WSDOT FISH PASSAGE PERFORMANCE REPORT

JUNE 30, 2017

Environmental Services

Environmental Services Office
Biology Branch
Stream Restoration Program

WSDOT FISH PASSAGE PERFORMANCE REPORT

June 30, 2017

Cover photos, clockwise from the upper left-hand corner: juvenile chum at SR 108 Little Skookum Creek after correction in 2016; installation of new box culvert at US 101 Swanson Creek during construction in 2016; US 101 Swanson Creek culvert outlet during post-construction monitoring; adult chum at SR 108 Little Skookum Creek after correction in 2016; monitoring a culvert replaced in 2014; SR 307 Gamble Creek culvert outlet during post-construction monitoring

This report is also available in a pdf format at http://www.wsdot.wa.gov/Projects/FishPassage/.

Additional data can be obtained by contacting Washington State Department of Transportation's Environmental Services Office, Kathy Prosser, e-mail kathy.prosser@wsdot.wa.gov, phone: (360) 705-7478

Primary report authors include Mike Barber, Susan Kanzler, Damon Romero, and Kathy Prosser. Maps, figures, and photos provided by Susan Kanzler, Damon Romero, and Kathy Prosser. Additional photos provided by the Washington Department of Fish and Wildlife.

Americans with Disabilities Act (ADA) Information
This material can be made available in an alternate format by emailing the Office of Equal Opportunity at wsdotada@wsdot.wa.gov or by calling toll free, 855-362-4ADA(4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.

Title VI Notice to Public
It is the Washington State Department of Transportation's (WSDOT) policy to assure that no person shall, on the grounds of race, color, national origin or sex, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its federally funded programs and activities. Any person who believes his/her Title VI protection has been violated, may file a complaint with WSDOT's Office of Equal Opportunity (OEO). For additional information regarding Title VI complaint procedures and/or information regarding our non-discrimination obligations, please contact OEO's Title VI Coordinator at (360) 705-7082.

Table of Contents

Executive Summary.....IX
Introduction.....1
Background on WSDOT Fish Passage Program.....1
2016 Fish Passage Projects Completed.....3
High Creek, Tributary to Kendall Creek.....5
Unnamed Tributary to Drayton Harbor.....6
Secret Creek, Tributary to Pilchuck Creek.....7
Unnamed Tributary to Milwaukee Canal.....8
Jovita Creek, Tributary to Milwaukee Canal.....9
South Creek, Tributary to Muck Creek.....10
Lacamas Creek, Tributary to Muck Creek.....11
Little Skookum Creek, Tributary to Skookum Creek.....12
Grovers Creek, Tributary to Miller Bay.....13
Anderson Creek, Tributary to Sinclair Inlet.....14
Unnamed Tributary to Mindy Creek.....16
Dogfish Creek, Tributary to Liberty Bay.....17
Gamble Creek, Tributary to Port Gamble.....18
Jansen Creek, Tributary to Strait of Juan de Fuca.....19
Joe Creek, Tributary to Strait of Juan de Fuca.....20
Field Creek, Tributary to Strait of Juan de Fuca.....21
Swanson Creek, Tributary to Sol Duc River.....22
Blooms Ditch, Tributary to Black River.....23
Unnamed Tributary to Blooms Ditch.....24
2017 Fish Passage Projects Planned.....33
Project Planning.....35
WSDOT Barrier Corrections and Planning Strategy.....35
Fish Passage Barrier Inventory.....36
Fish Passage Inventory Updates.....36
Regional Statistics.....37
U.S. v. WA List of WSDOT Case Area Barrier Culverts.....38
Monitoring.....39
Monitoring Continues in 2016.....39
Monitoring Results.....39
Pre- and Post-Project Evaluation for Fish Presence.....39
Fishway Inspections and Maintenance.....40

List of Tables

Table 1. Fish Passage Projects Completed in 2016....4
Table 2. WSDOT Fish Passage Barrier Corrections Completed 25
Table 3. Fish Passage Projects Going to Construction in 2017.... 34
Table 4. Fish Passage Barriers Statewide....36
Table 5. Fish Passage Barrier Assessment Summarized Across Six WSDOT Regions....37

List of Figures

Figure 1. WSDOT fish passage barriers.... 2
Figure 2. WSDOT fish passage project construction during 2016....3
Figure 3. High Creek pre-construction photo....5
Figure 4. High Creek post-construction photo....5
Figure 5. Unnamed tributary to Drayton Harbor pre-construction photo.... 6
Figure 6. Unnamed tributary to Drayton Harbor post-construction photo....6
Figure 7. Secret Creek pre-construction photo....7
Figure 8. Secret Creek post-construction photo....7
Figure 9. Unnamed tributary to Milwaukee Canal pre-construction photo....8
Figure 10. Unnamed tributary to Milwaukee Canal post-construction photo....8
Figure 11. Jovita Creek pre-construction photo....9
Figure 12. Jovita Creek post-construction photo....9
Figure 13. South Creek pre-construction photo....10
Figure 14. South Creek post-construction photo....10
Figure 15. Lacamas Creek pre-construction photo....11
Figure 16. Lacamas Creek post-construction photo....11
Figure 17. Little Skookum Creek pre-construction photo.... 12
Figure 18. Little Skookum Creek post-construction photo....12
Figure 19. Grovers Creek pre-construction photo.... 13
Figure 20. Grovers Creek post-construction photo....13
Figure 21. Anderson Creek pre-construction photo....14
Figure 22. Anderson Creek pre-construction photo....14
Figure 23. Anderson Creek post-construction photo.... 15
Figure 24. Anderson Creek post-construction photo.... 15
Figure 25. Anderson Creek post-construction photo.... 15
Figure 26. Unnamed tributary to Mindy Creek pre-construction photo....16
Figure 27. Unnamed tributary to Mindy Creek post-construction photo....16
Figure 28. Dogfish Creek pre-construction photo....17
Figure 29. Dogfish Creek post-construction photo....17
Figure 30. Gamble Creek pre-construction photo.... 18
Figure 31. Gamble Creek post-construction photo....18
Figure 32. Jansen Creek pre-construction photo.... 19
Figure 33. Jansen Creek post-construction photo....19
Figure 34. Joe Creek pre-construction photo....20
Figure 35. Joe Creek post-construction photo.... 20
Figure 36. Field Creek pre-construction photo....21

Figure 37. Field Creek post-construction photo....21
Figure 38. Swanson Creek pre-construction photo....22
Figure 39 Swanson Creek post-construction photo.... 22
Figure 40. Blooms Ditch pre-construction photo.... 23
Figure 41. Blooms Ditch post-construction photo....23
Figure 42. Unnamed tributary to Blooms Ditch pre-construction photo....24
Figure 43. Unnamed tributary to Blooms Ditch post-construction photo....24
Figure 44. WSDOT fish passage barrier corrections since 1955....32
Figure 45. WSDOT fish passage project construction during 2017.... 33
Figure 46. WSDOT Regions....37
Figure 47. An example of a properly functioning fishway....40

List of Appendices

Appendix I WSDOT Fish Passage Barriers....41
A. Northwest Region....42
B. North Central Region....58
C. Olympic Region....62
D. Southwest Region....80
E. South Central Region....90
F. Eastern Region....93
Appendix II WSDOT Culvert Barriers Relevant to the Injunction....99
Appendix III Updates to the List of WSDOT Case Area Barrier Culverts....132
Appendix IV WSDOT Fishway Inspections Spring 2017....139
A. Northwest Region....140
B. Olympic Region....141
C. Southwest Region....142

Executive Summary

Since 1991, the Washington State Department of Transportation (WSDOT) has worked with the Washington Department of Fish and Wildlife (WDFW) on a comprehensive program to eliminate fish passage barriers along the 7,056 miles of Washington State highways. Statewide there are 3,710 fish bearing highway crossings and 1,977 are fish passage barriers. 1,513 of these barriers block a significant amount of upstream habitat (> 200 meters).

To date, WSDOT has completed 319 fish passage barrier corrections, allowing access to approximately 1,032 miles of potential upstream habitat for fish. Twenty-one fish passage projects were completed in 2016, opening up 92.5 miles of potential upstream habitat. All 21 of the projects corrected Federal Court Injunction barrier culverts.

Thirteen fish passage projects are planned for completion in 2017. Ten of the 13 are injunction barrier corrections. Eleven of the barrier corrections are stand-alone projects funded by the WSDOT improvement subprogram I4. One barrier will be corrected using a combination of preservation funds and grant funding. Another will be corrected with emergency funds. These projects will open up approximately 53 miles of potential fish habitat.

Introduction

Background on WSDOT Fish Passage Program

The Washington State Department of Transportation (WSDOT) has long recognized the importance of minimizing the environmental impacts of Washington's transportation system. As a part of that commitment to the environment, in 1991, with legislative support, WSDOT created a dedicated program to correct barriers that restrict or completely block salmon and trout access to historic spawning and rearing habitat. In that same year, WSDOT partnered with the Washington Department of Fish and Wildlife (WDFW) to assist with that effort. This was a major shift to the way fish passage barriers had been addressed in the past. Prior to 1991, fish passage barriers were addressed during highway construction and maintenance projects as required by permit. With this new program, WSDOT now had the ability to identify high priority barriers and correct them with dedicated fish passage funds as well as correcting barriers during other transportation projects.

Since 1991, WSDOT has completed 319 fish passage barrier corrections in Washington streams. As a result of this effort, access has been restored to an estimated 1032.3 miles* (1661.3 kilometers) of potential upstream habitat, assuming no other human-made obstacles exist in a given watershed where the project was completed.

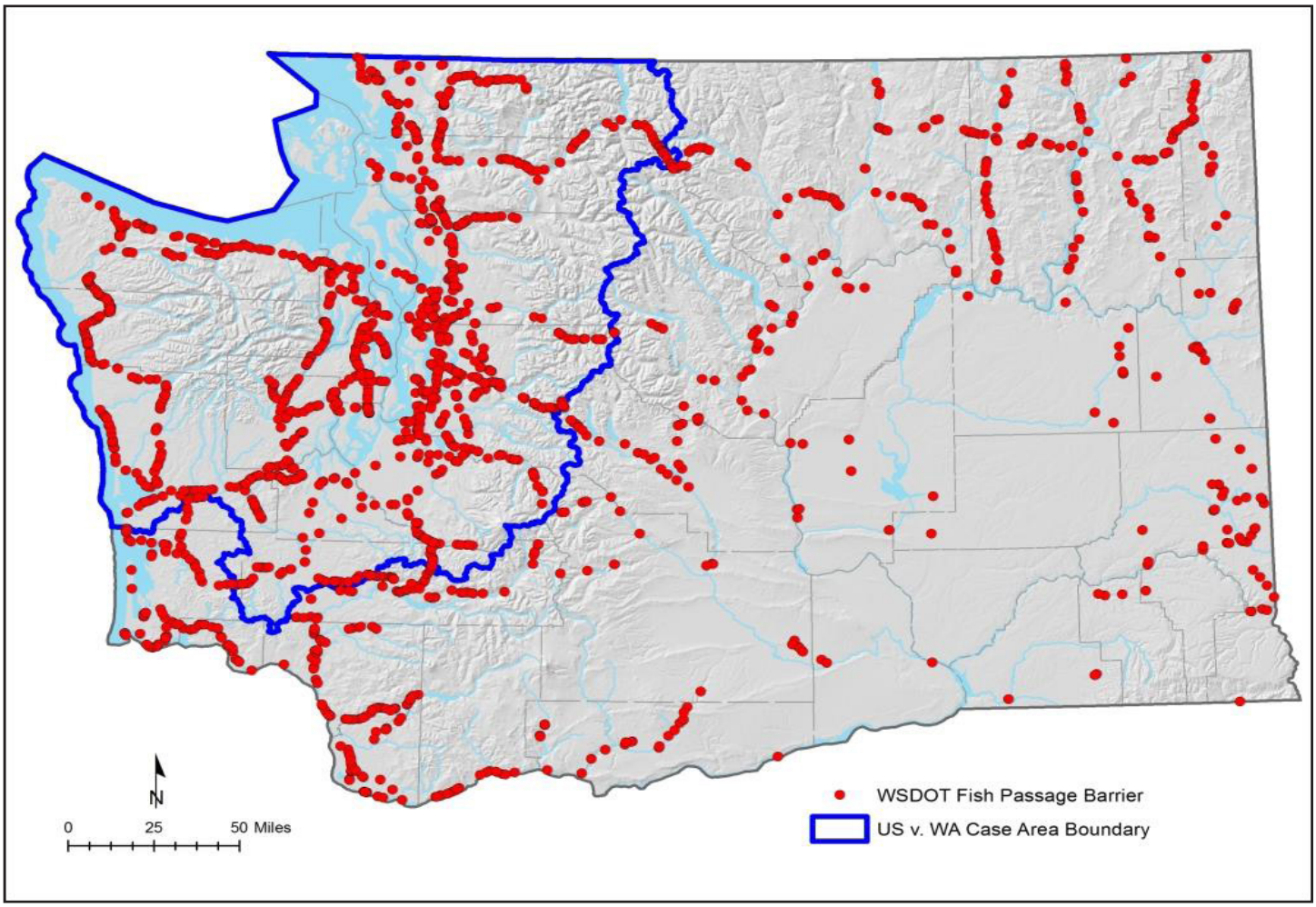
*The amount of habitat that was once blocked by fish passage barriers was derived by habitat surveys or by using Geographic Information System (GIS) software for sites lacking detailed habitat surveys.

In 2001, 21 western Washington treaty tribes filed suit in U.S. District Court (United States v. Washington - "culvert case") alleging that the existence of state-owned barrier culverts under roads is a violation of treaty rights. On March 29, 2013, a permanent injunction was issued requiring the State of Washington to accelerate barrier correction on salmon and steelhead streams within the area subject to the injunction. This area is referred to herein as the "case area". The case area is that portion of the State of Washington west of the Cascade Mountains and north of the Willapa and Columbia River drainages (Figure 1).

This report summarizes WSDOT's progress in correcting fish passage barriers during the previous year and over the life of the program, both for dedicated fish passage projects and for those completed as a part of other transportation projects. It provides an update on planned corrections, as well as the results of fish use monitoring for completed and planned projects and fishway inspections.

The appendices include: all WSDOT fish passage barriers by region, a list of culverts subject to the injunction, updates to the WSDOT injunction barrier list, and fishways requiring maintenance for fish passage.

Figure 1. WSDOT fish passage barriers



2016 Fish Passage Projects Completed

Twenty-one fish passage projects were completed in 2016 (Figure 2, Table 1), correcting 20 barriers and opening up an estimated 92.5 miles (148.8 kilometers) of potential upstream habitat.

All 21 of the projects corrected injunction barriers. Eighteen of the 21 were funded by the WSDOT improvement subprogram I4. Three projects were constructed during larger transportation projects. The new culvert for State Route (SR) 3 unnamed tributary to Mindy Creek has been installed at the new location and will begin conveying flow from the creek in 2017.

Table 2 shows a list of fish passage barrier corrections completed since 1955. Figure 44 is a map of these sites.

Figure 2. WSDOT fish passage project construction during 2016

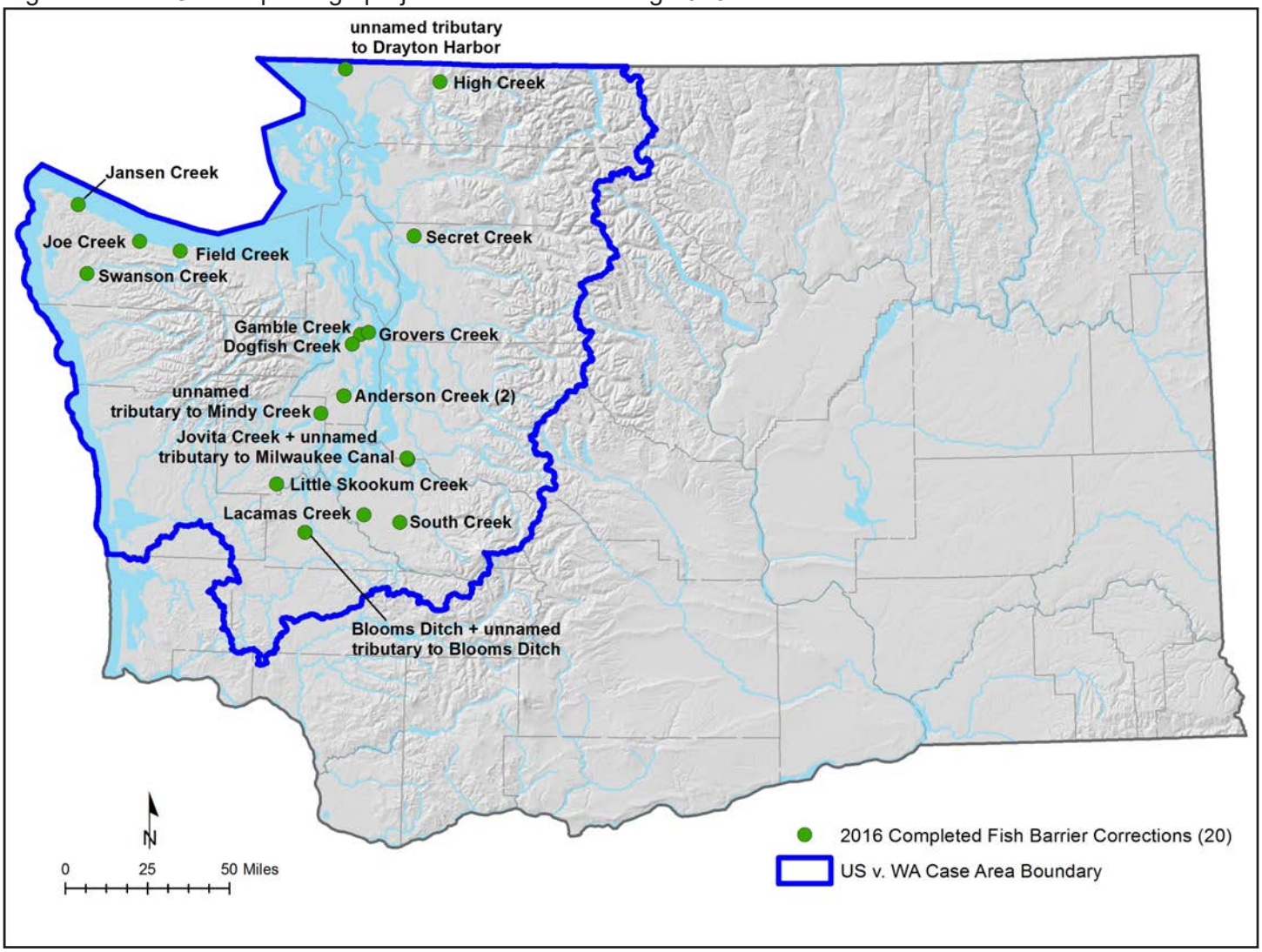


Table 1. Fish Passage Projects Completed in 2016. The 21 projects listed below corrected 20 barriers applicable to the Federal Court Injunction.

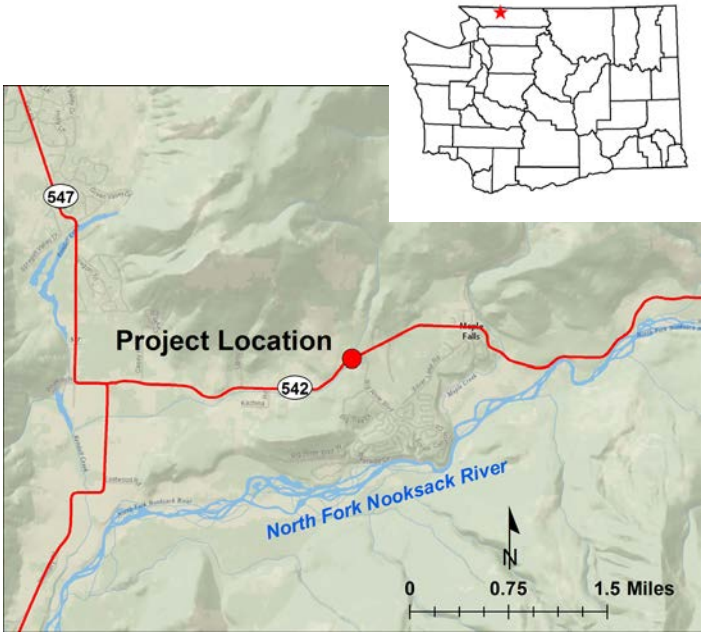
Site ID	WSDOT Region	Road	MP	Stream	WRIA	Lineal Gain (km)*	Incremental Gain (km)*	Funding
991621	NW	SR 542	24.9	High Creek	1	3.882	3.882	I4
996155	NW	SR 548	11.19	Unnamed to Drayton Harbor	1	3.25	3.25	I4
990624	NW	SR 532	9.75	Secret Creek	5	4.570	2.318**	I4
930179	NW	SR 167	11.43	Unnamed to Milwaukee Canal	10	2.320	2.320	T
105 R050320a	OLY	SR 167	10.8	Jovita Creek	10	4.075	4.075	T
990972	OLY	SR 161	12.85	South Creek	11	38.343	38.343	I4
991049	OLY	SR 507	36.35	Lacamas Creek	11	24.287	24.287	I4
14.0021 0.30	OLY	SR 108	11.9	Little Skookum Creek	14	5.417	5.417	I4
992205	OLY	SR 104	22.47	Grovers Creek	15	5.192	5.192	I4
996753	OLY	SR 16; EB	28.10	Anderson Creek	15	9.293	9.293	I4
990017	OLY	SR 16; WB	28.10	Anderson Creek	15	9.295	0.001**	I4
934013	OLY	SR 166	0.16	Anderson Creek	15	9.294	0.001**	I4
996735	OLY	SR 3	26.13	Unnamed to Mindy Creek	15	pending	pending	T
990123	OLY	SR 307	0.49	Dogfish Creek	15	7.891	7.891	I4
992002	OLY	SR 307	4.62	Gamble Creek	15	10.003	9.058**	I4
990205	OLY	SR 112	5.17	Jansen Creek	19	5.719	5.719	I4
990214	OLY	SR 112	33.21	Joe Creek	19	7.158	7.158	I4
990144	OLY	SR 112	48.49	Field Creek	19	8.926	8.926	I4
20.0312 0.60	OLY	US 101	197.1	Swanson Creek	20	6.644	6.644	I4
990962	OLY	SR 121	4.04	Blooms Ditch	23	4.939	4.939	I4
343040	OLY	SR 121	4.1	Unnamed to Blooms Ditch	23	0.070	0.070	I4
					Total	**170.568**	**148.784 km**	
						105.986	**92.450 mi**	

* Lineal gain represents the amount of potential fish habitat upstream of a corrected barrier. Incremental habitat gain is reported for sites having other WSDOT barriers located upstream. Incremental habitat gain is the amount of potential fish habitat upstream to the next WSDOT barrier.
** Site with WSDOT barrier(s) upstream.

Funding Codes:
I4 = Improvement
T=Transportation Project

High Creek, Tributary to Kendall Creek

Fish Passage Improvement with I4 Funding



High Creek crosses SR 542 at milepost 24.9 about one mile southwest of the town of Maple Falls and flows into Kendall Creek.

Before Construction

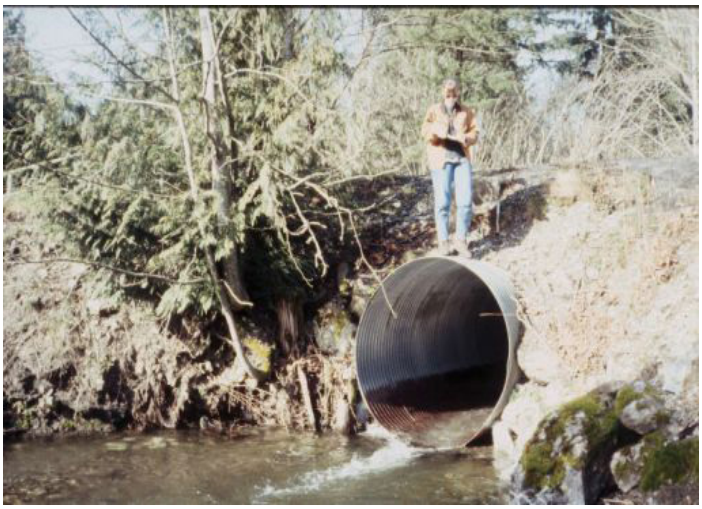


Figure 3. The old crossing was a 6.2 ft (1.89 m) diameter corrugated steel pipe that was a barrier to fish passage due to excessive slope.

After Construction

Figure 4. The new crossing is a 27 ft (8.23 m) wide concrete box structure that provides access to 2.4 mi (3.9 km) of potential habitat for chum and coho salmon, steelhead, sea run cutthroat, resident and bull trout.

Unnamed Tributary to Drayton Harbor

Fish Passage Improvement with I4 Funding

The unnamed tributary crosses SR 548 at milepost 11.19 about 2.2 miles south of the city of Blaine and flows into Drayton Harbor.

Before Construction

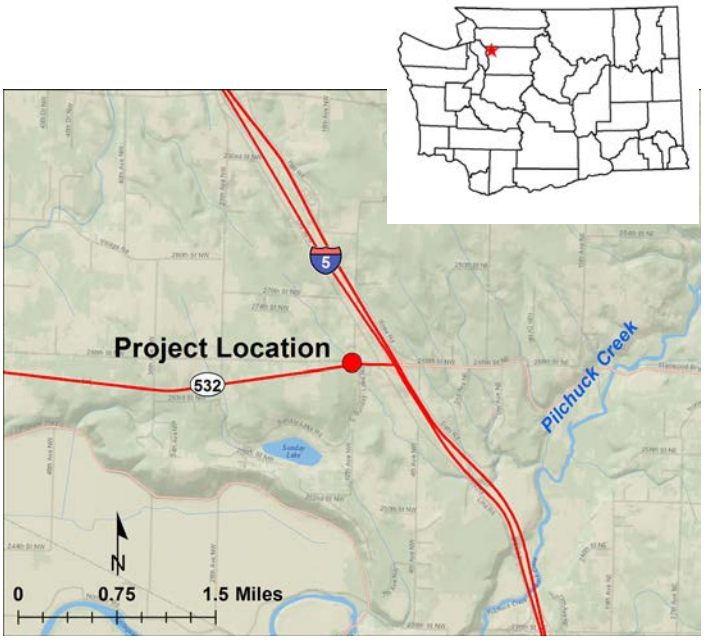
Figure 5. The old crossing was a 3 ft (0.91 m) diameter concrete pipe that was a barrier to fish migration due to inadequate depth during low flows. The old crossing was undersized for the channel and required repeated maintenance to remove debris.

After Construction

Figure 6. The new crossing is a 12 ft (3.66 m) wide concrete box structure that provides access to 2 mi (3.25 km) of seasonal habitat for chum and coho salmon, steelhead, sea run cutthroat and resident trout.

Secret Creek, Tributary to Pilchuck Creek

Fish Passage Improvement with I4 Funding



The unnamed tributary, locally known as Secret Creek, crosses SR 532 at milepost 9.75 approximately 0.3 miles west of I-5.

Before Construction

Figure 7. The old crossing was a 4 ft (1.22 m) diameter concrete pipe that was a barrier due to excessive velocity at high flows and insufficient water depth at low flows.

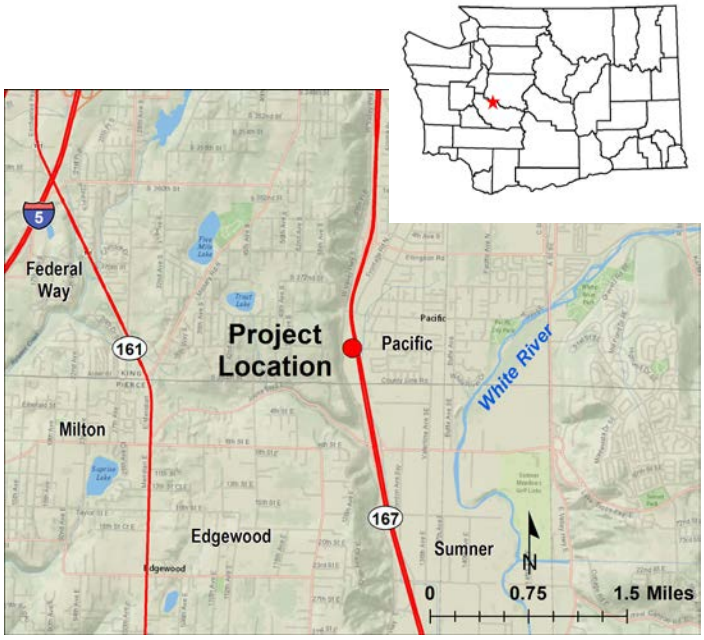
After Construction

Figure 8. The new crossing is an 18 ft (5.5 m) wide concrete box culvert that provides access to 1.4 mi (2.3 km) of habitat for chum and coho salmon, steelhead, sea run cutthroat and resident trout.

Unnamed Tributary to Milwaukee Canal

Fish Passage Improvement during a Transportation Project

The unnamed tributary to Milwaukee Canal crossed an access road within the WSDOT right-of-way adjacent to SR 167 at milepost 11.43. This project was completed as part of a larger transportation improvement project.



Before Construction

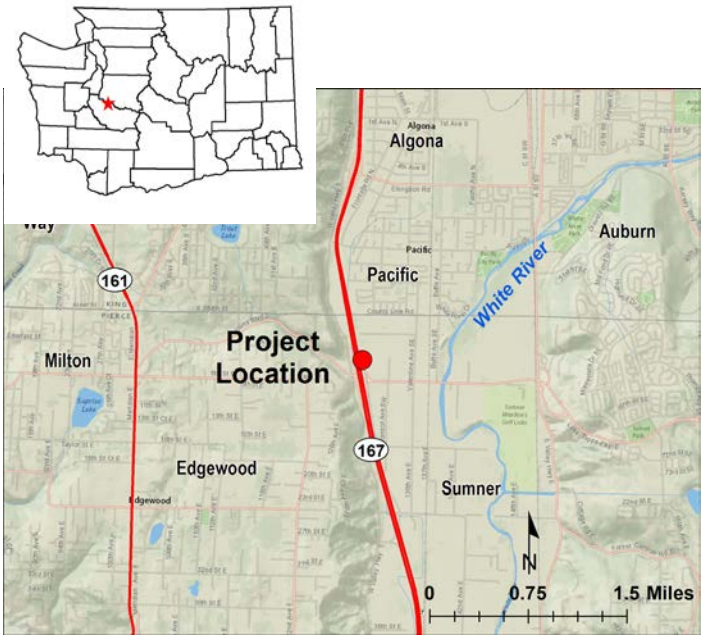
Figure 9. The old crossing was an undersized 5.5 ft (1.68 m) diameter corrugated steel pipe that was a barrier to fish passage due to excessive velocity.

After Construction

Figure 10. WSDOT removed the culvert and abandoned the road crossing. As part of the project, the stream channel was restored through the project area and four Large Woody Material (LWM) structures placed along the right bank to enhance fish habitat. The culvert removal and stream restoration improved access to 1.44 mi (2.32 km) of habitat for coho salmon, steelhead, sea run cutthroat and resident trout.

Jovita Creek, Tributary to Milwaukee Canal

Fish Passage Improvement during a Transportation Project



Jovita Creek crosses SR 167 at milepost 10.8 within the city limits of Pacific and flows into Milwaukee Canal. The Jovita Creek culvert under SR 167 was replaced as part of a High Occupancy Toll (HOT) Lanes project to reduce congestion and improve mobility, traffic flow, and safety on SR 167.

Before Construction

Figure 11. The old crossing was made of twin 7.74 ft (2.36 m) wide by 6.07 ft (1.85 m) tall squash corrugated steel culverts fitted with a fishway. The fishway consisted of concrete baffles installed inside one of the culverts to compensate for a barrier slope condition. The hydraulic drops over the baffles were a barrier to migrating fish.

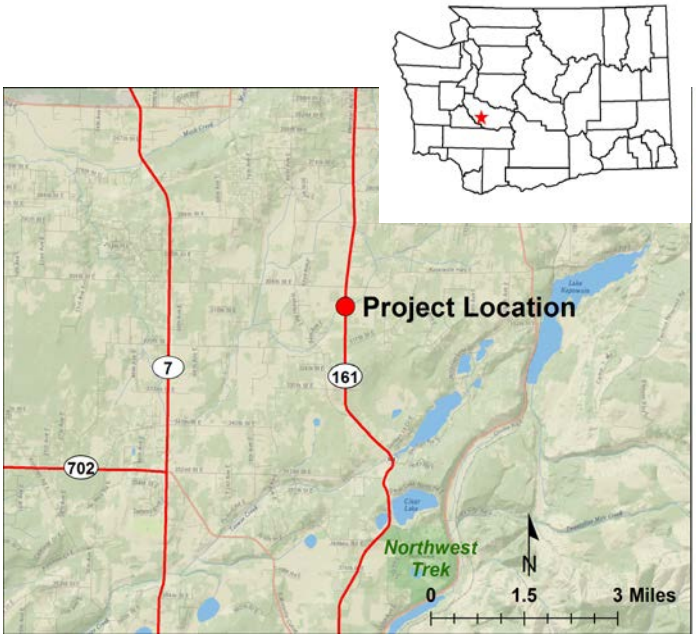
After Construction

Figure 12. The new crossing is a 19 ft (5.8 m) wide box culvert that provides access to 2.53 mi (4.08 km) of habitat for chum and coho salmon, steelhead, sea run cutthroat and resident trout.

South Creek, Tributary to Muck Creek

Fish Passage Improvement with I4 Funding

South Creek crosses SR 161 at milepost 12.85, approximately 5.3 miles south of the census-designated place of Graham.



Before Construction

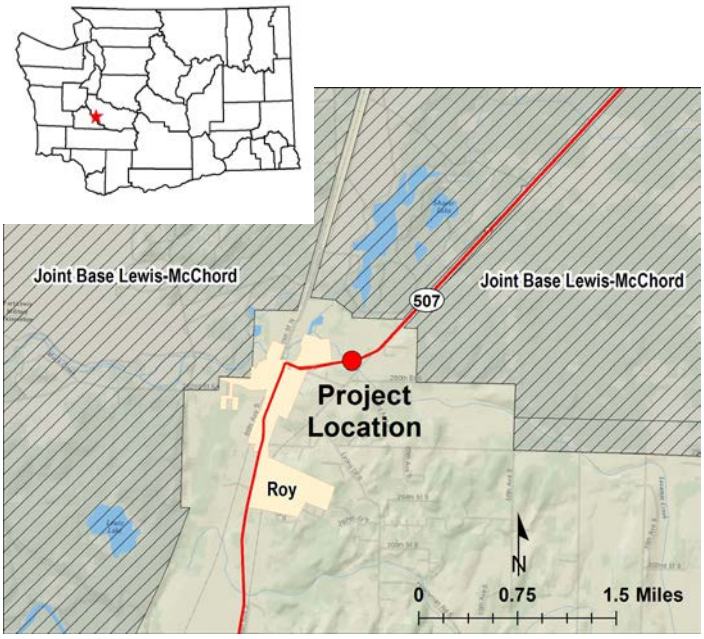
Figure 13. The old crossing was a 6 ft (1.83 m) wide by 4 ft (1.22 m) tall concrete box culvert that was prone to flooding the roadway and was a velocity barrier to fish passage at high flows.

After Construction

Figure 14. The new crossing is a 26 ft (7.92 m) wide concrete structure that provides access to 23.8 mi (38.3 km) of habitat for chum and coho salmon, steelhead, sea run cutthroat and resident trout.

Lacamas Creek, Tributary to Muck Creek

Fish Passage Improvement with I4 Funding



Lacamas Creek crosses SR 507 at milepost 36.35, a half mile east of the rural city of Roy, and flows into Muck Creek in the Nisqually River watershed.

Before Construction

Figure 15. The old crossing was made of triple 6 ft (1.83 m) by 3.75 ft (1.14 m) squash-shaped corrugated steel pipes that were a barrier to fish passage due to excessive velocity at high flows. The culverts were deficient due to all the stream flow being concentrated into a single pipe at most flows.

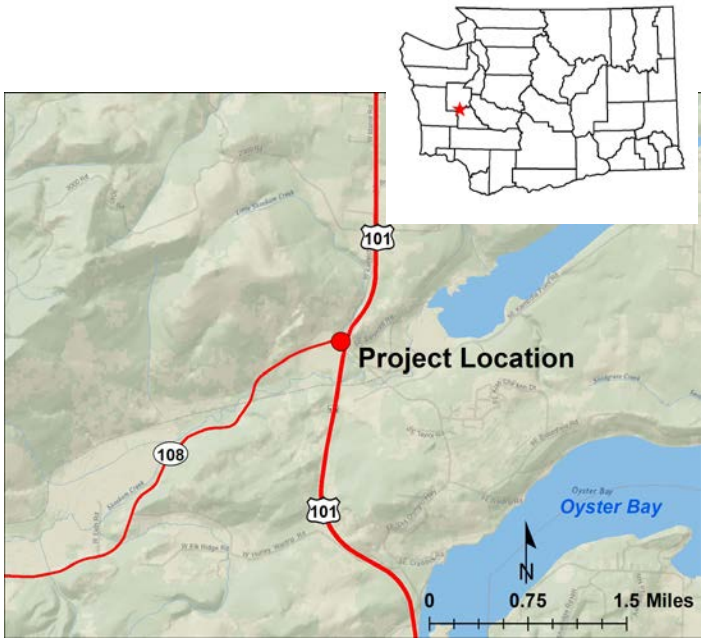
After Construction

Figure 16. The new crossing is a 25 ft (7.62 m) wide bottomless concrete structure that provides access to 15.1 mi (24.3 km) of habitat to chum and coho salmon, steelhead, sea run cutthroat and resident trout.

Little Skookum Creek, Tributary to Skookum Creek

Fish Passage Improvement with I4 Funding

Little Skookum Creek crosses SR 108 at milepost 11.9 within the census-designated place of Kamilche and flows into Skookum Creek.



Before Construction

Figure 17. The old crossing was a 10 ft (3.05 m) wide by 5 ft (1.52 m) tall concrete box culvert fitted with a fishway. The fishway consisted of concrete baffles installed inside one half of the culvert to compensate for a barrier slope condition. The baffles had become buried in streambed sediments and the culvert was a barrier to migrating fish due to low water depth in the culvert during normal flows.

After Construction

Figure 18. The new crossing is a 20 ft (6.1 m) wide box culvert that provides access to 3.37 mi (5.42 km) of habitat for chum and coho salmon, steelhead, sea run cutthroat and resident trout.

Grovers Creek, Tributary to Miller Bay

Fish Passage Improvement with I4 Funding

Grovers Creek crosses SR 104 at milepost 22.47 about 2 miles west of Kingston and flows into the Puget Sound through Miller Bay.

Before Construction

Figure 19. The old crossing was a 3 ft (0.91 m) wide concrete box culvert that was a barrier to fish passage due to excessive slope.

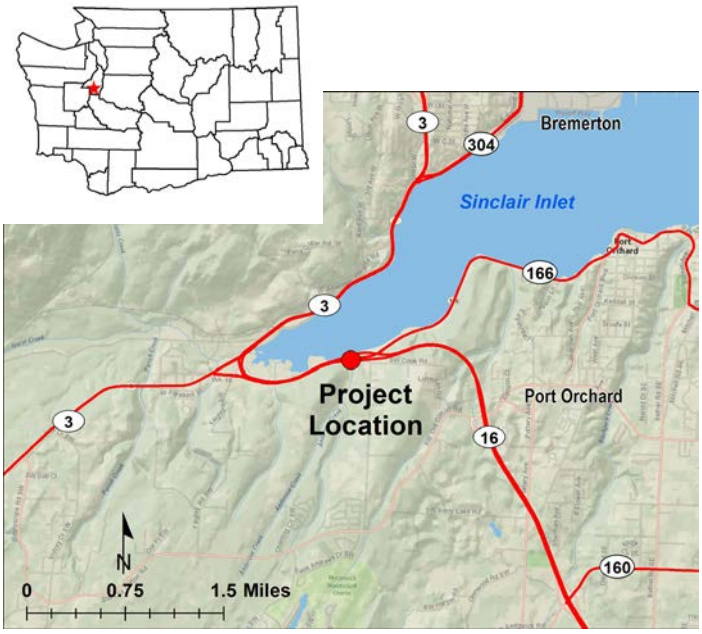
After Construction

Figure 20. The new crossing is a 13 ft (3.96 m) wide concrete box structure that provides access to 3.23 mi (5.2 km) of habitat for chum and coho salmon, steelhead, sea run cutthroat and resident trout.

Anderson Creek, Tributary to Sinclair Inlet

Fish Passage Improvement with I4 Funding

Anderson Creek flows into Puget Sound through Sinclair Inlet. It crosses SR 16 at milepost 28.10, and SR 166 at milepost 0.16. The SR 166 crossing is downstream of the eastbound SR 16 crossing and upstream of the westbound SR 16 crossing. This project replaced two long barrier culverts with three shorter culverts, resulting is less over-all culvert length and providing more daylight sections for Anderson Creek. This project provides access to 5.78 miles (9.3 kilometers) of habitat for chinook, chum, and coho salmon, steelhead, sea run cutthroat and resident trout.



Before Construction

Figure 21. The old eastbound crossing was a 5 ft (1.52 m) diameter concrete pipe culvert that was a barrier to fish passage due to excessive velocity.

Before Construction

Figure 22. The old westbound crossing was a 5 ft (1.52 m) diameter concrete pipe culvert that was a barrier to fish passage due to excessive slope.

After Construction

Figure 23. The new SR 16 westbound crossing is an 18 ft (5.5 m) wide concrete box structure.

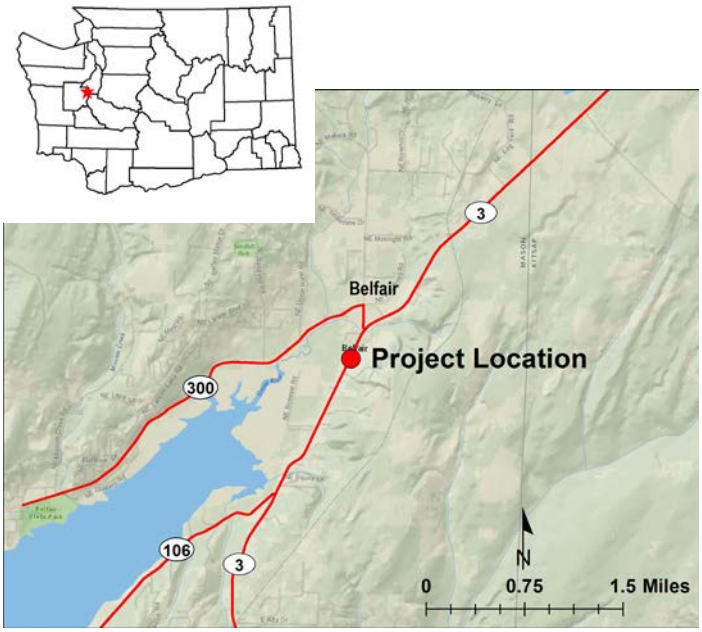
Figure 24. The new SR 166 crossing is the same basic construction as both of the new SR 16 crossings: an 18 ft (5.5 m) wide concrete box culvert.

Figure 25. The new SR 16 eastbound crossing is an 18 ft (5.5 m) wide concrete box structure.

Unnamed Tributary to Mindy Creek

Fish Passage Improvement during a Transportation Project

This unnamed tributary to Mindy Creek crosses SR 3 at milepost 26.13 just south of Belfair and flows into Mindy Creek in the Union River watershed. This fish passage barrier correction is part of a larger transportation project to improve safety and mobility through the Belfair area.



Before Construction

Figure 26. The old stream crossing consists of a 2 ft (0.61 m) diameter pipe culvert that is a barrier to fish passage due to excessive slope.

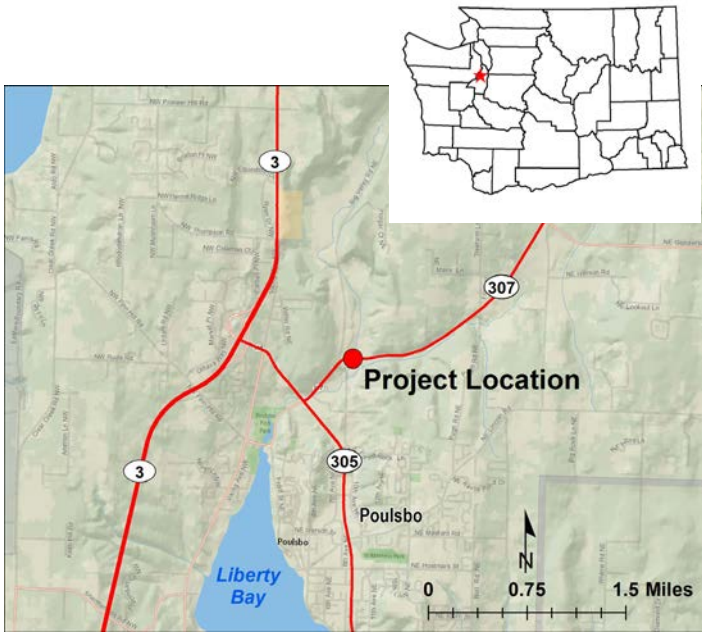
After Construction

Figure 27. The new culvert is a 12 ft (3.66 m) wide concrete box culvert crossing SR 3 at milepost 26.00. The culvert has been installed at the new location and will begin conveying flow from the creek in 2017. The new stream channel alignment will move the creek away from the shoulder of SR 3 and bypass several driveway culverts. A new stream channel has been created downstream of the new culvert that will mimic natural conditions. The project will provide access to 0.81 mi (1.31 km) of habitat for coho salmon, steelhead, sea run cutthroat and resident trout.

Dogfish Creek, Tributary to Liberty Bay

Fish Passage Improvement with I4 Funding

Dogfish Creek crosses SR 307 at milepost 0.49 and flows into Liberty Bay in central Puget Sound.



