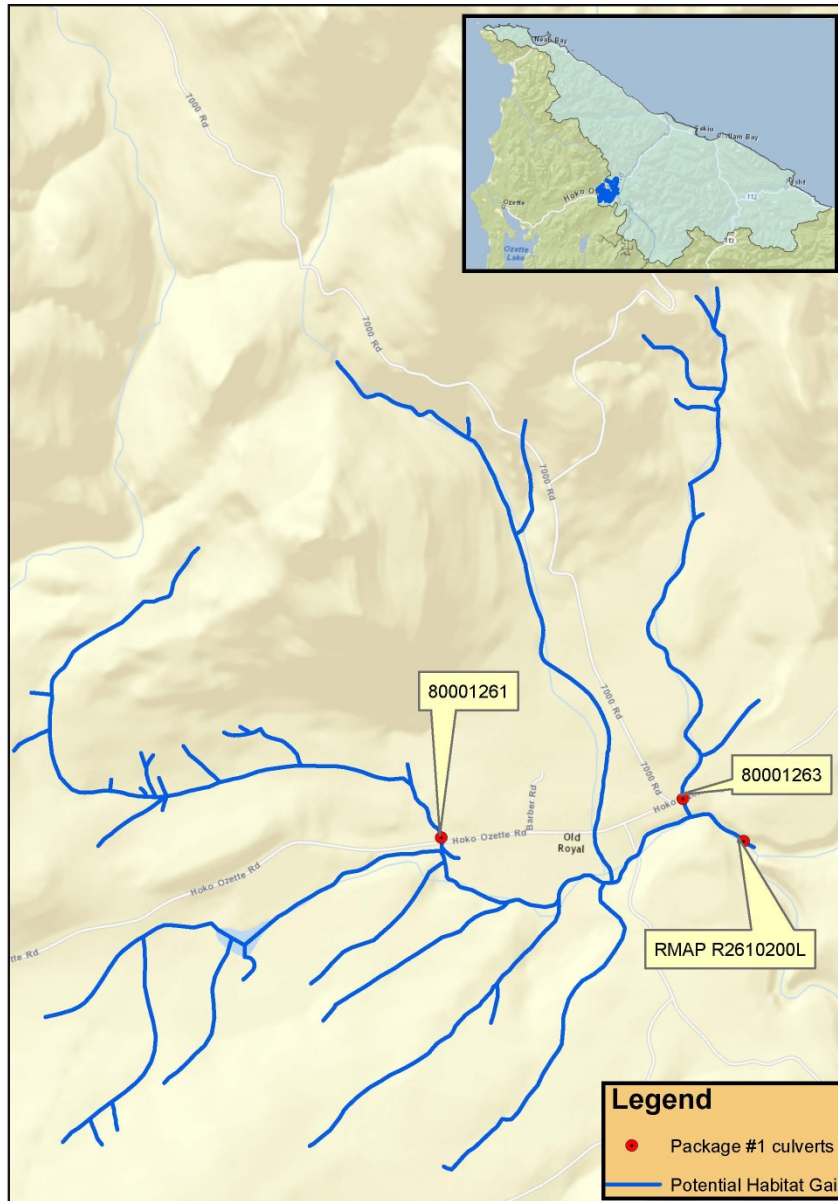
Net Habitat Gain:
13.21 miles

US Barrier(s): 8

DS Barrier(s): 0

Map Made: 3/14/16

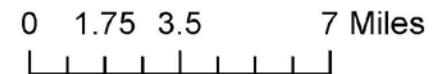
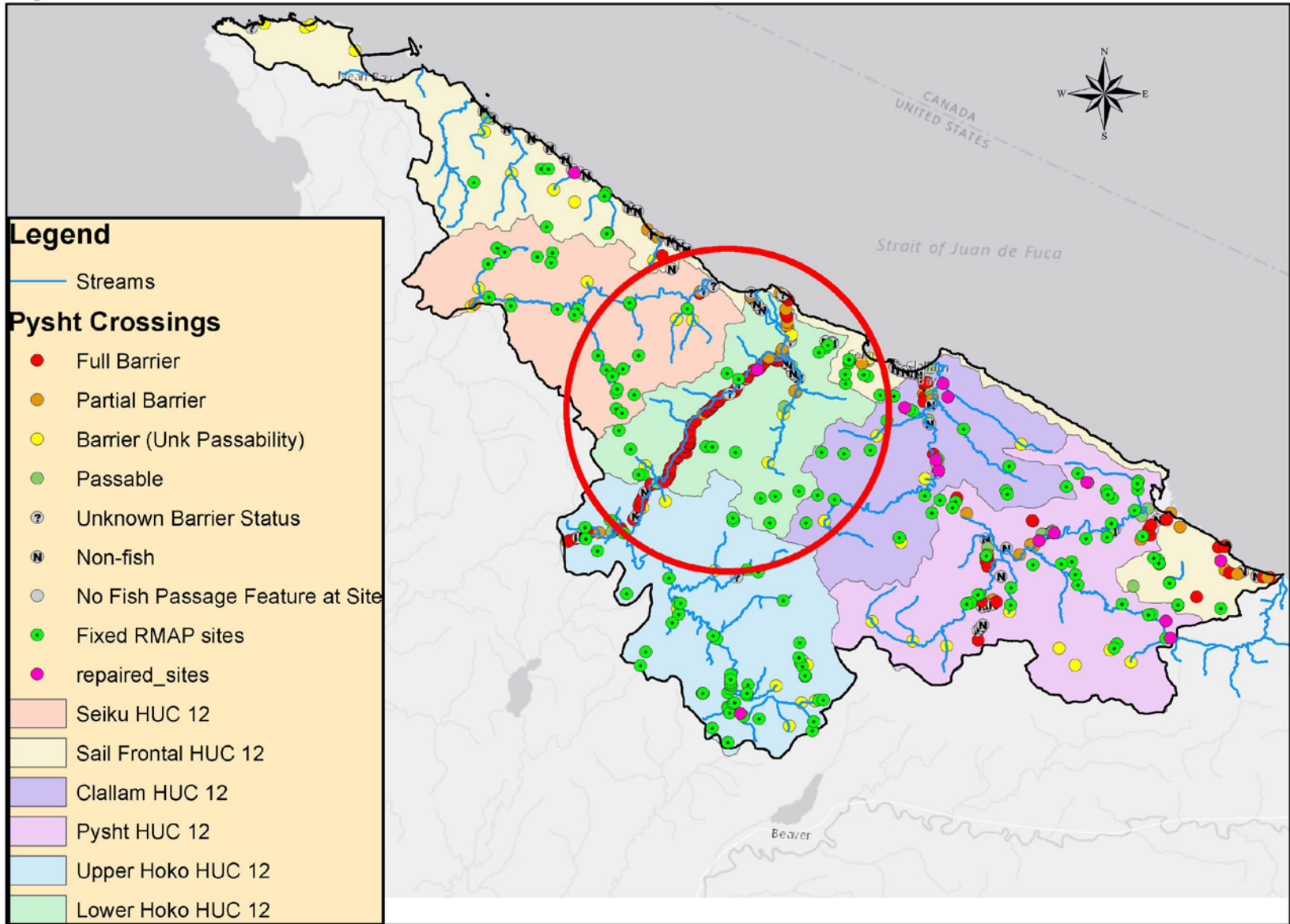
Gina Piazza