Before Construction

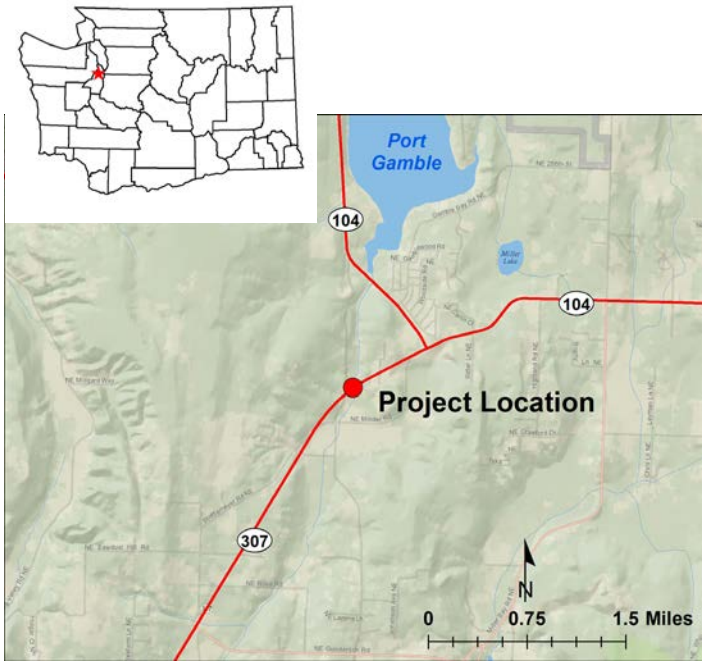
Figure 28. The old crossing was a 4 ft (1.21 m) diameter concrete pipe. The culvert was undersized for the watershed and a velocity barrier for fish passage.

After Construction

Figure 29. The new crossing is a 20 ft (6.1 m) wide box culvert that provides access to 4.9 mi (7.89 km) of habitat for chum, chinook, and coho salmon, steelhead, sea run cutthroat and resident trout.

Gamble Creek, Tributary to Port Gamble

Fish Passage Improvement with I4 Funding



Gamble Creek crosses SR 307 at milepost 4.62 about 4.3 miles west of Kingston and flows into the bay at Port Gamble at the north end of Hood Canal.

Before Construction

Figure 30. The old crossing was a 5.28 ft (1.61 m) diameter corrugated aluminum pipe fitted with a fishway. The fishway consisted of timber streambed controls upstream and downstream of the culvert to correct for insufficient depth at low flows. The timbers of both streambed controls had rotted away and the culvert had become a barrier again.

After Construction

Figure 31. The new crossing is an 18 ft (5.49 m) wide concrete box structure that provides access to 5.6 mi (9 km) of habitat for chum and coho salmon, steelhead, sea run cutthroat and resident trout.

Jansen Creek, Tributary to Strait of Juan de Fuca

Fish Passage Improvement with I4 Funding

Jansen Creek crosses SR 112 at milepost 5.17 in rural Clallam County, approximately 7.1 miles east of the Makah Cultural & Research Center.

Before Construction

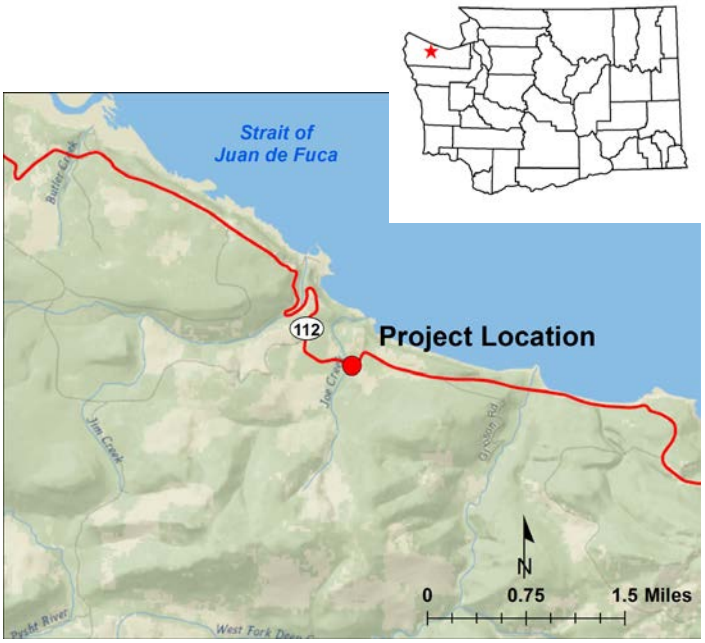
Figure 32. The old crossing consisted of twin 6 ft (1.82 m) diameter concrete pipes that were a barrier to fish passage due to excessive slope.

After Construction

Figure 33. The new crossing is a bridge that spans the full channel with a width of 52 ft (15.85 m) and provides access to 3.55 mi (5.72 km) of habitat to coho salmon, steelhead, sea run cutthroat and resident trout.

Joe Creek, Tributary to Strait of Juan de Fuca

Fish Passage Improvement with I4 Funding



Joe Creek crosses SR 112 at milepost 33.21 approximately 3.7 miles east of Pillar Point Recreational Area.

Before Construction

Figure 34. The old crossing consisted of twin 5 ft (1.52 m) diameter steel pipes that were barriers to fish passage due to excessive hydraulic drops.

After Construction

Figure 35. The new crossing is a 20 ft (6.1 m) wide concrete box structure that provides access to 4.45 mi (7.16 km) of habitat for chinook and coho salmon, steelhead, sea run cutthroat and resident trout.

Field Creek, Tributary to Strait of Juan de Fuca

Fish Passage Improvement with I4 Funding

Field Creek crosses SR 112 at milepost 48.49 and flows to the Strait of Juan de Fuca.

Before Construction

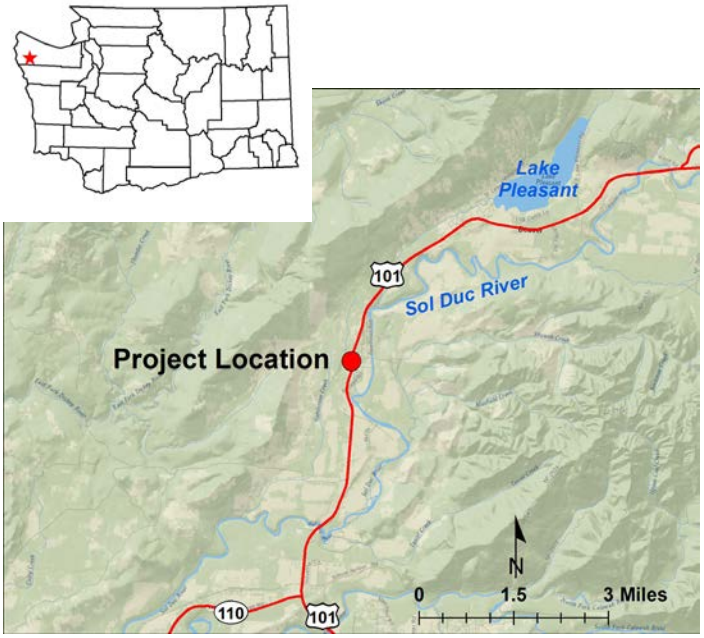
Figure 36. The existing crossing is an 18 ft (5.5 m) wide bottomless concrete box culvert. The culvert had a fishway log weir located downstream of the culvert that had become a barrier over time due to excessive hydraulic drop.

After Construction

Figure 37. The project removed the log weir and re-graded the streambed to match upstream and downstream conditions. Rock clusters were added inside the culvert along the side walls to help prevent the stream from migrating to one side of the culvert and possibly stranding fish during high flows. This project restored fish passage to 5.55 mi (8.93 km) of habitat for coho salmon, steelhead, sea run cutthroat and resident trout.

Swanson Creek, Tributary to Sol Duc River

Fish Passage Improvement with I4 Funding



Swanson Creek crosses US 101 at milepost 197.1 about 5.5 miles north of the city of Forks and flows into the Sol Duc River.

Before Construction

Figure 38. The old crossing was a 6 ft (1.83 m) wide concrete box culvert fitted with a fishway. The fishway consisted of wooden baffles on one side of the culvert and a concrete streambed control downstream of the culvert to correct for a barrier slope condition. The baffles had degraded and did not provide fish passage at low flows and the concrete control had developed an excessive hydraulic drop.

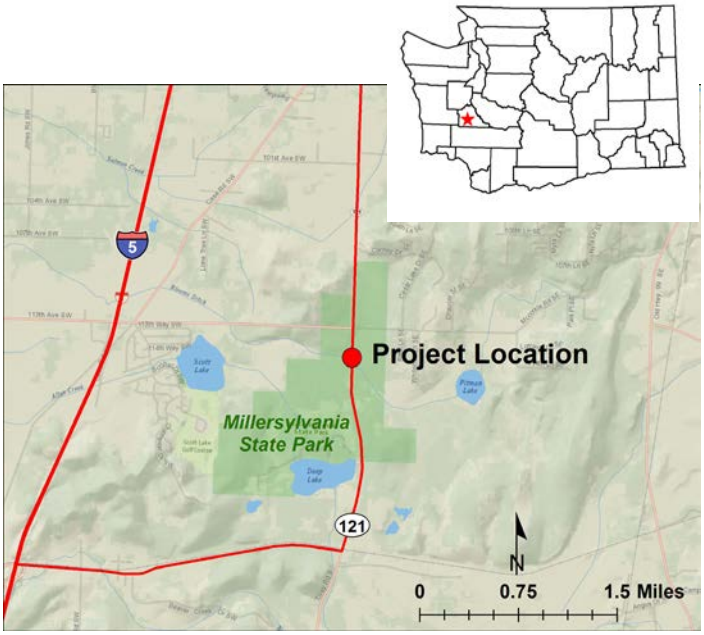
After Construction

Figure 39. The new crossing is a 25 ft (7.62 m) wide concrete box structure that provides access to 4.13 mi (6.64 km) of habitat for Chinook and coho salmon, steelhead, sea run cutthroat and resident trout.

Blooms Ditch, Tributary to Black River

Fish Passage Improvement with I4 Funding

Blooms Ditch crosses SR 121 at milepost 4.04 within the boundaries of Millersylvania State Park. This project achieved efficiency by coordinating construction with another fish passage project located 450 feet to the north.



Before Construction

Figure 40. The old crossing was a 3 ft (0.91 m) diameter concrete pipe that was a barrier to fish passage due to excessive slope.

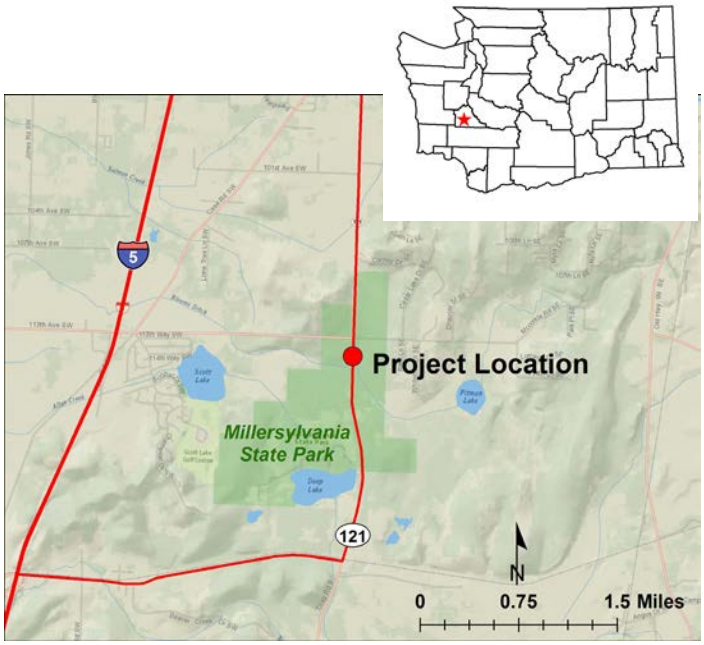
After Construction

Figure 41. The new crossing is a 26 ft (7.92 m) wide structure that provides access to 3.07 mi (4.9 km) of habitat for coho salmon, steelhead, sea run cutthroat and resident trout.

Unnamed Tributary to Blooms Ditch

Fish Passage Improvement with I4 Funding

The unnamed tributary to Blooms Ditch crosses SR 121 at milepost 4.1 within the boundaries of Millersylvania State Park. This project achieved efficiency by coordinating construction with another project located 450 feet to the south.



Before Construction

Figure 42. The old crossing consisted of twin 2 ft (0.61 m) diameter corrugated steel pipes that were in poor condition and barriers due to excessive slope.

After Construction

Figure 43. The new crossing is a 16 ft (4.9 m) wide box culvert that provides access to 230 ft (70 m) of habitat for coho salmon, steelhead, sea run cutthroat and resident trout.

Table 2. WSDOT Fish Passage Barrier Corrections Completed. Sorted by Year, Region, Road, and Milepost.

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year Fixed	Potential Lineal Gain (km)[1]	Project Cost $[2]
OL	990480	SR 112	49.48	Whiskey Cr	19.0020	1955	2.724	
NW	05.0018 2.00	SR 532	6.14	Church Cr	05.0018	1961	26.081	
OL	15.0051 0.10	SR 302	11.36	Little Minter Cr	15.0051	1982	0.606	
OL	15.0051 0.20	SR 302	11.42	Little Minter Cr	15.0051	1982	5.496	
OL	14.0010 0.10	US 101	356.8	Countyline Cr	14.0010	1985	0.753	
NW	08.0049 3.00	I-5 NB	177.67	McAleer Cr	08.0049	1986	0.138	
OL	14.0009A 0.06	US 101	357.9	Holiday Valley Cr	14.0009A	1986	1.770	
NW	03.0354A 0.04	SR 20	77.7	Little Careys Cr	03.0354A	1987	0.850	
OL	18.0021 5.40	US 101	260.93	Matriotti Cr	18.0021	1989	8.075	
NW	996965	I-90	20.42	EF Issaquah Cr tributary	08.0186	1990	1.835	
NW	01.0228 4.80	SR 542	6.55	Anderson Cr	01.0228	1990	0 [3]	
OL	990448	US 101	246.4	Tumwater Cr Fishway	18.0256	1991	8.928	19,991
NW	03.0181 0.50	I-5	219.41	Fisher Cr Fishway	03.0181	1992	27.534	19,990
NW	990142	SR 202	11.96	Evans Cr Fishway	08.0106	1992	7.579	319,044
OL	990323	SR 3	33.7	Parish Cr Fishway	15.0220	1992	1.609	14,835
SW	990171	SR 6	8.9	Green Cr Fishway Upgrade	24.0341	1992	1.770	8,000
NW	995411	I-5	246.75	Chuckanut Cr	01.0626	1993	1.148	
NW	01.0626 0.35	SR 11	18.6	Chuckanut Cr Fishway	01.0626	1993	2.680	68,788
NW	991712	US 2	18	Unnamed tributary to Skykomish R Culvert Replacement	07.0864	1993	1.726	60,000
OL	15.0280 1.00	SR 308	1.15	Big Scandia Cr	15.0280	1993	6.430	
NW	08.0302 0.00	SR 169	23.62	Maplewood Cr	08.0302	1994	1.931	
NW	08.0077 0.20	SR 527	6.57	Penny Cr	08.0077	1994	13.458	
NW	990014	SR 542	3.5	Squalicum Cr Fishway	01.0552	1994	4.745	68,000
OL	990021	US 101	253.85	Bagley Cr Fishway	18.0183	1994	10.450	40,704
SC	990189	US 97	37.14	Highbridge Springs	37	1994	1.127	
SW	990363	US 101	29.8	SF Nemah R Fishway	24.0503	1994	4.362	34,986
NW	990272	SR 104	29.65	McAleer Cr	08.0049	1995	5.348	
NW	08.0070A 0.01	SR 527	4	Sulphur Springs Cr	08.0070A	1995	0.322	
NW	08.0075 0.70	SR 527	4.46	Silver Cr No2	08.0075	1995	2.575	
NW	08.0070B 0.30	SR 527	6.32	Nickel Cr	08.0070B	1995	1.287	
NW	990644	SR 530	31.01	Stillaguamish R tributary	05	1995	1.296	
NW	991168	SR 530	31.9	Stillaguamish R tributary	05	1995	0.200	
OL	996952	SR 160	3.8	Curley Cr	15.0185	1995	16.305	
OL	990219	US 101	267.18	Johnson Cr Fishway	17.0301	1995	7.252	121,945
NW	105 R042117a	SR 164	8.24	Pussyfoot Cr Culvert Replacement; culvert retrofitted with fishway in 2000	10.0048	1996	15.021	117,566
NW	991519	SR 18	19.59	Carey Cr tributary	08.0218A	1996	1.754	
NW	990064	SR 18	19.76	Carey Cr	08.0218	1996	18.224	
NW	990271	SR 530	29.63	Mc Govern Cr	05.0168	1996	8.520	
NW	991162	SR 530	31.2	NF Stillaguamish R tributary	05.0168X	1996	0.200	
NW	991164	SR 530	32.51	NF Stillaguamish R tributary	05	1996	0.164	
NW	991154	SR 530	55.07	Hatchery Cr	04.1062	1996	0.351	
NW	991153	SR 530	55.9	Skagit R tributary	04.0707	1996	0.111	
NW	991059	SR 531	8.71	Edgecomb Cr	07.0060	1996	2.838	
OL	990348	SR 112	3.99	Rasmussen Cr Culvert Replacement	19.0230	1996	1.325	545,699
OL	990178	US 101	146.85	Harlow Cr Fishway	21.0134	1996	16.889	82,685
OL	990197	US 101	171.7	Huelsdonk Cr Fishway	20.0437 D	1996	1.142	18,594
OL	990169	US 101	189.4	Grader Cr Fishway	20.0237	1996	4.484	189,964
EA	990350	SR 20	388.13	Renshaw Cr	62.0310	1997	0.116	
EA	990351	SR 20	389.5	Renshaw Cr	62.0310	1997	1.178	
NW	990390	SR 18	8.9	Soosette Cr	09.0073	1997	7.575	
NW	991155	SR 530	54.6	Lyle Cr	04.1064	1997	2.092	
OL	990224	SR 3	57.1	Kinman Cr Culvert Replacement and Baffles Installation	15.0368	1997	3.623	365,902

Table 2. (Continued)

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year Fixed	Potential Lineal Gain (km)[1]	Project Cost $[2]
OL	991501	US 101	103.65	Unnamed tributary to Big Cr - new fishway built in 1997; fishway tune up in 2003	22.0057	1997	3.434	126,327
OL	991581	US 101	104.9	Unnamed tributary to Fairchild Fishway	22.0052	1997	5.462	198,126
OL	990143	US 101	105.6	Fairchild Cr Fishway	22.0051	1997	4.238	195,742
OL	990164	US 101	186.3	Fuhrman Cr	20.0237E	1997	0.578	
OL	990156	US 101	186.41	Frakker Cr	20	1997	0.200	
OL	990716	US 101	186.45	Frakker Cr tributary	20	1997	0.200	
OL	991512	US 101	186.7	Forgotten Marsh	20.0237N	1997	0.256	
OL	22.0349 0.70	US 12	12.36	Camp Cr	22.0349	1997	9.978	
SW	992462	US 101	28.92	Roaring Cr Sl	24.0563	1997	0.413	
EA	990250	SR 20	384.95	Lost Cr	62.0322	1998	26.001	
NW	05.0021 4.10	I-5	216.73	WF Church Cr Fishway	05.0021	1998	1.600	17,101
NW	07.0383A 0.50	SR 202	13.8	Dry Cr	07.0383A	1998	2.816	
NW	101S-23	SR 203	7.83	Harris Cr tributary	07.0285	1998	5.050	
NW	997679	SR 509	24.42	Miller Cr	09.0371	1998	5.783	
NW	994239	SR 520	6.27	Yarrow Cr	08.0252	1998	0 [4]	
OL	990278	SR 108	8.89	McDonald Cr Fishway	14.0023	1998	5.909	260,615
OL	105 R050320a	SR 167	12.05	Jovita Cr	10.0033	1998	0 [3]	
OL	991852	SR 303	6.9	Barker Cr	15.0255	1998	4.435	
OL	990121	SR 305	12.8	Dogfish Cr	15.0286	1998	0.124	
OL	991502	US 101	101.1	Tributary to S Branch Big Cr Culvert Replacement	22.0059	1998	2.609	250,899
OL	991263	US 101	162.15	Big Cedar Cr Baffles Installation; baffles re-installed 2001	20.0576	1998	2.350	121,328
OL	990400	US 101	162.6	Steamboat Cr	20.0574	1998	7.434	23,000
OL	991532	US 12	13.8	Chehalis R tributary	22.0354	1998	3.850	
SW	990119	SR 14	55.8	Dog Cr	29.0130	1998	0.121	
SW	990211	SR 14	66	Jewett Cr Culvert Replacement	29.0342	1998	0.210	413,000
SW	990116	SR 142	5.2	Dillacort Cr	30.0009	1998	0.966	
NC	990149	SR 971	8.9	First Cr Bridge	47.0096	1999	17.000	287,000
NC	990145	SR 971	9.1	First Cr Bridge	47.0096	1999	0.010	287,000
NW	991160	SR 530	25.94	Schoolyard Cr Fishway	05.0145	1999	5.678	360,289
NW	990433	SR 900	19.5	Tibbets Cr Fishway	08.0169	1999	1.763	147,000
OL	991270	SR 109	36.43	Unnamed tributary to Pacific Ocean Fishway	21.0715	1999	3.081	189,566
OL	991690	US 101	111.9	Stevens Cr tributary	22	1999	0.972	
OL	990249	US 101	174	Lost Cr	20.0440	1999	1.340	
SW	992272	I-5	42.4	Cowlitz R tributary	26.0129	1999	1.193	
SW	990035	SR 4	35.6	Birnie Cr Fishway	25.0281	1999	3.924	67,570
SW	991698	US 101	24.13	Willapa Bay tributary	24.0673	1999	0.665	
SW	990948	US 12	127.44	Dry Cr	26.1119	1999	5.446	
EA	990881	SR 20	380.1	Lk Thomas tributary	59	2000	0.560	
EA	992006	SR 21	172.17	Lambert Cr	60.0327	2000	19.266	
NC	980108	SR 153	29.28	Beaver Cr Culvert Replacement	48.0307	2000	2.998	765,461
NW	990622	I-5	211.5	Secret Cr	05.0065	2000	3.645	45,107
NW	991708	SR 20	90.13	Skagit R tributary	04	2000	0.280	
NW	105 R071916a	SR 410	48.29	Boundary Cr	10.0250	2000	0.596	
NW	990262	SR 522	1.87	Maple Leaf Cr	08.0033	2000	2.350	
NW	990294	SR 528	2.52	Munson Cr	07.0073	2000	1.090	
OL	991295	SR 105	31.1	South Bay tributary	22	2000	0.200	
OL	990910	SR 106	6.95	Dalby Cr	14	2000	0.850	
OL	990466	US 101	246.9	Valley Cr Baffles and Roughened Channel	18.0249	2000	2.021	102,297
SC	990436	US 97	57.2	Toppenish Cr	37.1178	2000	21.133	
SW	991684	SR 506	2.33	Unnamed tributary to Stillwater Cr Culvert	26.0429B	2000	1.286	99,000
EA	990312	SR 20	309.31	O'Brien Cr Culvert Replacement	52.0394	2001	11.721	302,000
EA	990299	SR 20	309.96	NF O'Brien Cr Culvert Replacement	52.0394A	2001	0.215	302,000

Table 2. (Continued)

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year Fixed	Potential Lineal Gain (km)[1]	Project Cost $[2]
EA	990300	SR 20	310.06	NF O'Brien Cr Culvert Replacement	52.0394A	2001	1.474	302,000
NC	990381	US 2	87.1	Skinney Cr Culvert Replacement	45.0701	2001	3.061	480,000
NC	990382	US 2	87.67	Skinney Cr Culvert Replacement	45.0701	2001	0.482	480,000
NC	990383	US 2	88.03	Skinney Cr Culvert Replacement	45.0701	2001	0.483	480,000
NW	DM10	SR 20	114.94	Damnation Cr	04.1844	2001	2.380	
OL	991729	SR 112	19.56	Clallam R tributary	19	2001	0.202	
OL	991545	SR 112	19.89	Clallam R tributary	19.0129A	2001	0.202	
OL	990144	SR 112	48.49	Field Cr - retrofitted in 2001 and 2003	19.0026	2001	0 [3]	
OL	991797	SR 3	25.31	Sweetwater Cr Culvert Replacement	15.0504	2001	1.096	261,000
SW	992271	SR 142	3.65	Knight Cr	30.0008	2001	11.567	
SW	990220	SR 4	4.5	Johnson Cr Culvert Replacement	24.0581	2001	3.417	269,000
SW	991397	SR 4	25.91	Skamokawa R tributary	25	2001	0.240	
SW	990036	SR 409	3.85	Birnie Cr Fishway	25.0281	2001	0.140	322,000
SW	991440	SR 503	49.03	Kenyon Cr Fishway	27.0320	2001	1.428	224,000
NC	990202	US 97	158.32	Iron Cr	39.1209	2002	13.833	
NW	08.0268 0.80	I-405	10.12	Coal Cr	08.0268	2002	8.240	155,710
NW	993115	I-405	29.67	Martha Cr	08	2002	2.817	
NW	08.0110 0.10	SR 202	11.05	Rutherford Cr	08.0110	2002	1.770	
NW	990291	SR 530	44	Moose Cr Culvert Replacement	05.0257	2002	6.681	140,000
NW	990317	SR 530	44.27	Fink Cr Culvert Replacement	05.0257A	2002	6.681	140,000
NW	991741	SR 534	1.2	Unnamed tributary to Bulson Cr Fishway	03.0199	2002	7.932	790,555
NW	990344	SR 9	28.38	Portage Cr	05.0036	2002	7.114	
NW	991166	SR 9	32.2	Bryant Cr	05.0129	2002	0.548	
NW	LP23	SR 9	35.46	Pilchuck Cr tributary	05.0080B	2002	1.732	
NW	LP27	SR 9	35.52	unnamed trib to unnamed trib	05.0080C	2002	0.300	
NW	LP28	SR 9	35.7	unnamed trib to unnamed trib	05	2002	0.200	
NW	990625	SR 9	38.57	unnamed trib to unnamed Pilchick Cr trib	05.0080H	2002	1.060	
NW	LP32	SR 9	38.69	unnamed trib to unnamed trib	05	2002	0.788	
NW	NC180	SR 9	39.69	Lk McMurray tributary	03	2002	0.351	
NW	NC170	SR 9	39.87	unnamed trib to unnamed trib	03	2002	0.285	
NW	995398	SR 9	69.88	Samish R tributary	03	2002	0.351	
NW	991210	SR 99	6.86	WF Hylebos Cr Fishway	10.0014	2002	0 [3]	105,968
SC	990440	SR 241	9.17	Sulphur Cr Wasteway tributary	37	2002	4.134	
SC	990409	SR 410	82.8	Wash Cr	38	2002	0.222	
SW	990071	SR 401	8.8	Cement Cr Fishway	24.0598	2002	6.464	200,000
EA	990180	SR 21	155.06	Golden Harvest Cr	52.0352	2003	21.767	
NW	08.0183 1.00	I-90	17	EF Issaquah Cr	08.0183	2003	1.430	
NW	991199	SR 167	23.65	Upper Springbrook Cr	9.002	2003	0.860	
NW	990208	SR 18	12.7	Jenkins Cr	09.0087	2003	16.379	
NW	990209	SR 18	13.8	Jenkins Cr	09.0087	2003	8.210	
NW	995977	SR 20	25.77	Penn Cove tributary	06.0003	2003	1.277	
NW	101S-27	SR 203	12.76	Deer Cr	07	2003	1.172	
NW	991189	SR 527	6.99	North Cr tributary	08	2003	0.500	
NW	995981	SR 9	0.88	Little Bear Cr tributary	08	2003	0.660	
OL	161180	US 101	167.44	Fletcher Cr Fishway	20.0426	2003	2.189	19,005
SW	990377	US 12	81.22	Silver Cr Culvert Replacement	26.0540	2003	6.788	527,000
NW	994411	I-90	15.48	Tibbets Cr Bridge	08.0169	2004	6.811	5,536,555
NW	990136	SR 11	6.84	Edison Sl	03.0001	2004	14.126	
NW	991486	SR 167	25.65	Panther Cr	09.0006	2004	0 [3]	
NW	105 S012018a	SR 509	10.71	Lakota Cr	10.0386	2004	2.129	
NW	990434	SR 542	15.32	Jim Cr	01	2004	0.953	
NW	995578	SR 542	44.14	NF Nooksack R tributary	01	2004	0.200	
NW	995580	SR 542	44.34	NF Nooksack R tributary	01	2004	0.200	
NW	995584	SR 542	45.57	Happy Valley Creek - NF Nooksack tributary	01	2004	0.732	
OL	115 MC176	SR 106	7.06	Alderbrook Cr	14	2004	0.911	
OL	19.0110 0.50	SR 112	32.02	Jim Cr Culvert Replacement	19.0110	2004	14.100	870,000

Table 2. (Continued)

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year Fixed	Potential Lineal Gain (km)[1]	Project Cost $[2]
OL	18.0234 1.10	US 101	250	Ennis Cr Fishway Upgrade	18.0234	2004	8.950	58,165
OL	17.0285 0.20	US 101	270.98	Jimmycomelately Cr Bridge	17.0285	2004	10.401	1,282,482
OL	990370	US 101	359.6	Schneider Cr	14.0009	2004	11.600	
SW	992311	US 101	53.56	Old Mill Pond Cr	24	2004	0.635	
NC	990228	SR 20	181.34	Little Boulder Cr Culvert Replacement	48.1400	2005	5.054	567,336
NC	992058	SR 262	13.19	Irrigation Ditch to Potholes Reservoir	41	2005	11.000	
NW	991620	SR 161	33.9	EF Hylebos Cr tributary	10.0016A	2005	2.139	
NW	991576	SR 18	18.19	Taylor Cr	08.0326	2005	1.711	
NW	990426	SR 18	18.43	Taylor Cr	08.0326	2005	1.637	
NW	992374	SR 522	18.44	Evans Cr tributary	07.0211	2005	2.695	
NW	990016	SR 522	18.77	unnamed trib to unnamed trib	07	2005	0.370	
NW	102 N171	SR 527	7.38	Mill Cr	08.0070	2005	1.120	
NW	993087	SR 527	9.33	Penny Cr tributary	08	2005	0.200	
NW	995582	SR 542	45.51	Happy Valley Creek - NF Nooksack tributary	01	2005	0.165	
NW	991122	SR 9	48	Gribble Cr Retrofit - 2005 and 2006	03	2005	4.291	322,176
NW	991821	SR 92	0.47	Stevens Cr Culvert Replacement	07.0147	2005	2.083	634,398
OL	990384	SR 106	0.85	Skobob Cr Bridge	16.0004	2005	1.434	1,731,000
OL	991636	SR 706	8.02	Nisqually R tributary	11.0008A	2005	7.263	
OL	991227	SR 706	9.81	Nisqually R tributary	11.0222	2005	0.330	
OL	991275	US 101	130.6	Ten O'Clock Cr tributary	21	2005	0.240	
EA	991471	SR 31	18.22	Three Mile Cr	62.0051	2006	7.674	
NC	980114	SR 20	205.84	Beaver Cr Culvert Replacement	48.0307	2006	80.652	700,915
NC	980124	SR 20	206.85	Frazer Cr Culvert Replacement	48.0309	2006	12.291	700,915
NC	990282	US 2	70.21	Mill Cr Culvert Replacement	45.0956	2006	11.553	1,674,411
NW	990376	I-405	19.12	Forbes Cr	08.0242	2006	4.709	
NW	08.0320 1.30	SR 18	16.94	Downs Cr - culvert replacement 2006; fishway rebuild 2008	08.0320	2006	3.894	
NW	995979	SR 20	14.65	Crockett Lk	06.0053	2006	2.864	
NW	995980	SR 9	0.97	Little Bear Cr tributary	08	2006	0.500	
NW	990316	SR 9	1.16	Cutthroat Cr	08.0083	2006	3.058	
NW	370220	SR 9	96.1	Easterbrook Cr	01.0686	2006	0.750	
NW	370219	SR 9	96.6	Bone Cr	01.0685	2006	3.650	
OL	990714	SR 112	24.91	Unnamed to Pysht R Culvert Replacement	19.0113K	2006	1.603	647,773
OL	990713	SR 112	54.35	Bear Cr Culvert Replacement	19.0014	2006	3.729	666,151
OL	990998	SR 305	11.62	SF Dogfish Cr	15	2006	0 [5]	
OL	991853	SR 305	12.1	SF Dogfish Cr	15	2006	0 [5]	
OL	996943	SR 305	12.16	SF Dogfish Cr	15	2006	0 [5]	
OL	991854	SR 305	12.29	SF Dogfish Cr	15	2006	0 [5]	
OL	15.0285 H 0.50	SR 305	12.34	SF Dogfish Cr	15	2006	1.588	
SW	992223	SR 142	13.4	Snyder Canyon Cr Fishway Tune up	30.0018	2006	6.267	0 [6]
SW	30.0068 0.40	SR 142	20.2	Bowman Cr Bridge	30.0068	2006	36.671	1,495,495
EA	995837	SR 270	4.29	Paradise Cr tributary	34	2007	7.437	
EA	999625	SR 270	9.08	Paradise Cr tributary	34	2007	2.590	
NC	994035	SR 20	278.6	Bonaparte Cr	49.0246	2007	17.679	
NC	995038	US 2	57.8	Tye R tributary	07	2007	0.207	
NW	08.0059 7.00	I-405	29.75	Swamp Cr Fishway	08.0059	2007	0.635	436,324
NW	993090	I-5	182.73	Swamp Cr Fishway	08.0059	2007	10.760	433,648
NW	996459	SR 524	13.05	Whistle Cr	08	2007	0.200	
NW	990578	SR 542	28.3	Boulder Cr tributary	01.0425	2007	0.560	
NW	981788	SR 548	6.35	Terrell Cr	01.0089	2007	6.854	
NW	07.0148 1.30	SR 92	1.93	Catherine Cr Fishway	07.0148	2007	7.326	377,749
OL	991566	SR 303	5.6	Steele Cr	15.0274	2007	3.200	
OL	990122	SR 307	0.07	Dogfish Cr	15.0286	2007	6.945	
SC	990988	SR 24	1.07	Blue Sl	37	2007	3.700	
NW	FD41	SR 20	44.74	Meadow Cr	03	2008	8.203	

Table 2. (Continued)

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year Fixed	Potential Lineal Gain (km)[1]	Project Cost $[2]
NW	991641	SR 524	9.1	Filbert Cr	08	2008	1.147	
NW	991109	SR 539	2.06	Spring Cr tributary	01.0553	2008	0.380	
NW	990112	SR 539	4.3	Deer Cr	01.0165	2008	7.609	
NW	991817	SR 9	31.61	Bryant Cr tributary	05	2008	0.780	
NW	995209	SR 96	3.96	unnamed trib to unnamed trib	07	2008	0.057	
SC	999499	US 12	319.35	Touchet R	32	2008	0 [7]	
SW	994652	I-5	11	Gee Cr tributary	27.0168A	2008	2.065	
NW	991751	SR 531	3.8	Cougar Cr	05.0041	2009	0.778	
NW	990046	SR 542	28.01	Bruce Cr	01	2009	3.000	
NW	990023	SR 542	28.74	Baptist Camp Cr Culvert Replacement	01.0433	2009	0.512	495,103
NW	991184	SR 900	20.09	Clay Cr	08.0172	2009	0.200	
NW	991723	SR 900	20.34	Tibbetts Cr tributary	08.0171	2009	0.650	
OL	992196	SR 104	12.7	Unnamed tributary to Squamish Harbor Culvert Replacement	17.0185	2009	1.822	1,475,868
OL	991244	SR 106	2.95	Unnamed tributary to Skokomish R Culvert Replacement	16.0002	2009	0.437	1,270,093
OL	998155	SR 16	20.06	Burley Cr tributary	15	2009	0.180	
OL	993576	SR 16	20.2	Burley Cr tributary	15	2009	0.200	
OL	991908	US 101	76.48	Mosquito Cr Culvert Replacement	24.0137	2009	3.563	1,357,943
SW	994286	I-5	74.05	Berwick Cr	23.0081	2009	11.575	
SW	992234	SR 122	4.99	Unnamed tributary to Mayfield Lake Culvert Replacement	26	2009	1.858	385,839
EA	997498	US 2	296.35	Deadman Cr	55.0051	2010	92.200	
NW	991060	SR 542	16.07	Nooksack R tributary	01	2010	0.188	
NW	990606	SR 542	38.98	Chain-up Cr Bridge	01	2010	0.276	1,289,251
OL	990709	SR 305	9.6	Unnamed tributary to Liberty Bay Culvert Replacement	15.0291	2010	2.803	2,887,452
OL	991742	SR 305	9.86	Bjorgen Cr Culvert Replacement	15.0290	2010	1.520	3,546,564
OL	991252	US 101	335.02	Hood Canal tributary	16.0218	2010	0.210	
SW	931450	SR 105	24.26	Seastrand Cr tributary	24	2010	0 [8]	
SW	993139	SR 105	24.42	Seastrand Cr tributary	24	2010	0 [8]	
SW	992821	US 101	3.3	Columbia R tributary	24	2010	1.400	
NW	AR11	SR 20	75.75	Red Cabin Cr Bridge	3.0343	2011	14.000	3,610,665
NW	994459	SR 520	4.48	Lake Washington tributary	8.0257	2011	2.391	
NW	998987	SR 520	4.81	Lake Washington tributary	08	2011	1.000	
NW	994119	SR 520	5.81	Yarrow Cr tributary	08	2011	0.522	
NW	990429	SR 548	4.67	Terrell Cr Culvert Replacement	01.0089	2011	11.313	1,569,358
NW	07.0939 0.40	US 2	23.08	Wagley's Cr Dam Removal	07.0939	2011	15.105	726,441
OL	999532	I-5	85.81	Dry Cr tributary	23	2011	1.600	
OL	992493	US 101	68.99	Tributary to Lower Salmon Cr Culvert	24.0106	2011	4.606	1,505,251
OL	990729	US 101	100.9	Tributary to S Branch Big Cr Culvert Replacement	22.0059	2011	1.202	845,786
OL	990032	US 101	102.14	Tributary to S Branch Big Cr Culvert Replacement	22.0059	2011	4.059	1,062,966
SW	990307	SR 105	16.57	Norris Slough Bridge	24	2011	2.500	3,023,493
EA	990096	SR 21	172.85	Curlew Cr	60.0288	2012	23.910	
NW	08.0183 1.60	I-90	18.83	EF Issaquah Cr Culvert Replacement	08.0183	2012	11.065	3,337,235
NW	991486	SR 167	25.65	Panther Cr	9.0006	2012	5.990	
NW	994234	SR 520	5.95	Yarrow Cr	08.0252	2012	6.418	
NW	994227	SR 520	5.95	Yarrow Cr	08.0252	2012	0 [4]	
NW	991736	SR 520	6.04	Yarrow Cr	8.0252	2012	0 [4]	
NW	994704	SR 520	6.40	unnamed to Yarrow Cr	8	2012	0 [4]	
NW	990151	SR 530	42.99	Fortson Cr Culvert Replacement	05.0254	2012	1.030	1,852,338
NW	931684	SR 9	2.65	Great Dane Cr tributary	08	2012	0.200	
OL	991730	SR 112	25.6	Unnamed tributary to Pysht R Culvert	19	2012	3.347	996,662
OL	990304	SR 112	47.1	Nelson Cr Culvert	19.0032	2012	4.684	2,031,115
SW	994301	I-5	81.77	China Cr Fishway	23.0870	2012	8.289	

Table 2. (Continued)

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year Fixed	Potential Lineal Gain (km)[1]	Project Cost $[2]
SW	990052	US 97	21.35	Butler Cr Bridge	30.0140	2012	22.067	3,634,545
EA	990362	SR 21	133.6	S. Nanamkin Cr	52.0125	2013	25.700	
NC	991849	US 2	88.54	Skinney Cr	45.0701	2013	0.720	
NW	991036	I-5	255.40	Squalicum Cr	01.0552	2013	30.082	1,516,068
NW	994389	SR 11	20.42	Padden Cr	01.0622	2013	11.580	2,899,049
NW	994449	SR 520	6.03	Yarrow Cr	8.0252	2013	0 [4]	
NW	994705	SR 520	6.44	SF Yarrow Cr	08	2013	0 [4]	
NW	991448	SR 9	67.33	NP Cr Culvert Replacement	3.0078	2013	2.101	1,220,015
OL	991246	SR 106	13.50	Twanoh Falls Cr Culvert Replacement	14.0132	2013	4.520	2,864,719
OL	993048	SR 107	0.76	Little North R tributary	24	2013	0.010	
OL	990092	SR 112	57.61	Coville Cr Culvert Replacement	19.0001	2013	15.710	1,754,881
OL	991215	SR 162	4.82	Ball Cr	10.0405	2013	2.482	
OL	990297	SR 7	41.17	Muck Cr Culvert Replacement	11.0018	2013	8.388	2,065,841
SC	992942	I-90	56.81	Rocky Run Cr	39.1867A	2013	0.250	
SW	993138	SR 105	24.39	Seastrand Cr	24.0003	2013	2.227	
SW	932550	SR 142	23.66	Little Klickitat R tributary	30	2013	1.868	
SW	992228	US 12	115.29	Cowlitz R tributary	26.1030	2013	0.886	
NW	932370	SR 410	31.12	Scatter Cr	10.0073	2014	26.890	
NW	994236	SR 520	6.19	Yarrow Cr	8.0252	2014	0 [4]	
NW	994237	SR 520	6.26	Yarrow Cr	8.0252	2014	0 [4]	
NW	994238	SR 520	6.27	Yarrow Cr	8.0252	2014	0 [4]	
NW	994128	SR 522	21.95	Skykomish R tributary	7.0814	2014	1.331	
NW	994125	SR 522	21.97	Skykomish R tributary	7.0814	2014	0.119	
NW	995404	SR 530	36.83	NF Stillaguamish R tributary	05	2014	0.070	
NW	991169	SR 530	36.9	NF Stillaguamish R tributary	05	2014	0 [8]	
NW	991170	SR 530	37.58	NF Stillaguamish R tributary	05	2014	0 [8]	
NW	990359	SR 530	37.95	Rowan II Cr	05.0220A	2014	0 [9]	
NW	991171	SR 530	37.96	NF Stillaguamish R tributary	05	2014	0 [9]	
NW	995405	SR 530	38.13	NF Stillaguamish R tributary	05	2014	0 [9]	
OL	15.0229 0.10	SR 3	40.96	Chico Cr - temporary weirs inside the box culvert	15.0229	2014	pending [10]	326,100
OL	990555	US 101	259.79	Owl Cr	18	2014	3.585	
NW	991718	SR 203	14.55	Coe Clemons Cr Culvert Replacement	07	2015	2.332	3,235,856
NW	08.0052 0.10	SR 522	5.76	Lyon Cr Culvert Replacement	08.0052	2015	15.298	1,600,001
NW	01.0228 4.80	SR 542	6.55	Anderson Cr Bridge	01.0228	2015	21.897	8,031,016
NW	991120	SR 9	42.36	Lake Cr Bridge	03.0227	2015	16.453	2,443,447
NW	991210	SR 99	6.86	WF Hylebos Cr Culvert Replacement	10.0014	2015	3.364	2,651,108
SC	995878	SR 129	5.78	Rattlesnake Cr Culvert Replacement	35.2314	2015	14.441	1,038,260
SW	991374	SR 4	3.1	Petes Cr	24.0572	2015	11.410	
SW	931100	SR 4	33.94	Unnamed trib to Elochoman Slough Culvert Replacement	25	2015	0.304	1,503,775
SW	990818	SR 4	34.1	Unnamed trib to Elochoman Slough Culvert Replacement	25	2015	2.702	1,908,427
SW	990283	SR 502	5.13	Mill Cr	28.0079	2015	4.493	
NW	930179	SR 167	11.43	unnamed trib to Milwaukee Canal	10	2016	2.320	
NW	990624	SR 532	9.75	Secret Creek	05.0065	2016	4.570	3,390,700
NW	991621	SR 542	24.9	High Creek	01	2016	3.882	2,603,209
NW	996155	SR 548	11.19	unnamed trib to Drayton Harbor	01.0044	2016	3.250	937,023
OLY	992205	SR 104	22.47	Grovers Creek	15.0299	2016	5.192	1,571,769
OLY	14.0021 0.30	SR 108	11.9	Little Skookum Creek	14.0021	2016	5.417	2,773,677
OLY	990205	SR 112	5.17	Jansen Creek	19.0228	2016	5.719	2,622,413
OLY	990214	SR 112	33.21	Joe Creek	19.0109	2016	7.158	1,959,724
OLY	990144	SR 112	48.49	Field Creek	19.0026	2016	8.926	195,954
OLY	990962	SR 121	4.04	Blooms Ditch	23.0684	2016	4.939	2,549,213
OLY	343040	SR 121	4.1	unnamed trib to Blooms Ditch	23	2016	0.070	0 [6]
OLY	996753	SR 16 EB	28.1	Anderson Creek	15.0211	2016	9.293	0 [6]
OLY	990017	SR 16 WB	28.1	Anderson Creek	15.0211	2016	0.002	7,182,198

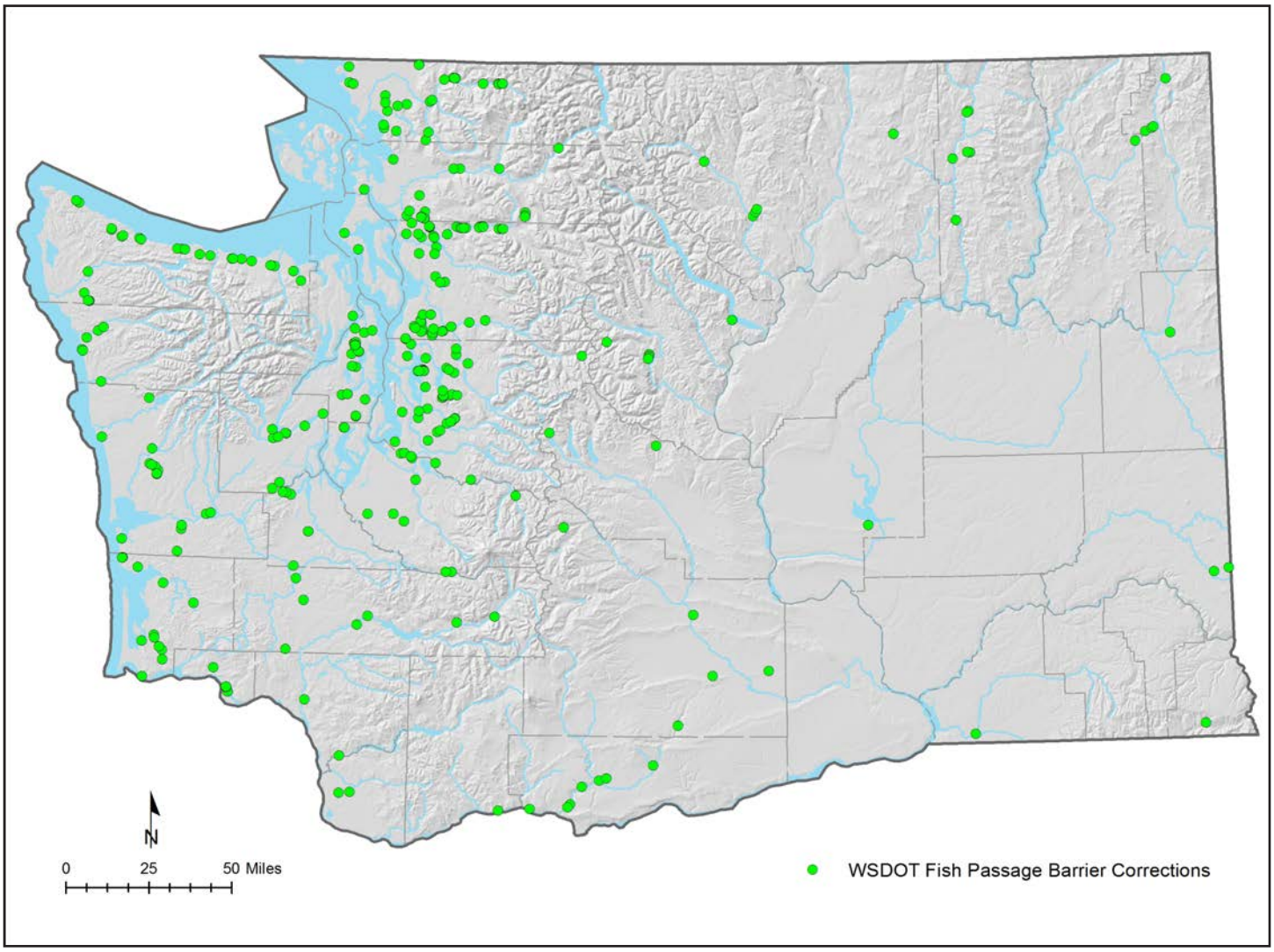
Table 2. (Continued)

WSDOT Region	Site Id	Road	MP	Stream	WRIA	Year Fixed	Potential Lineal Gain (km)[1]	Project Cost $[2]
OLY	990972	SR 161	12.85	South Creek	11.0028	2016	38.343	1,624,227
OLY	105 R050320a	SR 167	10.8	Jovita Creek	10.0032	2016	4.075	
OLY	996735	SR 3	26.13	unnamed trib to Mindy Creek	15	2016	pending [11]	
OLY	990123	SR 307	0.49	Dogfish Creek	15.0285	2016	7.891	1,450,976
OLY	992002	SR 307	4.62	Gamble Creek	15.0356	2016	10.003	2,023,774
OLY	991049	SR 507	36.35	Lacamas Creek	11.0022	2016	24.287	2,135,195
OLY	20.0312 0.60	US 101	197.1	Swanson Creek	20.0312	2016	6.644	2,155,575

Totals: 1661.3 km $136,827,010
1032.3 mi

1 - For watersheds with multiple corrections, lineal gain is typically shown for the site highest in the watershed and incremental gain is shown for lower sites.
2 - Project Costs only available for projects completed with dedicated I4 funds.
3 - Correction reverted to a barrier. Barrier re-corrected in later project.
4 - Lineal gain represented by site 994234 (2012).
5 - Lineal gain represented by site 15.0285 H 0.50 (2006).
6 - Project Costs included in a related site's contract.
7 - Bridge repair and fish passage improvement in 2008, but still a barrier due to outfall drops.
8 - Amount of habitat gain unknown at this time.
9 - Amount of habitat gain unknown; site not previously documented as a barrier before emergency situation.
10 - Pending: interim fix; potential gain will be reported after the culvert is replaced by a bridge.
11 - Pending until stream is rerouted and project is completed in 2017.