North Olympic Lead Entity

Pysht River-Frontal Strait of Juan De Fuca HUC 10

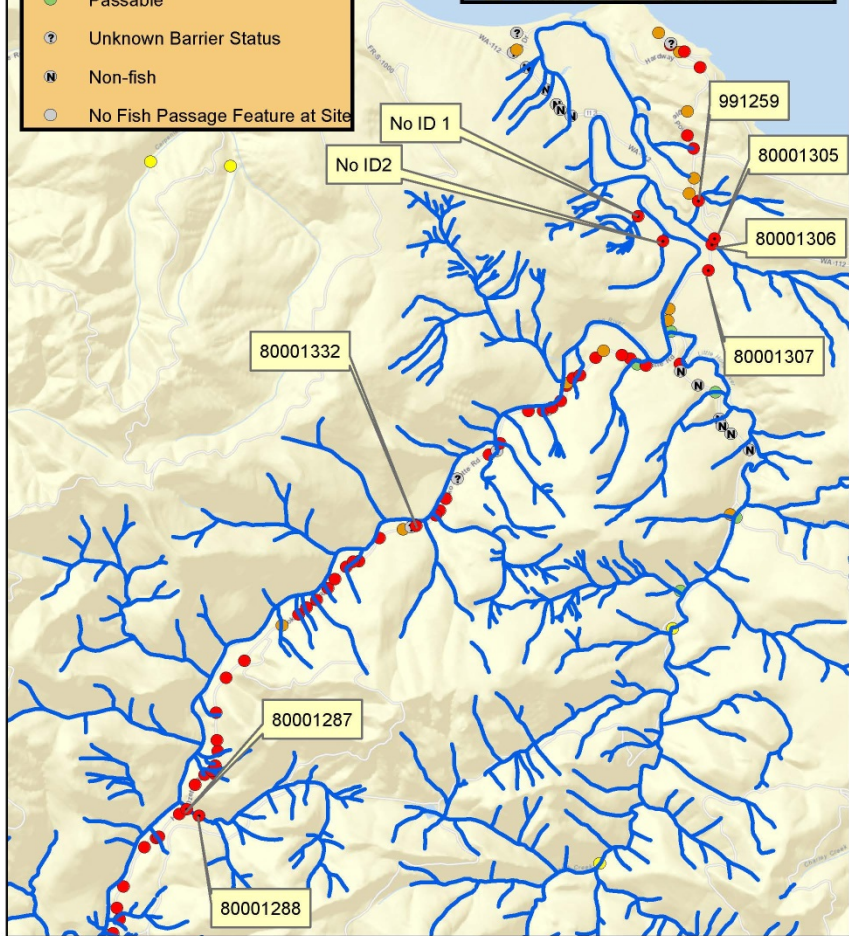
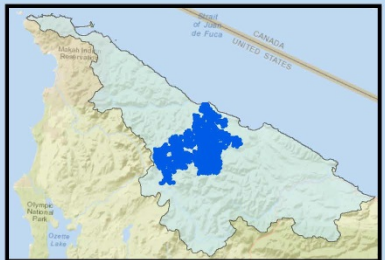
Pysht River-Frontal Strait of Juan De Fuca HUC 10 Barriers



Lower Hoko Package Priority #2

Legend

- Package #2
- Stream
- Full Barrier
- Partial Barrier
- Barrier (Unk Passability)
- Passable
- ⊙ Unknown Barrier Status
- ⊙ Non-fish
- No Fish Passage Feature at Site



Fish Barrier Removal Board

County: Clallam

WRIA: 19

Streams: Gage Creek, Talbot creek, and unnamed tributary to Hoko River

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

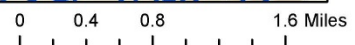
Net Habitat Gain:

US Barrier(s):

DS Barrier(s):

Map Made:

Gina Piazza



North Olympic Lead Entity
Pysht River-Frontal Strait of Juan De Fuca HUC 10

Lower Hoko Package Priority #2



Fish Barrier Removal Board

County: Clallam

WRIA: 19

Streams: Gage Creek, Talbot creek, and unnamed tributary to Hoko River

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

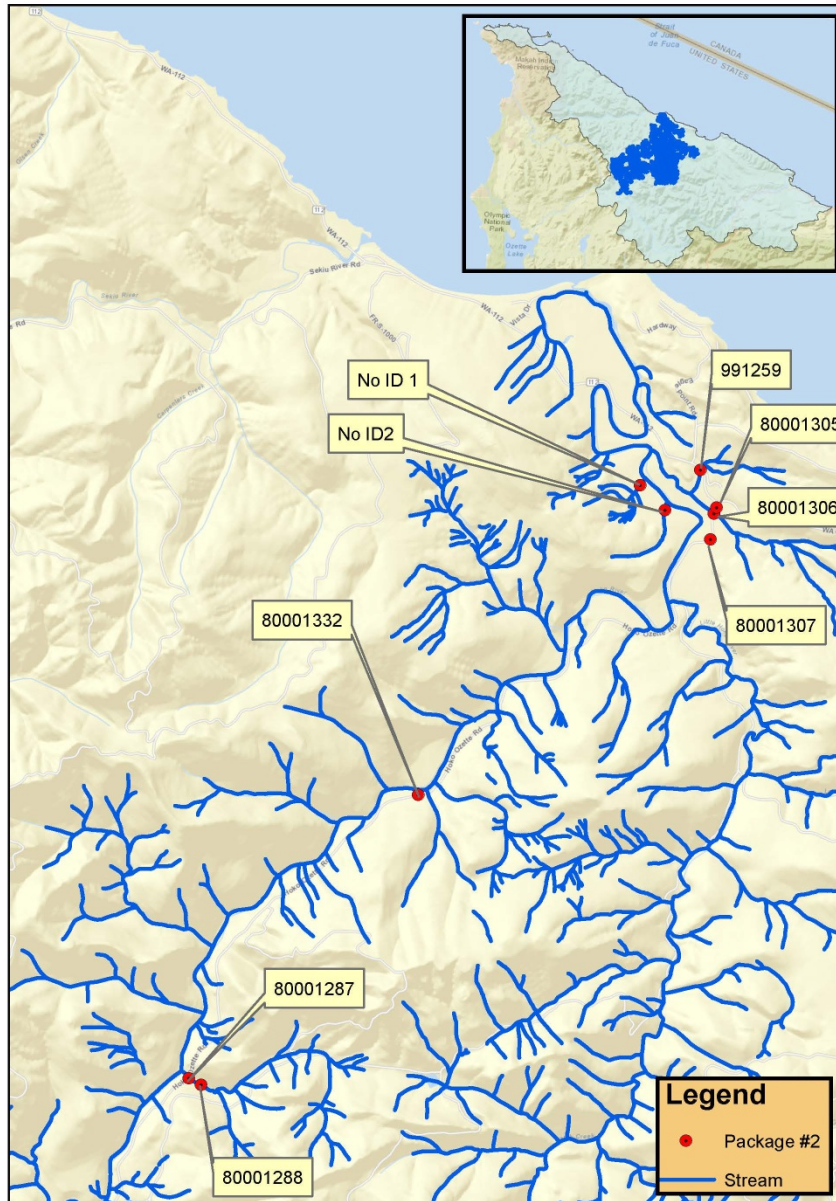
Net Habitat Gain:

US Barrier(s):

DS Barrier(s):

Map Made:

Gina Piazza



North Olympic Lead Entity

Pysht River-Frontal Strait of Juan De Fuca HUC 10

Puget Sound Watershed Updates

Pysht River

- Next steps
 - Field Verifications of Priority 2's
 - Finalize cost estimates

Puget Sound Watershed Updates

Goldsborough Creek

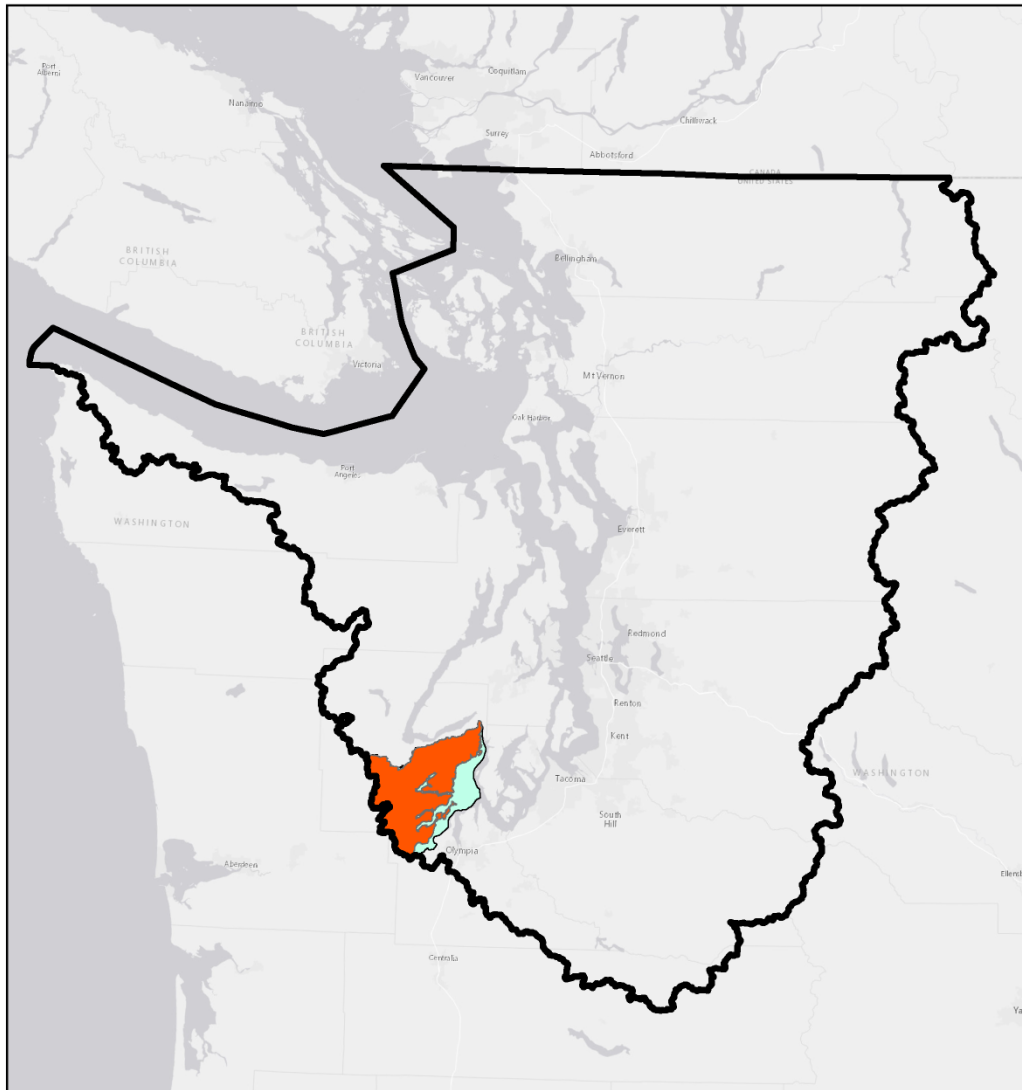
Priority #1

Goldsborough (10 culverts)