Figure 44. WSDOT fish passage barrier corrections since 1955



2017 Fish Passage Projects Planned

Thirteen barrier correction projects are scheduled for completion in 2017 (Figure 45, Table 3). The 13 projects will open up an estimated 53 miles (85.1 kilometers) of potential upstream habitat. Eleven of the barrier corrections are stand-alone projects funded by the WSDOT improvement subprogram I4. One barrier will be corrected using a combination of preservation and grant funding. Another will be corrected using emergency funds. Ten of the 13 barrier corrections planned for 2017 will correct injunction barriers.

Figure 45. WSDOT fish passage project construction during 2017

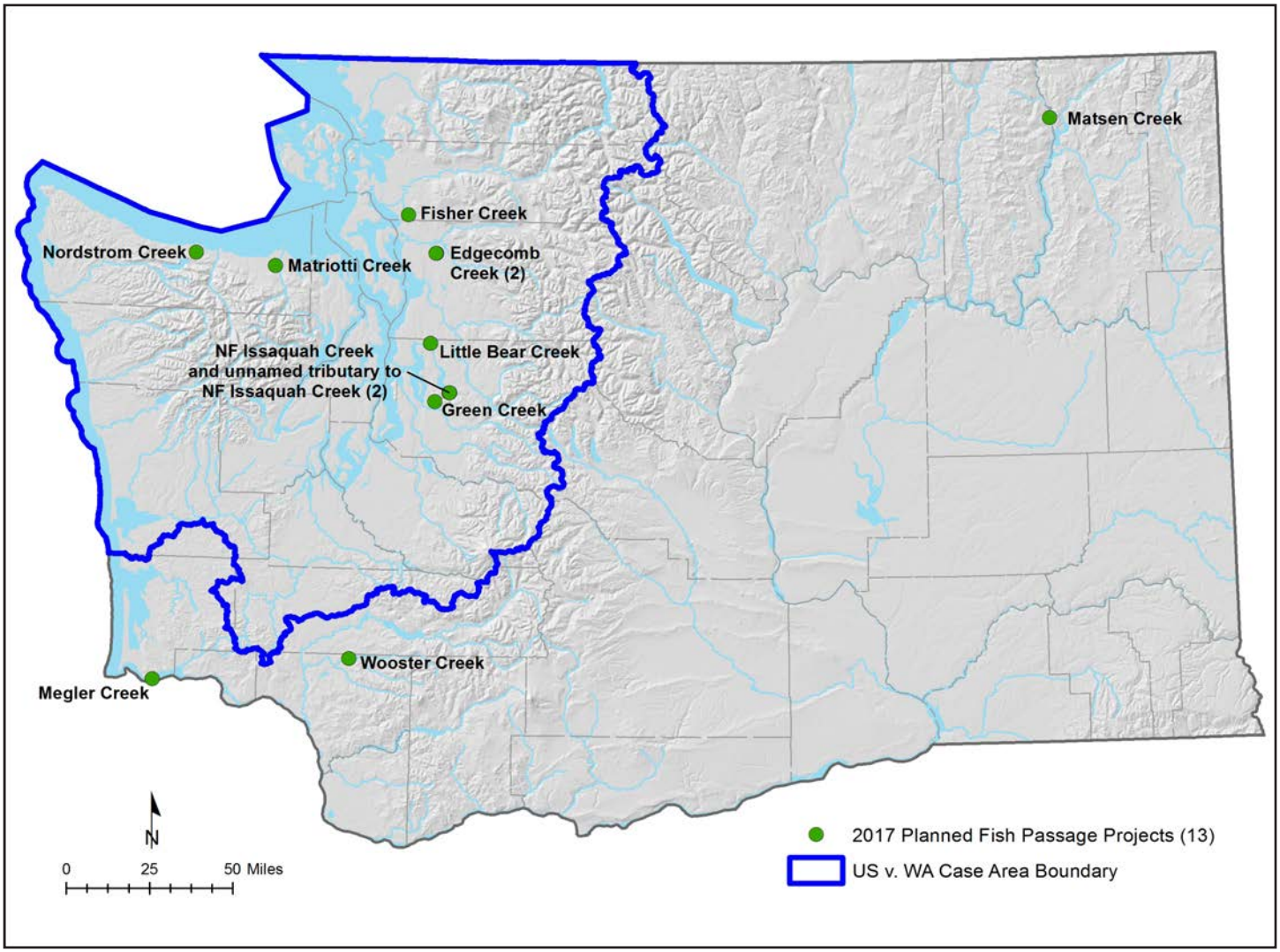


Table 3. Fish Passage Projects Scheduled for Completion in 2017

Site ID	WSDOT Region	Road	MP	Stream	WRIA	Lineal Gain (km)*	Incremental Gain (km)*	Funding
03.0181 0.50	NW	I-5	219.41	Fisher Creek	3	27.534	27.534	I4
991058	NW	SR 531	8.65	Edgecomb Creek	7	2.928	0.09**	I4
991059	NW	SR 531	8.71	Edgecomb Creek	7	2.838	2.838	I4
996475	NW	I-90; WB off-ramp	17.00	Unnamed to NF Issaquah Creek	8	0.357	0.357	I4
996963	NW	I-90; WB on-ramp	17.00	NF Issaquah Creek	8	1.380	1.380	I4
934151	NW	I-90; ROW	17.06	Unnamed to NF Issaquah Creek	8	.285	.285	I4
102 L062	NW	SR 202	0.10	Little Bear Creek	8	46.169	31.996**	I4
991842	NW	SR 900	15.86	Green Creek	8	2.155	2.155	I4
18.0021 5.40	OLY	US 101	260.93	Matriotti Creek	18	8.075	8.075	I4
991660	OLY	SR 112	52.90	Nordstrom Creek	19	4.855	4.855	I4
991409	SW	SR 401	0.84	Megler Creek	24	1.280	1.280	P, G
991634	SW	SR 504	17.00	Wooster Creek	26	2.837	2.837	I4
990267	EA	US 395	249.98	Matsen Creek	60	1.450	1.450	E
					Total	**102.143**	**85.132 km**	
						63.47	**52.9 mi**	

* Lineal gain represents the amount of potential fish habitat upstream of a corrected barrier. Incremental habitat gain is reported for sites having other WSDOT barriers located upstream. Incremental habitat gain is the amount of potential fish habitat upstream to the next WSDOT barrier.
** Site with WSDOT barrier(s) upstream

Funding Codes:
E = Emergency
G = Grants
I4 = Improvement
P = Preservation

Project Planning

WSDOT Barrier Corrections and Planning Strategy

WSDOT corrects fish passage barriers mainly through stand-alone projects or part of larger transportation projects.

- Stand-alone correction projects address some of the highest priority barriers.
- Barriers corrected as part of larger safety or mobility projects allow WSDOT to save time and money.

Stand-alone Projects

These “dedicated correction” projects are part of the WSDOT Environmental Retrofit Program (I4). The sole purpose of these projects is to correct fish passage barriers. As part of managing WSDOT’s barrier correction program for efficient use of state resources, decisions about project prioritization may involve factors such as (in no particular order of preference):

- Amount of habitat blocked and habitat quality.
- Project cost in relation to program funding.
- Future safety/mobility projects which may address the barrier.
- Multiple WSDOT barriers in a watershed.
- Project grouping efficiencies for combined construction or traffic detour management.
- Structure condition/maintenance issues.
- Severity of the fish passage barrier (e.g. total barrier vs. partial barrier).
- Notably complex design challenges (e.g. adjacent barriers, complex right of way issues, unstable stream conditions, etc.).
- Tribal input.
- Partnership opportunities with local agencies, Tribes, enhancement groups, and other landowners.
- The presence and number of Endangered Species Act (ESA) listed species.
- Permitting constraints.

WSDOT prioritizes known barriers statewide for correction. The prioritization process aims to select the projects that efficiently provide benefits for anadromous and resident fish species. Mainly barriers with significant amount of potential habitat gain are prioritized for correction as stand-alone fish passage restoration projects in the Environmental Retrofit Program (I4) budget.

WSDOT Transportation Improvement Projects

WSDOT fish passage barrier correction can also occur by integrating the barrier project with road construction, including safety and mobility projects. It is a cost-effective way to accelerate barrier correction and reduce mobilization costs. WSDOT integrates fish passage barrier corrections into planned WSDOT transportation improvement projects whenever possible. All fish passage barriers within an upcoming transportation project are considered for correction, including barriers with limited habitat gain that are not considered for correction with dedicated funding. WSDOT works closely with WDFW to identify all fish passage barriers within a project’s boundaries.

Fish Passage Barrier Inventory

Fish Passage Inventory Updates

WDFW has inspected 7,193 water crossings along 7,056 miles of state highways. The initial inventory was completed in October of 2007, but reassessment of barriers and non-barriers is an ongoing effort. The inspected crossings included culverts as well as other features associated with WSDOT highways and rights of way, such as road fills, streambed controls, and dams.

- Of the 7,193 water crossings, 3,710 were identified as crossings over fish bearing waters.
- Approximately 53% (1,977) of the examined fish bearing crossings were identified as barriers (Table 4). Out of the 1,977* barriers, 979 are total barriers to fish passage, 985 provide partial fish passage, while 13 barriers have an unknown percent passability.
- One hundred and thirty-eight crossings require further analysis to determine fish passage barrier status.
- Barriers with a significant habitat gain** (1,513) may be prioritized for correction with dedicated funding.
- Thirty-one fish passage barrier crossings require verification of significant habitat gain.

*The number of fish passage barriers is a dynamic value that changes as the on-going inventory takes place. As previously undetected culverts are inventoried, the number of crossings (and possibly fish passage barriers) may increase.

**A significant reach of habitat is defined as a section of stream having at least 200 linear meters of habitat without a natural barrier.

Table 4. Fish Passage Barriers Statewide

Fish-bearing Water Crossings	Fish Passage Barriers			Unknown Barrier Status	Barriers with Significant Habitat Gain	Barriers with Limited Habitat Gain[1]	Barriers with Habitat Threshold Gain Not Determined	Barriers Fixed[2]
3710	Total Barriers (0% Passable)	Partial Barriers (33% or 67% Passable)	Percent Passable Unknown	138	1513	433	31	319
	979	985	13					

Based on WSDOT Fish Passage Inventory as of June 6, 2017.

[1] Barriers with less than 200 m potential habitat gain.

[2] Three hundred and nineteen WSDOT fish passage barriers have been reported as replaced or retrofitted for fish passage; however, some of these require additional work to meet current fish passage criteria.

Regional Statistics

WSDOT has six geographic management regions: Northwest, North Central, Olympic, Southwest, South Central, and Eastern (Figure 46). A summary of the fish passage barriers within the six regions is shown in Table 5. For a complete list of fish passage barriers refer to Appendix I.

Figure 46. WSDOT Regions

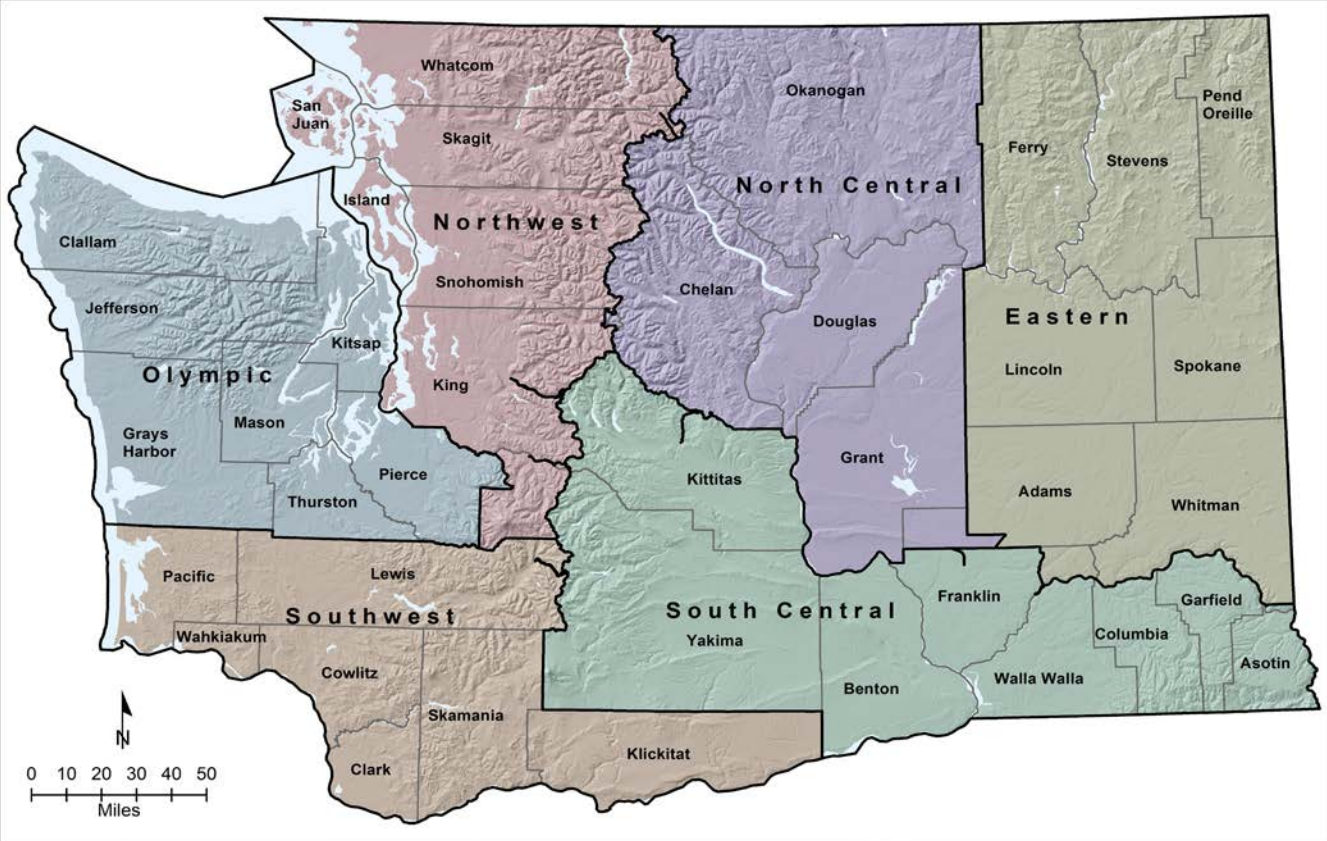


Table 5. Fish Passage Barrier Assessment Summarized Across Six WSDOT Regions

WSDOT Region	Fish-bearing Water Crossings	Fish Passage Barriers	Barriers with Significant Habitat Gain	Barriers with Limited Habitat Gain[1]	Barriers with Habitat Threshold Gain Not Determined	Barriers Fixed[2]
Northwest	1040	581	431	144	6	148
North Central	234	135	96	34	5	15
Olympic	1040	640	489	148	3	96
Southwest	723	357	270	74	13	37
South Central	267	87	70	14	3	8
Eastern	406	177	157	19	1	15
Totals	**3710**	**1977**	**1513**	**433**	**31**	**319**

Based on WSDOT Fish Passage Inventory as of June 6, 2017.

[1] Barriers with less than 200 m potential habitat gain.

[2] Three hundred and nineteen WSDOT fish passage barriers have been reported as replaced or retrofitted for fish passage; however, some of these require additional work to meet current fish passage criteria.

U.S. v. WA List of WSDOT Case Area Barrier Culverts

A list of culverts blocking salmon or steelhead passage within the case area was filed on September 27, 2013, containing 1,014 barriers, including 847 with a significant habitat gain and 167 with a limited habitat gain.

As of June 6, 2017, WSDOT has 978 culvert barriers relevant to the U.S. v. WA case - 806 with significant habitat upstream (≥200 meters) and 172 with a limited habitat gain (<200 meters).

The List of WSDOT Case Area Barrier Culverts (Case 2:01-sp-00001-RSM Document 779-1) is updated as WSDOT learns new information about culverts within the case area and the disposition of culverts may change. The injunction requires the state to re-evaluate non-barrier culverts once every ten years to determine whether they remain passable. Newly identified barriers are discovered as part of this re-inventory work, as the culvert conditions change over time and become barriers.

Updates to the September 2013 List of WSDOT Case Area Barrier Culverts:

- 44 barriers have been corrected and are no longer barriers*,
- 26 culverts are on resident-fish streams, not containing steelhead or salmon,
- 7 barriers are on streams determined to be non-fish bearing,
- 4 barriers are equipped with tide gates,
- 1 barrier was a duplicate record in WDFW's database,
- 17 barriers were re-evaluated as fish passable,
- 12 barriers were incorrectly assigned to WSDOT ownership, and
- 75 new barrier culverts were identified.

Appendix II lists the barrier culverts relevant to the injunction as of June 6, 2017. Appendix III lists the updates to the September 2013 List of WSDOT Case Area Barrier Culverts.

* This number includes one barrier that was corrected during the SR 520 project in 2014 that had not previously been reported.

Monitoring

Monitoring Continues in 2016

In September 2015, as part of the U.S. v. WA culvert injunction, state agencies and Tribal nations agreed upon and finalized a set of Monitoring Implementation Guidelines. Those Guidelines are the basis of WSDOT's current fish passage monitoring plan. Some elements of the monitoring plan apply to all statewide fish passage projects, not just those within the case area. Some projects have monitoring requirements as part of a state or federal permit. The monitoring plan based on the agreed upon guidelines provides protocols that can be applied to those special monitoring requirements and will ensure a consistent and efficient process.

There are three basic types of monitoring inspections:

Post-Construction Compliance Inspection - WSDOT evaluates all fish passage projects to ensure they are constructed as designed and permitted. Sites are also evaluated for their ability to pass fish using WDFW barrier assessment methods.

Over-Winter Inspection – WSDOT inspects sites corrected under the injunction after the first full winter to evaluate the impact of high seasonal flows on fish passage at the new structure.

Long-Term Evaluations - Sites corrected under the injunction are evaluated five and 10 years after construction to determine if they still provide fish passage and to determine if the structures still conform to the fish passage standards under which they were constructed.

Monitoring Results

During the 2016 monitoring season WSDOT evaluated 33 sites under the monitoring plan. Twenty sites were fish passage projects within the case area that were constructed in 2016 and evaluated under the Post-Construction Compliance Inspection protocols. All were inspected and determined to meet fish passage standards and were constructed according to the permitted designs. Seven sites within the case area that were constructed in 2015 received an Over-Winter Inspection. All seven sites remain fully passable for fish. Six sites within the case area received additional Long-Term evaluations. These six also remain fully passable to fish.

Pre- and Post-Project Evaluation for Fish Presence

Adult spawner surveys determine species presence or absence above and below a newly completed fish passage project or evaluate a pre-project barrier. Typically, the surveys are conducted 500 meters downstream and upstream of the project. The surveys may be shorter if the distance to a confluence with a larger body of water downstream is less than 500 meters or if there is a natural barrier upstream within the 500 meters. If there is no spawning habitat within 500 meters upstream or downstream of the fish passage project, the survey may be relocated to where fish are likely to spawn.

Not all potential habitat may be utilized by salmonids immediately following a fish passage correction. In some cases, it may take years before the newly opened habitat is utilized to its full potential. Fish passage is only one of the many factors influencing fish production. Among the other factors are surface water diversions, pollution, hydropower, unfavorable ocean conditions, predation, harvest, and general habitat degradation or loss.

Due to budget constraints, a limited number of sites were evaluated for adult fish use in 2016. We observed adult fish upstream of five out of six fish passage projects surveyed: SR 108 Little Skookum Creek, SR 307 Gamble Creek, SR 307 Dogfish Creek, and two barrier corrections on SR 16 at Anderson Creek.

Fishway Inspections and Maintenance

In addition to culverts, WSDOT owns 152 fishways statewide. Regular inspections and maintenance are essential for the continued successful operation of fishways. Some of the fishways require frequent maintenance for fish passage but are not fish passage barriers. WDFW biologists perform regular inspections for fishways in the spring. They document maintenance needs or fish passage deficiencies then notify WSDOT. A follow-up inspection, conducted in the fall, ensures that all the fish passage deficiencies were corrected and maintenance needs were met.

For 2017, WDFW inspected 92 fishways that were deemed passable in 2016. Of these 92, two require minor maintenance to address and avoid potential long-term problems and three require maintenance to allow fish passage. WDFW also inspected an additional 25 fishways that require replacement but with maintenance can afford some degree of passability. Of the 25, five fishways require some degree of maintenance to allow partial fish passage.

Maintenance of the fishways includes removal of organic debris and sediment, repairing broken or missing baffles and other similar activities ensuring fish passage through fishways.

When fishways reach the end of their lifespan and can no longer provide fish passage, they are put on the barrier list to be evaluated by biologists and engineers for a repair solution. Like the other fish passage barriers, barrier fishways are included in the scoping and prioritization process that will ultimately lead to repair or replacement.

Figure 47. An example of a durable and efficient fishway on SR 401 at milepost 8.8 for Cement Creek.

The results of the spring 2017 fishway inspections can be found in Appendix IV.

Appendix I

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
995857	I-405	0.42	C	Gilliam Cr	09.0032	67	14.8	1.1	RND	SPS	1.9	1.9	34.1	0	0.49	4048	410	3055
998967	I-405	0.61	C	Gilliam Cr	09.0032	67	15.07	1.1	RND	SST	2.68	2.68	304.4	0	0.2	4129	418	3228
995470	I-405	2.31	C	Rolling Hills Cr	09	0	8.83	1.1	RND	OTH	1.22	1.22	270	0	0.99	1865	107	699
994406	I-405	3.06	C	Rolling Hills Cr	09	0	7.96	1.1	RND	OTH	1.3	1.3	140.9	0.13	4.47	810	63	465
996482	I-405	5.09	C	Johns Cr	08	0	3.93	1.1	RND	PVC	0.46	0.46	134.8	0	2.08	203	0	47
999410	I-405	6.31	C	Clover Cr	08	0		1.1	RND	PCC	0.61	0.61	56.5	0.8	10.85			
933259	I-405	7.61	C	Lake Washington trib	08	0	22.83	1.1	RND	OTH	0.61	0.61	84.9	0	4.32	1211	441	5136
996032	I-405	7.62	C	Lake Washington trib	08	67	17.28	1.1	RND	OTH	1.22	1.22	107.8	0.48	0.56	1208	441	5089
998971	I-405	7.83	C	Lake Washington trib	08	0	8.16	1.1	RND	CST	0.46	0.46	44	0	2.48	605	362	490
998972	I-405	7.9	C	Lake Washington trib	08	0	6.88	1.1	RND	OTH	0.46	0.46	74.4	0	2.59	303	161	167
998973	I-405	9.2	D	Lakehurst Cr	08.0281	0	9.59									1378	735	1667
933258	I-405	12.03	C	Trail Cr	08	0	2.14	1.1	RND	CAL	0.61	0.61	301	0.52	13.11	18	1	4
998974	I-405	12.51	C	Hixson Cr	08	0	3.7	1.1	RND	PCC	0.61	0.61	62.5	1.7	7.36	162	0	37
933244	I-405	13.05	C	Sturtevant Cr	08	67		1.2	RND	PCC	1.22	1.22	0.9	0	0.99			
933244	I-405	13.05	C	Sturtevant Cr	08	67		2.2	RND	PCC	1.22	1.22	0.9	0.1	0.99			
992385	I-405	15.09	C	Yarrow Cr	08.0252	0	28.47	1.1	RND	OTH	0.75	0.75	204.8	0.8	0.99	2001	704	10761
998982	I-405	19.07	C	Forbes Cr trib	08	0	3.65	1.1	RND	PCC	0.61	0.61	76.1	0.13	2.4	59	6	15
932812	I-405	20.5	C	Juanita Cr trib	08	0		1.2	RND	SST	1.02	0.9	131.2	0	4.54			
932812	I-405	20.5	C	Juanita Cr trib	08	0		2.2	RND	SST	1.02	0.9	129.8	0.99	4.62			
992654	I-405	20.95	C	Juanita Cr trib	08.0238	0	11.98	1.1	RND	CST	1.37	1.37	257	0	2.17	1025	245	4061
998602	I-405	21.94	C	Juanita Cr	08.0230	0	13.76	1.1	RND	CST	1.22	1.22	109.3	0.8	3	399	294	269
993106	I-405	25.33	C	North Cr trib	08	0		1.1	RND	CST	0.76	0.76	114.6	0.45	6.3	90		
08.0070 A 0.25	I-405	26.46	C, Fl	Perry Cr	08.0070	33	11.39	1.1	RND	PCC	1.52	1.52	112.3	0.2	2.4	2524	1067	4525
993109	I-405	26.87	C	North Cr trib	08	0	20.09	1.1	RND	CST	1.07	1.07	136.6	0	3.43	1684	1098	1093
991008	I-405	27.7	C	North Cr trib	08	0		1.1	RND	CST	0.76	0.76	39.4	0	8.48			
993111	I-405	27.74	D	unnamed North Cr trib	08	0	8.79									618	358	433
998976	I-405	27.76	C	North Cr trib	08	0		1.1	RND	CST	0.76	0.76	59.5	1.1	0.99			
998977	I-405	27.83	C	North Cr trib	08	0	8.44	1.1	RND	CST	0.76	0.76	86.8	0	6.5	573	317	393
995295	I-5	141.17	C	EF Hylebos Cr trib	10.0016	67	7.71	1.1	RND	PCC	0.61	0.61	16.4	0	1.34	1637	826	1522
995292	I-5	141.49	C	EF Hylebos Cr trib	10.0016	33	7	1.1	RND	PCC	1.22	1.22	107.8	0	1.22	1229	501	1021
995297	I-5	142	C	EF Hylebos Cr trib	10.0016	0	6.37	1.1	RND	OTH	0.91	0.91	178.4	0.09	2.2	558	83	375
995293	I-5	142.15	C	Hylebos Cr trib	10.0013	33	4.55	1.2	RND	PCC	0.76	0.76	77.5	0	0.9	201	39	91
995293	I-5	142.15	C	Hylebos Cr trib	10.0013	33	4.55	2.2	RND	PCC	0.46	0.46	77.5	0	0.74	201	39	91
995300	I-5	143	C	WF Hylebos Cr trib	10.0013	67	7.6	1.1	RND	OTH	0.73	0.73	68.1	0	-0.05	813	0	1143
995299	I-5	143	C	WF Hylebos Cr trib	10.0013	33	8.56	1.1	RND	PCC	0.76	0.76	195.1	0	0.46	951	1	2308
992364	I-5	143.6	C	WF Hylebos Cr trib	10.0013	Unk	10.45	1.1	RND	PCC	0.91	0.91	745	0	0.99	1478	1	2709
933613	I-5	145.81	C	Bingaman Cr	09	0	16.3	1.1	RND	PCC	0.99	0.99	34.7	1.1	0.99	1261	0	5308
991031	I-5	145.93	C	Bingaman Cr	09	0	13.87	1.1	RND	PCC	0.76	0.76	100.3	0.02	6.9	1454	77	5573
996029	I-5	153.31	C	Green R trib	09.0036	0		1.1	RND	SPS	1.6	1.6	200	0.05	9	182		
995976	I-5	153.45	C	Green R trib	09.0033	0		1.1	RND	SPS	1.6	1.6	207.7	0.15	9.6			
996030	I-5	154.39	C	Gilliam Cr	09.0032	0	13.05	1.1	RND	PCC	1.37	1.37	631.8	0	0.99	2745	328	1380

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
998964	I-5	154.48	C	unnamed Green R trib	09	0		1.1	RND	PCC	0.91	0.91	191.8	1.2	3.7			
994562	I-5	174.71	C	Thornton Cr	08.0030	33	20.7	1.2	RND	PCC	1.75	1.75	465	0	2	2987	324	19878
994562	I-5	174.71	C	Thornton Cr	08.0030	33	20.7	2.2	RND	PCC	1.75	1.75	465	0	2	2987	324	19878
994561	I-5	174.85	D	Thornton Cr trib	08	0	23.66									1131	189	11351
994842	I-5	175	C	Thornton Cr trib	08	0	18.4	1.1	RND	PCC	0.61	0.61	80	0	0.99	1304	135	8322
102 M048	I-5	177.85	C	McAleer Cr trib	08.0049	0	7.31	1.1	RND	CAL	0.91	0.91	36.8	0.68	6.53	354	519	208
102 M046	I-5	177.85	C	McAleer Cr	08.0049	33	33.99	1.1	RND	CST	1.68	1.68	85.4	0	1.05	6164	3304	34907
990273	I-5	177.93	C	McAleer Cr	08.0049	33	33.43	1.1	RND	CST	1.52	1.52	135.2	0	1.97	5961	3132	34751
993116	I-5	180.63	C	Scriber Cr	08.0061	33	31.31	1.1	RND	OTH	1.75	1.75	109.9	0	0.72	4904	812	17572
996229	I-5	183.33	C	Swamp Cr trib	08	0		1.1	RND	PCC	0.3	0.3	144	0.17	0.99	48		
102 N218	I-5	186.93	C	North Cr trib	08.0070	33	2.94	1.1	RND	PCC	0.75	0.75	0.9	0.22	0.99	152	8	47
993091	I-5	187.64	C	Silver Lk trib	08	33	9.76	1.1	RND	PCC	0.91	0.91	25	0	0.99	1900	30	3206
993124	I-5	187.89	C	Silver Lk trib	08	33	9.61	1.1	RND	PCC	0.91	0.91	65.9	0.09	0.66	1718	18	3115
930252	I-5	187.93	C	Penny Cr trib	08	33	9.61	1.1	RND	PCC	0.91	0.91	77.9	0	1.08	1641	18	3115
995262	I-5	189.9	C	Wood Cr trib	07	0		1.1	RND	PCC	0.76	0.76	324.3	0.07	4	40		
996076	I-5	210.01	C	Stillaguamish R trib	05	0		1.1	RND	PCC	1.22	1.22	174.5	0	4.4			
992181	I-5	213.27	C	Pilchuck Cr trib	05.0065B	0	7.94	1.1	SQSH	CST	0.7	0.45	36.7	0.46	2.97	275	0	156
992182	I-5	213.27	C	Pilchuck Cr trib	05.0065C	0	10.29	1.1	SQSH	CST	0.7	0.45	37.2	0.37	3.28	982	392	880
991979	I-5	213.29	C	unnamed trib	05.0065C	0	10.29	1.1	RND	CST	0.61	0.61	62	0.15	4.5	916	392	880
992175	I-5	213.66	C	Secret Cr	05.0065	33	6.02	1.1	RND	PCC	0.76	0.76	36	0.21	2.57	365	183	148
LP66	I-5	213.86	C	unnamed Pilchuck Cr trib	05	33		1.1	RND	CST	0.48	0.48	11.4	0	0.44			
996077	I-5	214.38	C	WF Church Cr trib	05	0	8.63	1.1	RND	OTH	0.61	0.61	115.1	0.54	3.81	531	213	356
996454	I-5	214.65	C	WF Church Cr trib	05	0	10.77	1.1	RND	PCC	0.46	0.46	45.2	0	0.99	1046	213	867
996074	I-5	214.65	C	WF Church Cr trib	05	33	9.75	1.1	RND	CAL	0.61	0.61	44.7	0	4	1046	213	867
996071	I-5	214.73	C	WF Church Cr	05.0021	33	13.03	1.1	RND	CAL	0.61	0.61	74.7	0	1.67	1906	710	2767
996073	I-5	214.74	C	WF Church Cr	05.0021	33	13.16	1.1	RND	CST	0.76	0.76	47.9	0	1.52	2145	727	2883
995242	I-5	218	C	unnamed trib	03.0184	33	5.13	1.1	RND	OTH	1.07	1.07	182.9	0.1	0.7	1136	257	994
995221	I-5	218.01	C	unnamed trib	03	0	2.78	1.1	RND	OTH	0.61	0.61	121	0	0.99	153	71	57
03.0181 0.50	I-5	219.41	C, FI	Fisher Cr	03.0181	33	37.67	1.1	RND	SPS	2.44	2.44	105.5	0	1.6	27534	19626	52534
991725	I-5	224.62	C	Maddox Cr	03.2966	33	17.5	1.1	RND	PCC	1.52	1.52	51	0	0.99	11487	4742	21317
CR122	I-5	225.24	C	Martha Washington Cr	03.2970	33	8.78	1.1	RND	CST	0.91	0.91	100	0	0.99	1448	4	1334
995227	I-5	234.65	C	Samish R trib	03	0		1.1	RND	PCC	0.76	0.76	41.8	0.35	6.1	40		
995228	I-5	235.65	C	Samish R trib	03	0		1.1	RND	CST	0.91	0.91	122	1.3	5.3	26		
995246	I-5	240	C	unnamed trib	03.0031	0	10.76	1.1	RND	PCC	0.61	0.61	29.6	1.11	6.08	1408	726	1448
995241	I-5	240	C	Friday Cr trib	03.0032	67	14.73	1.1	RND	PCC	1.07	1.07	17.4	0	0.52	2048	712	16171
995245	I-5	240	C	Friday Cr trib	03	0	6.62	1.1	RND	OTH	0.76	0.76	69.7	0.42	2.73	1283	422	927
995236	I-5	240	C	Friday Cr trib	03	33	5.91	1.1	RND	PCC	0.61	0.61	16.1	0.08	3.16	1116	391	878
995259	I-5	240	C	unnamed trib	03.0031	0	10.76	1.1	RND	PCC	0.61	0.61	47	0	6.09	1358	720	1444
995240	I-5	240	C	Friday Cr trib	03.0032	0	19.65	1.1	RND	CST	1.07	1.07	43.8	1.16	7.22	1882	675	16059
995233	I-5	240.95	C	Friday Cr trib	03	0	6.55	1.1	RND	CST	0.61	0.61	13.7	0.19	6.11	1205	392	882
995232	I-5	240.95	C	Friday Cr trib	03	33	5.92	1.1	RND	PCC	0.61	0.61	22.3	0	1.66	1220	393	883

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
995234	I-5	240.95	C	Friday Cr trib	03	33	5.43	1.1	RND	PCC	0.61	0.61	19.8	0	0.86	1184	392	881
995235	I-5	240.95	C	Friday Cr trib	03	0	6.53	1.1	RND	CST	0.61	0.61	50.9	0.21	11.15	1132	391	878
995238	I-5	241.03	C	Friday Cr trib	03.0032	0	19.66	1.1	RND	PCC	1.07	1.07	31.3	0	5.44	1961	699	16085
995239	I-5	241.03	EC	Friday Cr trib	03.0032	0	19.65									1937	683	16067
995249	I-5	242.03	C	Friday Cr trib	03	33		1.1	RND	CST	0.76	0.76	76.3	0	0.26			
370614	I-5	243.43	C	Samish Lk trib	03.0035	0	13.5	1.1	RND	PCC	1.07	1.07	104	0	4	853	206	1253
FR73	I-5	243.91	C	Samish Lk trib	03.0036	0	16.23	1.1	RND	CST	1.37	1.37	31.2	0.33	9.1	704	642	917
995250	I-5	243.96	C	Samish Lk trib	03.0036	0	16.23	1.1	RND	CST	1.45	1.45	59.2	0.31	4.4	704	642	917
990025	I-5	244.2	C, FI	Barnes Cr	03.0037	0	11.92	1.1	RND	CST	1.83	1.83	26.1	0.99	5.14	492	216	652
994501	I-5	244.2	C	Barnes Cr	03.0037	0	11.92	1.1	RND	PVC	1.52	1.52	24.5	0	6.25	559	248	705
FR75	I-5	245.76	C	Lake Cr	03.0042	0	14.23	1.2	RND	SPS	1.83	1.83	68.9	0.5	0.3	3387	1388	4477
FR75	I-5	245.76	C	Lake Cr	03.0042	0	14.23	2.2	RND	SPS	1.83	1.83	69.2	0.5	0.2	3387	1388	4477
995247	I-5	246	C	unnamed trib	03	33	3	1.1	RND	PCC	0.76	0.76	21.5	0	2.7	207	0	125
995248	I-5	246	C	unnamed trib	03	67	2.68	1.1	RND	PCC	0.76	0.76	29.5	0	1.4	269	2	162
995256	I-5	246.12	C	Lake Cr trib	03.0043	0	10.62	1.1	BOX	CPC	2.46	1.21	48.8	0.59	3.75	1898	422	1510
995255	I-5	246.22	C	Lake Cr trib	03.0043	0	9.81	1.1	BOX	CPC	1.56	1.22	16.6	0.8	3.6	1449	298	1128
995411	I-5	246.75	C, FI	Chuckanut Cr	01.0626	0	8.9	1.2	RND	PCC	1.52	1.52	106.4	0	2.9	1148	325	3015
995411	I-5	246.75	C, FI	Chuckanut Cr	01.0626	0	8.9	2.2	RND	OTH	1.42	1.61	106.3	0	3.1	1148	325	3015
994233	I-5	250.55	C	Padden Cr	01.0622	0	29.96	1.1	BOX	CPC	1.52	1.55	131.5	0.13	3.72	8068	3216	28940
995699	I-5	251.36	C	Connelly Cr trib	01	0	4.57	1.1	RND	PCC	1.07	1.07	53.4	1.3	10.7	575	54	355
995705	I-5	251.83	C	Connelly Cr trib	01	0		1.1	RND	OTH	0.61	0.61	97.4	0	11.2	18		
992003	I-5	256	C	Spring Cr	01.0553	67	22.64	1.1	SQSH	SPA	2.87	2.01	28.3	0	1.72	9084	4469	17964
990022	I-5	256.28	C, FI	Baker Cr	01.0553	33	30.02	1.1	SQSH	SPS	3.66	1.98	115.8	0.3	2.06	19187	5755	29462
995701	I-5	258.56	C	Silver Cr trib	01	33		1.1	RND	OTH	0.46	0.46	74.6	0	1.61	90		
995703	I-5	259.08	C	unnamed trib	01.0148	33		1.1	RND	OTH	0.46	0.46	91.3	0	1.2	110		
995709	I-5	260.98	C	Tennant Cr trib	01	67		1.1	BOX	CPC	1.22	0.91	86.5	0	0.74			
995714	I-5	268.25	C	California Cr trib	01	0		1.1	RND	CST	1.6	1.6	0.9	0.99	0.99			
995715	I-5	268.63	C	California Cr trib	01.0068	67	9.54	1.1	RND	CST	1.67	1.67	103.6	0	0.21	3815	51	3815
995731	I-5	270.14	C	unnamed California Cr trib	01	67	8.82	1.1	RND	PCC	0.91	0.91	50	0	0.24	2756	0	3604
995720	I-5	270.14	C	unnamed California Cr trib	01	33	10.52	1.1	RND	PCC	0.91	0.91	34.6	0	0.69	2714	0	3599
933400	I-5	270.2	C	unnamed California Cr trib	01	33	8.22	1.1	RND	PVC	0.61	0.61	6.2	0	1.92	425	0	447
995726	I-5	275.33	C	Cain Cr	01.0001	33	7.67	1.2	RND	CST	0.76	0.76	48.9	0	0.8	948	13	556
995726	I-5	275.33	C	Cain Cr	01.0001	33	7.67	2.2	RND	CST	0.76	0.76	48.9	0	0.8	948	13	556
932886	I-90	7.48	D	Lake Washington trib	08	0												
932887	I-90	8.2	D	Lake Washington trib	08	0												
994412	I-90	10.21	C	Richards Cr	08.0261	67		1.1	OTH	OTH	0.91	0.91	216	0	0.99	192		
996251	I-90	10.52	C	Sunset Cr	08.0262	0	8.12	1.1	OTH	OTH	1.7	1.9	175	1.15	0.99	2649	733	2832
996252	I-90	12.03	D	Squibbs Cr	08.0156	0	3.46									3227	2870	3549
996478	I-90	12.75	C	Squibbs Cr trib	08	0	6.08	1.1	RND	CST	1.07	1.07	120	2	10	810	86	612
996479	I-90	12.93	C	Lake Sammamish trib	08	0		1.1	RND	PCC	0.61	0.61	0.9	1	0.99			
996480	I-90	13.01	C	Lake Sammamish trib	08	0		1.1	RND	PCC	0.76	0.76	89.8	0	8.5			