Priority #2

Independent tributaries- (6 culverts) just received Independent Tributaries

Goldsborough HUC 10 Vicinity Map



Legend

-  Puget Sound Partnership
-  WRIA 14 Lead Entity
-  Goldsborough HUC 10

0 15 30 60 Miles



Author: Cade Roler



Goldsborough HUC 10 Fish Passage Sites



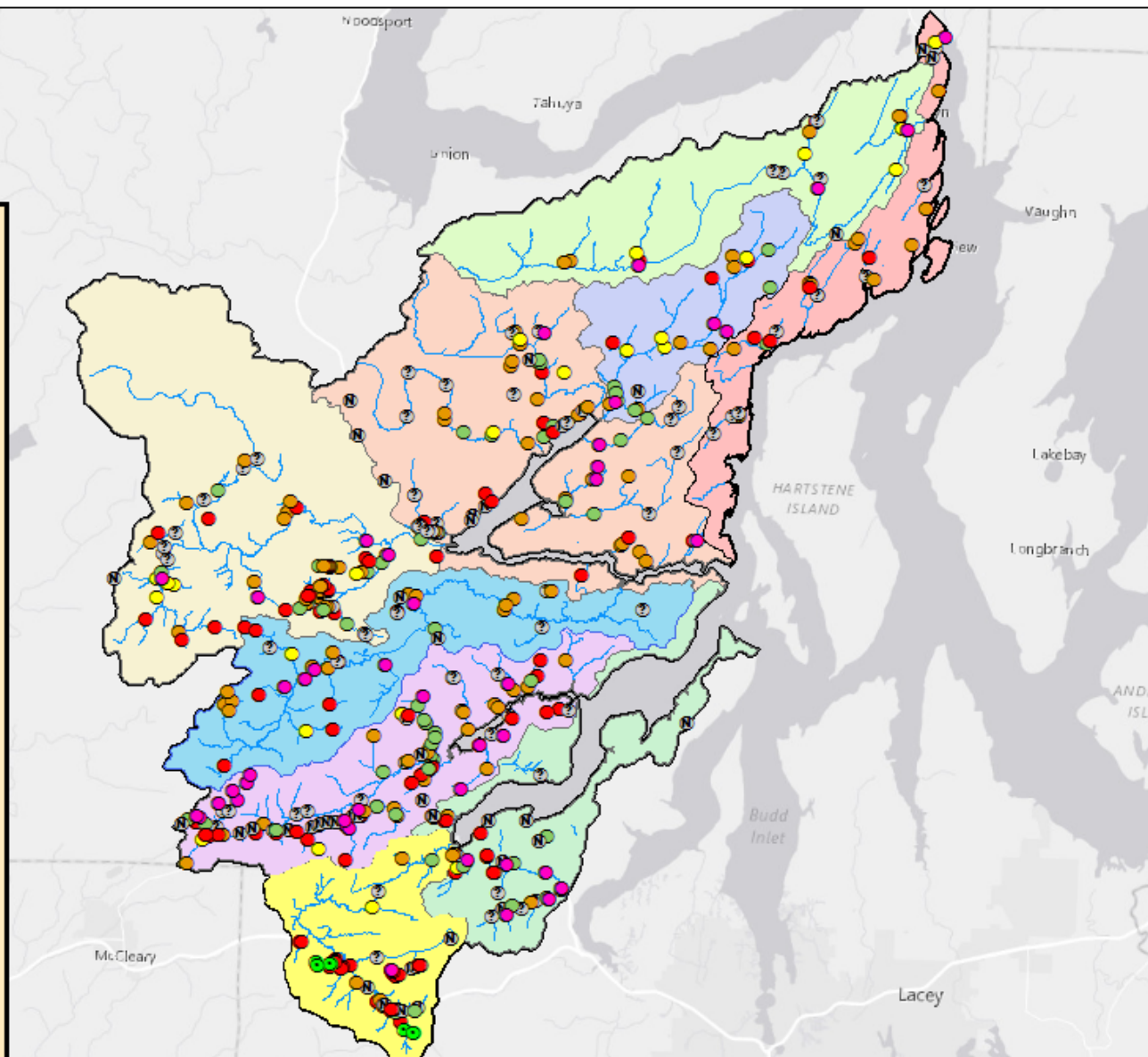
Legend

- Fixed RMAP Sites
- Repaired Sites

Fish Passage Sites

- Full Barrier
- Partial Barrier
- Natural Barrier (Unk Passability)
- Passable
- Unknown Barrier Status
- N Non-fish
- No Fish Passage Feature at Site

- SWIFD Stream Layer
- Kennedy Creek HUC 12
- Sherwood Creek HUC 12
- Jones Creek HUC 12
- Deer Creek HUC 12
- Cranberry Creek HUC 12
- Goldsborough Creek HUC 12
- Mill Creek HUC 12
- Skookum Creek HUC 12
- Schneider Creek HUC 12
- Goldsborough HUC 10



0 2.5 5 10 Miles



Author: Cade Roler



Goldsborough Package Priority #1



Fish Barrier Removal Board

County: Snohomish

WRIA: 14

Streams:
Goldsborough creek,
Coffee, Likes Creek,
unnamed tributaries

Fish Species: Coho,
Winter Steelhead,
Fall Chinook,
Fall Chum,
Cutthroat Trout,
Resident Trout

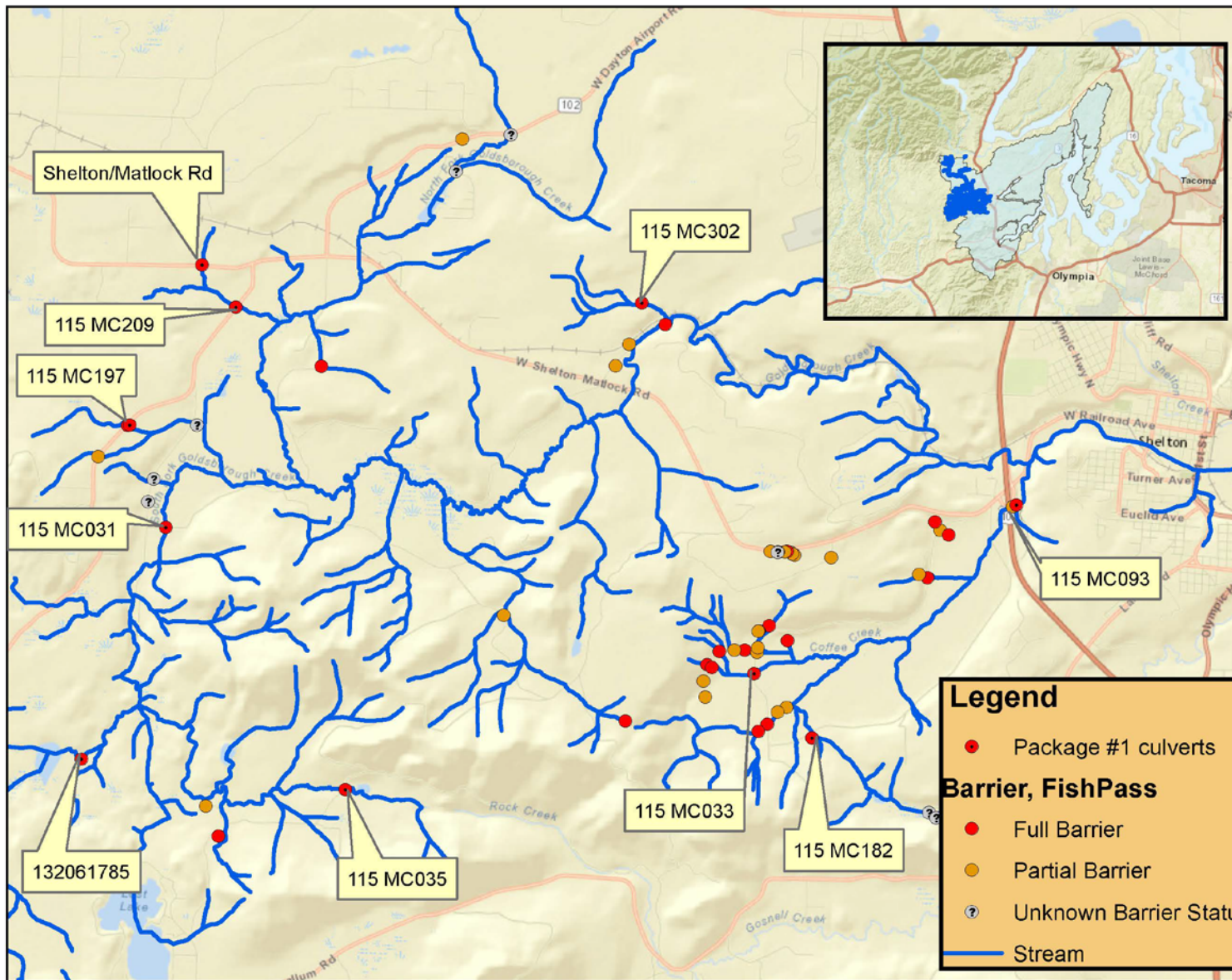
Net Habitat Gain:

US Barrier(s):

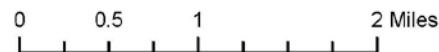
DS Barrier(s):

Map Made: 4/18/16

Gina Piazza



WRIA 14 Lead Entity
Goldsborough HUC 10



Goldsborough Package Priority #1



Fish Barrier Removal Board

County: Snohomish

WRIA: 14

Streams:
Goldsborough creek,
Coffee, Likes Creek,
unnamed tributaries

Fish Species: Coho,
Winter Steelhead,
Fall Chinook,
Fall Chum,
Cutthroat Trout,
Resident Trout

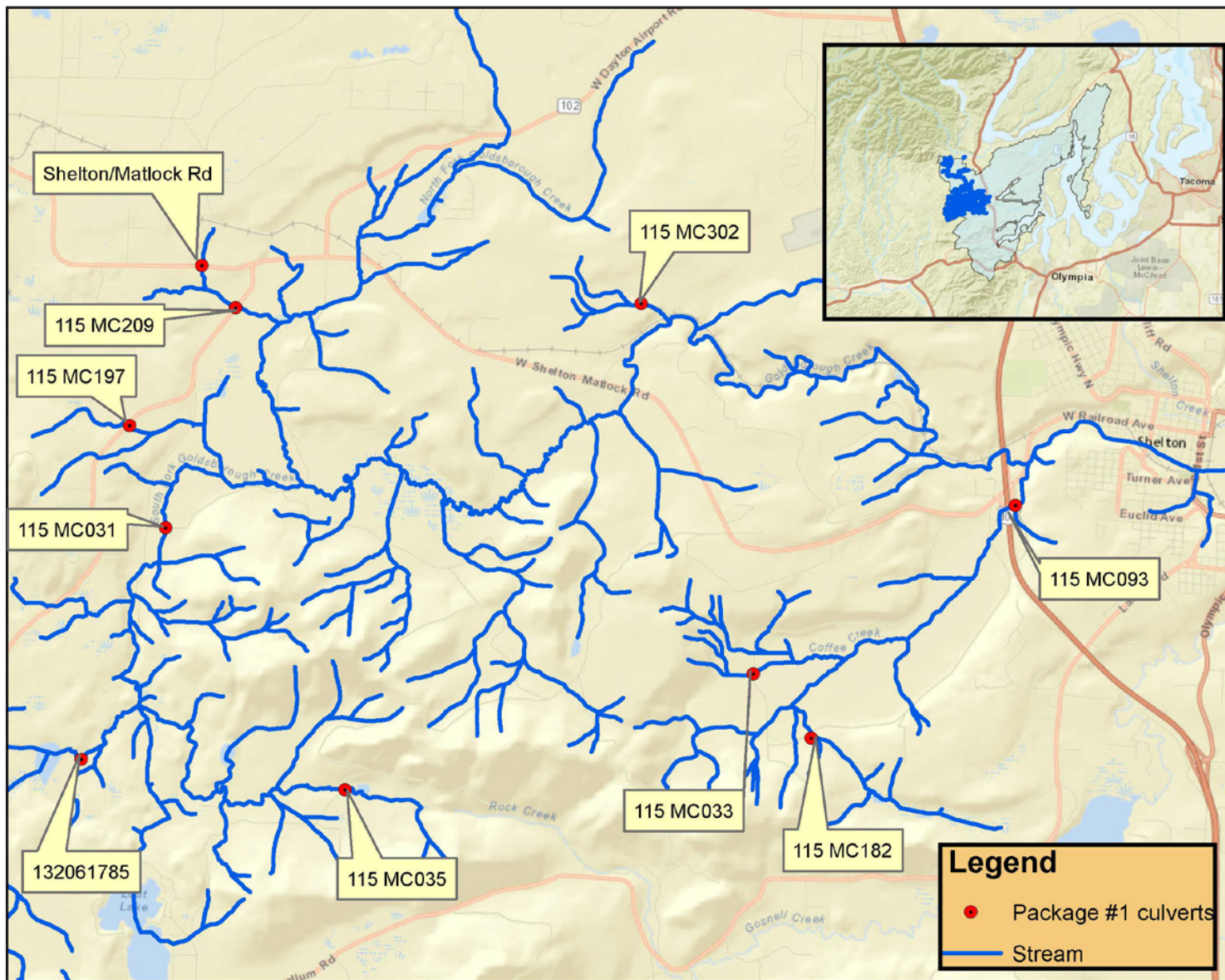
Net Habitat Gain:

US Barrier(s):

DS Barrier(s):

Map Made: 4/18/16

Gina Piazza



WRIA 14 Lead Entity
Goldsborough HUC 10

0 0.5 1 2 Miles



Independent Tributary Package Priority #2



Fish Barrier Removal Board

County: Snohomish

WRIA: 14

Streams:

Fish Species:

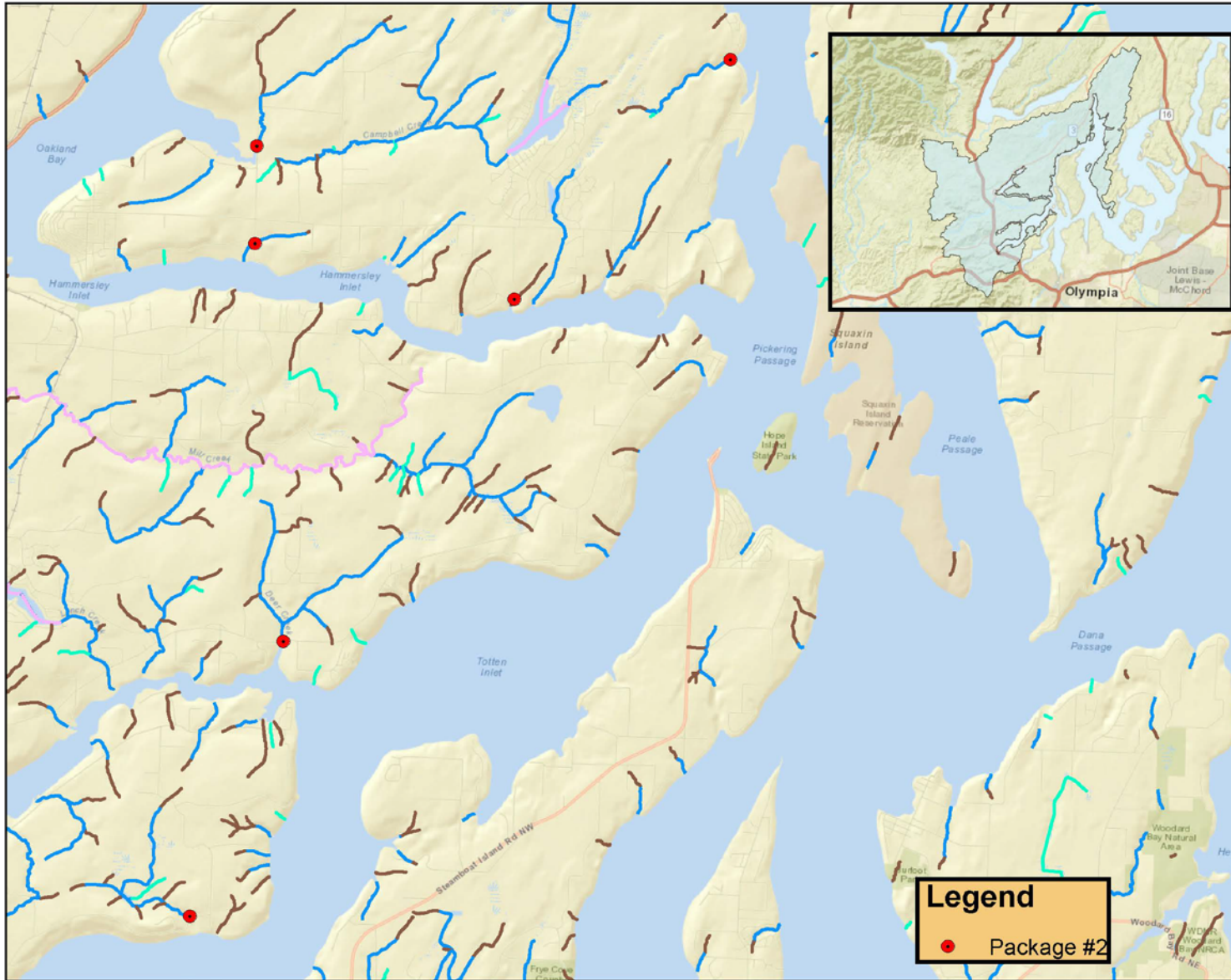
Net Habitat Gain:

US Barrier(s):

DS Barrier(s):

Map Made: 4/19/16

Gina Piazza



WRIA 14 Lead Entity

0 0.5 1 2 Miles



Puget Sound Watershed Updates

Goldsborough Creek

- Next steps
 - Finalize Priority #2's
 - Finish Field Verifications
 - Finalize cost estimates

Coordinated Project Pathway

Coordinated Project Pathway Project Ranking Criteria

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

DRAFT

Coordinated Project Pathway Tier 2 Ranking Criteria

Tier 2 Ranking - Top 30 projects

1. Cost per Linear Mile (Total Map Measured Potential Gain): – Surveys are showing less net gain than when map measured.
2. Level of Coordination – Cade will bring a list of completed and ongoing restoration projects in the sub-watershed for the board to review and consider.
3. Habitat Quality – Actual net gain weighted by habitat quality index scores.
4. Barrier Severity – Based on reassessments
5. Number of Downstream Barriers

Additional Criteria?