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
992798	I-90	13.83	C	Lewis Cr	08.0162	0	33.3	1.1	OTH	PCC	1.52	1.52	313.3	0	4.6	4350	3986	6663
994415	I-90	14.71	C	Lake Sammamish trib	08	0	1.74	1.1	RND	OTH	1.07	1.07	153	0.12	10	820	71	229
932343	I-90	15.14	C	Lake Sammamish trib	08	33	16.85	1.1	OTH	OTH	1.17	1.17	114.7	0	1.55	1077	896	1309
996477	I-90	15.82	C	Tibbetts Cr trib	08	67	13.54	1.3	RND	CST	1.52	1.52	81	0.12	0.19	2305	486	1123
996477	I-90	15.82	C	Tibbetts Cr trib	08	67	13.54	2.3	RND	CST	1.52	1.52	81.7	0.12	0.05	2305	486	1123
996477	I-90	15.82	C	Tibbetts Cr trib	08	67	13.54	3.3	RND	CST	1.52	1.52	81.8	0.12	0.18	2305	486	1123
996967	I-90	15.89	C	Tibbetts Cr trib	08	67	12.8	1.2	RND	CST	1.22	1.22	31.3	0	-0.35	1377	464	639
996967	I-90	15.89	C	Tibbetts Cr trib	08	67	12.8	2.2	RND	CST	1.22	1.22	31.4	0	-0.61	1377	464	639
996472	I-90	15.92	C	Tibbetts trib	08	33	6.73	1.3	RND	PCC	1.07	1.07	84.1	0.16	0.75	605	0	215
996966	I-90	15.92	C	Tibbetts trib	08	33	5.38	1.3	RND	CST	1.07	1.07	26.6	0	0.23	538	0	188
996472	I-90	15.92	C	Tibbetts trib	08	33	6.73	2.3	RND	PCC	1.07	1.07	84.1	0.16	0.82	605	0	215
996966	I-90	15.92	C	Tibbetts trib	08	33	5.38	2.3	RND	CST	1.07	1.07	24.8	0	0.6	538	0	188
996472	I-90	15.92	C	Tibbetts trib	08	33	6.73	3.3	RND	PCC	1.07	1.07	84.1	0.16	0.56	605	0	215
996966	I-90	15.92	C	Tibbetts trib	08	33	5.38	3.3	RND	CST	1.07	1.07	26.2	0	0.27	538	0	188
991182	I-90	16.21	C	Tibbetts Cr trib	08	67	11.34	1.1	RND	CST	1.37	1.37	118.8	0	0.64	827	284	384
996963	I-90	17	C	NF Issaquah Cr	08.0181	33	13.69	1.2	RND	CST	1.07	1.07	45	0	1.39	1380	670	2697
996963	I-90	17	C	NF Issaquah Cr	08.0181	33	13.69	2.2	RND	CST	1.07	1.07	45.1	0	1.7	1380	670	2697
932089	I-90	19.53	C	EF Issaquah Cr trib	08	67		1.1	RND	OTH	0.46	0.46	56.4	0	0.89	120		
996965	I-90	20.42	C, FI	EF Issaquah Cr trib	08.0186	67	22.86	1.1	RND	PCC	1.75	1.75	117.5	0	3.3	1835	2177	5248
996473	I-90	21.23	C	EF Issaquah Cr trib	08	67		1.1	RND	CST	1.22	1.22	29.4	0	1.66			
08.0183 5.00	I-90	22.37	FI	EF Issaquah Cr	08.0183	33	33.67									3828	6482	10790
994410	I-90	23.13	C	Soderman Cr	07.0390	0	10.89	1.1	RND	CST	2.13	2.13	138.4	0.11	4.53	1001	1612	2151
994984	I-90	24.85	C	Lake Cr trib	07	0	13.04	1.1	RND	PCC	1.33	1.33	225	1.52	0.99	1027	179	1864
994911	I-90	25.37	C	Coal Cr trib	07	0		1.1	RND	CST	0.76	0.76	175	0.26	0.99	140		
994864	I-90	26.9	C	Good Cr trib	07	0		1.1	RND	CST	0.91	0.91	160	0.48	12	140		
994865	I-90	26.99	C	Good Cr	07.0456	0		1.1	RND	OTH	1.45	1.45	0.9	0.52	0.99	143		
994866	I-90	28.32	C	Kimball Cr trib	07	0	1.8	1.1	RND	PCC	0.76	0.76	125	0.62	13	992	94	260
994868	I-90	28.52	C	Kimball Cr trib	07.0461	0	2.55	1.1	RND	CAL	0.61	0.61	44.8	0.59	0.6	579	224	524
994938	I-90	28.56	C	Kimball Cr trib	07.0461	0	2.64	1.1	RND	CAL	0.91	0.91	69.4	0.62	14	677	263	603
994985	I-90	28.81	C	SF Snoqualmie R trib	07.0469	33	3.28	1.1	BOX	CPC	1.85	1.22	123.7	0	0.6	3204	1772	2146
994937	I-90	28.85	C	unnamed trib	07	0		1.1	RND	CST	0.61	0.61	97.7	1.1	12.5	73		
994929	I-90	29.74	C	Kimball Cr trib	07.0454	0		1.1	RND	CST	0.61	0.61	100.8	1.4	3.5	129	0	0
994877	I-90	30.45	C	SF Snoqualmie R trib	07	0	3.29	1.1	RND	CST	1.68	1.68	176.8	0	5	2726	4068	2915
990111	SR 104	25.7	C	Willow Cr	08.0011	0	8.36	1.1	BOX	PCC	1.83	0.91	152.4	0.6	2.5	692	277	482
996208	SR 104	29.33	C	Lake Ballinger trib	08	0	5.07	1.1	RND	OTH	0.46	0.46	62.8	0.24	3.56	152	66	64
990653	SR 104	30.67	C	Lyon Cr trib	08.0053	33	9.82	1.1	RND	CST	0.76	0.76	18	0.15	3.11	1301	423	1006
990253	SR 104	31.23	C	Lyon Cr	08.0052	67	32.92	1.1	BOX	PCC	1.85	1.25	60.4	0	0.99	12368	6207	14826
991623	SR 104	31.73	C	Lyon Cr trib	08	0	7.45	1.1	RND	CAL	0.76	0.76	20	0.1	4.31	601	178	222
995790	SR 11	8.66	C	Samish Bay trib	01	33		1.1	RND	PCC	0.61	0.61	16	0	1.18			
995312	SR 11	14.24	C	Samish Bay trib	01	0		1.1	BOX	CPC	0.9	0.94	20.9	3	9.6	114		
940081	SR 11	14.76	C	Wildcat Cove trib	01	0	0.71	1.1	RND	PCC	0.76	0.76	95.4	1.7	12.38	41	0	3

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
995313	SR 11	15.45	C	Pleasant Bay trib	01.0634	0		1.1	OTH	OTH	0.76	0.76	103.7	1.78	0.07			
995314	SR 11	15.93	C	Chuckanut Bay trib	01.0633	0		1.1	RND	SST	1.22	1.22	38.9	0	12			
995796	SR 11	18.47	C	Chuckanut Cr trib	01	0		1.1	RND	PCC	0.61	0.61	0.9	0.37	0.99	321		
990581	SR 11	18.65	C	Chuckanut Cr trib	01.0627	0	16.29	1.1	RND	PCC	0.61	0.61	50.2	0.26	2.9	1138	250	4842
994386	SR 11	21.08	C	Padden Cr	01.0622	33	28.62	1.2	BOX	CPC	1.5	0.95	24.6	0	2.1	8614	3746	29441
994386	SR 11	21.08	C	Padden Cr	01.0622	33	28.62	2.2	BOX	CPC	1.5	0.95	24.5	0	2.2	8614	3746	29441
105 S011918a	SR 161	32.78	C	Hylebos Cr trib	10.0015	0	20.74	1.1	RND	PCC	0.61	0.61	41.7	0	7.36	1066	58	16754
997974	SR 161	32.9	C	unnamed trib	10	0	9.77	1.1	RND	PCC	0.61	0.61	32.4	0	4.1	1106	346	984
992062	SR 161	33.48	C	Hylebos Cr trib	10	0	13	1.1	RND	PCC	0.46	0.46	35.1	1.6	1.57	1313	21	2075
992064	SR 161	33.79	C	EF Hylebos Cr trib	10	0	32.98	1.1	RND	CST	0.75	0.75	63.3	0.54	8.02	5329	917	33462
992360	SR 164	5.89	C	White R trib	10	67	15.96	1.1	BOX	CPC	1.83	1.22	16.1	0	1.43	4009	68	7112
996279	SR 164	7.01	C	White R trib	10	33		1.1	RND	PCC	0.61	0.61	27.8	0	0.8	161		
105 R042117a	SR 164	8.24	C, FI	Pussyfoot Cr	10.0048	33	22.72	1.1	RND	SST	3.3	3.3	65.7	0	6.2	15021	2161	29295
991213	SR 164	9.06	C	Seconds Cr	10.0050	0	10.06	1.1	RND	PCC	1.22	1.22	36.6	1.16	2	1528	149	995
991837	SR 164	10.21	C	unnamed White R trib	10	33		1.1	RND	CST	0.91	0.91	32	0	1.9			
996281	SR 164	10.65	C	unnamed trib	10	67		1.1	RND	PCC	0.46	0.46	12.2	0	1.5	100		
991839	SR 164	13.33	C	Newaukum Cr trib	09	0		1.1	RND	OTH	1.22	1.22	45.8	0.58	3.01			
991198	SR 167	21.17	C	Mill Cr	09.0015	67	14.55	1.2	RND	CST	1.22	1.22	84.2	0	0.99	6280	4927	9850
991198	SR 167	21.17	C	Mill Cr	09.0015	67	14.55	2.2	RND	CST	1.22	1.22	83.3	0	1.01	6280	4927	9850
995469	SR 167	22.63	C	Springbrook Cr trib	09	0		1.1	RND	PCC	0.61	0.61	43.5	0	0.6	95		
933530	SR 167	23.93	C	unnamed Springbrook Cr trib	09	33		1.1	RND	OTH	0.61	0.61	50.7	0	0.73			
991681	SR 167	23.94	C	Springbrook Cr trib	09	67		1.1	RND	CST	0.61	0.61	50.1	0	0.2			
991200	SR 167	24.16	C	Springbrook Cr trib	09	67		1.1	RND	CST	0.76	0.76	51.4	0	1.7	102		
991202	SR 167	26.1	C	Rolling Hills Cr	09	67	7.12	1.1	BOX	CPC	1.3	0.91	1070	0	0.99	2291	107	891
997637	SR 169	4.77	C	Green R trib	09	0		1.1	RND	PCC	0.46	0.46	32.9	0.45	10.3			
997691	SR 169	7.15	C	Rock Cr	09.0085	33	12.64	1.1	RND	OTH	0.46	0.46	27.9	0	1.5	1531	355	2046
997692	SR 169	7.25	C	Jones Lk trib	09	0	11.74	1.1	RND	PCC	0.91	0.91	33.2	0	4.4	1527	1024	2049
997693	SR 169	8.27	C	Ginder Cr trib	09	0	16.15	1.2	RND	CST	0.61	0.61	23.3	0	4.7	1289	193	7337
997693	SR 169	8.27	C	Ginder Cr trib	09	0	16.15	2.2	RND	PCC	0.61	0.61	22.5	0	3.7	1289	193	7337
997694	SR 169	8.29	C	Ginder Cr	09	33	15.26	1.1	RND	PCC	0.91	0.91	71.6	0	1.1	1806	834	8711
997695	SR 169	9.95	C	Ravensdale Cr	09.0083	33	21.38	1.1	BOX	CPC	1.83	1.53	24.5	0	0.4	3753	4786	33616
996492	SR 169	17.92	C	unammed	08	0	9	1.1	RND	PCC	0.46	0.46	57.3	0	2	231	42	474
996493	SR 169	18.06	C	Cedar R trib	08	33	7.07	1.1	RND	PCC	0.46	0.46	14.1	0	2.94	96	0	271
996514	SR 169	18.06	C	Cedar R trib	08	0	8.68	1.1	RND	CST	0.46	0.46	12.5	0.42	6.49	154	9	413
996494	SR 169	18.48	C	Cedar R trib	08	33	9.49	1.1	RND	PCC	0.46	0.46	17.2	0	1.6	545	53	1790
996496	SR 169	18.77	C	Cedar R trib	08	0		1.1	RND	OTH	0.46	0.46	26.5	0.07	2.4	125		
996277	SR 18	0.29	C, FI	EF Hylebos Cr trib	10	0	28.55	1.2	RND	PCC	0.91	0.91	103.8	0	0.48	2279	209	23126
996277	SR 18	0.29	C, FI	EF Hylebos Cr trib	10	0	28.55	2.2	RND	CST	1.22	1.22	103.3	0	0.59	2279	209	23126
995298	SR 18	0.45	C	EF Hylebos Cr trib	10.0016	0	5.13	1.2	RND	PCC	0.46	0.46	70.2	0	2.03	394	68	197
995298	SR 18	0.45	C	EF Hylebos Cr trib	10.0016	0	5.13	2.2	RND	PCC	0.76	0.76	69.1	0	2.03	394	68	197
997660	SR 18	7.51	C	Big Soos Cr trib	09	0	5.01	1.1	RND	CST	1.52	1.52	105.9	1.3	13.2	428	60	220

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
997661	SR 18	8	C	Soosette Cr trib	09	0	8.96	1.1	RND	SPS	1.52	1.52	152.4	2.05	6.8	996	354	1114
990390	SR 18	8.9	B, FI	Soosette Cr	09.0073	67	16.54									7575	1233	12221
997669	SR 18	15.14	C	unnamed trib	09	0	2.12	1.1	RND	PCC	0.91	0.91	87.7	0	5.2	585	75	252
995474	SR 18	21.15	C	Holder Cr trib	08	0	7.67	1.1	RND	CST	1.22	1.22	128	0	0.99	1266	510	1815
999960	SR 18	22.03	C	Holder Cr trib	08	0		1.1	RND	CST	1.05	1.05	24	1.97	3.9			
990173	SR 18	22.16	C, FI	Holder Cr	08.0178	0	23.5	1.1	BOX	CPC	3.05	3.35	66.4	1.04	7	14636	22651	25225
995971	SR 18	22.82	C	Holder Cr trib	08.0220	0	17.18	1.2	ELL	CST	1.64	1.37	76	0.19	3.5	5091	4421	6875
995971	SR 18	22.82	C	Holder Cr trib	08.0220	0	17.18	2.2	ELL	CST	1.64	1.37	78.9	0.13	3.4	5091	4421	6875
995972	SR 18	22.98	C	Holder Cr trib	08.0220	67	7.49	1.1	RND	CST	1.4	1.6	37.5	0.12	1.3	1140	694	691
995973	SR 18	23.45	C	unnamed trib	08	0	9.59	1.1	RND	CST	0.61	0.61	35.9	0	3.23	739	855	724
995974	SR 18	23.55	C	unnamed trib	08	33	5.53	1.1	RND	CST	0.91	0.91	43.3	0.22	1.27	574	551	485
07.0396 0.80	SR 18	25.67	C, FI	Deep Cr	07.0396	33	15.93	1.1	RND	CST	3.66	3.66	80.5	0.99	2	3377	2928	9493
990236	SR 18	27.64	C	Lake Cr	07.0393	33	20.65	1.2	RND	PCC	1.07	1.07	24.5	0	1.14	2168	1597	14558
990236	SR 18	27.64	C	Lake Cr	07.0393	33	20.65	2.2	RND	PCC	1.07	1.07	24.5	0	0.4	2168	1597	14558
996320	SR 20	46.1	C	Campbell Lk trib	03	0	10.24	1.1	RND	PCC	0.46	0.46	35.8	0	1.03	590	38	591
996319	SR 20	46.14	C	Campbell Lk trib	03	0	9.41	1.1	RND	PCC	0.61	0.61	31.8	0	0.99	672	38	631
995427	SR 20	49.07	C	Fidalgo Bay trib	03	0		1.1	RND	CST	0.91	0.91	90	0	6.9	79		
995430	SR 20	50.48	C	Fidalgo Bay trib	03	0	9.34	1.1	RND	OTH	0.91	0.91	97.7	0	5.9	2702	253	3193
PA106	SR 20	52.34	F	Padilla Bay trib	03.0116	Unk												
PA107	SR 20	52.6	FD	Telegraph Sl	03.0118	0												
933175	SR 20	53.53	C	Guemes Channel trib	03	33	16.68	1.1	RND	PVC	0.61	0.61	359	0.5	0.99	2357	717	20179
995432	SR 20	53.9	C	Indian Sl trib	03.0108	33	7.08	1.2	RND	CST	0.91	0.91	86.1	0	-0.5	5231	0	3595
995432	SR 20	53.9	C	Indian Sl trib	03.0108	33	7.08	2.2	RND	CST	0.91	0.91	85.6	0	-0.5	5231	0	3595
SF49	SR 20	61.26	C	Gages Sl	03.0224	33		1.1	RND	PCC	0.61	0.61	34.8	0	1.52			
991142	SR 20	69.08	C	Red Cr trib	03	67	9.94	1.1	RND	PCC	0.46	0.46	15.4	0	1.3	1613	1952	3181
991547	SR 20	70.24	C	Coal Cr trib	03.0279A	33		1.1	BOX	CPC	1.85	2.05	27.3	0.49	1.28			
991146	SR 20	72.85	C	Childs Cr	03.0294	67		1.1	ARCH	CPC	2.43	1.82	14.7	0	-1.9			
991123	SR 20	80.1	C	Skagit R trib	03.0363	33		1.1	RND	PCC	0.46	0.46	15.5	0	1.09			
997394	SR 20	85.39	C	Skagit R trib	04	33		1.1	RND	PCC	0.61	0.61	23.5	0	3.6	108		
991445	SR 20	85.63	C	unnamed trib	04	0	4.28	1.1	RND	PCC	0.61	0.61	20.5	0.72	0.48	766	486	450
997396	SR 20	85.94	C	House Cr trib	04.0433	67	4.46	1.1	RND	PCC	0.61	0.61	21.2	0.06	0.94	715	339	612
997398	SR 20	86.86	C	Skagit R trib	04	0	7.24	1.1	RND	OTH	0.61	0.61	29.7	1.2	2.21	1054	506	581
GR54	SR 20	87.01	C	Eagle Cr	04	33	26.65	1.1	RND	PCC	0.61	0.61	26.2	0	0.76	2270	1255	8024
991150	SR 20	87.2	C	Eagle Cr	04	67	19.78	1.1	RND	PCC	0.61	0.61	29.2	0	-0.2	1946	970	4526
991151	SR 20	87.31	C	Eagle Cr	04	0	11.58	1.1	SQSH	CST	1.57	1.1	28.3	0.1	4.48	1638	1069	1666
GR9	SR 20	87.7	C	Fish Cr	04	33	11.36	1.1	RND	PCC	0.61	0.61	23.4	0	0.73	2348	1595	2475
GR23	SR 20	88.82	C	Lorenzan Cr	04	33	8.91	1.1	RND	PCC	0.61	0.61	32	0.12	1.41	1582	945	1381
997401	SR 20	90.63	C	unnamed trib	04	0		1.1	RND	PCC	0.76	0.76	32.9	0	22.5	80		
JK2	SR 20	91.3	C	Skagit R trib	04.0643	0	9.15	1.1	RND	OTH	0.61	0.61	94	0	3.05	1309	298	740
991706	SR 20	93	C	Skagit R trib	04.0647	0		1.1	RND	CST	0.61	0.61	44.9	7	4.68	145		
991707	SR 20	93.21	C	Skagit R trib	04	0		1.1	RND	CPC	1.76	1.76	34.8	0.32	10.63	162		

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
994276	SR 20	93.29	C	Skagit R trib	04	0		1.1	RND	CST	1.21	1.21	50	1.53	6.7	9		
991709	SR 20	93.7	C	Skagit R trib	04	0		1.1	RND	CST	1.87	1.87	49	0.1	12.11	12		
991710	SR 20	93.84	C	Skagit R trib	04.0649	67	4.95	1.2	RND	PCC	0.61	0.61	16.7	0	2.03	637	379	613
991710	SR 20	93.84	C	Skagit R trib	04.0649	67	4.95	2.2	RND	CST	0.61	0.61	16.5	0.99	3.75	637	379	613
991711	SR 20	94.1	C	Skagit R trib	04.0650	0	7.02	1.2	BOX	CPC	1.52	0.91	25.4	0.45	4.8	2298	1621	1679
991711	SR 20	94.1	C	Skagit R trib	04.0650	0	7.02	2.2	BOX	CPC	1.52	0.91	25.4	0.45	4.8	2298	1621	1679
994308	SR 20	94.47	C	Skagit R trib	04.0654	0	9.38	1.1	RND	CST	0.76	0.76	36.8	0.32	8.71	1214	1017	1349
991125	SR 20	94.68	C	Skagit R trib	04.0655	0		1.1	RND	CST	1.83	1.83	59.2	0.02	12.7	96		
991126	SR 20	94.82	C	Skagit R trib	04.0657	0	12.4	1.1	RND	SPS	1.75	1.75	98	0.25	9.89	3790	2528	4966
994225	SR 20	96.12	C	Skagit R trib	04.0671	67	1.52	1.1	RND	PCC	0.46	0.46	15.2	0	0.46	337	47	406
991127	SR 20	96.23	C	Skagit R trib	04.0672	0	4.8	1.1	RND	PCC	0.91	0.91	24	0.18	3.08	476	937	1924
997404	SR 20	97.62	C	Skagit R trib	04	0		1.1	RND	OTH	0.46	0.46	82.7	0.2	8.9	23		
990410	SR 20	99.95	C	Sutter Cr	04.1345	0	8.68	1.1	RND	PCC	1.52	1.52	24.1	0	2.57	629	413	409
995097	SR 20	105.34	C	Backus Cr	04	33		1.2	RND	CST	1.22	1.22	25.4	0.09	2.6	188		
995097	SR 20	105.34	C	Backus Cr	04	33		2.2	RND	CST	0.91	0.91	17.9	0.13	3.9	188		
CD18	SR 20	105.42	C	Olson Cr	04.1407	0	14.35	1.1	SQSH	SPS	3.87	2.52	21	0	3	2423	1261	2728
994941	SR 20	111.68	C	Skagit R trib	04	67		1.1	RND	CST	0.76	0.76	14.8	0	4.15			
991130	SR 20	112.54	C	Skagit R trib	04	0		1.1	RND	CST	1.22	1.22	18.8	0.2	8.8	102		
991131	SR 20	112.9	C	Skagit R trib	04	33	7.02	1.1	SQSH	CST	1.53	1.07	13.9	0.54	1.22	418	500	235
994946	SR 20	114.14	C	Skagit R trib	04	0		1.1	RND	CST	1.22	1.22	15.6	2.1	7.1	100		
994947	SR 20	114.71	C	Skagit R trib	04	0		1.1	RND	CST	0.91	0.91	17.3	0.75	2.1	117		
DM7	SR 20	116.25	C	Skagit R trib	04	0	6.69	1.1	RND	CST	0.91	0.91	28.4	0.6	3.98	540	12	509
DM5	SR 20	117.61	C	Skagit R trib	04	33	1.49	1.2	RND	CST	1.07	1.07	20	0	4.31	245	234	181
DM5	SR 20	117.61	C	Skagit R trib	04	33	1.49	2.2	RND	CST	0.91	0.91	18.9	0.25	1.53	245	234	181
991452	SR 20	118.41	C	Babcock Cr	04.1862	67		1.1	RND	OTH	0.61	0.61	15	0	1.5	137		
997031	SR 20	126.44	C	Diablo Lk trib	04	67		1.2	RND	PVC	0.61	0.61	19	0.1	4	61		
997031	SR 20	126.44	C	Diablo Lk trib	04	67		2.2	RND	PVC	0.61	0.61	19	0.1	5	61		
997588	SR 20	129.63	C	Diablo Lk trib	04	67		1.1	RND	PCC	0.91	0.91	21	0	1	200		
997409	SR 20	134.25	C	Happy Cr	04.2195	0		1.1	RND	SPS	1.91	1.91	42.2	0.9	2.63	20		
997420	SR 20	139.17	C	Ruby Cr trib	04	0		1.1	RND	CST	0.91	0.91	28.7	0.22	16.16	100		
997422	SR 20	139.75	C	Ruby Cr trib	04.2308	0		1.1	RND	CST	1.83	1.83	33.9	0.42	25.37	21		
997425	SR 20	141.48	C	Granite Cr trib	04.2314	0		1.1	RND	SPS	1.52	1.52	30.2	1.65	5.8	2		
997426	SR 20	143.13	C	Beebe Cr	04.2322	0		1.1	RND	SPS	1.45	1.45	47.6	3	18.6	8		
997429	SR 20	145.45	C	County Line Cr	04.2363	0		1.1	RND	CST	1.45	1.45	29.5	0.7	10.62	18		
997435	SR 20	147.07	C	Cabinet Cr	04.2376	0		1.1	ELL	CST	1.95	2.21	63.1	1.8	8.14			
102 L062	SR 202	0.1	C	Little Bear Cr	08.0080	67	48.22	1.1	BOX	PCC	3.05	1.83	43.6	0	0.06	46169	33024	100496
996917	SR 202	0.97	C	Sammamish R trib	08	67		1.1	RND	OTH	0.61	0.61	24.2	0	1.2	152		
996930	SR 202	1.03	C	Sammamish R trib	08	67		1.1	RND	PCC	0.3	0.3	12.1	0	0.91	49		
996921	SR 202	4.17	C	Sammamish R trib	08	33	25.85	1.1	RND	CAL	0.84	0.84	16.8	0	2.8	3014	1779	8321
996925	SR 202	4.25	C	High School Cr trib	08	0	16.47	1.1	RND	PCC	0.91	0.91	55.2	0	3.3	2360	2059	5339
991181	SR 202	5.27	C	Sammamish R trib	08.0101	0		1.1	RND	OTH	1.22	1.22	58.9	5.31	18.9	48		

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
990142	SR 202	11.96	C, Fl	Evans Cr	08.0106	33	23.6	1.1	BOX	PCC	1.83	1.83	51.9	1.7	5.26	7579	8607	33779
990325	SR 202	13.22	C	Patterson Cr	07.0376	67	38.58	1.1	BOX	CPC	1.53	0.91	11.1	0	-0.5	5159	4494	52450
995194	SR 202	16.79	C	Patterson Cr trib	07	33	18.03	1.1	RND	PCC	0.61	0.61	15.8	0	2.1	3603	851	15290
991174	SR 202	19.69	C	Patterson Cr trib	07.0378	33	13.53	1.2	BOX	CPC	1.22	0.65	12.9	0.11	0	4147	3488	10674
991174	SR 202	19.69	C	Patterson Cr trib	07.0378	33	13.53	2.2	RND	PCC	0.46	0.46	16.5	0	1.2	4147	3488	10674
991173	SR 202	19.76	C	Patterson Cr trib	07.0377	33	22.43	1.1	BOX	CPC	2.43	1.78	17.1	0	0.2	8805	4527	36961
101S-22	SR 202	22.56	C	Snoqualmie R trib	07.0429	33	6.47	1.1	BOX	CPC	1.86	1.54	29.8	0.22	4.8	630	262	547
101SA-06	SR 202	23.18	C	Skunk Cr	07.0434	33	10.11	1.1	BOX	CPC	1.2	0.6	30.1	0.1	2	2659	1729	1729
995200	SR 202	23.22	C	Skunk Cr trib	07	0	8.63	1.1	RND	PCC	0.61	0.61	30.7	0	3.8	368	47	357
101S-10	SR 202	23.45	C	Mud Cr	07.0435	67		1.1	BOX	CPC	1.21	0.99	10.8	0	0			
995203	SR 202	28.76	C	SF Snoqualmie R trib	07	67	3.6	1.2	RND	PCC	0.91	0.91	19.1	0	0.6	5540	5192	12647
995203	SR 202	28.76	C	SF Snoqualmie R trib	07	67	3.6	2.2	RND	PCC	0.91	0.91	18.9	0	0.4	5540	5192	12647
101L-01	SR 203	3.97	C	Griffin Cr trib	07.0365	33		1.1	RND	PCC	0.46	0.46	19.3	0.14	3	120		
991720	SR 203	4.37	C	Snoqualmie R trib	07	0	20.81	1.1	RND	OTH	0.61	0.61	49.2	0	2.2	1075	30	13613
991721	SR 203	4.91	C	Indian Cr	07	67	34.5	1.1	RND	PCC	0.76	0.76	11.4	0	1.67	8649	3014	22646
991717	SR 203	4.98	C	Langlois Cr	07	67	34.26	1.1	RND	PCC	0.76	0.76	13.9	0	1.4	8806	3001	21940
995167	SR 203	7.26	C	Horseshoe Lk trib	07	0	12.2	1.1	RND	OTH	0.61	0.61	23.6	0	3.9	1446	0	5156
995178	SR 203	11.61	C	unnamed trib	07	33		1.1	RND	PCC	0.61	0.61	10.9	0	3.59			
991716	SR 203	13.6	C	Loutsis Cr	07	33	19.59	1.1	RND	PCC	1.22	1.22	45.1	0	1.5	5052	2001	20052
995181	SR 203	14.1	C	Snoqualmie R trib	07	0	11.63	1.1	RND	PCC	0.61	0.61	15.3	0	4.1	1260	166	1804
995184	SR 203	18.19	C	Snoqualmie R trib	07	0		1.1	RND	PCC	0.91	0.91	0.9	0.99	0.99	30		
995186	SR 203	18.48	C	Snoqualmie R trib	07.0238	33		1.1	RND	PCC	0.91	0.91	52.5	0.05	2.8	167		
995137	SR 204	0.21	C	Ebey Sl trib	07	0		1.1	RND	OTH	0.76	0.76	59	1.6	4.1			
995138	SR 204	0.54	C	Ebey Sl trib	07	0	12.9	1.1	RND	PCC	1.22	1.22	67.5	0	5.9	1574	746	2691
995141	SR 204	0.96	C	Ebey Sl trib	07	0		1.1	RND	PCC	0.46	0.46	49.1	0.42	6.4			
995150	SR 204	1.19	C	Burri Cr	07.0091	0		1.1	RND	PCC	0.91	0.91	76.7	0.18	6.8			
995151	SR 204	1.64	C	Ebey Sl trib	07	33		1.1	RND	PCC	0.46	0.46	31.7	0	2.3	51		
995152	SR 204	1.8	C	Weiser Cr	07	0	7.22	1.1	RND	PCC	0.91	0.91	63.6	0	4.98	700	327	920
991204	SR 410	22.67	C	Boise Cr trib	10	33		1.1	RND	PCC	1.22	1.22	38.7	0	1.2			
991206	SR 410	22.94	C	Boise Cr trib	10	33		1.1	RND	PCC	0.76	0.76	43.8	0	0.39			
990474	SR 410	25.19	C	Watercress Cr	09	33		1.1	BOX	CPC	1.22	1.22	22.2	0.15	0.68			
991218	SR 410	27.25	C	Boise Cr trib	10	0		1.1	RND	PCC	0.61	0.61	23.8	0.43	3			
990043	SR 410	27.44	C	Boise Cr	10.0057	67	3.34	1.2	BOX	PCC	1.83	1.83	32.6	0	1.28	1786	1623	9336
990043	SR 410	27.44	C	Boise Cr	10.0057	67	3.34	2.2	BOX	PCC	1.83	1.83	32.6	0.99	1.28	1786	1623	9336
996622	SR 410	31.48	C	Scatter Cr trib	10	33	7.52	1.1	RND	PCC	0.61	0.61	27.4	0	0.4	2021	61	6322
996625	SR 410	35.29	C	White R trib	10	33		1.1	RND	PCC	1.52	1.52	21.9	0	3.8			
990082	SR 410	35.77	C	Clay Cr	10.0103	0	12.53	1.1	BOX	PCC	1.83	1.83	38.4	6.1	14	668	421	1678
990102	SR 410	36.49	C	Cyclone Cr	10.0105	0	4.38	1.1	BOX	PCC	2.44	2.44	28.6	0.8	9	385	432	2205
991219	SR 410	39.18	C	White R trib	10	0		1.1	RND	PCC	0.76	0.76	16.4	0.36	4	36		
996661	SR 410	40.31	C	White R trib	10	0		1.1	RND	PCC	0.61	0.61	15.1	0.21	9.6	102		
996662	SR 410	40.51	C	White R trib	10	0		1.1	RND	PCC	0.76	0.76	21.1	0.7	5.4	48		

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
105 R022221a	SR 410	41.42	C	White R trib	10	0	5.46	1.1	RND	PCC	0.91	0.91	15.4	0	4.95	524	275	665
105 R071916a	SR 410	48.29	C, FI	Boundary Cr	10.0250	33	7.55	1.1	RND	PCC	1.22	1.22	29.6	0.99	2.4	596	453	647
996664	SR 410	48.94	C	unnamed trib	10	0		1.1	RND	PCC	0.61	0.61	22	0.7	7.8			
991012	SR 410	49.93	C	White R trib	10	33		1.1	SQSH	CST	1.4	1.01	24.5	0.24	1.7	0		
996671	SR 410	53.01	C	White R trib	10	67		1.1	SQSH	CST	1.05	0.83	28.2	0	3.9			
105 R072016a	SR 410	55.29	C	Dry Cr	10.0310	0	3.42	1.1	BOX	CPC	1.52	1.52	25.9	3.04	5.6	431	215	812
991016	SR 410	55.51	C	Deep Cr	10	0	7.82	1.1	BOX	CPC	1.83	1.83	36.2	2.86	5.74	548	1391	2060
105 R072018a	SR 410	59.57	C	White R trib	10	0	17.52	1.2	RND	PCC	0.76	0.76	13.4	0	7.16	37		
105 R072018a	SR 410	59.57	C	White R trib	10	0	17.52	2.2	RND	PCC	0.76	0.76	13.4	0	7.16	37		
996266	SR 509	9.18	C	Puget Sound trib	10	0	16.13	1.1	RND	CST	0.69	0.69	40.4	0	3.11	869	337	11780
991651	SR 509	9.6	C	Puget Sound trib	10	33		1.2	RND	PCC	0.76	0.76	75.1	0	4.3	166		
991651	SR 509	9.6	C	Puget Sound trib	10	33		2.2	RND	PCC	0.76	0.76	75	0	4.4	166		
996270	SR 509	10.96	C	Lakota Cr	10.0386	0	17.96	1.1	RND	PCC	1.07	1.07	41.5	0	4.91	836	579	6687
996272	SR 509	11.43	C	Lakota Cr trib	10.0387	0	14.8	1.1	RND	OTH	0.46	0.46	285.1	0.3	0.16	595	1510	9428
991192	SR 509	13.49	C	Puget Sound trib	09.0385	0		1.1	RND	CST	1.07	1.07	36.6	1.22	6.4			
997675	SR 509	14.23	C	Redondo Cr	09.0384	0	20.34	1.1	RND	PCC	0.61	0.61	469.7	0	3.5	1436	89	25784
997679	SR 509	24.42	C, FI	Miller Cr	09.0371	33	23.33	1.2	RND	SPS	1.83	1.83	135	0	0.99	5783	4124	10201
997679	SR 509	24.42	C, FI	Miller Cr	09.0371	33	23.33	2.2	RND	SPS	1.83	1.83	135	0	0.99	5783	4124	10201
997678	SR 509	28.9	D	NF Hamm Cr	09	0										70		
997681	SR 509	29.06	C	Lost Fork Hamm Cr	09	0		1.1	RND	CST	0.91	0.91	227	3.7	0.99			
997682	SR 509	29.2	C	Lost Fork Hamm Cr	09	0		1.1	RND	PCC	0.46	0.46	0.9	0.99	0.99			
997645	SR 515	3.97	C	Panther Cr	09.0006	33	19.91	1.1	RND	PCC	0.91	0.91	65.4	0	1.3	1725	772	22742
994409	SR 515	7.08	C	Rolling Hills Cr	09	33	7.23	1.1	OTH	OTH	1.75	1.1	430	0	1.07	1231	65	475
991191	SR 516	0.41	C	Barnes Cr	09.0380	67	8.9	1.1	RND	OTH	0.61	0.61	29.5	0	2.3	1789	1066	2055
997674	SR 516	1.28	C	Massey Cr trib	09	0		1.1	RND	OTH	0.5	0.5	47.8	0	3.5	164		
997649	SR 516	2.98	C	Green R trib	09.0043	0	8.77	1.1	RND	CST	0.91	0.91	111.6	0	7.51	409	196	573
997651	SR 516	5.8	C	Mill Cr	09.0015	67	11.74	1.1	RND	CST	1.22	1.22	185	0	0.99	4561	4871	6196
997670	SR 516	10.58	C	Big Soos Cr trib	09	67	13.68	1.1	RND	PCC	0.91	0.91	55.5	0	0.88	3514	368	11368
998886	SR 518	2.27	C	Gilliam Cr	09.0032	0	5.64	1.1	RND	CST	0.91	0.91	270.8	0	0.99	236	13	104
992651	SR 518	2.59	C	Gilliam Cr trib	09	0	4.97	1.1	RND	CST	0.61	0.61	57.3	1.53	0.99	140	37	97
997697	SR 518	3.57	C	unnamed trib	09	0		1.1	RND	CST	0.46	0.46	60.8	0	0.99	171		
994117	SR 520	5.42	C	Lake Washington trib	08	0		1.1	RND	CST	0.91	0.91	98.7	4.42	8.07	33		
990167	SR 520	7.9	C	Goff Cr	08	0	18.61	1.2	RND	CST	0.91	0.91	77.4	1.26	4.9	710	704	897
990167	SR 520	7.9	C	Goff Cr	08	0	18.61	2.2	RND	CST	0.91	0.91	77.4	1.45	4.8	710	704	897
990430	SR 522	2.86	C, FI	Thornton Cr	08.0030	67	19.16	1.1	BOX	CPC	1.51	1.85	84.3	0	1.26	7076	2966	29580
990655	SR 522	6.63	C	Cat Whisker Cr	08.0056	0	18.94	1.1	OTH	OTH	1.46	1.46	200.6	0.77	6	5185	1758	14607
996928	SR 522	9.6	C	Horse Cr	08	33	17.46	1.1	RND	OTH	0.91	0.91	630	0	0.99	2642	485	4637
993083	SR 522	11.31	C	Sammamish R trib	08	67	10.75	1.1	RND	PCC	1.52	1.52	96.9	0	0.43	1373	175	3923
996910	SR 522	11.59	C	Sammamish R trib	08	67		1.1	RND	PCC	1.52	1.52	60.6	0	0.68	134		
996916	SR 522	12.86	C	Little Bear Cr trib	08	0	8.98	1.1	RND	CST	1.14	1.14	196	0	1.2	713	312	287
996880	SR 522	12.86	C	Little Bear Cr trib	08	67	6.89	1.1	RND	PCC	1.22	1.22	29.2	0	0.48	932	322	304

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
996913	SR 522	13.66	C	Little Bear Cr trib	08	0	8.08	1.1	RND	PCC	0.61	0.61	54.6	0	3.86	2053	506	839
994430	SR 522	14.25	C	Howell Cr	08.0082	0	8.39	1.2	RND	OTH	0.46	0.46	55.6	0	5.8	286	161	238
994430	SR 522	14.25	C	Howell Cr	08.0082	0	8.39	2.2	RND	OTH	0.46	0.46	55.4	0	5.7	286	161	238
994432	SR 522	14.38	C	Howell Cr trib	08	0	4.7	1.1	RND	OTH	0.46	0.46	56.5	0	5.9	176	27	83
992371	SR 522	17.48	C	Evans Cr trib	07.0211	33	15.38	1.1	RND	PCC	0.76	0.76	55	0	0.21	1794	34	5325
992632	SR 522	17.82	C	Evans Cr trib	07.0211	33	18.84	1.1	RND	PCC	0.91	0.91	89.6	0	1.13	2571	45	17031
992631	SR 522	17.87	C	Evans Cr trib	07.0211	33	19.01	1.1	RND	PCC	0.91	0.91	54.4	0	-0.8	2786	554	17617
992378	SR 522	19.26	C	Anderson Cr	07.0212	0	9.5	1.1	RND	PCC	0.9	0.9	116	0.23	12	1027	210	948
992381	SR 522	19.35	C	Anderson Cr trib	07	0	5.28	1.1	RND	CST	0.91	0.91	84.3	0.8	22.7	756	180	548
992382	SR 522	19.44	C	Anderson Cr trib	07	0	1.45	1.1	RND	CST	0.76	0.76	0.9	0	10	237	21	111
990139	SR 522	20.21	C	Elliott Cr	07.0214	0	15.78	1.1	RND	PCC	0.9	0.9	117	0	4	2294	2058	4413
931850	SR 522	21.82	C	unnamed trib	07	0	3.76	1.1	RND	OTH	0.46	0.46	32	1.05	5.16	180	38	87
996915	SR 523	1.24	C	Thornton Cr trib	08	0		1.1	RND	PCC	0.76	0.76	41.4	0.12	2.03			
996205	SR 524	0.21	C	Shelleberger Cr	08.0010	0	8.09	1.1	RND	PCC	0.76	0.76	34.2	0.14	2.42	887	184	415
993103	SR 524	3.89	C	Scriber Cr	08.0061	67	19.21	1.2	SQSH	CST	1.8	1.1	40.9	0.02	0.42	3421	808	3273
993103	SR 524	3.89	C	Scriber Cr	08.0061	67	19.21	2.2	SQSH	CST	1.8	1.1	39.9	0	0.48	3421	808	3273
992846	SR 524	5.54	C	Golde Cr	08.0062	0	10.8	1.1	RND	PCC	0.91	0.91	4.7	0.61	1.2	450	123	485
993100	SR 524	6.95	C	Martha Cr	08	33	10.67	1.1	RND	OTH	0.91	0.91	0.9	0	0.99	2500	1971	1403
991053	SR 524	8.06	C	North Cr trib	08	0		1.1	RND	PCC	0.46	0.46	29	0.15	2.6	100		
102 L020	SR 524	12.44	C	Great Dane Cr	08.0084	67	39.52	1.1	BOX	OTH	1.22	0.96	10.6	0	0.19	7397	11889	25507
996460	SR 524	14.28	C	Daniels Cr	08.0122	67	5.44	1.1	RND	PCC	0.61	0.61	18.8	0	0.9	364	0	398
994124	SR 524	14.38	C	Daniels Cr	08.0122	0	7.8	1.2	RND	PCC	0.46	0.46	40.2	0	2.47	526	0	558
994124	SR 524	14.38	C	Daniels Cr	08.0122	0	7.8	2.2	RND	PCC	0.46	0.46	41.1	0	2.2	526	0	558
994123	SR 524	14.52	C	Daniels Cr	08.0122	67	6.43	1.1	RND	PCC	0.91	0.91	31.6	0	0.38	726	0	781
102 S088	SR 525	0.28	C	Maple Cr	08.0059	67		1.1	RND	CST	1.02	1.02	76.8	0	0.18	1252		
991176	SR 525	1.1	C	Swamp Cr trib	08	0		1.1	RND	CST	0.91	0.91	53.1	0	5.35			
991054	SR 525	2.05	C	Swamp Cr trib	08.0065	0		1.1	RND	OTH	0.61	0.61	86.1	0.2	4.2			
996203	SR 525	7.56	C	Possession Bay trib	08	0		1.1	RND	OTH	0.46	0.46	185	0	0.99	143		
996188	SR 525	7.82	C	Possession Bay trib	08	0		1.1	RND	PCC	0.61	0.61	57.9	0.6	22.4	163		
995994	SR 525	9.14	C	Clinton Cr	06	0	9.15	1.1	OTH	CST	0.61	0.61	0.9	2.4	0.99	1367	248	755
995986	SR 525	9.54	C	Clinton Cr	06	0	6.48	1.1	RND	OTH	0.61	0.61	41	0.17	4.7	567	4	197
995984	SR 525	9.7	C	Clinton Cr	06	0	5.71	1.1	RND	PCC	0.61	0.61	27	0.68	3	272	0	59
995987	SR 525	9.84	C	Clinton Cr	06	67		1.1	RND	PCC	0.61	0.61	37.3	0	0.1			
995992	SR 525	11.99	C	Maxwelton Cr	06.0029	67		1.1	RND	PCC	0.46	0.46	37.8	0	0.5			
991805	SR 525	15.03	C	Deer Lagoon trib	06.0037	33	12.3	1.1	RND	PCC	0.61	0.61	38.4	0	1.46	2219	0	32822
931879	SR 525	21.15	C	Honeymoon Bay trib	06	67		1.1	RND	CAL	0.76	0.76	39.5	0	-0.96			
995127	SR 526	2.94	C	Merrill and Ring Cr	07.1725	0		1.1	RND	CST	1.22	1.22	161.6	0	5.3	96		
993084	SR 527	2.78	C	North Cr trib	08	0	21.41	1.1	RND	CST	1.22	1.22	65.5	0	2.57	2031	1345	1471
08.0077 0.20	SR 527	6.57	C, FI	Penny Cr	08.0077	33	24.54	1.1	BOX	CPC	2.75	1.22	42.9	0.34	0.44	13458	3462	39288
990294	SR 528	2.52	C, FI	Munson Cr	07.0073	67		1.1	SQSH	CST	1.45	0.97	23.8	0	-0.21			
990574	SR 530	23.98	C	NF Stillaguamish R trib	05.0136	0		1.1	RND	CST	0.91	0.91	51.8	0.2	3	140		

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
990627	SR 530	24.29	C	NF Stillaguamish R trib	05	0		1.1	RND	SST	1.52	1.52	3	0.61	6	0		
991159	SR 530	24.65	C	Trafton Cr	05.0137	0	20.18	1.1	RND	PCC	1.22	1.22	56.4	0.3	2.5	4520	1308	7332
990629	SR 530	25.74	C	Schoolyard Cr trib	05.0148	0	17.47	1.1	RND	PCC	0.46	0.46	20.3	0	5.02	1494	553	6819
996092	SR 530	25.88	C	Schoolyard Cr trib	05	0	6.39	1.1	RND	PCC	0.61	0.61	21.6	0.2	4.99	78	0	161
991160	SR 530	25.94	C, FI	Schoolyard Cr	05.0145	67	22.94	1.1	RND	SST	1.89	1.89	32.6	0	1.65	5678	3255	11375
990628	SR 530	26.29	C	Schoolyard trib	05	33	12.3	1.1	RND	PCC	0.46	0.46	23.9	0.2	1.76	643	53	2557
991161	SR 530	26.4	C	unnamed trib	05	33		1.1	RND	PCC	0.46	0.46	25.3	0	2.29	169		
990632	SR 530	26.68	C	NF Stillaguamish R trib	05.0151X	67	8.99	1.1	RND	PCC	0.61	0.61	28.7	0	1.15	1709	1151	2087
990631	SR 530	26.7	C	unnamed trib	05.0147	0		1.1	RND	PCC	0.76	0.76	24.5	0.27	4.9			
990633	SR 530	26.87	C	NF Stillaguamish R trib	05.0151	0	10.47	1.1	RND	PCC	0.91	0.91	24.9	0.41	3.01	1126	1015	1337
990630	SR 530	27.46	C	NF Stillaguamish R trib	05.0150	0	7.95	1.1	RND	PCC	0.76	0.76	16.9	1.38	2.9	480	384	473
990634	SR 530	27.66	C	NF Stillaguamish R trib	05.0152X	67		1.1	RND	PCC	0.46	0.46	17.1	0	1.46	44		
990361	SR 530	27.75	C	Ryan Falls Cr	05.0152	33		1.1	RND	CST	1.43	1.43	23.8	0.18	1.5	40		
990638	SR 530	30.67	C	McGovern Cr trib	05	33		1.1	RND	PVC	0.46	0.46	21	0	1.09	172		
990644	SR 530	31.01	C, FI	NF Stillaguamish R trib	05	67	14.38	1.1	RND	CAL	1.22	1.22	19.5	0.99	0	1296	51	285
991164	SR 530	32.51	C	NF Stillaguamish R trib	05	67		1.1	RND	PVC	0.46	0.46	21.3	0	2.02	164		
990639	SR 530	34.3	C	NF Stillaguamish R trib	05	33	6.71	1.1	RND	PCC	0.61	0.61	22.9	0	2	162	0	295
990646	SR 530	34.7	C	NF Stillaguamish R trib	05	67		1.1	RND	PCC	0.61	0.61	10.8	0	2.23			
996100	SR 530	35.06	C	NF Stillaguamish R trib	05	67		1.1	RND	CAL	0.53	0.53	12.4	0	-3.7	111		
990640	SR 530	35.24	C	Montague Cr trib	05	33	10.17	1.1	RND	PCC	0.46	0.46	11.5	0	3.47	756	126	413
995402	SR 530	36.67	C	NF Stillaguamish R trib	05	0		1.1	RND	OTH	0.46	0.46	23.8	0.77	9.7	111		
990649	SR 530	38.53	C	NF Stillaguamish R trib	05	67		1.1	RND	PCC	0.61	0.61	12.2	0	0.57			
990650	SR 530	38.6	C	NF Stillaguamish R trib	05	67		1.1	RND	PCC	0.61	0.61	0.9	0	1	76		
990246	SR 530	42.14	C	Little French Cr	05.0253	0	8.84	1.2	RND	PCC	1.22	1.22	36.4	1.19	0.14	1005	1711	623
990246	SR 530	42.14	C	Little French Cr	05.0253	0	8.84	2.2	RND	PCC	1.22	1.22	36.3	0.88	0.08	1005	1711	623
990652	SR 530	43.34	C	NF Stillaguamish R trib	05	67	10.03	1.1	RND	PCC	0.76	0.76	25.2	0	2.22	1263	761	2280
997712	SR 530	64.41	C	Hilt Cr trib	04	0		1.1	RND	CAL	0.61	0.61	18.1	1.57	2.4	30		
991750	SR 531	2.61	C	Fish Cr	05.0038	33	18.14	1.1	RND	CST	0.61	0.61	26.5	0	1	1252	0	32069
991058	SR 531	8.65	C	Edgecomb Cr	07.0060	67	19.57	1.1	RND	CST	1.53	1.1	24.5	0	0.2	2928	3059	4969
991059	SR 531	8.71	C, FI	Edgecomb Cr	07.0060	67	19.3	1.1	RND	PCC	0.76	0.76	18	0	1.05	2838	2869	4833
05.0018 2.00	SR 532	6.14	C, FI	Church Cr	05.0018	67	37.94	1.1	BOX	CPC	1.83	2.44	70.8	0	0.47	27681	28396	100818
990080	SR 532	6.68	C	Church Cr trib	05.0020	0	7.48	1.1	RND	CST	0.61	0.61	68.7	0.65	2.77	748	0	293
990890	SR 532	8.71	C	Jackson Gulch Cr	05.0061	0	13.77	1.1	RND	CST	0.76	0.76	54.6	0	2.49	2104	25	3504
CR2	SR 534	0.53	C	Carpenter Cr trib	03	33	10.72	1.1	RND	PCC	0.91	0.91	10.9	0	2.1	2508	345	1533
995265	SR 534	0.6	C	Carpenter Cr trib	03	0	11.76	1.1	RND	CST	0.76	0.76	67.7	0.25	2.7	2335	339	1479
PA2	SR 536	2.07	C	unnamed Higgins Sl trib	03.0110	67		1.1	RND	PCC	0.61	0.61	17.9	0	1.18			
NC129	SR 538	2.18	C	Logan Cr	03.0253	33	17.96	1.2	SQSH	OTH	1.6	1.15	31.6	0	1.61	2587	1579	3973
NC129	SR 538	2.18	C	Logan Cr	03.0253	33	17.96	2.2	SQSH	OTH	1.6	1.15	31.2	0	1.32	2587	1579	3973
992987	SR 539	0.04	C	Baker Cr	01.0554	33	22.77	1.1	SQSH	SPA	2.38	1.74	128.6	0	0.41	9896	1263	11405
992978	SR 539	0.05	FL, FI	Spring Cr	01.0553	67	22.64									9015	4469	17932
991973	SR 539	0.3	C	Spring Cr trib	01.0553	0	7.17	1.1	RND	OTH	0.91	0.91	54.3	0.05	0.99	792	710	1562

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
990015	SR 539	0.3	C, FI	Spring Cr	01.0556	33	29.65	1.2	RND	CMP	1.37	1.37	34.7	0	1.3	8110	4469	17248
990015	SR 539	0.3	C, FI	Spring Cr	01.0556	33	29.65	2.2	RND	CMP	1.37	1.37	34.7	0	1.4	8110	4469	17248
991473	SR 539	11.08	C	Duffner Ditch	01.0202	67	14.57	1.2	RND	PCC	1.22	1.22	17.1	0.21	1.5	9764	224	4584
991473	SR 539	11.08	C	Duffner Ditch	01.0202	67	14.57	2.2	RND	PCC	1.22	1.22	17.1	0.46	1.5	9764	224	4584
991803	SR 542	2.4	C	Toad Lk Cr	01.0560	0	13.41	1.1	RND	PCC	1.55	1.55	62.5	0.3	2.5	1591	1832	3204
991111	SR 542	13.48	C	Nooksack R trib	01	33		1.1	RND	SST	0.34	0.34	31.4	0	0.55			
990582	SR 542	14.07	C	Nooksack R trib	01	0		1.1	RND	PCC	0.7	0.7	40.8	0	3	98		
990584	SR 542	15.05	C	Nooksack R trib	01	67		1.1	RND	OTH	0.61	0.61	23.6	0	1.86	228		
990585	SR 542	15.08	C	Jim Cr trib	01	33	6.55	1.1	RND	OTH	0.76	0.76	19.2	0	4	322	84	235
990434	SR 542	15.32	C	Jim Cr	01	Unk		1.1	BOX	CPC	3.09	1.36	16.9	0	1			
990588	SR 542	15.97	C	NF Nooksack R trib	01.0338	33	5.85	1.1	RND	PCC	0.91	0.91	16	0	3.5	256	351	437
995776	SR 542	16.21	C	unnamed trib	01	0		1.1	RND	PCC	0.76	0.76	43.1	0	6.3	104		
991107	SR 542	16.28	C	Nooksack R trib	01.0337	33		1.1	RND	PCC	1.07	1.07	30.5	0	3	115		
995777	SR 542	17.38	C	NF Nooksack R trib	01	0		1.1	RND	PCC	0.61	0.61	27.6	1.8	8			
990589	SR 542	17.85	C	NF Nooksack R trib	01	0		1.1	RND	PCC	0.91	0.91	30.5	0.7	6.9	90		
991705	SR 542	21.45	C	Kendall Cr trib	01	33	12.39	1.1	SQSH	CST	1.06	0.7	11.3	0.36	2.7	786	449	406
991113	SR 542	23.95	C	High Cr trib	01	0	9.04	1.2	RND	CST	0.61	0.61	19.8	0	3.6	642	49	252
991113	SR 542	23.95	C	High Cr trib	01	0	9.04	2.2	RND	CST	0.61	0.61	19.9	0.3	3.1	642	49	252
995770	SR 542	24.25	C	High Cr trib	01	67	9.34	1.2	RND	CST	0.91	0.91	24.4	0.34	0.8	875	726	509
995770	SR 542	24.25	C	High Cr trib	01	67	9.34	2.2	RND	CAL	0.61	0.61	11.9	0	2.9	875	726	509
990577	SR 542	24.49	C	High Cr trib	01	33		1.1	RND	CST	0.61	0.61	17.5	0.14	2			
990590	SR 542	26.25	C	NF Nooksack R trib	01	67		1.1	RND	CST	0.46	0.46	13.4	0	0.89	179		
991640	SR 542	27.21	C	Nooksack R trib	01	0		1.1	RND	PCC	0.61	0.61	20.5	0	2.92			
995409	SR 542	28.87	C	NF Nooksack R trib	01	0	8.08	1.1	RND	PCC	0.76	0.76	18	0	11.1	372	114	377
990580	SR 542	29.02	C	NF Nooksack R trib	01	0		1.1	RND	PCC	0.61	0.61	63.5	0	10.8	108		
990598	SR 542	31.57	C	NF Nooksack R trib	01.0000	33	12.59	1.1	BOX	CPC	1.54	1.58	25.7	0	0.97	1509	571	3213
990187	SR 542	32	C	Hedrick Cr	01.0463	0	19.26	1.2	BOX	PCC	1.83	1.68	37.8	0	5.93	551	159	576
990187	SR 542	32	C	Hedrick Cr	01.0463	0	19.26	2.2	BOX	PCC	1.83	1.68	37.8	0	5.93	551	159	576
990600	SR 542	32.08	C	Hedrick Cr trib	01	67	5.82	1.1	RND	PCC	0.61	0.61	16.7	0	1.32	338	29	106
990602	SR 542	34.49	C	NF Nooksack R trib	01	33	11.41	1.1	RND	OTH	0.76	0.76	17.9	0.72	3.53	583	112	898
995413	SR 542	35.55	C	NF Nooksack R trib	01	0		1.1	RND	CST	0.46	0.46	17.9	1.2	12.2	88		
990603	SR 542	36.61	C	Lookout Cr	01	0	2.46	1.1	RND	CST	1.22	1.22	24.9	0.7	6.71	535	340	455
990604	SR 542	38.15	C	Deerhorn Cr	01	0	9.02	1.2	RND	CST	1.83	1.83	23.8	0.9	7.3	172	80	235
990604	SR 542	38.15	C	Deerhorn Cr	01	0	9.02	2.2	RND	CST	1.83	1.83	23.8	1	7.4	172	80	235
990605	SR 542	38.38	C	NF Nooksack R trib	01	0		1.1	RND	CST	0.91	0.91	18.3	0.91	7	216		
995561	SR 542	38.86	C	NF Nooksack R trib	01	0		1.1	RND	PCC	0.46	0.46	18.3	0.4	8.4	38		
995567	SR 542	40.77	C	NF Nooksack R trib	01	0		1.1	BOX	CPC	1.84	1.84	23.9	1.1	15.3	38		
995571	SR 542	42.13	C	NF Nooksack R trib	01	67		1.1	RND	PVC	0.91	0.91	18.1	0.04	3.7	64		
995577	SR 542	43.52	C	NF Nooksack R trib	01	67		1.2	BOX	CPC	1.84	1.84	16.1	0.08	1.07			
995577	SR 542	43.52	C	NF Nooksack R trib	01	67		2.2	BOX	CPC	1.84	1.84	16.1	0.08	1.07			
995585	SR 542	46.11	C	NF Nooksack R trib	01	67		1.2	BOX	CPC	1.83	1.23	12.2	0	2.3			

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
995585	SR 542	46.11	C	NF Nooksack R trib	01	67		2.2	BOX	CPC	1.83	1.23	12.2	0	1.6			
995439	SR 542	49.44	C	Bagley Cr trib	01	0		1.1	RND	OTH	0.61	0.61	29.5	1.5	10			
995695	SR 542	49.74	C	Bagley Cr trib	01	0		1.1	RND	PVC	0.61	0.61	14.7	0	10.9	95		
995595	SR 542	52.97	C	Razor Hone Cr trib	01	0		1.2	RND	PCC	0.61	0.61	11.5	0	0.99	99		
995595	SR 542	52.97	C	Razor Hone Cr trib	01	0		2.2	RND	PCC	0.61	0.61	11.5	0	0.99	99		
995443	SR 542	53.05	C	unnamed trib	01	67		1.1	RND	PCC	0.61	0.61	14.2	0	4.4	153		
930309	SR 543	0.12	C	Cain Cr	01	33	7.57	1.1	RND	CST	1.1	1.1	101.9	0	1.1	632	11	528
996168	SR 544	3.51	C	Four Mile Cr trib	01	67	7.91	1.1	RND	OTH	0.61	0.61	13.6	0.3	-1.3	1050	0	1281
931144	SR 546	0.17	C	Duffner Ditch	01.0202	33	8.42	1.2	RND	PCC	0.61	0.61	19	0	0.68	1023	0	403
931144	SR 546	0.17	C	Duffner Ditch	01.0202	33	8.42	2.2	RND	PCC	0.61	0.61	19.2	0	0.73	1023	0	403
990510	SR 546	0.46	C	Double Ditch	01.0211	33	41.68	1.1	BOX	PCC	1.9	1.23	42.7	0	0.49	11783	12360	33987
996161	SR 546	0.47	C	Double Ditch	01.0211	33	42.44	1.1	BOX	PCC	1.85	1.22	45.8	0	0.32	11783	13767	35939
996163	SR 546	1.47	C	Fishtrap Cr trib	01.0213	33	12.17	1.1	BOX	CPC	1.83	1.22	42.7	0	0.25	7798	0	2361
996164	SR 546	2.01	C	Fishtrap Cr trib	01.0214	67	14.08	1.1	BOX	PCC	1.83	1.22	67	0	0.7	7089	197	3868
996167	SR 546	6.02	C	Squaw Cr trib	01.0681	33		1.1	RND	PCC	1.07	1.07	31.2	0	0.58			
995772	SR 547	6.16	C	Saar Cr trib	01	0		1.1	RND	PCC	0.46	0.46	17	0	0.45	38		
995774	SR 547	6.71	C	Saar Cr trib	01	33		1.1	RND	PCC	0.61	0.61	39.1	0	1.33			
996003	SR 548	0.29	C	California Cr trib	01.0082	67	12.39	1.1	RND	PCC	0.91	0.91	45.7	0	0.52	5314	631	2449
996006	SR 548	0.87	C	California Cr trib	01	33		1.1	RND	CAL	0.46	0.46	19.1	0	0.89			
996007	SR 548	1.14	C	unnamed California Cr trib	01	33		1.1	RND	PCC	0.61	0.61	23	0	2.26			
996008	SR 548	1.24	C	California Cr trib	01.0079	33	8.96	1.1	RND	PCC	0.61	0.61	26.1	0.2	2.03	1574	345	471
996142	SR 548	4.27	C	Fingalson Cr trib	01	0	4.38	1.1	RND	PCC	0.61	0.61	22.2	0.37	2.4	135	0	40
996148	SR 548	6.76	C	Terrell Cr trib	01.0094	33	7.84	1.1	RND	PCC	0.61	0.61	15	0	0.4	838	0	610
996149	SR 548	8.11	C	Terrell Cr trib	01.0090	67	12.69	1.1	OTH	OTH	0.76	0.76	12.9	0	0.7	3702	221	8466
996153	SR 548	10.55	C	California Cr trib	01.0047	67	7.43	1.2	RND	PCC	0.61	0.61	17.7	0	2.6	293	11	995
996153	SR 548	10.55	C	California Cr trib	01.0047	67	7.43	2.2	RND	SST	0.91	0.91	18	0	3.39	293	11	995
996156	SR 548	13.8	C	Cain Cr	01.0001	0	10.26	1.1	RND	OTH	1.53	1.53	239	0	0.99	2355	79	1194
102 L012	SR 9	0.17	C	Howell Cr	08.0082	0	9.88	1.1	RND	CST	0.83	0.83	140	0	0.99	899	196	472
995982	SR 9	10.61	C	Cemetery Cr	07.0118	67	9.58	1.1	RND	CST	0.61	0.61	45.3	0.28	0.77	3103	582	2475
995087	SR 9	12.57	C	Bunk Foss Cr	07.0130	33	7.06	1.1	RND	PCC	0.61	0.61	52.6	0.11	1.65	1069	156	359
999168	SR 9	14	C	Cenntenial Cr	07	33		1.1	RND	PCC	0.46	0.46	33.8	0	1.7	50		
995086	SR 9	16.66	C	Hulbert Cr	07.0086	0		1.1	RND	CST	0.61	0.61	0.9	2.5	0.99			
991812	SR 9	17.69	C	unnamed trib	07	33	0.98	1.1	RND	PCC	0.61	0.61	40.5	0	3.9	185	23	35
991813	SR 9	17.75	C	Stevens Cr trib	07	0	6.92	1.1	RND	PCC	0.61	0.61	31	0	2	234	18	222
991814	SR 9	18.79	C	Lake Stevens trib	07.0149	33		1.1	RND	OTH	0.61	0.61	87.7	0	1.4	135		
995084	SR 9	22.72	C	Quilceda Cr trib	07.0044	0	11.9	1.1	RND	PCC	0.46	0.46	25.1	0	2.1	263	0	1505
102 Q028	SR 9	24.44	C	Quilceda Cr trib	07	67	17.48	1.1	RND	PCC	1.52	1.52	53.5	0.45	0.84	2530	1009	10274
995082	SR 9	25.75	C	unnamed trib	07	0		1.1	RND	PCC	0.91	0.91	35.2	0.5	0.85			
990255	SR 9	27.25	C	Portage Cr trib	05.0058	0		1.1	RND	PCC	1.22	1.22	24.9	0	5.3			
996079	SR 9	27.94	C	unnamed Portage Cr trib	05	33		1.1	RND	PCC	0.61	0.61	58.6	0	1.53			
991166	SR 9	32.2	C	Bryant Cr	05.0129	67	10.39	1.1	RND	CAL	1.4	1.4	17.9	0	1.57	548	0	5329

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
996080	SR 9	33.2	C	Roth Cr	05	33		1.1	RND	PVC	0.61	0.61	15.4	0	1.6			
996082	SR 9	34.23	C	Pilchuck Cr trib	05	33		1.1	RND	CST	0.91	0.91	13.1	0.3	2.36			
LP23	SR 9	35.46	C	unnamed Pilchuck Cr trib	05.0080B	0		1.1	RND	CST	1.22	1.22	17.2	0	4.81			
996085	SR 9	36.95	C	unnamed trib	05	0		1.1	RND	PCC	0.31	0.31	13.5	0.67	8.14	38		
LP19	SR 9	37.26	C	unnamed trib	05	0		1.1	RND	OTH	0.61	0.61	31.8	0	12.33	34		
996088	SR 9	38.14	C	unnamed trib	05	0		1.1	RND	PCC	0.61	0.61	11.6	0.33	5.61	52		
996089	SR 9	38.27	C	unnamed trib	05	0		1.1	RND	PVC	0.61	0.61	14.3	0.18	3.64	111		
LP31	SR 9	38.64	C	unnamed trib	05	67		1.1	RND	CST	0.46	0.46	14	0	2.14	30		
LP32	SR 9	38.69	C	unnamed trib	05	33		1.1	RND	PCC	0.76	0.76	11.4	0	4.3			
991158	SR 9	38.88	C	Pilchuck Cr trib	05.0080	67		1.1	RND	PCC	1.22	1.22	14.6	0.4	0.84			
NC158	SR 9	39.16	C	Lake McMurray trib	03	0	10.93	1.1	RND	PCC	0.46	0.46	23.7	0.35	9.4	496	86	1663
995275	SR 9	39.51	C	Lake McMurray trib	03	0	7.26	1.1	RND	PVC	0.61	0.61	18.5	0.1	17.3	157	5	303
NC180	SR 9	39.69	C	Lake McMurray trib	03	33	9.22	1.1	RND	PCC	1.07	1.07	15.7	0.35	8.6	351	17	697
NC170	SR 9	39.87	C	unnamed trib	03	0	5.46	1.1	RND	CST	0.91	0.91	25.7	0	3	285	4	122
990641	SR 9	40.09	C	Lake McMurray trib	03	67	14.29	1.1	RND	PCC	0.91	0.91	12.5	0	1.9	2479	121	4603
NC166	SR 9	40.77	C	Lake McMurray trib	03	0	6.75	1.1	RND	CAL	1.22	1.22	15.1	0.05	6.8	585	160	377
990091	SR 9	41.04	C	Norway Park Cr	03.0265	0	12.14	1.1	RND	CST	0.76	0.76	44.6	0	2.8	1690	730	2081
991451	SR 9	41.5	C	Lake Cr trib	03	0	9.02	1.1	RND	CST	1.21	1.21	16.2	0	4.3	104	232	214
NC164	SR 9	41.93	C	Lake Cr trib	03	0	4.86	1.1	SQSH	CST	0.74	0.46	28.3	0.4	18.7	213	58	122
NC163	SR 9	43.08	C	Lake Cr trib	03	33	12.24	1.1	RND	CST	0.91	0.91	12	0	2.2	684	295	1255
991122	SR 9	48	C, FI	Gribble Cr	03	33	24.19	1.1	RND	PCC	1.22	1.22	22.1	0	0.02	4291	1743	18551
NC69	SR 9	49	C	Nookachamps Cr trib	03	0	10.6	1.1	BOX	CPC	1.22	1.55	11.1	0	4.7	1462	16	2126
HC53	SR 9	59.08	C	unnamed trib	03	33	9.6	1.1	RND	PCC	0.61	0.61	11.9	0	3.6	1458	160	1222
HC93	SR 9	59.46	C	Hansen Cr trib	03.0272	0	14.62	1.1	RND	PCC	0.46	0.46	12.5	0.1	0.99	551	6	3309
991114	SR 9	62.36	C	Samish R trib	03	33		1.1	RND	PCC	0.46	0.46	12.9	0	1.24			
SR71	SR 9	63.74	C	Samish R trib	03	33		1.1	RND	OTH	0.91	0.91	17.4	0	2.3			
SR67	SR 9	64.45	C	Samish R trib	03	33		1.1	RND	OTH	1.14	1.14	15.9	0	3.7	199		
991135	SR 9	64.68	C	Samish R trib	03.0069	33		1.1	RND	OTH	1.22	1.22	15.9	0	2.59	186		
995390	SR 9	64.93	C	Samish R trib	03	0		1.2	RND	CST	0.61	0.61	16.2	0.4	6.4	44		
995390	SR 9	64.93	C	Samish R trib	03	0		2.2	RND	CST	0.76	0.76	15.9	0.55	4.2	44		
991136	SR 9	65.07	C	Samish R trib	03	0		1.1	RND	PCC	1.22	1.22	13.7	0	2.9	122		
991116	SR 9	65.32	C	Samish R trib	03.0073	33		1.1	RND	OTH	1.22	1.22	14.4	0	4.58			
991446	SR 9	66.51	C	Samish R trib	03	67		1.1	RND	OTH	0.91	0.91	14.9	0	2.34	76		
991447	SR 9	66.85	C	Samish R trib	03	0	7.52	1.1	RND	PCC	0.91	0.91	11.1	1.19	2.7	478	730	385
995392	SR 9	67.46	C	Samish R trib	03	0		1.1	RND	PCC	0.61	0.61	31.5	0	8.8	83		
995395	SR 9	69.1	C	Samish R trib	03	0		1.1	RND	PCC	0.76	0.76	23.3	0.29	5.6	60		
995396	SR 9	69.15	C	Samish R trib	03	0		1.1	RND	PCC	0.76	0.76	22.8	0.72	3.3	173		
930834	SR 9	69.87	C	Samish R trib	03	33		1.1	RND	PCC	0.61	0.61	20.9	0	1.8			
995398	SR 9	69.88	C	Samish R trib	03	0	5.57	1.1	RND	PCC	0.61	0.61	29.4	0	5.5	351	142	94
991106	SR 9	70.6	C	Landingstrip Cr trib	01	0	10.47	1.1	RND	OTH	0.76	0.76	13.7	0.55	6	2156	2436	1436
995780	SR 9	70.81	C	SF Nooksack R trib	01.0263	33		1.2	RND	PCC	0.91	0.91	26.8	0	8	154		

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
995780	SR 9	70.81	C	SF Nooksack R trib	01.0263	33		2.2	RND	PCC	0.91	0.91	26.4	0	7.6	154		
995783	SR 9	71.54	C	SF Nooksack R trib	01	67		1.1	RND	PCC	0.76	0.76	17.6	0.14	2.9	81		
992344	SR 9	76.91	C	Black Sl trib	01	0	9.95	1.1	RND	PCC	0.61	0.61	35.2	0.05	2.47	665	0	1053
992345	SR 9	77.12	C	Black Sl trib	01	67	6.21	1.1	RND	PCC	0.7	0.7	18.4	0	0.04	643	16	490
992349	SR 9	77.36	C	Tawes Cr trib	01.0248	67	8.95	1.1	RND	PCC	1.22	1.22	13.4	0	0.37	950	196	680
992350	SR 9	77.43	C	Tawes Cr trib	01.0248	33	14.63	1.1	RND	PCC	0.7	0.7	10.7	0.17	0.06	4387	714	2877
992356	SR 9	77.94	C	Tawes Cr	01.0247	67	31.49	1.1	RND	PCC	0.91	0.91	14.5	0	0.3	3520	3282	14056
991842	SR 900	15.86	C	Green Cr	08.0288	67	28.17	1.1	BOX	PCC	1.22	0.91	13.7	0.21	1	2155	995	50198
991702	SR 900	18.59	C	May Cr	08.0176	33		1.1	BOX	PCC	1.22	0.61	9.3	0	4.4			
990432	SR 900	19.14	C	Tibbetts Cr trib	08.0169X	67	5.84	1.1	RND	CST	0.61	0.61	12.3	0	2.28	185	0	380
991185	SR 900	19.4	C	Tibbetts Cr trib	08.0174	0		1.1	BOX	PCC	0.91	0.91	11.6	0.26	2	20		
990433	SR 900	19.5	C, Fl	Tibbetts Cr	08.0169	33	19.29	1.1	BOX	PCC	1.22	1.83	21.3	0	2	1763	1083	2975
992641	SR 92	0.22	C	Stevens Cr trib	07	0	13.8	1.1	RND	PCC	0.91	0.91	42	0	1.88	825	480	7182
991827	SR 92	0.78	C	Lundeen Cr	07.0150	0	22.45	1.1	RND	OTH	0.61	0.61	71.5	0.12	0.92	2462	222	16657
991830	SR 92	2.2	C	Catherine Cr trib	07	33		1.1	RND	PCC	0.61	0.61	22.3	0.05	1.8	156		
990233	SR 92	2.73	C	Little Pilchuck Cr	07.0146	67	28.18	1.1	BOX	PCC	3.66	1.83	59.7	0	-0.01	46553	15280	185241
991831	SR 92	2.99	C	Little Pilchuck Cr trib	07	67	6	1.1	RND	PCC	0.61	0.61	30.3	0	0.24	768	13	314
102 N183	SR 96	0.47	C	North Cr	08.0070	33	18.06	1.1	SQSH	CST	1.8	1.2	37	0	1.1	3976	2999	4502
995326	SR 96	5.29	C	Thomas Cr	07.0108	0	27.62	1.1	RND	CST	1.66	1.66	0.9	0	0.99	2225	1725	4378
995214	SR 96	5.86	C	Snohomish R trib	07	0		1.1	RND	PCC	0.46	0.46	17.6	0.56	5.5			
995215	SR 96	5.98	C	Snohomish R trib	07.0123	33		1.1	RND	PCC	0.76	0.76	16	0	2.9			
995216	SR 96	6.09	C	Snohomish R trib	07.0120	0		1.1	BOX	CPC	1.35	0.93	15	1.15	1.2	265		
995217	SR 96	6.49	C	Marshland Sl trib	07	0	10.26	1.1	RND	CST	0.91	0.91	25	2.15	3.56	684	85	1074
991196	SR 99	13.54	C, Fl	McSorley Cr	09.0381	67	5.24	1.1	BOX	CPC	1.22	1.22	0.9	0	0.99	1047	207	449
997684	SR 99	23.41	C	Duwamish R trib	09	0	9.68	1.1	RND	PCC	1.52	1.52	49.8	0.5	4.3	680	465	679
997685	SR 99	24.71	C	NF Hamm Cr	09	33		1.1	RND	CST	0.91	0.91	0.9	0.99	0.99	248		
997687	SR 99	24.86	C	NF Hamm Cr	09	67		1.2	RND	CST	1.22	1.22	0.9	0.99	0.99	443		
997687	SR 99	24.86	C	NF Hamm Cr	09	67		2.2	RND	CST	1.22	1.22	0.9	0.99	0.99	443		
996216	SR 99	49.01	C	Lunds Gulch Cr trib	08	33		1.1	RND	CAL	0.91	0.91	47.5	0	4.7			
993849	SR 99	51.45	C	Swamp Cr trib	08	0	9.19	1.1	RND	CAL	0.76	0.76	175	0	0.99	620	3	554
102 N192	SR 99	54.23	C	North Cr	08.0070	33	13.6	1.1	OTH	OTH	0.76	0.76	74.1	0	0.57	518	219	2313
932426	US 2	5.02	C	Bunk Foss Cr	07.0130	0	10.64	1.1	RND	OTH	0.93	0.93	66.2	0.21	6.98	1573	215	1241
932428	US 2	5.18	C	Bunk Foss Cr	07.0130	0	10.92	1.1	RND	CST	1.03	1.03	140	1.2	7.76	1814	230	1376
995101	US 2	6.23	C	Bunk Foss Cr	07.0130	67	15.81	1.1	RND	PCC	2.44	2.44	103.9	0	0.04	4701	1279	18388
995108	US 2	12.94	C	French Cr trib	07.0186	67	5.77	1.1	BOX	PCC	2.04	2.48	45.5	0	-0.4	616	0	659
933734	US 2	19.65	C	unnamed Skykomish R trib	07	33		1.1	RND	OTH	0.91	0.91	26.6	0	1.3			
101NORT-32	US 2	20.48	C	Skykomish R trib	07	0		1.1	RND	PCC	0.61	0.61	34	0	6.21			
101NORT-33	US 2	20.53	C	Skykomish R trib	07	33		1.1	RND	PCC	0.61	0.61	51.5	0	0.33			
101OWEN-02	US 2	21.74	C	Groeneveld Cr	07.0864B	0	15.5	1.1	RND	PCC	0.91	0.91	35.3	0.1	2.3	3176	265	2897
991822	US 2	34.35	C	Skykomish R trib	07.0000	0	11.46	1.2	RND	PCC	1.22	1.22	22.1	0	23.7	1597	848	1202
991822	US 2	34.35	C	Skykomish R trib	07.0000	0	11.46	2.2	RND	PCC	1.22	1.22	22.6	0	21.3	1597	848	1202

Appendix IA. WSDOT Northwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
991825	US 2	36.73	C	SF Skykomish R trib	07	0		1.1	RND	CST	1.07	1.07	79.3	0	14	121		
995058	US 2	44.23	C	SF Skykomish R trib	07	0		1.1	RND	PCC	1.51	1.51	41	1.7	7	196		
995059	US 2	44.26	C	SF Skykomish R trib	07	33		1.1	RND	PCC	1.22	1.22	25.4	0	8	24		
995000	US 2	45.47	C	SF Skykomish R trib	07.1298	33	18.47	1.1	RND	PCC	1.22	1.22	19.5	0.07	1	1411	1117	2933
995060	US 2	47.75	C	SF Skykomish R trib	07	33		1.1	RND	PCC	1.51	1.51	16	0	3.5	53		
995002	US 2	48.78	C	SF Skykomish R trib	07	0		1.1	RND	OTH	0.46	0.46	70.6	0.16	6	38		
995020	US 2	48.94	C	SF Skykomish R trib	07	0	12.53	1.1	RND	PCC	1.22	1.22	15.8	0	7.51	585	306	609
995021	US 2	49.87	C	SF Skykomish R trib	07	33	10.26	1.1	OTH	OTH	1.22	1.22	47.2	0	1.23	1534	1708	1890
995062	US 2	52.39	C	Tye R trib	07	0	4.86	1.1	RND	OTH	1.22	1.22	34.4	0	4.27			
995063	US 2	52.47	C	Tye R trib	07	33		1.1	RND	PCC	0.91	0.91	23.9	0	8.7	13		
995023	US 2	52.7	C	Tye R trib	07	0	9.81	1.1	RND	PCC	1.22	1.22	17.7	0.2	4.46	457	553	655
995024	US 2	52.75	C	Tye R trib	07	33		1.1	RND	PCC	0.91	0.91	23	0	6	124		
995025	US 2	52.81	C	Tye R trib	07	0		1.1	RND	PCC	1.22	1.22	15.9	0	5.36	146		
995031	US 2	56.19	C	Tye R trib	07	0		1.1	RND	CST	0.91	0.91	29.2	0.19	22	46		

[1]Field Codes

Codes Used for Culvert Shape

ARCH - bottomless arch
BOX - rectangular or square
ELL - ellipse
OTH - other
RND - round
SQSH - squash (pipe arch)

Codes Used for Culvert Materials

CAL - corrugated aluminium
CMP - corrugated metal pipe
CPC - cast in place concrete
CST - corrugated steel
OTH - other
PCC - precast concrete
PVC - plastic
SPA - structural plate aluminium
SPS - structural plate steel
SST - smooth steel

Feature Type

B - bridge
C - culvert
D - dam
DL - dike/levee
EC - erosion control
F - fill/puncheon
FD - fill/debris
FI - fishway
FL - flume

[2]The culvert # identifies individual culverts at multiple stream crossings. For example, in a triple culvert crossing, the first pipe would be 1.3, the second 2.3, and the third 3.3.

Appendix IB. WSDOT North Central Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
990486	I-90	161.57	C	Winchester Wasteway	41	67		1.2	BOX	PCC	1.52	1.83	81.9	0	0.8			
990486	I-90	161.57	C	Winchester Wasteway	41	67		2.2	BOX	PCC	1.52	1.83	81.9	0	0.86			
992048	SR 150	2.25	C	Lake Chelan trib	47	0		1.2	RND	CST	0.61	0.61	18.4	0	11.2			
992048	SR 150	2.25	C	Lake Chelan trib	47	0		2.2	RND	CST	0.61	0.61	18.5	0	9.6			
999308	SR 150	3.8	C	Lake Chelan trib	47	0		1.1	RND	CST	0.91	0.91	17.3	0	16.43	174		
993416	SR 153	7.62	C	Squaw Cr	48.0043	0	4.94	1.1	BOX	CPC	1.22	1.22	27.6	1.35	0.76	6309	1845	6356
993438	SR 153	26.51	C	Benson Cr	48.0277	0		1.1	RND	CST	2.44	2.44	26.4	0.61	10			
999262	SR 155	32.29	C	Peter Dan Cr	53.0014	33		1.1	RND	SPS	1.22	1.22	66	0	5.1			
999263	SR 155	33.31	C	Lake Roosevelt trib	53.0012	0		1.1	RND	SPS	2.22	2.22	81	0	14.19	46		
999374	SR 155	41.53	C	Little Nespelem R	51	0		1.1	BOX	CPC	2.44	1.83	20.7	0.8	3.43			
999376	SR 155	47.11	C	Smith Cr	51	33		1.1	RND	CST	1.22	1.22	22.7	0	1.63			
999378	SR 155	52.13	C	Armstrong Cr trib	51.0036	0		1.2	RND	CST	0.61	0.61	17.3	0.99	4.1			
999378	SR 155	52.13	C	Armstrong Cr trib	51.0036	0		2.2	RND	CST	0.61	0.61	17.1	0.99	4.5			
998314	SR 155	53.96	C	unnamed trib	50	67		1.1	RND	CST	0.61	0.61	22.5	0	3.6			
993992	SR 155	60.76	C	Omak Cr	49.0138	67	6.47	1.2	RND	PCC	1.22	1.22	19.6	0	1.8	4285	2373	7029
993992	SR 155	60.76	C	Omak Cr	49.0138	67	6.47	2.2	RND	PCC	0.91	0.91	16.9	0.37	1.7	4285	2373	7029
993993	SR 155	60.92	C	Trail Cr	49.0179	33	9.42	1.1	RND	PCC	1.22	1.22	17.3	0	2.1	11310	7799	15742
993995	SR 155	62.41	C	Omak Cr trib	49.0173	0	3.48	1.1	RND	PCC	0.91	0.91	33.6	0.2	5.86	1955	904	1830
993997	SR 155	65.05	C	Clark Cr	49.0165	0	6.49	1.1	RND	CST	0.76	0.76	34.3	0.42	3.23	2818	1222	2366
993998	SR 155	65.59	C	Swimptkin Cr	49.0160	0	10.85	1.1	RND	CST	0.91	0.91	21.2	0.19	3.29	6467	13748	18455
992845	SR 155	66.94	C	Stapaloop Cr	49.0152	33	9.58	1.1	RND	CST	1.9	1.9	45.5	0.46	2.3	20221	10545	21629
990288	SR 155	75.81	C	Mission Cr	49.0139	0	6.67	1.1	BOX	CPC	2.45	2.45	42.9	1.02	9.2	8773	682	2645
997015	SR 17	40.74	C	Lind Coulee trib	41	33		1.1	RND	PCC	1.22	1.22	56.2	0	1.19			
991582	SR 17	126.52	C	EF Foster Cr trib	50	0		1.1	RND	OTH	1.22	1.22	31.3	0	2.9			
990153	SR 17	131.21	C	EF Foster Cr trib	50	0		1.1	BOX	PCC	1.22	1.22	21.3	1.1	3.66			
990154	SR 17	132.05	C	EF Foster Cr trib	50	0		1.1	BOX	PCC	1.22	1.22	23.6	0.28	2.54			
997831	SR 173	2.93	C	Dry Cr	50	0		1.1	RND	SPS	3.05	3.05	73.4	5.2	5.77	141		
994050	SR 173	11.8	C	Swamp Cr	49.0002	67		1.2	RND	CST	1.52	1.52	28.1	0.37	0.8			
994050	SR 173	11.8	C	Swamp Cr	49.0002	67		2.2	RND	CST	1.52	1.52	28.2	0.56	0.6			
997436	SR 20	148.43	C	Granite Cr trib	04	0		1.1	RND	CST	1.07	1.07	27.8	0.35	20.93	524		
997437	SR 20	149.42	C	Granite Cr trib	04	0		1.1	RND	CST	0.99	0.99	44	0	13.95			
997438	SR 20	150.02	C	Granite Cr trib	04	0		1.1	RND	CST	1.14	1.14	26.9	0	10.88			
997439	SR 20	150.13	C	unnamed trib	04	0		1.1	RND	CST	1.07	1.07	36.3	1.5	5.76			
997441	SR 20	151.27	C	Granite Cr trib	04	0		1.1	RND	CST	0.61	0.61	21.1	0.3	7.71			
997442	SR 20	151.66	C	Granite Cr trib	04.2413	33		1.1	RND	CST	0.91	0.91	24.5	0	5.13			
997443	SR 20	152.03	C	Granite Cr trib	04	33		1.1	RND	CST	0.76	0.76	18.6	0	2.53	64		
997445	SR 20	152.46	C	Granite Cr trib	04	0		1.1	RND	CST	0.91	0.91	26.7	1	8.74	120		
997448	SR 20	153.71	C	Swamp Cr	04.2429	0		1.1	ELL	CST	2.55	2.97	35.7	1.85	8.16			
997453	SR 20	154.67	C	Granite Cr trib	04	0		1.1	RND	CST	1.52	1.52	30.3	0.65	0.92	116		
997114	SR 20	156.3	C	Porcupine Cr	04.2453	0		1.2	ELL	CST	1.32	1.63	31.2	1.45	10.9			
997114	SR 20	156.3	C	Porcupine Cr	04.2453	0		2.2	ELL	CST	1.32	1.63	30.4	0.6	11.2			

Appendix IB. WSDOT North Central Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
997575	SR 20	156.81	C	Granite Cr trib	04	0		1.1	RND	CST	1.07	1.07	26	0.6	4.47	30		
997576	SR 20	156.86	C	unnamed trib	04	0		1.1	RND	CST	1.07	1.07	31.9	0.2	14.3	115		
999306	SR 20	157.88	C	Bridge Cr	47	0		1.1	ELL	CST	1.3	1.45	50.2	0.4	5.2			
999313	SR 20	158.36	C	Bridge Cr trib	47	0		1.1	RND	SPS	2.21	2.21	23.2	0	7.97			
999315	SR 20	158.5	C	Bridge Cr trib	47	0		1.1	RND	CST	0.76	0.76	19.1	0.27	4.34	65		
999316	SR 20	158.78	C	Bridge Cr	47	33		1.1	RND	SPS	2.59	2.59	38.4	0	1.28			
999317	SR 20	159.89	C	State Cr	47	0		1.1	RND	SPS	2.59	2.59	135.9	1.3	7.2			
999319	SR 20	160.74	C	State Cr trib	47	0		1.1	RND	CST	1.22	1.22	44.6	0.99	10.8	27		
999320	SR 20	161.51	C	State Cr trib	47	0		1.1	RND	CST	0.76	0.76	30.5	0.27	4.52	12		
993055	SR 20	163.61	C	Early Winters Cr trib	48	0		1.1	RND	CST	1.22	1.22	81.9	2.05	14.4	130		
990342	SR 20	168.25	C	Pine Cr	48.1528	0	5.44	1.1	SQSH	SPS	3.47	2.24	19.3	0.8	4.91	5058	3520	9331
993163	SR 20	168.3	C	Early Winters Cr trib	48	0		1.1	RND	CST	0.91	0.91	22.3	0.47	7.21	70		
993171	SR 20	169.31	C	Early Winters Cr trib	48	0		1.1	RND	CST	0.76	0.76	19.2	0.75	7.54	160		
993179	SR 20	170.73	C	Silver Star Cr	48	0		1.1	ARCH	SPS	2.48	1.8	37.8	0	10.55	0		
993184	SR 20	171.97	C	Early Winters Cr trib	48	0		1.1	RND	CST	1.22	1.22	27.1	0	9.63	11		
990468	SR 20	173.16	C	Varden Cr	48.1479	0	4.66	1.1	SQSH	SPS	5.5	2.38	31.1	0.1	10.4	360	310	1235
993207	SR 20	174.98	C	Pekin Cr	48	0	3.05	1.1	SQSH	SPS	2.32	1.66	19.6	0.32	5.5	641	513	1161
993230	SR 20	185.93	C	Boesel Canyon Cr	48	0	4.93	1.1	RND	CST	0.61	0.61	25.8	0.42	10.3	378	204	342
980378	SR 20	188.17	C	Methow R trib	48	33	7.72	1.1	SQSH	CST	0.91	0.61	24.4	0	3.25	300	61	142
980131	SR 20	208.44	C	Frazer Cr trib	48.0309A	0	6.61	1.1	RND	CST	0.46	0.46	15	0	6.08	465	152	234
993405	SR 20	213.99	C	Frazer Cr	48.0309	33	3.29	1.1	RND	CST	0.61	0.61	18.3	0	6	1801	657	2020
993815	SR 20	215.96	C	Summit Cr	49.0054	33	2.17	1.1	RND	CST	0.91	0.91	114.2	0	6.8	456	279	415
993817	SR 20	218.48	C	Summit Cr	49.0054	33	4.11	1.1	RND	CST	0.91	0.91	18.9	0.2	3.1	4657	3080	5298
990406	SR 20	219.38	C	Summit Cr	49.0054	0	5.78	1.1	RND	CST	1.37	1.37	29.1	1.1	18.93	13563	2334	13877
991687	SR 20	220.1	C	Summit Cr trib	49	33	4.65	1.1	RND	OTH	0.76	0.76	35.7	0.21	4.4	978	55	8669
993818	SR 20	220.85	C	Summit Cr	49.0054	0		1.1	RND	PCC	1.22	1.22	23.4	0.47	7.2	199		
990247	SR 20	223.18	C	Little Loup Cr	49.0052	0		1.1	OTH	OTH	2	3.19	112.5	1.5	4.8	131		
990418	SR 20	224.49	C	Tallant Cr	49.0065	0	2	1.1	RND	PCC	1.07	1.07	22.3	0	5.4	379	111	403
993824	SR 20	225.6	C	Tallant Cr	49.0065	33	4.79	1.1	RND	PCC	1.52	1.52	25.9	0	1.7	1674	1590	2469
990419	SR 20	226.27	C	Tallant Cr	49.0065	0	6.23	1.1	BOX	CPC	1.18	2.49	25.5	1.15	4.2	2915	3063	4741
990420	SR 20	226.96	C	Tallant Cr	49.0065	0	6.79	1.1	RND	CST	1.83	1.83	32	1.7	5.6	4149	5252	6664
990421	SR 20	227.22	C	Tallant Cr	49.0065	33	6.27	1.3	RND	CST	0.76	0.76	17.8	0	3.3	4613	5497	7227
990421	SR 20	227.22	C	Tallant Cr	49.0065	33	6.27	2.3	RND	OTH	0.61	0.61	18.4	0	4.7	4613	5497	7227
990421	SR 20	227.22	C	Tallant Cr	49.0065	33	6.27	3.3	RND	CST	0.91	0.91	19.1	0	5.1	4613	5497	7227
994020	SR 20	263.4	C	Bonaparte Cr	49.0246	33	3.89	1.1	BOX	CPC	3.06	1.86	30	0	2.3	1441	714	4252
994021	SR 20	263.62	C	Bonaparte Cr	49.0246	33	4.21	1.1	BOX	CPC	3.06	1.86	28.8	0.23	2.27	1832	635	5857
994022	SR 20	264.08	C	Bonaparte Cr	49.0246	33	4.89	1.1	BOX	CPC	3.06	1.84	29.9	0.28	3.92	2796	1880	10625
994025	SR 20	265.57	C	Bonaparte Cr trib	49	0		1.1	RND	PCC	0.61	0.61	25.3	0	13.9			
994030	SR 20	266.09	C	Bonaparte Cr	49.0246	33		1.1	BOX	CPC	3.05	1.84	28.7	0.32	2.3	30		
994031	SR 20	266.22	C	Bonaparte Cr	49.0246	67	2.14	1.1	BOX	CPC	3.05	1.85	25.8	0	2.77	222	126	794
994035	SR 20	278.6	C, FI	Bonaparte Cr	49.0246	67	6.62	1.1	BOX	CPC	2.15	1.82	15.1	0	1.7	17679	28293	72435