- Updated project readiness information
- Board Review Points

Coordinated Project Pathway - Top 30 Ranked Projects

Draft Date: March 15th 2016

Barrier Owner Type	Nominating Entity	Stream Name	FBRB ID (Tot. # of Barrs. in Pack.)	Tot. Pack. Net Gain (mi.)	Net Gain (miles)	Net Gain Score	Project Readiness Score	Passability Score	Anadromous Species Score	Species Status Rating Score	Coordination score	Total Score	Rank
City	WRIA 19 North Olympic Peninsula and City of Port Angeles	Valley Creek	65.1 (1)	6.05	6.05	8	8	6	3	3	1	29	1
County	Kitsap County	Chico Creek	63.1 (1)	14.41	14.41	10	5	3	3	3	4	28	2
Private	King County	Big Soos Creek	53.1 (2)	13.74	13.37	10	1	3	4	4	3	25	3
County	Cowlitz County and LCFRB	Turner Creek	70.1 (1)	3.9	3.9	5	5	8	3	3	0	24	4
County	Mason County	John's Creek	59.2 (2)	9.51	9.37	9	3	3	3	3	2	23	5
County	Skagit Watershed Council	Fisher Creek	41.1 (6)	9.73	4.34	6	3	2	4	4	4	23	6
County	WRIA 1 Lead Entity	Kenney Creek	36.1 (1)	3.62	3.62	5	3	6	4	4	1	23	7
County	Jefferson County	Thorndyke Creek	64.1 (1)	10.02	10.02	9	3	3	3	3	1	22	8
County	Chehalis L.E.	Allen Creek	22.2 (1)	6.95	6.95	8	3	8	2	1	0	22	9
County	Lewis County	Cedar Creek	7.1 (1)	6.09	6.09	8	3	6	2	1	2	22	10
Private	Chehalis L.E.	Middle Fork Newaukum River	28.1 (1)	7.64	7.64	8	3	6	2	1	1	21	11
County	LCFRB	Little Salmon Creek	6.1 (1)	6.41	6.41	8	3	3	2	4	1	21	12
Private	Skagit Watershed Council	Starbird Creek	41.3 (6)	9.73	2.71	4	3	6	2	3	3	21	13
County	LCFRB	Mason Creek	1.2 (5)	10.59	5.46	7	3	0	4	4	2	20	14
County	LCFRB	Baxter Creek	4.1 (1)	5.36	5.36	7	3	2	3	4	1	20	15
County	Skagit Watershed Council	Red Cabin Creek	38.1 (1)	4.63	4.63	6	3	2	4	4	1	20	16
County	Cowlitz County	Erick Creek	32.1 (1)	3.31	3.31	5	3	6	3	3	0	20	17
County	Skagit Watershed Council	Mannser Creek	37.1 (3)	3.59	2.95	4	3	2	4	4	3	20	18
Private	LCFRB	Unnamed to Mason Creek	1.4 (5)	10.59	1.79	3	3	6	3	4	1	20	19
Private	Skagit Watershed Council	Fisher Creek	41.4 (6)	9.73	1.37	2	3	6	2	3	4	20	20
City	City of Renton	Panther Creek	52.2 (2)	2.06	0.96	1	3	8	3	4	1	20	21
County	Mason County	Sherwood Creek	60.1 (1)	18.53	18.53	10	1	2	3	3	0	19	22
County	LCFRB	Leckler Creek	3.2 (2)	4.97	4.23	6	3	2	3	3	2	19	23
Federal	Skagit Watershed Council	East Fork Walker Creek	40.1 (2)	1.51	1.39	2	3	3	4	4	3	19	24
County	LCFRB	Mason Creek	1.5 (5)	10.59	2.74	4	3	3	3	4	1	18	25
City	WRIA 8 Lead Entity	Ebright Creek	49.1 (1)	1.95	1.95	3	3	2	4	4	2	18	26
County	Lewis County	Lost Creek	8.1 (1)	1.86	1.86	3	3	6	2	1	3	18	27
County	LCFRB	Leckler Creek	3.1 (2)	4.97	0.74	1	3	6	3	4	1	18	28
County	Chehalis L.E.	unnamed Trib to Gheer Creek	29.1 (1)	3.8	3.8	5	3	6	2	1	0	17	29
County	Chehalis L.E.	unnamed Trib to Gheer Creek	30.1 (1)	3.4	3.4	7	3	6	2	1	0	17	30



Cade Roler, Justin Zweifel: WDFW

Match Requirement Guidance

DRAFT

Fish Barrier Removal Board

Match Requirement Guidance

Match Requirement Overview

- Applicants must provide a minimum of 25 percent of each project value, known as “match” from non-FBRB funds per RCW 77.95.170.
- Matching resources may include cash, bond funds, grants (unless prohibited by the FBRB), in-kind labor, equipment/materials, or adjacent fish passage projects occurring within the same sub-watershed (define sub-watershed?).

Match Requirement Specifications

Match Timing

- The required 25 percent match must be identified during the project award period.
 - If funding is identified during the project award period but will not be certified until after the award period, documentation must be provided to the FBRB regarding where the match is coming from and how it is being used towards the FBRB funded projects. The FBRB will then need to approve the funding to be used as match.
 - What documentation should be necessary?
 - Option #2: All match must be certified at the time of the FBRB award period.
 - What will be done/needed to certify the match?
- Other fish passage projects being implemented concurrently with the FBRB award year may also be used as match.
 - Option #2: Projects implemented within the prior year of the proposed FBRB project may also be used as match.
 - Option #3: Projects implemented within the prior 2 years of the proposed FBRB project may also be used as match.

Using adjacent fish passage projects as match

- Option #1: These may account for 20% of the required 25%
- Option #2: These may account for 15% of the required 25%
- Option #3: These may account for all of the match requirement
- Option #4: Stepped approach depending on who the barrier owner is:
 - Private: can use adjacent project for all their required 25%
 - Local Government: can use adjacent project for 15% of required 25%
 - State Government: can use adjacent project for 10% of required 25%
 - Federal Government: cannot use adjacent projects for required 25% match
- Adjacent projects can be sponsored by other groups and still be considered as match.
 - WSDOT, Conservation Districts, Regional Fish Enhancement Groups, Local Governments, etc.
 - This promotes partnerships
- Documentation of project expenditures being considered for match will need to be provided.
- **Eligibility of adjacent restoration projects for match must be approved by the FBRB and will be reviewed on a case-by-case basis.**

Decision Points

- Agreement on principles of matching resources
- Match identification vs certification - timing in conjunction with FBRB award periods
- What documentation should be necessary for confirming match resources?
- Adjacent Fish Passage Projects within the Sub-watershed match options.
 - Options 1-4 or additional option
 - Do we need to define Sub-Watershed?
- Should we consider a strategy/policy for contacting the other project sponsors or funders if their projects were being considered as match for an FBRB grant?
 - Would help determine eligibility; see if the dollars are being used as match for another restoration program (No double matching).