Appendix IB. WSDOT North Central Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
994037	SR 20	279.3	C	Bonaparte Cr	49.0246	0	9.57	1.1	BOX	CPC	2.15	1.84	29.4	0	1.7	23119	38005	104274
994043	SR 20	283.52	C	Bonaparte Cr trib	49	67		1.1	RND	CST	0.76	0.76	20.4	0	2.2			
994047	SR 20	284.52	C	Bonaparte Cr trib	49	67		1.1	RND	PCC	0.76	0.76	23	0	2.4			
999348	SR 20	295.16	C	Maple Cr	52.0383	0		1.1	BOX	CPC	1.22	1	51.5	0	4.2			
999349	SR 20	296.89	C	WF Granite Cr	52.0379	33		1.1	BOX	CPC	2.44	1.22	19.1	0	1.2			
990993	SR 243	25.29	C	Columbia R trib	41	0		1.1	RND	CST	1.07	1.07	22.9	0.46	8	30		
991760	SR 243	28.18	C	Sand Hollow Cr	41.2151	67	13.25	1.1	RND	CST	1.83	1.83	34	0	0.99	6666	1790	8819
991762	SR 26	1.79	C	Sand Hollow Cr	41.2151	0	15.67	1.1	RND	CST	1.82	1.82	89.9	2.8	3.2	5406	1452	5700
990570	SR 26	29.87	C	Crab Cr Wasteway	41	33		1.1	RND	CST	2.23	2.23	23.5	0	1.6			
990571	SR 26	29.95	C	Crab Cr Wasteway	41	0		1.1	RND	CST	1.22	1.22	26.8	0	9			
997815	SR 26	42.7	C	unnamed trib	36	0		1.2	RND	CST	2.21	2.21	58.1	3	0.95			
997815	SR 26	42.7	C	unnamed trib	36	0		2.2	RND	CST	2.21	2.21	58.1	3	0.94			
991776	SR 28	2.31	C	Columbia R trib	44	0		1.1	RND	PCC	1.22	1.22	38.1	0.25	7.09			
991947	SR 28	2.32	C	Sand Canyon Springs	44.0756	0	11.57	1.1	BOX	CPC	1.52	1.52	19.8	1.95	5.7	3352	1520	2398
997474	SR 28	7.44	C	Columbia R trib	44	0		1.1	RND	PCC	0.46	0.46	27.8	0.35	4.8	125		
990882	SR 28	22.72	C, FI	Lynch Coulee	41	0	9.46	1.1	BOX	PCC	3.66	3.05	113.4	0.99	3	4751	2019	4375
997487	SR 28	26.66	C	Babcock Ridge Lk trib	41	67		1.1	RND	PCC	0.61	0.61	24.5	0	0.53			
997814	SR 28	40.66	C	unnamed trib	41	0		1.1	RND	PCC	0.61	0.61	23.6	0.44	2.3			
995057	US 2	56.86	C	Tye R trib	07	0		1.1	RND	CST	0.61	0.61	53.8	0.24	5.3	167		
995037	US 2	57.66	C	Tye R trib	07	0		1.1	RND	CST	0.61	0.61	47.2	0.2	6.5	61		
995038	US 2	57.8	C	Tye R trib	07	67		1.1	RND	PVC	0.74	0.74	45.6	0	1.8			
995051	US 2	58	C	Tye R trib	07.1695	0		1.1	RND	PCC	0.91	0.91	30.1	0.04	3	122		
995055	US 2	64.32	C	Tye R trib	07	0		1.1	BOX	CPC	1.3	1.3	49.5	0.65	19.7			
995056	US 2	64.46	C	Tye R trib	07.1716	0		1.1	BOX	CPC	1.85	1.85	56.2	0	11.8			
992753	US 2	80.58	C	Nason Cr trib	45.0901	0		1.1	RND	CST	0.61	0.61	27.6	0	0.29			
992755	US 2	82.06	C	Nason Cr trib	45	0	4.23	1.1	RND	CST	0.91	0.91	0.9	1.5	0.99	1100	632	1025
996888	US 2	107.43	C	Wenatche R trib	45.0214	0		1.1	OTH	OTH	1.9	0.45	115.9	0	5.21	125		
996890	US 2	111.46	C	Wenatchee R trib	45.0072	0		1.1	ARCH	CST	1.84	1.17	37.5	3.5	0.99			
990517	US 2	136.45	C	unnamed pond	44	33		1.1	RND	PCC	0.61	0.61	0.9	0	0.99	35		5075
998309	US 2	146.02	C	Pine Canyon	44	0		1.1	RND	SPS	3.05	3.05	178.7	0.32	8.6			
991948	US 97	152.92	C	Mill Cr	39.1188	0	6.11	1.1	RND	PCC	0.91	0.91	111.9	0.37	5.41	3075	1842	2262
990202	US 97	158.32	C, FI	Iron Cr	39.1209	67		1.1	SQSH	SPS	2.57	1.81	24	0	3.5			
990413	US 97	159.26	C	Swauk Cr	39.1157	67	9.02	1.1	SQSH	SPS	2.69	1.83	24.5	0	1.2	7024	7916	14464
990414	US 97	159.67	C	Swauk Cr	39.1157	0	10.74	1.1	SQSH	SPS	2.72	1.86	36.1	0.97	2.05	5402	5874	9814
990444	US 97	164.7	C	Tronsen Cr	45.0346	0	5.61	1.2	RND	PCC	0.61	0.61	67.1	0.6	5	1330	563	1348
990444	US 97	164.7	C	Tronsen Cr	45.0346	0	5.61	2.2	RND	PCC	0.61	0.61	67.1	0.09	5	1330	563	1348
992763	US 97	165.57	C	Tronsen Cr trib	45	0		1.1	RND	CST	0.6	0.6	25.9	0.34	0.34			
990445	US 97	165.77	C	Tronsen Cr	45.0346	0	7.5	1.1	RND	CST	1.07	1.07	36.6	0.24	4.5	3030	2544	4316
990446	US 97	166.23	C	Tronsen Cr	45.0346	0	8.12	1.1	RND	CST	1.07	1.07	30.5	0.52	3.5	3110	2774	5297
993143	US 97	172.85	C	Peshastin Cr trib	45	0		1.1	RND	CST	1.22	1.22	26	1.07	1.2	128		
990411	US 97	205.1	C	Swakane Cr	46	33	6.57	1.1	RND	OTH	2.13	2.13	56	0	2.99	2040	1657	3130

Appendix IB. WSDOT North Central Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
999326	US 97	207.63	C	Tenas George Canyon	46	0		1.1	RND	OTH	0.91	0.91	21.5	0	3.9			
997549	US 97	216.66	C	unnamed pond	44	67		1.1	RND	PCC	0.61	0.61	27.8	0	0.07			
997551	US 97	218.38	C	unnamed pond	44	67		1.1	RND	PCC	0.91	0.91	32	0	0.87			
997552	US 97	218.66	C	unnamed pond	44	67		1.1	RND	PCC	0.61	0.61	30.5	0	0.39			
999330	US 97	219.63	C	McKinstry Canyon	46.0378	0		1.1	RND	CST	1.22	1.22	40.8	0.6	3.3			
992045	US 97	220.76	C	Byrd Canyon Cr	46.0380	33	12.68	1.1	RND	PCC	0.91	0.91	48.3	0	3.26	3700	9181	2134
992043	US 97	222.02	C	Oklahoma Gulch	46.0002	0	12.79	1.2	RND	OTH	1.22	1.22	44.3	0	3.99	2156	262	1559
992043	US 97	222.02	C	Oklahoma Gulch	46.0002	0	12.79	2.2	RND	OTH	1.22	1.22	44.3	0	3.87	2156	262	1559
997559	US 97	226.49	C	unnamed pond	44	33		1.1	RND	PCC	0.61	0.61	34.4	0	0.06			
997564	US 97	232.94	C	Columbia R trib	44	0		1.1	ELL	SPA	2.59	3.43	44	0.86	6.55			
997566	US 97	235.3	C	Beebe Cr	47	33		1.1	RND	CST	1.22	1.22	43.5	0.08	2.13			
997567	US 97	235.65	C	Columbia R trib	47	33		1.1	RND	CAL	0.91	0.91	34.3	0.12	2.65	283		
990523	US 97	246.86	C	unnamed pond	47	67		1.1	RND	CST	0.61	0.61	38.7	0	0.88			
992050	US 97	256.94	C	Indian Dan Canyon	49	0		1.1	RND	SST	1.4	1.4	24.7	1.55	0.03			
992051	US 97	260.28	C	Swamp Cr	49.0002	0		1.1	RND	PCC	1.24	1.24	0.9	0	0.99			
993915	US 97	261.24	C	Columbia R trib	49	0	5.17	1.1	BOX	CPC	2.44	2.42	91.9	0	2.2	1320	80	8884
990217	US 97	299.03	C	Johnson Cr	49.0202	33	10.22	1.1	SQSH	CST	1.87	1.07	29.5	0.4	4.3	11104	1929	10566
960240	US 97	299.04	D	Johnson Cr	49.0202	33												
960241	US 97	299.05	D	Johnson Cr	49.0202	0												
993964	US 97	324.67	C	Mosquito Cr	49.0321	67		1.1	RND	PCC	2.13	2.13	16.7	0.04	1.4			
991643	US 97	325.87	C	Okanogan R trib	49	67		1.1	RND	PCC	1.22	1.22	28.1	0	2.88			
993971	US 97	328.16	C	Whistler Canyon Cr	49	33	4.44	1.1	RND	PCC	0.91	0.91	35.3	0	1.4	2890	1122	919

[1]Field Codes

Codes Used for Culvert Shape

ARCH - bottomless arch
BOX - rectangular or square
ELL - ellipse
OTH - other
RND - round
SQSH - squash (pipe arch)

Codes Used for Culvert Materials

CAL - corrugated aluminium
CMP - corrugated metal pipe
CPC - cast in place concrete
CST - corrugated steel
OTH - other
PCC - precast concrete
PVC - plastic
SPA - structural plate aluminium
SPS - structural plate steel
SST - smooth steel

Feature Type

B - bridge
C - culvert
D - dam
DL - dike/levee
EC - erosion control
F - fill/puncheon
FD - fill/debris
FI - fishway
FL - flume

[2]The culvert # identifies individual culverts at multiple stream crossings. For example, in a triple culvert crossing, the first pipe would be 1.3, the second 2.3, and the third 3.3.

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
991040	I-5	86.2	C	Chehalis R trib	23	33		1.1	RND	PCC	1.22	1.22	62.8	0	0.08			
991499	I-5	94.57	C	Beaver Cr trib	23	33	7.2	1.1	RND	PCC	1.22	1.22	64.5	0	1.2	743	0	787
991659	I-5	98.11	C	Salmon Cr trib	23.0686	Unk		1.1	RND	OTH	0.91	0.91	60.6	0	0.3			
997706	I-5	104.13	C	Deschutes R trib	13	0	8.32	1.1	RND	OTH	0.76	0.76	197	0.38	0.99	636	172	364
990292	I-5	105.52	C	Moxlie Cr	13.0027	67	16.16	1.1	RND	CST	1.22	1.22	88.5	0	0.4	2341	378	5064
990199	I-5	105.85	C	Indian Cr	13.0026	0	28.26	1.1	RND	CST	0.91	0.91	100.6	0	3	5026	1624	18204
998888	I-5	109.19	C	College Cr	13	33		1.1	RND	OTH	0.76	0.76	220	0	0.55	6		
997705	I-5	109.62	C, FI	College Cr	13	33	12.46	1.1	RND	PCC	0.61	0.61	72.4	0.19	1.3	1330	319	749
933313	I-5	115.77	C	unnamed Red Salmon Cr trib	11	0	1.67	1.1	RND	PCC	0.46	0.46	59.3	0	18.61	23	2	1
990295	I-5	122.41	C	Murray Cr	12.0019	33		1.2	RND	PCC	0.91	0.91	61	0	0.02			
990295	I-5	122.41	C	Murray Cr	12.0019	33		2.2	RND	PCC	0.91	0.91	60.5	0	0.05			
933186	I-5	134.33	C	Puyallup R trib	10	0	2.82	1.1	BOX	PCC	0.51	0.48	1876	1.2	0.99	36	4	22
162173	SR 104	4.25	C	Barnhouse Cr trib	17.0000	0	9.28	1.1	RND	CST	0.76	0.76	93.8	0.2	4.08	889	424	758
991978	SR 104	5.75	C	Ludlow Cr trib	17	33		1.1	RND	CAL	0.8	0.8	52.8	0	1.2		0	26831
990375	SR 104	10.36	C	Shine Cr	17.0181	67	24.03	1.1	RND	CST	1.45	1.45	49.7	0.1	0.46	3166	1726	14910
991983	SR 104	12.05	C	Hood Canal trib	17	0		1.1	RND	CST	0.63	0.63	65.5	0	10.2	115		
162192	SR 104	12.57	C	Squamish Harbor trib	17	0	10.5	1.1	RND	CST	0.91	0.91	103.3	0	7.6	932	469	1082
990710	SR 104	16.55	C	Hood Canal trib	15	0	17.21	1.1	RND	PCC	0.91	0.91	69.6	0	6.17	1061	97	6186
992199	SR 104	17.67	C	Ladine DeCouteaux Cr	15	Unk		1.1	BOX	CPC	0.91	0.91	28	0	2.11			
992200	SR 104	17.82	C	Port Gamble trib	15	33	4.94	1.1	BOX	PCC	0.91	0.91	35	0.29	1.86	527	131	87
992201	SR 104	19.12	C	Port Gamble trib	15	0	7.88	1.1	RND	PCC	0.76	0.76	20.5	0.34	6.08	409	177	380
992202	SR 104	19.39	C	Port Gamble trib	15	0	7.06	1.1	RND	PCC	0.76	0.76	31.5	0	4.8	531	48	372
996729	SR 104	22.23	C	Grovers Cr trib	15.0304	33	15.39	1.1	RND	PCC	0.61	0.61	30	0	-0.06	1875	479	3624
992207	SR 104	22.95	C	Carpenter Cr	15.0309	0	20.92	1.1	BOX	CPC	0.91	0.91	22.8	0	1.49	2791	1838	3113
992208	SR 104	23.37	C	Appletree Cove trib	15	0	4.37	1.1	RND	PCC	0.45	0.45	24.9	0.41	1.69	198	0	34
991301	SR 105	31.38	C	South Bay trib	22.1321	33	1.78	1.1	RND	PCC	1.07	1.07	21.2	0.1	1.7	620	0	233
993007	SR 105	31.79	C	South Bay trib	22	0		1.1	RND	PCC	0.65	0.65	29.4	0	1.5	150		
990905	SR 105	36.26	C	South Bay trib	22	33		1.1	RND	PCC	0.61	0.61	48.4	0	1.5	34		
980275	SR 105	38.1	C	Johns R trib	22	0	10.36	1.1	RND	PCC	0.61	0.61	38.1	0	5	420	222	567
980274	SR 105	38.28	C	Johns R trib	22	33		1.1	RND	PCC	0.46	0.46	22.9	0	2	124	0	0
994782	SR 105	38.9	C	Grays Harbor trib	22.1269	0		1.1	RND	PCC	0.76	0.76	59.5	0	2.5	181		
991642	SR 105	39.77	C	O'Leary Cr trib	22	33	8.74	1.1	RND	PCC	0.91	0.91	26.8	0	1.4	468	10	856
991298	SR 105	40.5	C	South Bay trib	22	0	6.45	1.1	RND	PCC	1.07	1.07	73.2	0.24	3	228	58	170
991302	SR 105	41.76	C	Grays Harbor trib	22	0		1.1	RND	PCC	0.46	0.46	23.2	0.34	0.99	77		
991297	SR 105	44.56	C	Grays Harbor trib	22	33	5.83	1.2	RND	PCC	0.91	0.91	22.6	0	0.4	860	0	93
991297	SR 105	44.56	C	Grays Harbor trib	22	33	5.83	2.2	RND	PCC	0.91	0.91	23.2	0	0.9	860	0	93
996115	SR 106	2.07	C	unnamed Skokomish R trib	16	0	5.77	1.1	RND	PCC	0.61	0.61	14.5	0.3	4.14	318	12	116
996412	SR 106	2.33	EC	unnamed trib	16	0	3.71									522	47	100
996116	SR 106	2.36	C	Skokomish R trib	16	33	3.03	1.1	RND	PCC	0.46	0.46	12.3	0	1.54	528	48	100

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
996127	SR 106	3.39	C	Hood Canal trib	16	33		1.1	RND	PCC	0.61	0.61	10.6	0	3.38			
996383	SR 106	4.11	C	Hood Canal trib	16	0	5.95	1.1	RND	PCC	0.46	0.46	20	0.35	13.48	369	136	95
997163	SR 106	5.45	C	Hood Canal trib	14	33		1.1	RND	PCC	0.46	0.46	0.9	0.55	5	14		
997166	SR 106	7.64	C	Hood Canal trib	14	0	2.82	1.1	RND	OTH	0.3	0.3	14.3	0	6.4	300	69	34
997168	SR 106	7.71	C	Hood Canal trib	14	0	3.01	1.1	RND	PCC	0.46	0.46	13.1	1.14	6.6	404	93	45
997176	SR 106	9.7	C	Hood Canal trib	14	33		1.1	RND	PCC	0.46	0.46	0.9	0	6	9		
997182	SR 106	11.57	C	Hood Canal trib	14.0136	0	6.1	1.1	RND	PCC	1.22	1.22	15.2	0	6.92	825	760	913
990450	SR 106	12.3	C	Twanoh Cr	14.0134	67	21.6	1.1	BOX	CPC	1.22	1.22	12.3	0	3.1	3059	4104	3193
991245	SR 106	13.84	C	Hood Canal trib	14.0131	0	12.54	1.1	BOX	OTH	1.22	1.22	16.4	3.06	1.34	490	390	361
997184	SR 106	14.61	C	Hood Canal trib	14.0130	33	9.19	1.1	RND	OTH	0.76	0.76	52.5	0	0.93	1369	784	871
115 MC190	SR 106	14.72	C	Mulberg Cr	14	33	10.86	1.1	RND	PCC	0.61	0.61	12	0.16	9.92	273	81	317
115 MC218	SR 106	19.57	C	Devereaux Cr	14.0124	0	21.96	1.1	BOX	OTH	1.23	0.92	11.1	0.9	3	4156	2364	6222
997260	SR 106	19.84	C	Hood Canal trib	14	33		1.1	RND	PCC	0.46	0.46	13.2	0	3.2			
993043	SR 107	0.76	C	Little North R trib	24	67	9.56	1.1	RND	CAL	0.75	0.75	29.2	0	3.96	744	203	704
990911	SR 107	3.29	C	Preachers Sl trib	22	67		1.1	RND	PCC	0.61	0.61	19.5	0	1.23	80		
933360	SR 107	4.34	C	Chehalis R trib	22	0	4.39	1.1	RND	PCC	0.46	0.46	26.3	1.18	4.75	268	0	56
991727	SR 107	5.49	C	Chehalis R trib	22	0		1.1	RND	PCC	0.46	0.46	27.4	1	0	30		
993659	SR 108	0.18	C	EF Wildcat Cr trib	22	67	8	1.1	RND	PCC	0.76	0.76	16.4	0	1	192	0	287
997209	SR 108	4.27	C	MF Wildcat Cr trib	14	67		1.1	RND	PCC	0.61	0.61	15.5	0	2.59	109		
997210	SR 108	5.2	C	unnamed trib	14	0	16.43	1.1	RND	PCC	0.76	0.76	38.4	0.64	4.53	824	157	2958
991237	SR 108	5.5	C	Skookum Cr trib	14	0	13.13	1.1	RND	PCC	0.91	0.91	26	0	4.2	2814	1642	3626
990385	SR 108	5.54	C	Skookum Cr trib	14.0020	67	15.9	1.1	BOX	CPC	1.86	1.86	25.4	0	0.35	490	811	1537
991672	SR 108	7.62	C	Skookum Cr trib	14	0	10.58	1.1	RND	CST	1.52	1.52	16.1	0.51	1	2325	3549	1774
990278	SR 108	8.89	C, FI	McDonald Cr	14.0023	33	27.13	1.1	BOX	PCC	1.84	1.22	19.2	0.94	0.31	5909	5753	8155
997224	SR 108	9.35	C	Kamilche Cr trib	14	67	4.53	1.1	RND	PCC	0.61	0.61	13.3	0	3.64	375	154	224
997225	SR 108	9.47	C	Kamilche Cr	14.0022	67	19.11	1.1	RND	SPS	1.52	1.52	22	0.15	0.41	2867	549	5611
997229	SR 108	11.37	C	Skookum Cr trib	14	67		1.1	RND	PCC	0.91	0.91	17.4	0	2.59	132		
990921	SR 109	2.71	C	Grays Harbor trib	22	67	4.23	1.1	RND	PCC	0.46	0.46	15.8	0	1.15	366	0	190
991835	SR 109	3.41	C	Grays Harbor trib	22	33	8.09	1.1	RND	PVC	0.61	0.61	42.4	0.12	1	321	83	728
991836	SR 109	4.46	C	Little Hoquiam R trib	22.0163	67	10.98	1.1	RND	PCC	0.91	0.91	18.2	0	0.82	3347	34	8642
990932	SR 109	6.91	C, FI	Grass Cr trib	22	67	10.44	1.1	RND	CST	0.61	0.61	28	0	1.96	1323	0	2364
990938	SR 109	9.8	C	Gillis Sl trib	22	67	6.21	1.1	RND	PCC	0.46	0.46	32.8	0	0.64	216	0	297
994806	SR 109	13.39	C	Kurtz Sl trib	22	33		1.1	RND	OTH	0.83	0.83	48.3	0	2.7	70		
990920	SR 109	19.4	C	Connor Cr trib	21	67	11.5	1.1	RND	PCC	0.91	0.91	15.6	0	1.67	1806	0	1903
997311	SR 109	21.12	C	Copalis R trib	21	33	6.46	1.1	RND	OTH	0.7	0.7	50	0	0.99	92		
997360	SR 109	24.23	C	Boone Cr trib	21	33	6.12	1.1	RND	PCC	0.91	0.91	16.6	0	3.3	99	22	74
997363	SR 109	24.56	C	Boone Cr trib	21	67	9.93	1.1	RND	CST	1.22	1.22	19.3	0	1.27	1659	54	2090
991265	SR 109	26.1	C	Pacific Ocean trib	21.0764	0	10.52	1.1	RND	SST	1.22	1.22	22	0.2	1.6	500	0	1948
997780	SR 109	27.05	C	Pacific Ocean trib	21	67	7.35	1.1	RND	PCC	0.91	0.91	19.8	0	1.21	1121	4	872

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
997781	SR 109	27.41	C	Spruce Cr	21	0	6.96	1.1	RND	PCC	0.94	0.94	12.3	0	5.2	184	17	209
990138	SR 109	28.1	C	Elk Cr	21.0761	67	16.48	1.2	RND	PCC	1.22	1.22	20.2	0	2.5	5561	2604	14666
990138	SR 109	28.1	C	Elk Cr	21.0761	67	16.48	2.2	RND	PCC	0.61	0.61	19.7	0	0.99	5561	2604	14666
997784	SR 109	30.26	C	Pacific Ocean trib	21	0	10.46	1.1	RND	OTH	0.76	0.76	0.9	0.67	0.99	323	232	645
997786	SR 109	31.93	C	Moclips R trib	21	67		1.1	RND	PCC	0.76	0.76	25.1	0	1.35			
991272	SR 109	33.1	C	Wain Cr	21.0728	0	14.45	1.1	RND	PCC	1.52	1.52	45.7	0	1.9	3972	5849	4665
991266	SR 109	33.4	C	Pacific Ocean trib	21	0	8.63	1.1	RND	PCC	0.91	0.91	29.3	0.4	3	482	599	548
997787	SR 109	33.87	C	Pacific Ocean trib	21.0727	0	13.56	1.1	RND	PCC	1.22	1.22	31.5	0	3.96	1937	658	2389
990922	SR 109	35.73	C	Pacific Ocean trib	21.0718	0	7.19	1.1	RND	PCC	0.61	0.61	18	0.24	5	575	96	270
997790	SR 109	36	C	Pacific Ocean trib	21	0		1.1	RND	CAL	0.91	0.91	0.9	0	0.99			
991271	SR 109	36.38	C	Pacific Ocean trib	21.0716	0	11.07	1.1	RND	PCC	1.07	1.07	16.5	0.21	5.9	816	1239	1482
991270	SR 109	36.43	C, FI	Pacific Ocean trib	21.0715	67	10.25	1.1	RND	PCC	1.07	1.07	21	0	2.48	3081	677	3593
990923	SR 109	37.11	C	Pacific Ocean trib	21.0714	33		1.1	RND	PCC	0.91	0.91	31.7	0	1			
990924	SR 109	37.43	C	Pacific Ocean trib	21.0713	0	11.67	1.1	RND	PCC	0.91	0.91	16.9	0	4.1	1081	0	1996
990927	SR 109	39.15	C	Pacific Ocean trib	21.0711	0	11.73	1.1	RND	PCC	1.07	1.07	30.5	0.58	4	871	1254	1840
990559	SR 112	6.95	C	Strait of Juan de Fuca trib	19	33	7.32	1.1	RND	PCC	1.83	1.83	12.9	0.12	2.3	641	118	963
991739	SR 112	7.35	C	Olsen Cr	19.0227	33	18.18	1.2	RND	PCC	1.83	1.83	13.4	0	0.89	5827	6485	8049
991739	SR 112	7.35	C	Olsen Cr	19.0227	33	18.18	2.2	RND	PCC	1.83	1.83	13.2	0	0.6	5827	6485	8049
991259	SR 112	12.26	C	Hoko R trib	19.0148A	33		1.1	RND	PCC	0.61	0.61	16.1	0.2	1.6			
996684	SR 112	17.14	C	Clallam R trib	19	0	17.22	1.1	RND	CST	1.08	1.08	112.3	0	3.5	1429	629	1538
996687	SR 112	17.65	C	Clallam R trib	19	67		1.1	RND	CST	0.61	0.61	36.3	0	0.19	96		
996691	SR 112	19.36	C	Clallam R trib	19	0		1.1	RND	OTH	0.46	0.46	15.5	1.15	6	90		
991731	SR 112	21.1	C	Green Cr trib	19	0	7.45	1.1	RND	CST	1.52	1.52	19.8	0.98	1	418	287	305
996694	SR 112	21.64	C	unnamed trib	19	33		1.1	RND	OTH	0.46	0.46	20.1	0.65	5.8	155		
996578	SR 112	22.99	C	Green Cr trib	19	33		1.1	RND	PCC	0.61	0.61	16.7	0	2.3	199		
996552	SR 112	23.07	C	Green Cr trib	19	67		1.1	RND	CST	0.61	0.61	25.4	0	2.4	170		
996554	SR 112	24.26	C	Pysht R trib	19	33	5.79	1.1	RND	PCC	0.46	0.46	15.3	0.04	3.2	264	0	1610
996555	SR 112	24.77	C	Pysht R trib	19	67	8.69	1.1	RND	PCC	0.61	0.61	17.1	0	0.99	255	0	1858
996556	SR 112	25.2	C	Pysht R trib	19	0		1.1	RND	OTH	0.76	0.76	40.9	0.5	1.5			
991732	SR 112	29.12	C	Indian Cr	19.0112	0	13.43	1.1	RND	CST	0.61	0.61	39.6	0.03	3	2567	1126	3623
990941	SR 112	29.7	C	Butler Cr	19	0	11.94	1.1	RND	PCC	0.76	0.76	44.2	0.55	3.4	1351	864	1739
991258	SR 112	29.71	C	Butler Cr trib	19	0	13.48	1.1	RND	PCC	0.76	0.76	47.2	0.61	3	2262	1386	2824
996424	SR 112	31.46	C	Jim Cr trib	19	0		1.1	RND	SST	0.91	0.91	46	0.4	8.3			
996426	SR 112	32.85	C	Joe Cr trib	19	33		1.1	RND	PCC	0.76	0.76	18.5	0	4.2	107		
996427	SR 112	33.02	C	Joe Cr trib	19	0		1.1	RND	CST	0.61	0.61	22.3	0.3	3.5	88		
996430	SR 112	34.12	C	Deep Cr trib	19	0	7.28	1.1	RND	PCC	0.76	0.76	0.9	0	0.99	293	49	302
996431	SR 112	34.2	C	Deep Cr trib	19	33	7.17	1.1	RND	PCC	0.76	0.76	69.5	0	3.91	459	65	424
996432	SR 112	34.28	C	Deep Cr trib	19	0	8.22	1.1	RND	PCC	0.76	0.76	99.8	0.35	7.1	587	75	491
990715	SR 112	35.28	C	Strait of Juan de Fuca trib	19	0	10.93	1.1	RND	CST	1.21	1.21	17.8	0.45	2.7	182	145	237

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
996528	SR 112	44.32	C	Murdock Cr trib	19.0079	0		1.1	RND	OTH	0.91	0.91	28.8	1	4			
996529	SR 112	45.66	C	Murdock Cr trib	19	67		1.2	RND	OTH	0.61	0.61	16.6	0	1.7	137		
996529	SR 112	45.66	C	Murdock Cr trib	19	67		2.2	RND	OTH	0.61	0.61	16.6	0.05	1	137		
990480	SR 112	49.48	C, FI	Whiskey Cr	19.0020	33	12.73	1.1	BOX	CPC	2.13	1.83	51.8	0.99	4	2724	6414	4409
996536	SR 112	49.62	C	EF Whiskey Cr	19.0022	0	18.88	1.1	RND	CST	1.22	1.22	36.2	0.35	3.09	2385	922	13659
991693	SR 112	50.73	C	Whiskey Cr trib	19.0021	67		1.2	RND	PCC	0.91	0.91	34.9	0	0.37			
991693	SR 112	50.73	C	Whiskey Cr trib	19.0021	67		2.2	RND	PCC	0.91	0.91	34.2	0	0.08			
991738	SR 112	51.6	C	Uptha Cr	19.0010	33	10.73	1.1	RND	OTH	0.61	0.61	22.3	0	4.8	1268	51	2122
991660	SR 112	52.9	C	Nordstrom Cr	19.0011	67	11.46	1.1	RND	CST	1.52	1.52	32.2	0	0.8	4855	5388	5648
991661	SR 112	53.5	C	Falls Cr	19.0012	33	14.71	1.1	RND	CST	1.52	1.52	42.8	0	0.8	3557	1768	7530
991686	SR 112	56.5	C	Coville Cr trib	19.0003	0	16.53	1.1	BOX	CPC	2.44	2.44	50.8	0.09	5	3151	816	3473
996541	SR 112	57.05	C	Coville Cr trib	19	0		1.1	RND	PCC	0.61	0.61	49.9	0.4	3.9	150		
995802	SR 112	60.27	C	Elwha R trib	18	0		1.1	RND	CST	0.91	0.91	26.8	0.84	5.5	0		
995803	SR 112	60.71	C	Elwha R trib	18.0277	33	2.04	1.1	RND	CST	1.22	1.22	43.5	0.05	4.3	557	458	640
991733	SR 113	0.9	C	Beaver Cr trib	20	0	9.04	1.1	RND	CST	1.22	1.22	64	0.65	3	363	265	224
997103	SR 113	5.58	C	Beaver Cr trib	20.0328	67		1.1	RND	CST	2.9	2.9	19.9	0	2.4			
997105	SR 113	6.08	C	unnamed trib	20	33		1.1	RND	CST	0.61	0.61	22.3	0	5.8	87		
996563	SR 113	6.55	C	Pysht R trib	19	0		1.1	SQSH	CST	1.29	1.17	0.9	0.99	0.99	85		
996571	SR 113	8.35	C	Pysht R trib	19	0	5.89	1.1	RND	CST	0.91	0.91	45.9	0.7	3.2	240	7	130
996573	SR 113	9.7	C	Pysht R trib	19	0	7.02	1.1	RND	PCC	0.91	0.91	21.6	1.29	5.09	402	67	177
996574	SR 113	9.81	C	Pysht R trib	19	0	7.2	1.2	RND	PCC	1.22	1.22	63.1	0	7.9	350	34	242
996574	SR 113	9.81	C	Pysht R trib	19	0	7.2	2.2	RND	PCC	1.22	1.22	63.2	0	7.7	350	34	242
990077	SR 116	0.22	C	Chimacum Cr	17.0203	33	82.03	1.1	RND	SPS	2.67	2.82	21.5	0	1.6	71105	32770	186201
995521	SR 116	1.64	C	Port Townsend Bay trib	17	0	4.71	1.1	RND	PCC	0.61	0.61	19	0.53	4	240	34	49
990943	SR 116	4.67	C	Kilisut Harbor	17	Unk		1.2	RND	PCC	1.52	1.52	14.9	0	-0.67			
990943	SR 116	4.67	C	Kilisut Harbor	17	Unk		2.2	RND	PCC	1.52	1.52	15	0	-1.07			
995908	SR 119	2.76	C	Dow Cr	16.0112	0	20.12	1.1	ELL	SPS	2.94	3.15	30.4	1.8	1.61	4280	13364	9220
995019	SR 119	3.98	C	Lake Kokanee trib	16	33		1.1	RND	CST	1.22	1.22	12.4	0	2.78			
995913	SR 119	5.66	C	Lake Cushman trib	16	0		1.1	RND	OTH	0.3	0.3	10.2	0.11	9.8	49		
995915	SR 119	7.02	C	Lake Cushman trib	16	0	25.82	1.1	RND	PCC	0.61	0.61	20.1	0.34	3.3	689	708	2691
995916	SR 119	7.8	C	Lake Cushman trib	16	0	38.85	1.1	RND	CST	1.22	1.22	18.8	3.8	3.45	1709	1276	13070
995917	SR 119	8.2	C	Big Cr trib	16	0	9.89	1.1	RND	CST	0.61	0.61	32.6	0.25	2.14	560	141	936
995918	SR 119	8.35	C	Big Cr trib	16	67		1.1	RND	CAL	0.61	0.61	12.2	0.13	2.8	70		
995924	SR 119	10.8	C	Lake Cushman trib	16	0		1.1	RND	CST	0.46	0.46	21.6	0.9	12	54		
991939	SR 16	14.63	C	McCormick Cr trib	15	0	21.29	1.1	RND	PCC	0.76	0.76	131.1	0	4.04	1791	876	1958
991940	SR 16	14.65	C	McCormick Cr	15.0065	67	15.34	1.1	RND	PCC	1.37	1.37	44.4	0	0.45	2283	1040	3187
991941	SR 16	14.86	C	McCormick Cr	15.0065	33	21.42	1.1	RND	OTH	1.22	1.22	67.1	0	0.99	2401	1159	3305
991942	SR 16	15.02	C	McCormick Cr trib	15.0066	0	24.47	1.1	RND	CST	0.46	0.46	78.6	0	6.96	1859	765	5252
991944	SR 16	15.21	C	McCormick Cr	15.0065	33	34.69	1.1	RND	CST	1.52	1.52	57.1	0	1.26	4851	2021	9074

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
105 K051618a	SR 16	16.59	C	Goodnough Cr	15.0063	0	20.96	1.1	RND	CST	1.25	1.25	141.6	0.65	6.75	2211	1244	4437
15.0060 1.00	SR 16	17.8	C, FI	Purdy Cr	15.0060	67	23.37	1.1	RND	CMP	1.83	1.83	165.8	0.3	1.61	9012	7271	211998
996760	SR 16	19.28	C	Burley Cr trib	15	0		1.1	RND	OTH	0.61	0.61	73.3	0.82	9.84	115		
991866	SR 16	19.54	C	Burley Cr trib	15	0	9.22	1.1	RND	PCC	0.91	0.91	84.4	0.66	7.37	888	206	889
991516	SR 16	20.36	C, FI	Burley Cr trib	15	0	9.83	1.1	RND	PCC	1.07	1.07	85.9	0	5.07	1168	1059	1011
991867	SR 16	20.44	C, FI	Burley Cr trib	15	33	7.19	1.1	RND	PCC	0.91	0.91	80	0	4.75	1096	497	454
996752	SR 16	21.58	C	Burley Cr trib	15	0	9.77	1.1	RND	OTH	1.07	1.07	91.5	0	4.19	1070	405	984
15.0056 4.50	SR 16	22.7	C, FI	Burley Cr	15.0056	0	14.65	1.1	RND	PCC	1.37	1.37	146.7	0	0.17	2265	1232	4956
996755	SR 16	25.24	C	Blackjack Cr	15.0203	67	32.03	1.1	BOX	PCC	2.74	2.44	41.4	0	0.31	25986	47446	104388
990038	SR 16	25.3	C	Blackjack Cr	15.0203	67	31.75	1.1	BOX	PCC	2.74	2.44	69.5	0	0.94	23132	6249	99383
996756	SR 16	25.3	C	Blackjack Cr	15.0203	67	31.75	1.1	BOX	PCC	2.74	2.44	43.4	0	0.77	23051	6150	99283
990357	SR 16	26.8	C	Ross Cr	15.0209	33	11.04	1.1	RND	PCC	0.76	0.76	106.5	0.19	0.82	420	4	1670
990270	SR 16	27.1	C	Ross Cr trib	15.0210	0	26.45	1.1	RND	CST	1.22	1.22	140.2	0.1	2.5	4778	2891	12226
991670	SR 16	28.6	C	Sinclair Inlet trib	15.0215	0	13.91	1.1	RND	OTH	0.76	0.76	162	0	0.99	2192	1192	1594
930022	SR 160	1.92	C	unnamed trib	15	67		1.1	RND	PCC	0.46	0.46	15.6	0.25	0.77	140		
990366	SR 160	2.29	C	Salmonberry Cr	15.0188	33	32.51	1.1	SQSH	SPS	2.26	1.71	18.8	0.46	0.2	9210	6700	40963
991567	SR 160	4.5	C	Curley Cr trib	15.0186	0	12.69	1.1	RND	CST	0.76	0.76	53.1	0.74	5.08	837	197	2794
996954	SR 160	5.13	C	Sinclair Inlet trib	15.0183	33	3.69	1.1	RND	PCC	0.46	0.46	17.5	0	0.8	133	2	54
996955	SR 160	6.06	C	Puget Sound trib	15.0181	33		1.1	RND	PCC	0.46	0.46	35.6	0	1.1	129		
990970	SR 161	1.02	C	Mashel R trib	11	0		1.1	RND	PCC	1.22	1.22	12.6	0.75	1.2	176		
990971	SR 161	1.33	C	Mashel R trib	11	67		1.1	RND	PCC	0.46	0.46	14	0	2.2	112		
995475	SR 161	14.89	C	unnamed South Cr trib	11.0036	67	12.05	1.1	RND	PCC	0.93	0.93	16.1	0.41	1.24	7357	396	6869
991214	SR 162	3.7	C	Puyallup R trib	10.0399	33		1.1	RND	CST	0.31	0.31	108	0	0.99			
991802	SR 162	6.33	C	Puyallup R trib	10	67		1.1	RND	OTH	0.61	0.61	20.2	0	2.9			
105 R021121a	SR 162	11.04	C	Card Cr	10	67	23.48	1.1	BOX	CPC	0.95	0.63	9.2	0	1.85	2908	651	6148
105 R032918d	SR 162	12.44	C	Rauch Cr	10	67	10.33	1.1	RND	CST	0.76	0.76	15.6	0	1.28	836	34	2217
996291	SR 162	13.64	C	S Prairie Cr trib	10	67	10.71	1.2	RND	CST	0.91	0.91	18.9	0	0.63	841	753	3861
996291	SR 162	13.64	C	S Prairie Cr trib	10	67	10.71	2.2	RND	CST	0.91	0.91	18.6	0	-0.64	841	753	3861
105 R040517a	SR 162	19.11	C	S Prairie Cr trib	10	0	8.72	1.1	RND	PCC	0.91	0.91	49.8	0.28	10.1	2000	168	1956
996343	SR 162	19.7	C	Spiketon Cr	10.0449	0	20.53	1.1	BOX	PCC	1.6	1.85	18.1	3	1	8603	6859	9205
105 R033018B	SR 165	19.76	C	Spiketon Cr	10.0449	33	15.74	1.1	BOX	CPC	1.2	1.25	10.6	0	1.37	8125	6610	8855
992009	SR 166	0.73	C	Sinclair Inlet trib	15	0	5.24	1.1	RND	PCC	0.46	0.46	25.2	1.2	5.51	257	49	132
996956	SR 166	2.12	C	Sinclair Inlet trib	15	0		1.1	RND	PCC	0.91	0.91	111.3	0	0.99			
996957	SR 166	2.27	C	Sinclair Inlet trib	15	33		1.1	RND	OTH	0.61	0.61	73.5	0.11	3.06			
15.0208 0.00	SR 166	2.54	C	Sinclair Inlet trib	15.0208	33	20.23	1.1	RND	OTH	0.91	0.91	149.1	0	1.92	2928	1017	3196
920412	SR 166	4.11	C	Sinclair Inlet trib	15	0	11.39	1.1	RND	OTH	0.91	0.91	313.6	0	0.99	716	56	725
15.0201 0.90	SR 166	4.52	C	Olney Cr	15.0201	0	14.29	1.1	BOX	CPC	1.22	1.22	94.9	0	3	2516	1713	4489
930603	SR 167	0.14	C	Milwaukee Canal trib	10	33		1.1	RND	PCC	0.76	0.76	14.8	0	3.38			
990083	SR 167	0.82	C	Clear Cr	10.0022	33		1.1	BOX	CPC	4.57	4.57	0.9	0	0.99			

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
996288	SR 167	11.72	C	Milwaukee Canal trib	10	33	8.03	1.1	RND	CST	1.37	1.37	88.5	0.29	1	406	0	2100
995526	SR 19	2.49	C	Ludlow Cr trib	17	33		1.1	RND	PCC	0.46	0.46	17.9	0	3.1	120		
995529	SR 19	2.93	C	Ludlow Cr trib	17	33		1.1	RND	OTH	0.38	0.38	18	0	4.2			
995532	SR 19	3.48	C	Ludlow Cr trib	17	33		1.1	RND	PCC	0.46	0.46	22.3	0.1	5.6			
990711	SR 19	4.3	C, FI	Swansonville Cr	17.0195	0	29.75	1.1	RND	PCC	0.61	0.61	29.4	0.22	3.4	3699	810	4980
991579	SR 19	6.82	C	EF Chimacum Cr trib	17.0000	0	16.26	1.1	RND	PCC	0.61	0.61	19.9	0	5.48	820	97	376
995743	SR 20	0.65	C	Discovery Bay trib	17.0218	0	10.36	1.1	BOX	CPC	0.92	0.92	60.7	1.7	9	1208	342	1110
995745	SR 20	1.12	C	Discovery Bay trib	17	0		1.1	BOX	CPC	0.92	0.92	32.4	0.53	15.9	40		
995748	SR 20	1.39	C	Discovery Bay trib	17.0217	0		1.1	BOX	CPC	0.92	0.92	0.9	0.97	0.99	59		
995753	SR 20	3.67	C	Discovery Bay trib	17	0	7.41	1.1	BOX	CPC	0.92	0.92	44.2	1	2.6	1027	216	335
997231	SR 3	2.11	C	Goldsburrough Cr trib	14	0		1.1	RND	PCC	0.76	0.76	153	0	0.99	85		
997235	SR 3	4.67	C	Oakland Bay trib	14	0	10.63	1.1	RND	PCC	0.83	0.83	56.4	0	4.9	483	32	310
997365	SR 3	7.16	C	Oakland Bay trib	14.0050	0	12.59	1.1	RND	PCC	0.46	0.46	17.5	0.6	6.6	661	248	1351
997368	SR 3	7.59	C	Oakland Bay trib	14	0	7.46	1.1	RND	PCC	0.46	0.46	17.2	0.32	4.54	281	70	146
997369	SR 3	7.96	C	Oakland Bay trib	14	33		1.1	RND	CAL	0.61	0.61	31.7	0.2	2.5	88		
997371	SR 3	8.28	C	Oakland Bay trib	14	33	20.6	1.1	RND	PCC	0.61	0.61	12.6	0.24	2.14	429	372	2314
991987	SR 3	21.29	C	Case Inlet trib	14	33		1.1	RND	CST	0.45	0.45	40.4	0	3.7	29		
991795	SR 3	23.94	C	Devereaux Cr trib	14	0	12.79	1.1	RND	PCC	0.6	0.6	24.2	0.1	4.8	1539	427	2143
991796	SR 3	24.71	C	Lynch Cove trib	14	0		1.1	RND	PCC	0.46	0.46	36	1.07	8			
996732	SR 3	24.91	C	Hood Canal trib	15	0	2.49	1.1	RND	PCC	0.3	0.3	0.9	0.05	0.99	137	17	43
996734	SR 3	25.15	C	Hood Canal trib	15.0123	0	10.63	1.1	RND	PCC	0.61	0.61	16.1	0.23	7.31	880	429	575
991797	SR 3	25.31	C	Sweetwater Cr	15.0504	0	18.74	1.1	BOX	PCC	2.45	1.65	13.5	0.06	0.66	1096	861	1479
996735	SR 3	26.13	C	Mindy Cr trib	15	0	9.73	1.1	RND	OTH	0.61	0.61	72.1	0	3.97	1305	221	1106
999626	SR 3	26.26	C	Mindy Cr	15	0	13.49	1.1	RND	CST	0.3	0.3	130	0	0.99	728	534	1059
991991	SR 3	26.4	C	Union R trib	15.0504	0	21.28	1.1	OTH	PCC	0.53	0.53	128	0	3.36	1976	1239	2558
991728	SR 3	29.63	C	Union R trib	15.0512	0	9.7	1.1	BOX	PCC	1.22	1.22	13.7	0.34	2.5	915	810	1162
990168	SR 3	32.1	C	Gorst Cr	15.0216	33	19.08	1.1	BOX	CPC	1.25	1.25	49.7	0.22	1.95	1483	403	14275
991585	SR 3	34.27	C	Gorst Cr trib	15.0217	33	19.54	1.1	RND	PCC	0.91	0.91	68.7	0	4.7	2647	2268	5291
991995	SR 3	36.1	C	Wright Cr	15	33	18.45	1.1	BOX	CPC	2.45	2.45	68.7	0	0.32	3848	1763	15967
991994	SR 3	36.51	C	Sinclair Inlet trib	15	0	4.08	1.1	OTH	CPC	1.23	1.23	111.8	0.34	5.46	241	11	54
996508	SR 3	38.41	C	Ostrich Cr	15.0226	0	20	1.1	RND	PCC	1.07	1.07	359.2	1.3	2.2	2745	1796	3350
996798	SR 3	39.13	C	Dyes Inlet trib	15.0228	0	3.97	1.1	RND	CST	0.61	0.61	156.3	2.62	5.71	238	55	49
996796	SR 3	39.45	C	Dyes Inlet trib	15	0		1.1	RND	CST	0.61	0.61	85.2	0.57	3.8	137		
996741	SR 3	40.37	C	Dyes Inlet trib	15	67		1.1	RND	PCC	0.91	0.91	87.4	0	0.73	200		
15.0229 0.10	SR 3	40.96	C, FI	Chico Cr	15.0229	67	48	1.2	BOX	CPC	2.44	2.44	122.3	0	0.4	35048	60475	265684
15.0229 0.10	SR 3	40.96	C, FI	Chico Cr	15.0229	67	48	2.2	BOX	CPC	2.45	2.45	119.7	0.35	0.4	35048	60475	265684
991907	SR 3	40.97	C	Chico Cr trib	15.0240	0	16.94	1.1	RND	CST	0.91	0.91	14.6	0.5	2.2	1830	947	1182
996795	SR 3	40.99	C	Chico Cr trib	15.0240	0	12.96	1.1	RND	CAL	0.91	0.91	53.8	0	2.56	1480	822	1031
996794	SR 3	41.08	C	Chico Cr trib	15.0240	0	11	1.1	RND	OTH	0.61	0.61	129.9	0	3.8	1276	715	985

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
996742	SR 3	41.52	C, FI	Dyes Inlet trib	15.0241	0	10.93	1.1	RND	CST	1.07	1.07	99.8	0	6	1736	1465	1702
996745	SR 3	41.81	C, FI	Dyes Inlet trib	15	0		1.1	RND	CST	0.61	0.61	93.1	0.99	11.4	541		
996747	SR 3	42.21	C, FI	Dyes Inlet trib	15.0243	0	6.56	1.1	RND	CST	0.91	0.91	88.2	0.6	9.66	758	712	542
996748	SR 3	42.56	C	Dyes Inlet trib	15.0244	0	10.53	1.1	RND	OTH	1.22	1.22	223.9	0	7.3	1528	2412	1639
996856	SR 3	43.58	C	Koch Cr	15.0245	0		1.1	OTH	CST	1.07	1.07	0.9	0.7	0.99	115		
990708	SR 3	44.62	C	Strawberry Cr trib	15.0247	0	15.89	1.1	RND	CST	1.22	1.22	93.9	1	3.5	705	706	843
15.0246 0.96	SR 3	44.8	C, FI	Strawberry Cr	15.0246	67	19.15	1.1	RND	CPC	1.68	1.68	0.9	0.99	0.99	1998	2014	3525
993013	SR 3	46.09	C	WF Clear Cr trib	15	0	9.23	1.1	RND	CAL	0.61	0.61	112.7	0	5.6	516	10	3098
996801	SR 3	46.82	C	Clear Cr trib	15	0	5.19	1.1	RND	OTH	0.46	0.46	101	0.94	9.77	500	6	142
996803	SR 3	47.72	C, FI	Clear Cr trib	15.0254	33	14.22	1.1	RND	CST	1.37	1.37	66.5	0	4.06	817	865	1237
996804	SR 3	49.48	C	Big Scandia Cr	15.0280	33	16.5	1.1	RND	CST	1.37	1.37	66.4	0.25	1.3	1924	825	1874
991241	SR 3	50.85	C	SF Johnson Cr	15.0282	0	13.5	1.1	RND	CST	0.91	0.91	182.9	0.18	8	1636	790	3581
990218	SR 3	50.94	C	MF Johnson Cr	15.0283	0	15.79	1.1	RND	CST	1.52	1.52	121.9	0	5	625	576	930
991744	SR 3	52.21	C	Johnson Cr	15.0283	0	9.06	1.1	RND	CST	0.92	0.92	67.4	0.22	2.87	1050	346	333
991242	SR 3	57.23	C	Kinman Cr trib	15	0	14.71	1.1	RND	PCC	0.76	0.76	27.3	0	2.64	1730	871	4012
991613	SR 3	57.87	C	Hood Canal trib	15	0	6.07	1.1	RND	PCC	0.61	0.61	31.7	0.17	2.91	346	169	268
991240	SR 3	58.21	C	Hood Canal trib	15.0367A	0	9.16	1.1	RND	PCC	0.61	0.61	27.4	0.03	4	1833	624	1386
990395	SR 3	58.49	C	Spring Cr	15.0364	0	13.37	1.1	RND	PCC	0.91	0.91	33.2	0	1.79	1441	1094	1578
996810	SR 3	59.39	C	Hood Canal trib	15.0363	0		1.1	RND	OTH	0.61	0.61	80.9	0	5.68	115		
991612	SR 3	59.52	C	Hood Canal trib	15.0361	0	8.14	1.1	RND	PCC	0.61	0.61	40.1	0	6.4	955	511	862
996811	SR 3	59.55	C	unnamed trib	15.0362	0	6.68	1.1	RND	PCC	0.61	0.61	36.6	0	5.17	640	250	392
996699	SR 300	2.36	C	Union R trib	15	67	13.7	1.1	RND	OTH	1.22	1.22	13.6	0.2	1.76	1427	511	5350
996700	SR 300	2.38	C	Union R trib	15	67		1.1	RND	PCC	0.46	0.46	15.9	0	2.45	89		
991559	SR 302	0.9	C	North Bay trib	15.0001	0	7.4	1.1	RND	CST	0.76	0.76	25.9	1.05	1	285	151	270
996763	SR 302	1.25	C	Coulter Cr trib	15	0		1.2	RND	CST	0.46	0.46	31	0.36	1.52	128		
996763	SR 302	1.25	C	Coulter Cr trib	15	0		2.2	RND	CST	0.46	0.46	30.8	0.32	1.4	128		
996765	SR 302	1.86	C	North Bay trib	15	33	5.52	1.1	RND	OTH	0.46	0.46	11.5	0.06	3.8	389	16	274
991522	SR 302	2.1	C	North Bay trib	15	67	5.97	1.1	RND	PCC	0.91	0.91	14	0	0.56	645	78	758
991239	SR 302	2.36	C	North Bay trib	15	0	8.2	1.1	RND	CST	0.46	0.46	14.2	0.55	2.25	775	101	889
991523	SR 302	2.48	C	North Bay trib	15	0	7.94	1.1	RND	CST	0.91	0.91	16.4	0.34	4.6	725	86	525
991525	SR 302	4.2	C	Victor Cr	15.0014	67	19.17	1.1	RND	PCC	0.91	0.91	15.3	0	1.44	2041	1238	44001
991526	SR 302	4.7	C	Case Inlet trib	15	0		1.1	RND	OTH	0.61	0.61	19.2	0.6	6.9	175		
991527	SR 302	5.5	C	Rocky Bay trib	15	0	7.2	1.1	RND	PCC	1.37	1.37	57.8	0	4.8	565	70	557
990286	SR 302	11.3	C	Minter Cr	15.0048	33	47.63	1.2	BOX	CPC	2.44	1.83	37.5	0	-0.48	34207	32753	94676
990286	SR 302	11.3	C	Minter Cr	15.0048	33	47.63	2.2	BOX	CPC	2.44	1.83	37.5	0	-0.4	34207	32753	94676
15.0051 0.10	SR 302	11.44	C, FI	Little Minter Cr	15.0051	67	21.49	1.1	BOX	CPC	1.83	1.22	17.1	0.18	0.99	6102	1867	19464
15.0051 0.20	SR 302	11.5	C, FI	Little Minter Cr	15.0051	67	21.26	1.1	BOX	CPC	1.83	1.22	16.8	0.07	0.99	5496	1719	19122
990345	SR 302	15.8	C	Purdy Cr	15.0060	67	29.88	1.1	BOX	CPC	1.85	1.85	24.8	0	0.5	10436	9523	216787
996783	SR 302	15.95	C	Henderson Bay trib	15	33	13.26	1.1	RND	PCC	0.76	0.76	63.1	0	1.8	878	725	503

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
105 K051518a	SR 302	16.15	C	Goodnough Cr	15.0063	0	22.95	1.1	RND	PCC	1.38	1.38	63.6	0	3.06	3068	1988	5502
996785	SR 302	16.44	C	Henderson Bay trib	15	0		1.1	RND	PCC	0.31	0.31	122	2	0.99	77		
994085	SR 303	6.63	C	Hoot Cr	15.0256C	67	18.96	1.2	RND	CST	0.91	0.91	19	0	0.05	4762	860	11033
994085	SR 303	6.63	C	Hoot Cr	15.0256C	67	18.96	2.2	RND	CST	0.91	0.91	18.6	0	0.3	4762	860	11033
990024	SR 303	6.66	C	Hoot Cr	15.0256C	67	18.95	1.3	RND	CST	0.61	0.61	94.6	0	0.67	4820	860	11040
990024	SR 303	6.66	C	Hoot Cr	15.0256C	67	18.95	2.3	RND	CST	0.61	0.61	94.6	0	0.61	4820	860	11040
990024	SR 303	6.66	C	Hoot Cr	15.0256C	67	18.95	3.3	RND	CST	0.61	0.61	94.4	0	0.64	4820	860	11040
994086	SR 303	6.68	C	Hoot Cr	15.0256C	67	18.16	1.2	RND	CST	0.91	0.91	36.7	0	1.72	3259	857	8508
994086	SR 303	6.68	C	Hoot Cr	15.0256C	67	18.16	2.2	RND	CST	0.91	0.91	0.9	0	0.99	3259	857	8508
930408	SR 303	6.7	C	Hoot Cr trib	15	67	9.39	1.1	RND	CST	0.91	0.91	45.6	0	0.81	1365	3	2525
930416	SR 303	6.72	C	unnamed trib	15	33	4.52	1.1	RND	CST	0.46	0.46	34.2	0	0.4	42	0	68
994320	SR 305	0.27	C	Eagle Harbor trib	15.0324	0	22.08	1.1	RND	OTH	1.22	1.22	102.4	0.45	3.3	1873	1059	9715
994324	SR 305	0.62	C	Eagle Harbor trib	15.0324	0	18	1.1	RND	PCC	0.76	0.76	49.7	1.25	0.89	1151	56	8846
933643	SR 305	1.38	C	Eagle Harbor trib	15	33		1.1	RND	PCC	0.46	0.46	28.1	0	1.14			
933644	SR 305	1.9	C	Murden Cove trib	15	0		1.1	RND	OTH	0.46	0.46	55.1	0.27	6.73			
994325	SR 305	2.44	C	Murden Cove trib	15.0321	33	29.44	1.1	BOX	CPC	1.56	1.22	46.8	0	0.62	2358	3799	3715
933663	SR 305	3.37	C	Murden Cove trib	15	0		1.1	RND	PCC	0.46	0.46	29.7	0.34	4.08			
994326	SR 305	3.73	C	Manzanita Cr	15.0344	0	12.01	1.1	RND	PCC	0.79	0.79	39.7	1.2	4.3	799	12	4093
933685	SR 305	5.23	C	Port Madison trib	15	33		1.1	RND	PCC	0.46	0.46	79.5	0	1.91			
933686	SR 305	5.37	C	Manzanita Bay trib	15	33		1.1	RND	PCC	0.76	0.76	37	0	1			
991958	SR 305	7.28	C	Klebeal Cr	15.0296	0	29.48	1.1	RND	PCC	1.22	1.22	61.3	0	2.61	3767	1027	8345
994327	SR 305	8.92	C	Liberty Bay trib	15.0293	0	20.91	1.2	RND	PCC	0.91	0.91	89.5	0.86	2.7	3186	2231	4456
994327	SR 305	8.92	C	Liberty Bay trib	15.0293	0	20.91	2.2	RND	PCC	0.91	0.91	90.8	2.35	1.41	3186	2231	4456
994328	SR 305	10.55	C	Liberty Bay trib	15.0289	0		1.1	RND	PCC	0.91	0.91	41.5	2	7.5			
991855	SR 305	12.59	C	SF Dogfish Cr trib	15	33	10.84	1.1	RND	OTH	0.46	0.46	28.1	0	1.78	255	1	2217
933284	SR 305	13.12	C	Dogfish Cr trib	15	0		1.1	RND	PCC	0.61	0.61	41.5	0.33	7.87			
991998	SR 307	0.98	C	unnamed trib	15	0	3.96	1.1	RND	PCC	0.3	0.3	9.5	0	5.46	212	122	111
991997	SR 307	0.98	C	unnamed trib	15	0	3.98	1.1	RND	PCC	0.45	0.45	16.5	0	5.2	224	123	112
991999	SR 307	1.34	C	Dogfish Cr trib	15.0286	67	19.84	1.1	RND	CST	1.21	1.21	21.4	0.6	0.32	2734	2420	4738
991572	SR 307	1.45	C	Dogfish Cr trib	15.0286	33	22.28	1.1	RND	CST	1.21	1.21	33.8	0.35	2.15	2187	1771	3849
991851	SR 307	2.5	C	Gamble Cr trib	15.0358	0	15.07	1.1	RND	OTH	0.61	0.61	60	0	3.04	945	369	903
996931	SR 308	0.3	C	Clear Cr	15.0249	33		1.1	RND	PCC	0.91	0.91	34.1	0	1.67			
990235	SR 308	0.94	C	Big Scandia Cr	15.0280	33	23.62	1.1	RND	CST	1.83	1.83	47	0	1.26	5548	3895	7340
15.0280 1.00	SR 308	1.15	C, FI	Big Scandia Cr	15.0280	67	21	1.1	RND	SPS	1.85	1.85	89.1	0	2.6	6430	5016	9257
992008	SR 308	1.33	C	Little Scandia Cr	15.0279	0	15.47	1.1	RND	CST	1.05	1.05	100.3	0.1	2.76	1126	806	1166
991000	SR 308	2.16	C	Puget Sound trib	15.0278	0	15.98	1.1	RND	PCC	0.76	0.76	34.1	0	2.43	1576	433	1934
996933	SR 308	2.41	C	Liberty Bay trib	15	0		1.1	RND	PCC	0.46	0.46	21.8	0	3.4	110		
996932	SR 308	2.57	C	Liberty Bay trib	15.0277	0		1.1	RND	PCC	0.61	0.61	26.6	0.6	5.5			
996617	SR 410	14.04	C	Fennel Cr	10.0406	67		1.2	BOX	CPC	1.83	1.83	51	0	0.2			

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
996617	SR 410	14.04	C	Fennel Cr	10.0406	67		2.2	BOX	CPC	1.83	1.83	51	0	0.2			
996618	SR 410	17.26	C	Fennel Cr	10.0406	67		1.1	RND	PCC	0.76	0.76	22.3	0	0.4			
996619	SR 410	21.73	C	LkTapps Canal trib	10	0		1.1	RND	PCC	0.91	0.91	26.9	0.1	1.1			
125 1502W11B	SR 507	8.22	C	Skookumchuck R trib	23	33		1.1	RND	PCC	1.25	1.25	0.9	0	1			
997703	SR 507	18.9	C	McIntosh Lk trib	13	67	2.66	1.1	RND	PCC	1.22	1.22	28.4	0	1	5464	299	3767
995891	SR 507	25.96	C	Thompson Cr	11	67		1.1	RND	OTH	1.07	1.07	54.2	0	0.7			
995893	SR 507	30.61	C	McKenna Cr	11.0055	33	21.71	1.1	RND	SPS	2.25	2.25	29.4	0	1.1	1464	187	15914
933185	SR 509	5.81	C	Commencement Bay trib	10	0	6.11	1.1	RND	SST	0.61	0.61	0.9	1.16	0.99	107	0	51
990656	SR 510	5.64	C	McAllister Cr trib	11.0328	67	9.18	1.1	RND	PCC	0.61	0.61	100.6	0	1	1449	0	1790
991052	SR 510	6.28	C	McAllister Cr trib	11	0		1.1	RND	OTH	0.61	0.61	31.3	0.5	5.5	170		
991051	SR 510	12.97	C	Thompson Cr	11.0041	33		1.1	RND	PCC	1.37	1.37	16.1	0.18	1.4	115		
997920	SR 512	3.3	C	NF Clover Cr trib	12.0015	67	7.59	1.1	RND	CST	1.22	1.22	73.9	0.42	0.85	1600	0	859
932349	SR 512	8.25	C	Silver Cr	10	67	5.42	1.1	RND	CST	0.76	0.76	56.3	0	0.95	395	5	252
932345	SR 512	8.25	C	Silver Cr	10	0	7.89	1.1	RND	CST	0.76	0.76	34.8	0	2.81	672	18	375
932347	SR 512	8.25	C	Silver Cr	10	67	5.62	1.3	RND	CST	1.07	1.07	67.6	0.12	-0.19	508	9	292
932347	SR 512	8.25	C	Silver Cr	10	67	5.62	2.3	RND	CST	1.07	1.07	67	0.05	0.06	508	9	292
932347	SR 512	8.25	C	Silver Cr	10	67	5.62	3.3	RND	CST	1.07	1.07	67.9	0	0.16	508	9	292
932351	SR 512	9.68	C	Puyallup R trib	10	0		1.1	RND	PCC	0.76	0.76	156.6	0.35	3.04			
931151	SR 7	17.05	C	Nisqually R trib	11	33		1.1	RND	PCC	0.46	0.46	12.4	0	2.7			
997605	SR 7	17.38	C	Alder Lk trib	11	0		1.1	RND	PCC	0.91	0.91	29.2	0	9	31		
997609	SR 7	18.28	C	Alder Lk trib	11	33		1.1	RND	PCC	0.61	0.61	24.6	0	2.7	7		
997612	SR 7	18.5	C	Alder Lk trib	11	0		1.1	RND	PCC	0.76	0.76	27	0	6	33		
990677	SR 7	19.15	C	Alder Lk trib	11	0		1.1	RND	PCC	0.76	0.76	35.8	0.48	12.9			
997615	SR 7	19.79	C	Alder Lk trib	11	33		1.1	RND	PCC	0.61	0.61	35.7	0	7.8	185		
990679	SR 7	21.3	C	Alder Lk trib	11.0136	33		1.2	RND	PCC	0.91	0.91	36.6	0.05	4			
990679	SR 7	21.3	C	Alder Lk trib	11.0136	33		2.2	RND	PCC	0.91	0.91	36.6	0.05	4			
990680	SR 7	21.41	C	Alder Lk trib	11	33		1.1	RND	PCC	0.61	0.61	25.2	0.32	2.94			
990681	SR 7	21.58	C	Alder Lk trib	11	67		1.1	RND	PCC	0.91	0.91	57.9	0.02	1.8			
990682	SR 7	21.68	C	Alder Lk trib	11.0133	67		1.1	BOX	PCC	1.52	1.52	37.3	0	4.7			
990683	SR 7	22.83	C	La Grande Reservoir trib	11.0130	33		1.1	RND	PCC	0.76	0.76	25.9	0.2	3			
990684	SR 7	23.32	C	La Grande Reservoir trib	11.0129	0		1.1	BOX	CPC	1.28	0.93	48	2	12.44	6		
990685	SR 7	24.83	C	Nisqually R trib	11.0128	0		1.1	RND	CST	0.76	0.76	26	0.5	7	0		
997623	SR 7	28.02	C	Mashel R trib	11	33		1.1	RND	SST	0.61	0.61	36.1	0.32	0.5	75		
990686	SR 7	32.4	C	Silver Lk trib	11	67		1.1	RND	PCC	0.46	0.46	18.4	0.12	0.59			
997628	SR 7	33.52	C	Cranberry Lk trib	11	67		1.1	RND	PCC	0.46	0.46	13.4	0	2.31	136		
991225	SR 7	37.5	C	South Cr trib	11.0032	0	23.43	1.1	SQSH	CST	1.4	1	23.6	0.3	2.8	5607	277	10932
990688	SR 7	38.12	C	South Cr trib	11	67	10.11	1.1	RND	PCC	0.61	0.61	23.9	0	0.51	2381	287	3412
996274	SR 7	58.34	C	Commencement Bay trib	10	33		1.1	RND	PCC	0.46	0.46	1355	0.59	0.99			
991229	SR 702	4.53	C	Nisqually R trib	11.0058	67		1.1	RND	CST	0.91	0.91	16.5	0	1.5			

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
995899	SR 702	5.6	C	Horn Cr trib	11	67		1.1	RND	PCC	0.61	0.61	17.2	0	1.9	10		
995476	SR 706	0.2	C	Nisqually R trib	11	33		1.1	RND	PCC	1.07	1.07	32.1	0.62	1.9			
991226	SR 706	1.75	C	Nisqually R trib	11	67		1.1	BOX	CPC	1.83	1.54	19.7	0.09	1.3			
991235	SR 706	6.01	C	Nisqually R trib	11	67		1.1	RND	PCC	0.91	0.91	20.5	0.09	2.5			
991637	SR 706	8	C	Nisqually R trib	11	33		1.1	SQSH	CST	1.5	0.96	36.1	0	4.5			
991227	SR 706	9.81	C, FI	Nisqually R trib	11.0222	67		1.1	SQSH	CST	2.31	1.59	31	0	1			
995074	SR 706	10.43	C	Nisqually R trib	11.0224	0		1.2	RND	PCC	0.91	0.91	15.1	0.55	1.8			
995074	SR 706	10.43	C	Nisqually R trib	11.0224	0		2.2	RND	PCC	0.91	0.91	15.4	0.7	0.8			
995095	SR 706	10.45	C	unnamed trib	11	67		1.1	RND	PCC	0.76	0.76	25.6	0	1.3			
995077	SR 706	11.62	C	Nisqually R trib	11	0		1.1	RND	PCC	1.22	1.22	18.7	2.2	10	169		
991063	SR 8	0.1	C	Cloquallum Cr trib	22	33	9.5	1.1	RND	CST	0.91	0.91	72.8	0	1.5	234	0	656
993723	SR 8	1.27	C	Cloquallum Cr trib	22	67	9.88	1.1	RND	PCC	0.46	0.46	50.8	0	0.6	767	3	1420
993727	SR 8	1.37	C	Cloquallum Cr trib	22	33	8.45	1.1	RND	PCC	0.46	0.46	51.1	0	0.08	155	0	196
993724	SR 8	3.16	C	Wildcat Cr trib	22	0	11	1.1	RND	CST	1.3	1.3	62.3	0	5.5	2269	359	1625
993725	SR 8	3.51	C	Wildcat Cr trib	22	0	7	1.1	RND	CST	0.91	0.91	51.8	0	10	873	68	307
991066	SR 8	3.72	C	unnamed pond	22	0	10.06	1.1	RND	CST	0.76	0.76	72	0.38	0.3	418	0	4339
22.0507 0.10	SR 8	5	C, FI	MF Wildcat Cr	22.0507	33	39.37	1.1	BOX	CPC	0.99	0.99	0.9	0.99	0.99	30005	20778	79247
990770	SR 8	6.1	C	EF Wildcat Cr trib	22	67	8.77	1.1	RND	CST	0.91	0.91	46.1	0	0.6	359	0	438
990133	SR 8	6.3	C	EF Wildcat Cr	22.0503A	33	52.71	1.2	BOX	CPC	3.06	2.43	90	0.06	0.3	21924	26044	70277
990133	SR 8	6.3	C	EF Wildcat Cr	22.0503A	33	52.71	2.2	BOX	PCC	2.87	2.44	89.9	0.06	0.25	21924	26044	70277
990773	SR 8	9.1	C	Mox Chehalis Cr trib	22	33	20.63	1.1	BOX	CPC	1.22	1.22	42.8	0	0.81	2481	1179	2311
993729	SR 8	10.12	C	Mox Chehalis Cr trib	22	33	12.21	1.1	RND	PCC	0.61	0.61	16.8	0	2.26	649	222	3564
993728	SR 8	10.12	C	Mox Chehalis Cr trib	22	33	12.22	1.1	RND	PCC	0.61	0.61	26.4	0	0.87	671	243	3581
990693	SR 8	12.15	C	Kennedy Cr trib	14	0	3.61	1.1	BOX	PCC	1.22	0.91	30.5	1.28	3	1770	1550	2205
990694	SR 8	12.16	C	Kennedy Cr trib	14	0	3.61	1.1	BOX	PCC	1.22	0.91	31.1	0	6	1770	1550	2205
997197	SR 8	13.25	C	Kennedy Cr trib	14	0	2.23	1.1	BOX	PCC	2.3	1.22	38.1	0	1.79	1400	209	615
990695	SR 8	13.25	C	Kennedy Cr trib	14	0	2.23	1.1	BOX	PCC	2.3	1.22	50.6	0	6.6	1345	209	612
997198	SR 8	13.51	C	Kennedy Cr trib	14	0	3.23	1.2	BOX	PCC	1.52	1.22	43.7	0.29	4.41	1354	982	1361
990692	SR 8	13.51	C	Kennedy Cr trib	14	0	3.54	1.2	BOX	PCC	1.52	1.22	42	0.12	4.77	1354	982	1361
997198	SR 8	13.51	C	Kennedy Cr trib	14	0	3.23	2.2	BOX	PCC	1.52	1.22	43.7	0.29	4.41	1354	982	1361
990692	SR 8	13.51	C	Kennedy Cr trib	14	0	3.54	2.2	BOX	PCC	1.52	1.22	42	0.2	4.77	1354	982	1361
990696	SR 8	14.09	C	Kennedy Cr trib	14	33	2.72	1.1	BOX	PCC	1.83	1.22	51	0	1.27	1217	1320	707
990697	SR 8	14.8	C	Kennedy Cr trib	14	67	1.65	1.2	RND	PCC	0.76	0.76	48.2	0.03	0.7	395	285	143
990697	SR 8	14.8	C	Kennedy Cr trib	14	67	1.65	2.2	RND	PCC	0.76	0.76	48.1	0	0.87	395	285	143
990698	SR 8	14.93	C	Kennedy Cr trib	14	33	1.74	1.1	RND	PCC	0.76	0.76	60.4	0	1.2	416	19	339
990700	SR 8	15.19	C	Kennedy Cr trib	14	0	2.94	1.1	BOX	PCC	1.83	0.91	60.1	0	5.21	1260	1168	962
997201	SR 8	15.35	C	Kennedy Cr trib	14.0012	67		1.1	BOX	PCC	1.83	1.22	50.6	0	0.71			
997206	SR 8	17.07	C	Perry Cr trib	14	33		1.1	RND	PCC	0.61	0.61	47.8	0.18	3.62	75		
990703	SR 8	17.17	C	Perry Cr trib	14	33	3.81	1.1	BOX	PCC	1.83	1.22	61	0	2.5	2483	1739	3045

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
997207	SR 8	18.28	C	Perry Cr trib	14	67		1.1	RND	PCC	0.91	0.91	16.5	0	1.58	188		
990704	SR 8	18.28	C	Perry Cr trib	14	0		1.1	RND	PCC	0.91	0.91	24.9	0.96	12.76	156		
990705	SR 8	18.61	C	Perry Cr trib	14	0		1.1	RND	PCC	0.91	0.91	92.3	0.3	11.39	30		
990706	SR 8	18.99	C	Perry Cr trib	14	33		1.1	RND	PCC	0.91	0.91	15.2	0.75	2.5	149		
990707	SR 8	18.99	C	Perry Cr trib	14	0		1.1	RND	PCC	0.91	0.91	47.6	1	12.32	90		
996275	SR 99	0.44	C	Hylebos Cr trib	10	67		1.1	BOX	CPC	1.22	1.25	35.5	0	0			
992510	US 101	71.02	C	Joe Cr	24.0129	67	24.98	1.2	BOX	CPC	1.52	1.52	50.5	0.25	1.04	6682	1217	16917
992510	US 101	71.02	C	Joe Cr	24.0129	67	24.98	2.2	BOX	CPC	1.52	1.52	50.5	0.25	1.04	6682	1217	16917
992526	US 101	73.35	C	unnamed trib	24	0	8.02	1.1	OTH	CPC	1	1.02	63.3	0	5.3	775	142	425
992534	US 101	75.05	C	Little North R trib	24	0	7.8	1.1	RND	CST	0.91	0.91	56.8	0.32	2.67	606	50	399
993670	US 101	80.4	C	Chehalis R trib	22	0	9.07	1.1	RND	CST	0.91	0.91	84.9	0	1.84	219	4	729
993673	US 101	84.15	C	Chehalis R trib	22	0	12.33	1.1	OTH	OTH	0.61	0.61	1438	0	0.99	2779	82	950
993681	US 101	89.48	C	Hoquiam R trib	22	67	6.25	1.1	RND	CST	0.61	0.61	20	0.5	0.99	498	9	224
993674	US 101	89.48	C	Hoquiam R trib	22	67	7.41	1.1	RND	PCC	0.61	0.61	31.1	0	0.5	462	9	224
993675	US 101	89.77	C	Hoquiam R trib	22	67		1.1	RND	PCC	0.61	0.61	24.6	0	1.5			
993679	US 101	90.73	C	Hoquaim R trib	22	33	17.35	1.1	RND	PCC	0.61	0.61	54.3	0.99	2	323	0	4450
993695	US 101	93.49	C	WF Hoquiam R trib	22	33	9.29	1.1	RND	PCC	0.91	0.91	23.1	0	4.5	938	42	438
990732	US 101	93.79	C	WF Hoquiam R trib	22	0	9.39	1.1	RND	PCC	0.91	0.91	24.8	0	4	940	72	381
993698	US 101	95.46	C	WF Hoquiam R trib	22	0	8.62	1.1	RND	CST	0.61	0.61	27	0.2	1.7	240	20	122
991619	US 101	95.93	C	WF Hoquiam R trib	22	0		1.1	RND	CST	0.76	0.76	23	0	0.08			
991691	US 101	96.87	C	WF Hoquiam R trib	22	0		1.1	RND	PCC	0.91	0.91	18.3	0.18	5	50		
993702	US 101	98.47	C	WF Hoquiam R trib	22	67	9.28	1.1	RND	PCC	0.91	0.91	24.5	0	1.7	1037	15	1098
993704	US 101	99.45	C	WF Hoquiam R trib	22	67	6.67	1.1	RND	PCC	0.91	0.91	24.6	0	1.8	993	56	584
990730	US 101	100.7	C	unnamed trib	22.0060	33	14.96	1.1	RND	PCC	0.91	0.91	32.1	0	1.3	1742	0	6833
991501	US 101	103.65	C, FI	Big Cr trib	22.0057	67	14.33	1.2	RND	CST	1.83	1.83	30.5	0	2	3434	5436	5573
991501	US 101	103.65	C, FI	Big Cr trib	22.0057	67	14.33	2.2	RND	CST	1.83	1.83	30.5	0	2	3434	5436	5573
993717	US 101	110.84	C	Stevens Cr trib	22	33	9.37	1.1	RND	PCC	0.61	0.61	33.2	0	4.6	404	110	324
990731	US 101	111.34	C	Stevens Cr trib	22.0064A	33	14.44	1.1	OTH	OTH	1.22	1.22	22.6	0	2.2	1162	485	3052
991690	US 101	111.9	C, FI	Stevens Cr trib	22	67	10.83	1.1	BOX	PCC	1.72	1.23	28.2	0	1.2	972	33	2848
997301	US 101	118.09	C	Cook Cr trib	21	67		1.1	RND	PCC	0.76	0.76	32.2	0	-0.34			
997302	US 101	118.35	C	unnamed trib	21	33		1.1	RND	PCC	0.76	0.76	42.2	0.26	7.1			
997304	US 101	119.6	C	Skunk Cr trib	21	33		1.1	RND	PCC	0.61	0.61	14.7	0	-0.75			
997305	US 101	120.33	C	Cook Cr trib	21	67		1.1	RND	PCC	0.61	0.61	24.3	0	1.8			
997307	US 101	121.68	C	Hathaway Cr trib	21	67		1.1	RND	PCC	0.76	0.76	25.4	0	1.5			
990182	US 101	122.4	C	Hathaway Cr	21.0457	33		1.1	BOX	PCC	1.22	1.22	19.5	0.09	2.2			
997309	US 101	122.92	C	McCalla Cr trib	21	0		1.1	RND	PCC	0.76	0.76	22	0.38	0.73			
990276	US 101	123.05	C	McCalla Cr	21.0456	33	9.57	1.1	RND	PCC	0.91	0.91	18.5	0.12	1.2	861	763	1118
990537	US 101	125.2	C	Quinault R trib	21	33		1.1	RND	PCC	0.91	0.91	25.1	0.01	-0.04			
990538	US 101	125.25	C	unnamed trib	21	33		1.1	RND	PCC	0.91	0.91	22.6	0.12	0.18	150		

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
991653	US 101	126.24	C	Quinault R trib	21	0	7.69	1.1	RND	PCC	1.47	1.47	29.9	0.35	3	278	94	117
997325	US 101	130.01	B	Milbourn Cr	21.0452	67												
990543	US 101	131.96	C	Ten O Clock Cr trib	21	33		1.1	RND	PCC	0.91	0.91	17	0	2.2			
990544	US 101	132.2	C	Ten O Clock Cr trib	21	33		1.1	RND	PCC	0.91	0.91	14.7	0	0.95			
990452	US 101	135.26	C	Lunch Cr trib	21	67		1.2	BOX	PCC	2.44	1.22	15.1	0	0.13			
990452	US 101	135.26	C	Lunch Cr trib	21	67		2.2	BOX	PCC	2.45	1.22	16.1	0	0.9			
990546	US 101	135.68	C	Lunch Cr	21.0374	33	13.66	1.1	BOX	PCC	1.83	1.52	18.5	0	1.03	3288	3889	6267
990453	US 101	135.95	C	Lunch Cr trib	21	67	5.21	1.1	RND	PCC	1.22	1.22	28	0	0.5	337	10	212
990883	US 101	137.35	C	Crane Cr	21.0370	33		1.1	RND	CST	1.22	1.22	44.8	0.12	1			
990548	US 101	142.48	C	Harlow Cr	21.0134	0	15.91	1.1	RND	CST	1.22	1.22	22.6	0.27	3.28	1080	77	3441
990457	US 101	142.68	C	Harlow Cr	21.0134	33	15.05	1.1	RND	CST	1.22	1.22	24.1	0	1.91	1485	389	4134
990178	US 101	146.85	C, FI	Harlow Cr	21.0134	67	26.58	1.2	BOX	CPC	2.44	1.22	31.9	0.11	0.34	16889	17854	39968
990178	US 101	146.85	C, FI	Harlow Cr	21.0134	67	26.58	2.2	BOX	CPC	2.44	1.22	31.9	0.11	0.34	16889	17854	39968
990148	US 101	147.49	C	Fisher Cr	21.0018	33	29	1.2	BOX	CPC	1.52	1.22	24.2	0.04	1.8	5132	9836	12568
990148	US 101	147.49	C	Fisher Cr	21.0018	33	29	2.2	BOX	CPC	1.52	1.22	24.2	0.04	1.9	5132	9836	12568
997342	US 101	152.47	C	Queets R trib	21	67		1.1	SQSH	CST	1.4	1	33.7	0	0.8			
991268	US 101	153.96	C	Pacific Ocean trib	21.0015	0	5.6	1.1	BOX	PCC	1.52	1.52	23.8	0.58	3	62	76	100
997345	US 101	154.27	C	Pacific Ocean trib	21.0014	0		1.1	BOX	CPC	1.22	1.22	24.8	2.3	7.1	33		
990549	US 101	154.45	C	Pacific Ocean trib	21	0		1.1	BOX	PCC	1.22	1.22	28.5	1.37	4.2	54		
990722	US 101	154.88	C	Pacific Ocean trib	21	33		1.1	BOX	PCC	1.22	1.22	39.6	1.35	3	150		
990550	US 101	154.9	C	Pacific Ocean trib	21	67		1.1	BOX	PCC	1.22	1.22	25.9	0	3.2			
990723	US 101	155.15	C	Pacific Ocean trib	21	0	2.68	1.2	BOX	PCC	1.22	1.22	39	1.37	3	2613	2139	1338
990723	US 101	155.15	C	Pacific Ocean trib	21	0	2.68	2.2	BOX	PCC	1.22	1.22	39	1.37	3	2613	2139	1338
991267	US 101	155.35	C	Pacific Ocean trib	21.0011	0	4.19	1.2	BOX	PCC	1.22	1.22	38.1	1.19	1.8	4193	4282	8440
991267	US 101	155.35	C	Pacific Ocean trib	21.0011	0	4.19	2.2	BOX	PCC	1.22	1.22	38.1	0.99	1.8	4193	4282	8440
997355	US 101	155.8	C	Pacific Ocean trib	21	33	1.83	1.2	RND	PCC	0.61	0.61	16	0.83	1.8	529	0	280
997355	US 101	155.8	C	Pacific Ocean trib	21	33	1.83	2.2	RND	PCC	0.61	0.61	15.8	0.83	1.25	529	0	280
991276	US 101	156.1	C	Pacific Ocean trib	21	33	8.2	1.1	BOX	CPC	1.52	1.52	35.2	0	1.93	602	0	364
991277	US 101	156.15	C	Pacific Ocean trib	21	0	1.77	1.1	RND	PCC	0.91	0.91	25.9	0.24	6.29	146	0	123
997349	US 101	158.26	C	Pacific Ocean trib	21	33	1.81	1.1	BOX	CPC	1.52	1.52	27.6	1.1	1.85	618	0	198
990724	US 101	158.7	C	Pacific Ocean trib	21	0		1.1	BOX	PCC	1.52	1.52	34.8	3	0.5	1		
997356	US 101	159.03	C	Pacific Ocean trib	21	33		1.1	RND	PCC	0.91	0.91	36	0	2	117		
990725	US 101	159.14	C	Pacific Ocean trib	21	0		1.1	OTH	OTH	0.61	0.91	36.4	0	4.06	77		
990726	US 101	159.24	C	Pacific Ocean trib	21	67		1.1	RND	PCC	0.91	0.91	61	0.16	2	45		
997352	US 101	159.29	C	Pacific Ocean trib	21	0		1.1	RND	PCC	0.91	0.91	31.9	0.45	6.8	144		
997353	US 101	159.39	C	Pacific Ocean trib	21	0		1.2	RND	PCC	0.61	0.61	40.6	0.6	3.9	66		
997353	US 101	159.39	C	Pacific Ocean trib	21	0		2.2	RND	PCC	0.61	0.61	39.5	0.6	3.5	66		
990727	US 101	159.63	C	Pacific Ocean trib	20	0		1.1	BOX	CPC	1.55	1.55	61	3.5	1	12		
996217	US 101	159.94	C	Pacific Ocean trib	20	0		1.1	RND	PCC	0.61	0.61	19.2	1	4.38	136		

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
996218	US 101	160.17	C	Pacific Ocean trib	20	0		1.1	RND	PCC	0.61	0.61	22.1	0.42	13.9	81		
996220	US 101	160.42	C	Pacific Ocean trib	20	0		1.1	RND	PCC	0.91	0.91	88.5	2	11.3	78		
990728	US 101	160.75	C	Pacific Ocean trib	20	0		1.1	BOX	PCC	1.52	1.55	39.9	0.65	3			
996223	US 101	160.89	C	Pacific Ocean trib	20	0	6.87	1.1	BOX	CPC	1.53	1.53	33.6	0.82	7.61	350	24	241
990718	US 101	161.07	C	Pacific Ocean trib	20	0		1.1	BOX	PCC	0.95	0.95	39.6	0.87	2.5			
991261	US 101	161.5	C	Pacific Ocean trib	20.0000A	0	9.19	1.1	RND	CST	1.22	1.22	56.4	1.34	1.5	277	242	572
990400	US 101	162.6	C, FI	Steamboat Cr	20.0574	0	20.91	1.3	BOX	CPC	1.83	1.83	37.5	0.3	1.6	7434	25322	26208
990400	US 101	162.6	C, FI	Steamboat Cr	20.0574	0	20.91	2.3	BOX	CPC	1.83	1.83	0.9	0.3	1.6	7434	25322	26208
990400	US 101	162.6	C, FI	Steamboat Cr	20.0574	0	20.91	3.3	BOX	CPC	1.83	1.83	0.9	0.3	1.6	7434	25322	26208
991262	US 101	163.13	C	Pacific Ocean trib	20	0	14.25	1.1	BOX	PCC	1.83	1.83	52.4	1.65	3	1928	3087	4459
996224	US 101	164.57	C	Pacific Ocean trib	20	0		1.1	BOX	PCC	0.91	0.91	57.7	0	9.49	60		
996225	US 101	165.11	C	Cedar Cr trib	20	0		1.1	RND	PCC	0.61	0.61	53.8	0	12.57	86		
996226	US 101	166.34	C	Pacific Ocean trib	20	33		1.1	RND	PCC	0.61	0.61	17.2	0	0.87			
990551	US 101	168.3	C	Hoh R trib	20	67		1.2	BOX	PCC	1.52	1.52	26	0	0.81			
990551	US 101	168.3	C	Hoh R trib	20	67		2.2	BOX	PCC	1.52	1.52	26	0	0.81			
996227	US 101	168.49	C	unnamed Braden Cr trib	20	67		1.1	RND	PCC	0.61	0.61	15	0	0.93			
990717	US 101	169.45	C	Braden Cr trib	20	67	12.5	1.1	BOX	PCC	0.91	0.91	18.5	0	1	1162	38	7956
997051	US 101	169.89	C	Hoh R trib	20	33		1.1	RND	CST	0.61	0.61	12.3	0	1.95			
997052	US 101	169.94	C	Hoh R. trib	20	33	8.57	1.1	RND	PCC	0.61	0.61	16.2	0	1	802	908	693
990719	US 101	170.81	C	Hoh R trib	20	67		1.1	RND	CST	1.22	1.22	30.7	0	1.4			
997053	US 101	170.87	C	unnamed Hoh R trib	20	33		1.1	RND	CST	1.52	1.52	19.6	0	1.12			
997054	US 101	171.29	C	Hoh R trib	20	67	10.92	1.1	RND	CST	0.61	0.61	19.6	0.03	0.36	1420	0	3050
997055	US 101	174.43	C	Hoh R trib	20	67		1.1	RND	PCC	0.46	0.46	33	0	3.3			
991596	US 101	174.7	C	Hoh R trib	20	0		1.1	RND	PCC	0.61	0.61	13.9	1	0.86			
997058	US 101	174.73	C	Hoh R trib	20	0		1.1	RND	PCC	0.61	0.61	21.1	0	2.37			
997059	US 101	174.79	C	Old Joe Sl trib	20	0		1.1	RND	CST	0.61	0.61	21.1	0	17	14		
991645	US 101	175.04	C	Old Joe Sl trib	20	0		1.1	RND	CST	0.84	0.84	26.2	0	25	188		
991647	US 101	175.45	C	Hoh R trib	20	67	20.6	1.1	BOX	PCC	1.52	1.52	20.1	0.03	0.5	3044	169	17116
933682	US 101	175.77	C	Hoh R trib	20	0	24.15	1.1	RND	OTH	0.61	0.61	87.1	0	9.22	809	41	10611
991598	US 101	175.91	C	Hoh R trib	20	33	17.98	1.1	RND	PCC	0.61	0.61	13.3	0	0.6	352	8	8405
997064	US 101	176.12	C	Hoh R trib	20	67		1.1	RND	OTH	0.46	0.46	14.4	0	1.5			
997065	US 101	176.3	C	Hoh R trib	20	33		1.1	RND	PCC	0.61	0.61	20.1	0	0.35			
997063	US 101	176.55	C	Hoh R trib	20	0		1.1	RND	PCC	0.61	0.61	17.2	0	1.4			
997066	US 101	177.35	C	unnamed trib	20	33	0.86	1.1	RND	CST	0.61	0.61	26.1	0	2.72	106	8	20
997068	US 101	177.58	C	Mill Cr trib	20	33		1.1	RND	CST	0.61	0.61	21.5	0	2.7	580		
997070	US 101	177.77	C	Hoh R trib	20	0		1.1	RND	CST	0.61	0.61	29.8	0.25	3.16	189		
997071	US 101	177.8	C	unnamed Hoh R trib	20	0		1.1	RND	CST	0.61	0.61	26.6	0.15	2.52			
997072	US 101	177.97	C	unnamed trib	20	33	1.17	1.1	RND	PCC	0.61	0.61	22.2	0.14	2.03	250	26	70
991595	US 101	178.09	C	unnamed trib	20	33		1.1	RND	PCC	0.91	0.91	24.2	0	3.72			

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
991589	US 101	178.3	C	Hell Roaring Cr trib	20	0	4.09	1.1	OTH	OTH	1.45	1.45	21.3	0.18	2	4102	4979	6882
991590	US 101	178.63	C	Hell Roaring Cr trib	20	0	2.59	1.1	RND	CST	0.76	0.76	24.4	0.7	4	801	182	1118
991591	US 101	179.13	C	Hell Roaring Cr trib	20	33	3.61	1.1	OTH	OTH	1.83	1.83	30.5	0.25	1	3433	5514	6314
991592	US 101	179.57	C	Hell Roaring Cr	20.0441	0	1.95	1.1	OTH	OTH	1.22	1.22	35	0.4	3	466	156	361
997078	US 101	179.73	C	Hell Roaring Cr trib	20	33		1.1	RND	PCC	0.46	0.46	19.5	0	1.8			
991593	US 101	180.2	C	EF Hell Roaring Cr trib	20	0	2.07	1.1	OTH	OTH	1.22	0.93	42.7	0.05	1	316	0	459
991575	US 101	181.2	C	Dowans Cr trib	20	33	13.89	1.2	BOX	CPC	1.52	1.52	21.3	0	1.31	1684	883	3166
991575	US 101	181.2	C	Dowans Cr trib	20	33	13.89	2.2	BOX	PCC	1.52	1.52	21.3	0	1.31	1684	883	3166
991574	US 101	181.46	C	Dowans Cr trib	20.0248A	33	8.24	1.1	RND	PCC	1.22	1.22	28.5	0	2.2	677	268	1585
991507	US 101	182.2	C	Dowans Cr trib	20	0	13.25	1.1	OTH	OTH	1.22	0.91	49.8	0	3.31	1160	375	1658
991508	US 101	182.84	C	Dowans Cr trib	20	0	9.05	1.1	RND	OTH	1.22	0.91	76.3	1.5	9.23	665	334	509
991509	US 101	183.05	C	Dowans Cr trib	20	0	7.88	1.1	OTH	OTH	0.91	0.91	68.1	0.27	6.79	505	200	293
997081	US 101	183.11	C	Dowans Cr trib	20	0	5.76	1.1	OTH	OTH	1.22	0.95	75	0.21	7.23	727	556	493
991510	US 101	183.87	C	Bogachiel R trib	20	0	5.24	1.1	RND	OTH	0.91	0.91	27.2	3.2	5.1	134	152	362
990269	US 101	184.66	C	May Cr	20.0247	67	19.21	1.1	RND	CST	3.05	3.05	58.5	0	0.73	12990	22700	23129
997087	US 101	184.87	C	Bogachiel R trib	20	0		1.1	RND	PCC	0.61	0.61	28	2.3	3.6			
997090	US 101	187.12	C	Bogachiel R trib	20	67		1.1	RND	PCC	0.46	0.46	14.7	0	3.7			
997091	US 101	187.18	C	Bogachiel R trib	20	67		1.1	RND	PCC	0.46	0.46	13	0	1.92			
991513	US 101	187.37	C	unnamed trib	20	0		1.1	RND	SST	0.91	0.91	33.8	0	20.78	29		
991515	US 101	187.79	C	Bogachiel R trib	20	0	2.16	1.1	RND	PCC	0.61	0.61	30.2	0	4.4	416	92	273
991505	US 101	188.09	C	Bogachiel R trib	20	0	8.75	1.1	RND	PCC	0.91	0.91	32.8	0	2.44	610	81	366
997093	US 101	188.19	C	Bogachiel R trib	20	0	9.87	1.1	RND	PCC	0.61	0.61	21.6	0.15	3.74	331	9	510
997095	US 101	188.42	C	Bogachiel R trib	20.0000	0	6.19	1.1	RND	PCC	0.61	0.61	26.9	0.13	3.53	308	13	186
997096	US 101	188.64	C	Bogachiel R trib	20.0000	0		1.1	RND	CST	0.61	0.61	23	0.51	4.92			
933421	US 101	189.05	C	Grader Cr trib	20	33		1.1	RND	PCC	0.76	0.76	19.8	0	3.94			
991264	US 101	189.15	C	Grader Cr trib	20	33	7.39	1.1	RND	PCC	0.61	0.61	24.4	0	3	302	46	164
990169	US 101	189.4	C, FI	Grader Cr	20.0237	33	18.62	1.1	BOX	PCC	3.05	3.05	36.9	0.3	3	4484	8071	17823
997098	US 101	190.05	C	Mill Cr trib	20	33	13.31	1.1	RND	PCC	1.22	1.22	27.4	0	1.02	626	91	832
997097	US 101	191.12	C	Uncle John's Cr	20	33		1.1	RND	PCC	0.91	0.91	18.5	0	1.35			
997107	US 101	202.71	C	Sol Duc R trib	20	33	5.73	1.1	RND	PCC	0.91	0.91	42.3	0	1.51	428	7	86
990554	US 101	209.32	C	Wisen Cr	20.0336	67	13.7	1.1	RND	CST	1.52	1.52	21.3	0	0.66	3273	8239	6036
997108	US 101	210.22	C	Sol Duc R trib	20	67		1.1	RND	CST	0.91	0.91	17	0	0.59	159		
997109	US 101	210.78	C	Sol Duc R trib	20	67	7.42	1.1	RND	PCC	0.91	0.91	23.3	0	0.77	333	11	493
991565	US 101	221	C	Lake Crescent trib	19	33		1.1	BOX	PCC	1.36	1.24	37.1	0.3	1.42			
996391	US 101	222.11	C	Eagle Cr	19.0075	0		1.2	SQSH	CST	1.07	1.36	20.1	1.07	3.6	190		
996391	US 101	222.11	C	Eagle Cr	19.0075	0		2.2	SQSH	CST	1.08	1.33	20.1	0.45	3.6	190		
996393	US 101	223.76	C	LaPoel Cr	19.0073	0		1.1	BOX	CPC	1.86	1.87	19	0.46	7.4	150		
996398	US 101	226.24	C	Smith Cr	19.0069	33		1.1	BOX	CPC	1.83	1.84	19.3	0	3.4	140		
995808	US 101	232.85	C	Lake Sutherland trib	18	0	1.78	1.1	RND	PCC	0.46	0.46	28.5	0.04	6.4	117	21	60

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
995812	US 101	234.71	C	Indian Cr trib	18.0293	33	1.55	1.1	RND	PCC	1.22	1.22	29.4	0	2.6	43	37	51
995815	US 101	235.81	C	Indian Cr trib	18	67	4.1	1.1	RND	PCC	0.91	0.91	37.5	0	-0.13	105	0	91
995816	US 101	236.28	C	Indian Cr trib	18	33	5.2	1.1	RND	PCC	1.36	1.36	33.1	0	0.06	331	202	274
995817	US 101	236.35	C	Indian Cr trib	18	0	6.76	1.1	RND	SST	0.91	0.91	30	0.31	5.5	594	741	524
995818	US 101	237.98	C	Indian Cr trib	18	67	6.23	1.1	RND	PCC	0.46	0.46	32	0	1.31	673	37	490
18.0283 2.00	US 101	238.35	C, FI	Indian Cr	18.0283	33	75.84	1.1	OTH	CPC	5.96	4.5	64	0.55	3.88	17109	11854	115344
995826	US 101	240.23	C	Elwha R trib	18	0		1.1	ARCH	CPC	0.8	0.82	63.5	0.51	5.4	120		
995835	US 101	242.53	C	Elwha R trib	18.0277	0	2.71	1.1	BOX	CPC	0.91	0.91	25.1	0.42	4.3	1130	900	1342
995540	US 101	243.08	C	unnamed trib	18	0		1.1	BOX	CPC	0.9	0.93	25.2	0.05	12.3	160		
990128	US 101	244	C	Dry Cr	18.0265	0	4.76	1.1	BOX	CPC	2.44	2.44	25	0.73	1	4478	5401	12805
995542	US 101	244.52	C	Dry Cr trib	18	33	3.91	1.1	RND	PCC	0.61	0.61	26.4	0	1.4	305	0	8709
932888	US 101	246.18	C	Tumwater Cr trib	18	0	5.43	1.1	RND	PCC	0.61	0.61	21.6	0	3.42	313	31	152
990448	US 101	246.4	C, FI	Tumwater Cr	18.0256	67	16.25	1.1	BOX	PCC	2.13	2.44	0.9	0.99	0.99	8928	8760	16969
990326	US 101	248.1	C	Peabody Cr	18.0245	0	12.95	1.1	RND	PCC	2.13	2.13	914.4	0	2	2296	875	2033
990481	US 101	249.4	C	White Cr	18.0235	0	20.02	1.1	OTH	OTH	1.37	1.37	215.3	0.5	3.07	6405	7067	12843
18.0234 1.10	US 101	250	C, FI	Ennis Cr	18.0234	33	25.05	1.1	BOX	CPC	3.05	2.45	0.9	0.99	0.99	8950	13853	33438
990240	US 101	250.5	C, FI	Lees Cr	18.0232	0	21.14	1.1	BOX	CPC	1.22	1.83	85.3	0.99	11	11288	10774	14173
995543	US 101	253.7	C	Bagley Cr trib	18	0	4.19	1.1	RND	CST	0.61	0.61	66.5	15	0.99	1815	252	7665
990021	US 101	253.85	C, FI	Bagley Cr	18.0183	67	17.87	1.1	BOX	CPC	1.52	1.52	101.2	0	3.5	10450	11942	22028
995544	US 101	255.65	C	Siebert Cr trib	18	33		1.1	RND	PCC	0.46	0.46	41.3	0.2	1.4	186		
18.0173 2.40	US 101	256.1	C, FI	Siebert Cr	18.0173	33	29.11	1.2	BOX	CPC	0.99	0.99	0.9	0.99	0.99	54706	101027	122508
18.0173 2.40	US 101	256.1	C, FI	Siebert Cr	18.0173	33	29.11	2.2	BOX	CPC	0.99	0.99	0.9	0.99	0.99	54706	101027	122508
994471	US 101	256.9	C	Strait of Juan de Fuca trib	18	0	2.48	1.1	RND	PCC	0.65	0.65	38.4	0	6.5	488	246	938
18.0021 5.40	US 101	260.93	C, FI	Matriotti Cr	18.0021	67	14.72	1.1	RND	CST	1.6	1.6	43.4	0	0.3	8075	1682	13787
933369	US 101	263.43	C	Sequim Prairie Tri irrigation ditch	18	0		1.1	RND	PVC	0.76	0.76	103	1	0.99			
995551	US 101	263.68	C	Sequim Prairie Tri irrigation ditch	18.0036	0		1.1	RND	PVC	0.76	0.76	85	1	0.99			
995481	US 101	266.59	C	Johnson Cr trib	17	0		1.1	RND	PCC	0.61	0.61	61.8	0	1.4			
990219	US 101	267.18	C, FI	Johnson Cr	17.0301	67	28.42	1.1	BOX	PCC	3.05	3.05	69.5	0.52	2	7252	6227	18912
991667	US 101	268.54	C	Sequim Bay trib	17.0300	0	16.42	1.1	RND	OTH	0.91	0.91	111.1	0.23	7	5201	1419	11103
991666	US 101	269.24	C	Sequim Bay trib	17.0297	0	8.54	1.1	RND	PCC	0.91	0.91	44.9	0	5	861	598	839
994464	US 101	269.45	C	Sequim Bay trib	17.0296	0		1.1	RND	PCC	0.91	0.91	76.4	1	5.7			
991735	US 101	271.22	C	Sequim Bay trib	17	67	8.27	1.1	RND	PCC	0.61	0.61	33	0	0.75	317	0	609
994478	US 101	271.22	C	Sequim Bay trib	17	67	8.27	1.1	RND	PCC	0.61	0.61	13.6	0	1.1	283	0	609
990712	US 101	271.57	C	Sequim Bay trib	17.0284	0	10.43	1.1	RND	OTH	0.76	0.76	119	0.29	6.18	799	181	429
991850	US 101	271.83	C	Sequim Bay trib	17	0	10.93	1.1	RND	PCC	0.61	0.61	37.7	0	3	1625	775	1683
990075	US 101	271.98	C	Chicken Coop Cr	17.0278	0	25.99	1.1	BOX	PCC	0.91	1.22	53.3	1.13	2	6092	3383	5607
990134	US 101	274.25	C	Eagle Cr	17.0272	0	15.85	1.1	RND	PCC	0.46	0.46	20.5	0	2.14	4084	1124	5006
995484	US 101	275.72	C	Eagle Cr trib	17	0	8.66	1.1	RND	PCC	0.91	0.91	39.3	0	3.36	518	99	255
995485	US 101	276.22	C	Discovery Bay trib	17	33	4.41	1.1	RND	PCC	0.61	0.61	36.7	0.04	0.98	792	541	962

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
990090	US 101	277.9	C	Contractors Cr	17.0270	0	15.67	1.1	BOX	PCC	1.22	1.22	73.2	0.37	2	3787	1132	3597
995488	US 101	278.66	C	Discovery Bay trib	17.0269	0		1.1	RND	PCC	0.61	0.61	40.9	0.9	1.9	150		
995489	US 101	279.76	C	Discovery Bay trib	17.0268	0		1.1	RND	PCC	0.91	0.91	68.2	0.35	13.1			
995490	US 101	281.61	C	Discovery Bay trib	17	0	5.56	1.1	RND	PCC	0.73	0.73	40.9	1.9	5.5	980	395	437
995491	US 101	281.72	C	Discovery Bay trib	17	0	11.83	1.1	RND	PCC	0.61	0.61	122.2	0.11	2.9	2014	1200	2337
995493	US 101	282.01	C	Discovery Bay trib	17	0		1.1	RND	OTH	0.46	0.46	61.7	0.52	2.37	100		
995497	US 101	283.57	C	Snow Cr trib	17	0	13.83	1.1	SQSH	CST	1.64	1.11	25.5	0.55	8.54	1152	1343	1411
995496	US 101	284.87	C	Snow Cr trib	17	0		1.1	RND	CST	0.76	0.76	97.1	0.36	2.3			
995760	US 101	284.87	C	Snow Cr trib	17	0		1.1	RND	CST	0.61	0.61	35.4	1.5	6.93			
995499	US 101	289.36	C	Leland Cr trib	17	67	6.76	1.1	RND	PCC	0.46	0.46	16.8	0	1.61	379	21	280
995500	US 101	289.91	C	Leland Cr trib	17	67		1.1	RND	PCC	0.61	0.61	19.3	0	1.39	50		
990896	US 101	290.35	C	Leland Cr trib	17.0080	67	19.76	1.2	BOX	CPC	1.83	1.22	13.7	0	0.17	3700	2620	7269
990896	US 101	290.35	C	Leland Cr trib	17.0080	67	19.76	2.2	BOX	CPC	1.83	1.22	14.3	0	0.56	3700	2620	7269
995502	US 101	291.79	C	Leland Cr trib	17.0079	33	13.05	1.1	RND	PCC	0.61	0.61	20.8	0	2.1	2066	465	779
990241	US 101	292.52	C	Leland Cr	17.0077	33	36.68	1.1	BOX	CPC	2.45	1.83	44.1	0	-0.04	23068	6708	67554
995509	US 101	299.86	C	Spencer Cr	17.0004	33		1.2	RND	PCC	0.61	0.61	17.8	0	1.18			
995509	US 101	299.86	C	Spencer Cr	17.0004	33		2.2	RND	PCC	0.61	0.61	18.2	0	1.32			
995510	US 101	300.19	C	Spencer Cr trib	17	67		1.1	RND	PCC	0.61	0.61	30.7	0	0.69			
995513	US 101	300.35	C	Spencer Cr trib	17	33		1.1	RND	PCC	0.91	0.91	16.6	0.09	3.2	90		
995515	US 101	300.62	C	Spencer Cr trib	17	33		1.1	RND	PCC	0.61	0.61	13.6	0.13	5.6	70		
995518	US 101	301.88	C	Spencer Cr	17.0004	33		1.1	BOX	CPC	1.84	1.85	29.4	0.25	1.08			
994484	US 101	303.01	C	Marple Cr	17.0001	33	20.05	1.1	ELL	CST	3.13	2.91	55.1	0	2.8	2755	2943	6506
990449	US 101	304.24	C	Turner Cr	16.0559	0		1.1	RND	PCC	1.22	1.22	36.6	0.46	9	96		
995931	US 101	305.59	C	Hood Canal trib	16	0	6.11	1.1	RND	CST	0.61	0.61	45.6	1.1	5.73	565	344	539
990899	US 101	307	C	Twana Cr	16.0441	33	13.42	1.1	BOX	CPC	1.83	1.83	31.1	0	1.2	1115	2072	1207
999584	US 101	308.74	C	Hood Canal trib	16	0		1.1	RND	OTH	0.46	0.46	32.2	0.65	22.52	168		
995935	US 101	310.27	C	Hood Canal trib	16	Unk		1.1	RND	PCC	0.46	0.46	26.6	0	3.07			
995936	US 101	310.4	C	Hood Canal trib	16	Unk	0	1.1	BOX	CPC	1.17	1.23	21	0.19	3.71	780	484	2896
995939	US 101	311.16	C	Hood Canal trib	16.0350	0		1.1	BOX	CPC	1.25	1.23	27	0.79	7.9			
991603	US 101	314.1	C	Hood Canal trib	16.0331	0	7.59	1.2	BOX	CPC	1.83	1.83	23.3	0.45	2.47	494	476	1274
991603	US 101	314.1	C	Hood Canal trib	16.0331	0	7.59	2.2	BOX	CPC	1.83	1.83	23.3	0.45	2.47	494	476	1274
991604	US 101	314.38	C	Hood Canal trib	16	0		1.1	RND	PCC	0.91	0.91	17.1	0.46	12.6	40		
996104	US 101	314.88	C	Hood Canal trib	16	67		1.1	RND	PCC	0.46	0.46	11.3	0	0.53			
991606	US 101	315.19	C	Schaerer Cr	16.0326	67	17.4	1.2	BOX	CPC	1.83	1.22	16.5	0	1.6	250	542	580
991606	US 101	315.19	C	Schaerer Cr	16.0326	67	17.4	2.2	BOX	CPC	1.83	1.22	16.5	0	1.6	250	542	580
996108	US 101	316.06	C	Hood Canal trib	16	0		1.1	RND	PCC	0.91	0.91	19.2	2.5	17.7	192		
996109	US 101	316.3	C	Hood Canal trib	16	0		1.1	BOX	CPC	1.83	1.83	16.5	0.19	5.4	15		
996120	US 101	317.39	C	Hood Canal trib	16	0		1.1	RND	PCC	0.61	0.61	26.5	0.49	12.5	65		
991615	US 101	317.45	C	Hood Canal trib	16	0	2.14	1.1	BOX	CPC	1.22	1.22	21	1.15	6.18	360	193	261

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
991614	US 101	322.83	C	Hood Canal trib	16	0	7.75	1.2	RND	PCC	0.91	0.91	29.2	0.43	3.76	531	430	768
991614	US 101	322.83	C	Hood Canal trib	16	0	7.75	2.2	RND	PCC	0.91	0.91	28.7	0.46	3.72	531	430	768
991608	US 101	324.1	C	Hood Canal trib	16	0	2.66	1.1	RND	PCC	0.91	0.91	22.6	0	4	402	55	57
991610	US 101	324.31	C	Hood Canal trib	16	0	4.97	1.1	RND	PCC	0.91	0.91	36.3	0	4.4	400	192	360
996135	US 101	325.68	C	Hood Canal trib	16	67	3.35	1.1	RND	PCC	1.07	1.07	22.5	0	0.3	575	1049	565
931509	US 101	325.7	D	Hood Canal trib	16	33	3.12									568	1036	588
996138	US 101	327.76	C	Little Lilliwaup Cr	16.0228	67	18.34	1.1	BOX	CPC	2.45	1.87	14.9	0	1.6	2058	4968	4953
990407	US 101	329.15	C	Hood Canal trib	16	0		1.1	RND	PCC	0.61	0.61	20.1	1.37	6	76		
996355	US 101	329.73	C	Hood Canal trib	16	0		1.2	RND	PCC	0.61	0.61	15.4	0.45	7.5	90		
996355	US 101	329.73	C	Hood Canal trib	16	0		2.2	RND	CST	0.61	0.61	16.2	0.8	12	90		
996356	US 101	330.25	C	Hood Canal trib	16	0	3.49	1.1	RND	PCC	0.61	0.61	17.9	0	9.5	230	232	179
996358	US 101	331.18	C	Hood Canal trib	16	0		1.1	RND	PCC	0.61	0.61	0.9	0	0.99	34		
991254	US 101	331.83	C	Hood Canal trib	16	0	7.84	1.2	BOX	PCC	0.96	0.96	121.4	0	4.6	512	334	408
991254	US 101	331.83	C	Hood Canal trib	16	0	7.84	2.2	RND	PCC	0.95	0.95	0.9	0.99	0.99	512	334	408
996360	US 101	332.15	C	Hood Canal trib	16	0	1.73	1.1	RND	CST	0.61	0.61	19.6	0.86	3.83	230	223	223
990191	US 101	332.65	C	Hill Cr	16.0221	67	19.5	1.1	BOX	CPC	2.44	1.83	22.3	0	2.99	518	1070	1135
996366	US 101	334.4	C	Hood Canal trib	16	67	6.57	1.1	RND	PCC	0.3	0.3	17	0.34	0.88	629	42	643
933494	US 101	334.47	C	Hood Canal trib	16	67		1.1	RND	PCC	0.46	0.46	12.2	0	2.05			
991250	US 101	335.93	C	Hood Canal trib	16	33	0	1.1	RND	PCC	0.61	0.61	16.1	0.08	0.19			
996371	US 101	338.37	C	Skobob Cr trib	16	67	7.84	1.1	RND	PCC	0.46	0.46	19.6	0	0.46	469	0	397
996374	US 101	341.57	C	Purdy Cr	16.0005	67		1.1	RND	CAL	0.91	0.91	17.2	0	1.08			
115 MC093	US 101	346.95	C, FI	Coffee Cr	14.0036	67	28.97	1.3	RND	CST	1.33	1.45	130.1	0.02	1.41	21444	11069	52066
115 MC093	US 101	346.95	C, FI	Coffee Cr	14.0036	67	28.97	2.3	RND	CST	1.3	1.4	130	0.99	1.48	21444	11069	52066
115 MC093	US 101	346.95	C, FI	Coffee Cr	14.0036	67	28.97	3.3	RND	CST	1.3	1.4	130	0.99	1.3	21444	11069	52066
115 MC180	US 101	348.21	C	Mill Cr trib	14	33	10.54	1.1	RND	CST	0.91	0.91	67.5	0.1	1.8	445	190	473
997158	US 101	354.01	C	Skookum Cr trib	14	0	9.77	1.1	RND	PCC	0.91	0.91	47	0.53	1.55	1486	356	980
997159	US 101	354.22	C	Skookum Cr trib	14	33		1.1	RND	PCC	0.91	0.91	59.7	0	2.13	70		
115 MC144	US 101	355.58	C	Totten Inlet trib	14	0	11.95	1.1	RND	CST	1.2	1.3	72.4	0.12	2.18	749	99	437
997157	US 101	356.48	C	Schneider Cr trib	14	33	4.06	1.1	RND	PCC	0.91	0.91	58.8	0.55	1.57	520	0	143
14.0010 0.10	US 101	356.8	C, FI	Countyline Cr	14.0010	33	14.43	1.1	RND	PCC	1.52	1.52	65.2	0	2.46	753	1428	1758
997161	US 101	357.4	C	Griggs Cr	14	33	15.52	1.1	RND	PCC	0.91	0.91	63.9	0	3.93	1709	372	2428
991477	US 101	360.6	C	Eld Inlet trib	14.0002A	33	10.1	1.1	BOX	PCC	1.83	1.83	103.4	0.3	4.66	331	266	350
115 MC276	US 101	361.22	C	Eld Inlet trib	14	0	3.37	1.1	RND	CST	0.95	0.95	92.9	0.22	11.96	202	84	146
994788	US 12	3.76	C	Elliott Sl	22.0238	33	13.56	1.1	RND	PCC	0.46	0.46	30.6	0	1.57	2311	164	5744
991284	US 12	4.59	C	Mox Chuck Sl trib	22.0253	33	9.72	1.1	OTH	OTH	1.21	1.21	98.4	0	1.89	1151	135	1434
991283	US 12	5.24	C	Mox Chuck Sl trib	22	0	8.82	1.1	RND	PCC	0.91	0.91	86.9	0	2	691	110	391
991285	US 12	5.38	C	unnamed trib	22.0252	0	11.3	1.1	RND	PCC	0.91	0.91	56.5	0.36	1.22	1789	492	1754
991633	US 12	5.62	C	unnamed trib	22	0	8.25	1.1	RND	PCC	0.61	0.61	46.1	0	2.45	931	338	538
991909	US 12	6.5	C	Higgins Sl trib	22	0		1.1	RND	PCC	0.61	0.61	82.9	0.2	5.6	0		

Appendix IC. WSDOT Olympic Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
991910	US 12	6.55	C	Higgins Sl trib	22	0	4.49	1.1	RND	PCC	0.76	0.76	82.9	0	2.94	271	39	90
990957	US 12	6.58	C	Higgins Sl trib	22	0	9.67	1.1	RND	PCC	0.76	0.76	74.1	0	3.44	858	323	421
990958	US 12	6.92	C	Higgins Sl	22.0257	0	15.6	1.1	RND	PCC	0.91	0.91	144	0	3.85	1612	439	1132
991911	US 12	7.26	C	Higgins Sl trib	22	0	8.29	1.1	RND	OTH	0.91	0.91	154.1	0.75	3.55	473	168	509
994791	US 12	9.04	C	Wynoochee R trib	22	33	16.87	1.1	RND	CST	0.91	0.91	90.5	0	0.46	2649	110	9326
991528	US 12	11.01	C	unnamed Chehalis R trib	22	33	22.56	1.1	RND	CST	0.61	0.61	49.7	0.08	0.22	5720	782	12260
931349	US 12	11.49	C	unnamed Chehalis R trib	22	67	6.74	1.1	RND	CST	0.61	0.61	54	0	0.26	276	0	616
22.0349 0.70	US 12	12.36	C, FI	Camp Cr	22.0349	33		1.2	BOX	CPC	1.83	1.83	83.1	0	0.04	9978		
22.0349 0.70	US 12	12.36	C, FI	Camp Cr	22.0349	33		2.2	BOX	CPC	1.83	1.83	83.1	0	0.04	9978		
933616	US 12	17.56	C	Wenzel Sl trib	22	67		1.2	RND	CST	1.37	1.37	51.1	0	0.37			
933616	US 12	17.56	C	Wenzel Sl trib	22	67		2.2	RND	CST	1.37	1.37	50.8	0	0.28			
125 1806W34G	US 12	19.17	C	Vance Cr trib	22	33	13.23	1.2	RND	PCC	1.22	1.22	46.1	0	0.39	7296	1269	6790
125 1806W34G	US 12	19.17	C	Vance Cr trib	22	33	13.23	2.2	RND	PCC	1.22	1.22	46.1	0	0.39	7296	1269	6790
991533	US 12	23.3	C	Chehalis R trib	22	33	7.66	1.2	RND	PCC	0.76	0.76	20.7	0	0.68	409	0	192
991533	US 12	23.3	C	Chehalis R trib	22	33	7.66	2.2	RND	PCC	0.76	0.76	20.5	0	1.3	409	0	192
994799	US 12	26.87	C	Chehalis R trib	22.0542	0	16.04	1.1	RND	SST	1.04	1.04	66.6	1.44	3.2	3293	1494	3548
996614	US 12	27.87	C	Chehalis R trib	23	0		1.1	RND	PCC	0.61	0.61	25.2	0.6	4.5			
991541	US 12	28.17	C	Chehalis R trib	23	0	9.79	1.1	RND	PCC	0.61	0.61	30.5	0	3.24	1145	441	988
991540	US 12	28.6	C	Chehalis R trib	23	0	5.51	1.1	RND	PCC	0.76	0.76	54	1	3.3	734	837	483
996635	US 12	29	C	unnamed trib	23	33		1.1	RND	PCC	0.61	0.61	68.9	0.07	3.85	300		
991535	US 12	29.19	C	Chehalis R trib	23	33	10.22	1.1	RND	PCC	0.91	0.91	54.2	0	1.5	3990	2159	2979
991536	US 12	29.45	C	Chehalis R trib	23	0	10.83	1.1	RND	PCC	0.91	0.91	43.9	0	6.5	2283	474	953
996659	US 12	30.74	C	Chehalis R trib	23	67		1.1	BOX	CPC	0.91	0.91	18.6	0	2.7	55		
996710	US 12	31.19	C	Chehalis R trib	23	33		1.1	RND	PCC	0.91	0.91	24.3	0	0.4	77		
996712	US 12	31.61	C	Cedar Cr trib	23	33	18.3	1.1	BOX	CPC	1.52	0.91	12.7	0	2.83	1580	833	1702
996714	US 12	32.69	C	Cedar Cr trib	23	67	8.31	1.1	RND	PCC	0.61	0.61	17.8	0	0.5	1517	1048	1580
991537	US 12	33.2	C	Chehalis R trib	23	33		1.1	BOX	CPC	1.22	1.22	38.1	0	3.14			
991538	US 12	33.42	C	Chehalis R trib	23.0619	0		1.1	BOX	CPC	1.22	1.22	42.5	0	2.37			
991539	US 12	33.6	C	Chehalis R trib	23	0	8.81	1.1	RND	PCC	0.91	0.91	42.2	0.17	5.36	699	227	648

[1]Field Codes

Codes Used for Culvert Shape

ARCH - bottomless arch
BOX - rectangular or square
ELL - ellipse
OTH - other
RND - round
SQSH - squash (pipe arch)

Codes Used for Culvert Materials

CAL - corrugated aluminium
CMP - corrugated metal pipe
CPC - cast in place concrete
CST - corrugated steel
OTH - other
PCC - precast concrete
PVC - plastic
SPA - structural plate aluminium
SPS - structural plate steel
SST - smooth steel

Feature Type

B - bridge
C - culvert
D - dam
DL - dike/levee
EC - erosion control
F - fill/puncheon
FD - fill/debris
FI - fishway
FL - flume

[2]The culvert # identifies individual culverts at multiple stream crossings. For example, in a triple culvert crossing, the first pipe would be 1.3, the second 2.3, and the third 3.3.

Appendix ID. WSDOT Southwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
995862	I-205	0.6	C	Columbia R trib	28	0		1.1	RND	PCC	0.46	0.46	317.9	0	0.7			
995866	I-205	32.28	C	Curtin Cr trib	28	0		1.1	RND	CST	1.07	1.07	67.5	0.38	1.7			
995867	I-205	32.77	C	Curtin Cr	28.0085	33		1.2	RND	CST	1.07	1.07	109.4	0	0.4			
995867	I-205	32.77	C	Curtin Cr	28.0085	33		2.2	RND	CST	1.07	1.07	108.2	0	0.3			
997193	I-205	35.18	C	unnamed trib	28.0050	0		1.1	RND	CST	1.07	1.07	173.9	0.9	0.83			
997194	I-205	35.83	C	Salmon Cr trib	28	67		1.1	RND	CST	0.76	0.76	136.6	0	0.48			
991753	I-5	3.07	C	Burnt Bridge Cr	28.0143	67	21.33	1.1	BOX	CPC	1.82	1.82	140.8	0	1.08	19184	14302	67438
990085	I-5	3.31	C	Cold Cr	28.0144	0	18.56	1.1	RND	OTH	1.2	1.2	71.3	1.6	3	4200	3728	6393
994304	I-5	5.98	C	Salmon Cr trib	28	67	3.67	1.1	RND	PCC	1.07	1.07	106.9	0	0.29	709		
994305	I-5	6.1	C	Salmon Cr trib	28	67	3.7	1.1	RND	PCC	1.07	1.07	109.6	0.15	0.83	453		
994306	I-5	6.29	C	Salmon Cr trib	28	33	4.56	1.1	RND	PCC	1.07	1.07	31.7	0.55	0.85	10		
991793	I-5	7.92	C	Whipple Cr trib	28.0050	67	6.46	1.1	RND	PCC	0.91	0.91	111.8	0	2.18	498	0	206
991792	I-5	8.07	C	Whipple Cr trib	28	0	11.06	1.1	RND	PCC	0.76	0.76	144.4	1.01	1.02	531	22	402
991794	I-5	8.42	C	Whipple Cr	28.0038	0	19.29	1.1	BOX	PCC	1.83	1.83	213.4	0	3	6549	1342	11743
997195	I-5	8.68	C	Whipple Cr trib	28	0	5.44	1.1	RND	PCC	0.61	0.61	165.2	0.33	1.6	251	3	70
994628	I-5	11.26	C	Gee Cr trib	27.0168A	67	9.9	1.1	RND	PCC	1.37	1.37	11.9	0	0.03	2454	0	3122
991844	I-5	11.44	C	Gee Cr trib	27.0168A	33	12.01	1.1	BOX	CPC	1.22	1.22	36.9	0	0.01	2623	3	3331
991846	I-5	12.42	C	Gee Cr	27.0168L	67	16.01	1.1	OTH	OTH	3.05	3.05	128.7	0	0	13140	3	21407
991847	I-5	13.2	C	Gee Cr trib	27.0168J	33	16.61	1.1	BOX	CPC	2.44	2.9	113.7	0.2	0.01	6662	16	12214
994555	I-5	25.2	C	Canyon Cr	27.0147	0		1.1	RND	CST	1.43	1.43	0.9	0.9	0.99	169		
991039	I-5	25.31	C	Canyon Cr	27.0147	0		1.1	RND	CST	1.43	1.43	38.7	0.4	3	292		
994588	I-5	25.85	C	Mill Cr	27.0144	33	14.93	1.1	RND	CPC	1.82	1.82	68.1	0.35	1.61	1464	1595	5744
994553	I-5	25.92	C	Mill Cr	27.0144	33	14.96	1.1	BOX	CPC	1.83	1.85	79.6	0	3.81	1184	1510	2894
990055	I-5	26.83	C	Bybee Cr	27.0142	0	12.36	1.1	BOX	PCC	2.44	1.83	98.2	0	5	1070	1482	1901
991665	I-5	27.8	C	Schoolhouse Cr	27.0139	0	15.66	1.2	BOX	PCC	1.83	1.83	339.2	0.09	2.5	4060	1353	4845
991665	I-5	27.8	C	Schoolhouse Cr	27.0139	0	15.66	2.2	RND	CST	1.83	1.83	339.2	0.09	2.5	4060	1353	4845
991436	I-5	29.25	C	Columbia R trib	27.0137	67	18.12	1.1	RND	CST	0.91	0.91	55.3	0	0.21	6078	1637	12633
994591	I-5	29.81	C	Columbia R trib	27.0136	33		1.1	OTH	OTH	0.91	0.91	149.4	0	2.16	155		
998211	I-5	36.67	C	unnamed trib	26	0		1.1	RND	PCC	0.91	0.91	0.9	0	0.99			
996199	I-5	38.02	C	Coweeman R trib	26	0		1.1	RND	PCC	0.76	0.76	137.3	0	4.5			
992332	I-5	41.62	C	King Cr	26.0127	0	12.82	1.1	RND	SPS	1.6	1.6	186	0	0.99	2997	705	1385
992331	I-5	42.29	C	Cowlitz R trib	26.0128	33	9.44	1.1	RND	SST	0.9	0.9	147.5	0	0.99	1402	213	381
992581	I-5	44.29	C	Cowlitz R trib	26.0180	0	5.7	1.1	RND	CST	0.9	0.9	152	0	1	852	155	274
992590	I-5	46.77	C	Cowlitz R trib	26.0186A	67	9.77	1.1	RND	CST	1.55	1.55	0.9	0	2	931	292	1257
992591	I-5	47.49	C	Salmon Cr trib	26	33	5.05	1.1	BOX	CPC	1.25	1.55	136.8	0	0.71	477	75	303
992592	I-5	47.88	C	Salmon Cr trib	26.0188	67		1.1	RND	CST	2.2	2.2	0.9	0	0.99	180		
992602	I-5	53.07	C	Cowlitz R trib	26	33	18.36	1.1	RND	PCC	1.05	1.05	90.8	0.27	0.09	3210	340	3587
992608	I-5	53.9	C	Cowlitz R trib	26	0	8.12	1.1	RND	CST	0.9	0.9	260	0	0.99	667	121	276
992343	I-5	54.4	C	Cowlitz R trib	26	0		1.1	RND	PCC	0.75	0.75	86.6	0.83	1.4	0	0	0
992355	I-5	54.93	C	Hill Cr trib	26	0	1.43	1.1	RND	PCC	0.75	0.75	88.7	0	0.99	204	17	54
991734	I-5	57.98	C	Foster Cr trib	26.0476	0	11.99	1.1	BOX	CPC	1.52	1.52	89.3	0.94	5	3507	160	1351

Appendix ID. WSDOT Southwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
990152	I-5	58.63	C	Foster Cr	26.0475	33	20.55	1.1	BOX	CPC	3.05	2.43	52.3	0.68	0.02	6939	2096	4772
995538	I-5	71.34	C	unnamed Newaukum R trib	23	67		1.1	RND	PCC	0.61	0.61	67.7	0	0.01			
994300	I-5	78.11	C	unnamed Chehalis R trib	23	0		1.1	RND	PCC	1.07	1.07	100	0	0.99			
992806	SR 100	1.67	C	Pacific Ocean trib	24.0754	67		1.1	BOX	CPC	1	0.95	54.5	0	1.95			
992807	SR 100	1.82	C	Pacific Ocean trib	24.0753	67		1.1	RND	PCC	0.91	0.91	34	0	1			
940093	SR 100	3.21	C	Columbia R trib	24	0		1.1	RND	PCC	0.46	0.46	30.7	0.11	4.27			
991360	SR 103	13.3	C	Espy Sl	24.0743	0	15.77	1.1	RND	CST	1.22	1.22	14.3	0.46	0	1850	544	6801
991328	SR 103	19.84	C	Stackpole Sl	24.0749	67	9.54	1.1	RND	CST	0.91	0.91	18	0	1.8	5935	0	28384
991332	SR 105	1.86	C	Willapa R trib	24	33	11.58	1.1	RND	PCC	0.9	0.9	26.7	0	2.1	915	161	784
992437	SR 105	5.95	C	Fredrickson Sl trib	24	33		1.1	RND	PCC	0.75	0.75	18.8	0	2.98	0		
991366	SR 105	6.23	C	Willapa Bay trib	24.0250	33	10.66	1.1	RND	PCC	1.52	1.52	32.3	0	2	1460	254	1412
992440	SR 105	7.31	C	Willapa Bay trib	24	33		1.1	RND	CST	0.75	0.75	37.9	0	2.27	42		
992447	SR 105	13.33	C	Willapa Bay trib	24	0		1.1	RND	CST	0.6	0.6	24.4	0	1.4	35		
993133	SR 105	20.12	C	Willapa Bay trib	24.0002A	33	8.85	1.1	RND	CST	0.91	0.91	35.5	0.32	0.17			
991280	SR 105	21.22	C	Drainage Ditch #1	24.0001	33	23.54	1.3	RND	CST	1.48	1.48	43.5	0	0.07	7453	82	19546
991280	SR 105	21.22	C	Drainage Ditch #1	24.0001	33	23.54	2.3	RND	CST	1.44	1.44	46.7	0	0.24	7453	82	19546
991280	SR 105	21.22	C	Drainage Ditch #1	24.0001	33	23.54	3.3	RND	CST	1.52	1.52	49.9	0	0.24	7453	82	19546
991281	SR 105	23.87	C	Drainage Ditch #1	24.0001	67	16.34	1.2	SQSH	CST	2.4	1.09	13.9	0	0.07	3784	82	10587
991281	SR 105	23.87	C	Drainage Ditch #1	24.0001	67	16.34	2.2	SQSH	CST	2.35	1.05	14.4	0	0	3784	82	10587
931450	SR 105	24.26	C	Seastrand Cr trib	24	67		1.1	RND	PVC	0.76	0.76	17.6	0	0.57			
993139	SR 105	24.42	C	Seastrand Cr trib	24	67		1.1	RND	OTH	0.6	0.6	15.4	0	1.1			
993140	SR 105	24.88	C	Drainage Ditch #1 trib	24	67		1.1	RND	PVC	0.6	0.6	0.9	0	0.99			
991282	SR 105	25.21	C	Drainage Ditch #1 trib	24	33		1.1	RND	CST	0.75	0.75	21.9	0	0.04			
992235	SR 122	5.84	C	Mayfield Lk trib	26	0	10.88	1.1	BOX	CPC	2.13	2.16	45.9	2.2	4.5	216	348	584
991017	SR 123	2.28	C	Ohanapecosh R trib	26	0		1.2	RND	PCC	0.9	0.9	33.2	0.16	6.4	20		
991017	SR 123	2.28	C	Ohanapecosh R trib	26	0		2.2	RND	PCC	0.9	0.9	31.9	0.27	6.4	20		
991022	SR 123	3.36	C	Ohanapecosh R trib	26	33	2.55	1.2	RND	PCC	0.75	0.75	27.4	0.25	2.4	686	403	792
991022	SR 123	3.36	C	Ohanapecosh R trib	26	33	2.55	2.2	RND	PCC	0.75	0.75	25	0.23	3.5	686	403	792
991029	SR 123	6.06	C	Ohanapecosh R trib	26	33		1.1	RND	PCC	0.9	0.9	0.9	0.99	0.99	60		
991030	SR 123	6.35	C	Ohanapecosh R trib	26	33	1.41	1.2	RND	PCC	0.9	0.9	15.9	0	6.2	231	47	77
991030	SR 123	6.35	C	Ohanapecosh R trib	26	33	1.41	2.2	RND	PCC	0.9	0.9	16.3	0	5.4	231	47	77
997382	SR 14	4.8	C	Columbia R trib	28	67		1.1	RND	PCC	1.22	1.22	54.6	0	0.37			
997383	SR 14	4.96	C	Columbia R trib	28	33		1.1	RND	PCC	0.46	0.46	56.1	0.26	1.26	72		
997384	SR 14	5.23	C	Columbia R trib	28	33		1.1	RND	PCC	0.61	0.61	52	0	1.3	200		
995859	SR 14	5.27	C	unnamed trib	28	33		1.1	RND	PCC	0.46	0.46	52	0.12	2.8	142		
995864	SR 14	5.45	C	unnamed trib	28	0		1.1	RND	PCC	0.61	0.61	128.8	0.02	3.5			
999074	SR 14	9.13	C	Fisher Cr	28.0148	0	14.71	1.1	BOX	CPC	1.22	1.22	72.7	0.8	8	1681	270	4793
999076	SR 14	10.66	C	Columbia R trib	28.0151	0		1.1	BOX	CPC	1.22	1.85	87.5	2.2	11.4	42		
999023	SR 14	16.62	C	unnamed Columbia R trib	28	0		1.1	RND	CST	0.91	0.91	102.1	1	0.34			
999036	SR 14	28.19	C	Columbia R trib	28	0		1.1	BOX	CPC	1.08	0.94	23.4	0.14	8.1	173		
999038	SR 14	28.45	C	unnamed trib	28	0		1.1	BOX	CPC	0.94	0.94	16.9	0	19.5	130		

Appendix ID. WSDOT Southwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
999079	SR 14	29.79	C	Columbia R trib	28	0		1.1	BOX	CPC	0.91	0.91	24.4	0	6.96	435		
999089	SR 14	31.85	C	Indian Mary Cr trib	28	33	9.81	1.1	BOX	CPC	0.95	0.91	22.5	0.22	1.51	262	38	1182
999090	SR 14	32.23	C	Indian Mary Cr	28	0	12.08	1.1	BOX	CPC	0.95	0.91	38.8	0	3.71	890	440	2366
999092	SR 14	33.49	D	Columbia R trib	28	0	13.12									1180	380	3090
990488	SR 14	34.5	C	Little Cr	28.0300	33		1.1	BOX	CPC	1.23	1.85	20.7	0	10.7	48		
999095	SR 14	35.19	C	Hardy Cr trib	28	0		1.1	RND	PCC	0.61	0.61	0.9	0.99	0.99			
990177	SR 14	36.05	C	Hardy Cr	28.0303A	0	8.95	1.1	BOX	CPC	3.05	3.1	24	0.76	5	1331	2824	4366
999221	SR 14	44.62	C	Kanaka Cr	29.0018	0	16.97	1.1	BOX	CPC	2.44	3.05	32.5	0	8.03	7994	2365	8788
990967	SR 14	46.6	C	Souther Cr	29.0021	0		1.1	BOX	CPC	1.83	1.9	97	45	5.6			
990067	SR 14	47.88	C	Carson Cr	29.0022	0	7.93	1.1	BOX	CPC	1.83	2.45	32.2	0	4.28	270	51	571
999239	SR 14	49.8	C	Wind R trib	29	67		1.1	RND	PCC	0.61	0.61	28.8	0.21	1.28			
999230	SR 14	50.03	C	Columbia R trib	29	33	9.29	1.1	BOX	CPC	0.95	0.92	27.2	0.35	4.3	2137	459	1089
990968	SR 14	51.98	C	Columbia R trib	29	0		1.1	BOX	CPC	1.28	1.28	37.9	0.25	17.92	7		
991549	SR 14	52.84	C	Collins Cr	29.0128	67	12.67	1.1	RND	SPS	2.29	2.29	36.6	0	3.13	1851	2577	3268
990119	SR 14	55.8	C	Dog Cr	29.0130	67		1.1	BOX	CPC	2.13	2.13	0.9	0.99	0.99	121		
990341	SR 14	140.8	C	Pine Cr	31.0354	0	34.25	1.4	RND	SPS	3.05	3.05	73	0.45	1.5	125566	26895	490830
990341	SR 14	140.8	C	Pine Cr	31.0354	0	34.25	2.4	RND	SPS	3.05	3.05	73	0.45	1.5	125566	26895	490830
990341	SR 14	140.8	C	Pine Cr	31.0354	0	34.25	3.4	RND	SPS	3.05	3.05	73	0.45	1.5	125566	26895	490830
990341	SR 14	140.8	C	Pine Cr	31.0354	0	34.25	4.4	RND	SPS	3.05	3.05	73	0.45	1.5	125566	26895	490830
999202	SR 141	0.74	C	Jewett Cr	29.0342	0		1.1	BOX	CPC	1.85	2.45	24.4	0.59	4.2	58		
990483	SR 141	14.64	C	Wieberg Cr	29.0202	0		1.1	BOX	PCC	1.83	1.86	29.9	0.76	2.4	14		
990339	SR 141	15	C	Phelps Cr	29.0203	0		1.1	BOX	PCC	1.82	1.85	26.9	1.95	3.07	133		
999207	SR 141	18.67	C	White Salmon R trib	29.0206	67		1.1	BOX	CPC	1.21	0.96	17.8	0	1.5			
992848	SR 142	1.53	C	Klickitat R trib	30	0		1.1	RND	CST	1.22	1.22	34.4	1.7	13.25	20		
992888	SR 142	8.66	C	Klickitat R trib	30	0		1.1	RND	CST	1.07	1.07	19	1.35	9.8	120		
992908	SR 142	14.66	C	Skookum Canyon Cr	30.0024	33	4.51	1.1	RND	SPS	1.83	1.83	11.5	0	1.24	540		
993802	SR 142	22.38	C	Little Klickitat R trib	30	67		1.2	RND	CST	0.91	0.91	13.1	0	0.1			
993802	SR 142	22.38	C	Little Klickitat R trib	30	67		2.2	RND	CST	0.91	0.91	15.7	0	1.1			
993804	SR 142	23.19	C	Little Klickitat R trib	30	67		1.1	RND	CST	0.91	0.91	9.1	0	1.7			
991629	SR 142	25.1	C	Smith-Mason Cr	30.0090	33	5.03	1.2	RND	CST	1.52	1.52	22.9	0	1.5	13632	2347	11893
991629	SR 142	25.1	C	Smith-Mason Cr	30.0090	33	5.03	2.2	RND	CAL	1.22	1.22	18.3	1.3	5.4	13632	2347	11893
990284	SR 142	25.32	C	Mill Cr	30.0088	67	6.19	1.1	RND	CST	2.02	2.02	14.6	0	1.5	25149	29484	55510
991342	SR 4	0.68	C	Roaring Cr Sl	24	0		1.1	RND	CST	0.9	0.9	25.5	1.08	0.74	0		
992398	SR 4	2.1	C	Naselle R trib	24	0		1.1	RND	PCC	0.6	0.6	39.4	0	3.5	127		
991375	SR 4	3.8	C	Naselle R trib	24.0575A	67	11.93	1.1	RND	CST	0.75	0.75	23.4	0	0.85	1877	506	1702
991372	SR 4	6.36	C	Naselle R trib	24.0543A	0		1.1	RND	PCC	0.6	0.6	28.5	0.09	1.5	45		
991346	SR 4	6.97	C	Salmon Cr trib	24.0622	0	17.63	1.1	RND	SST	0.9	0.9	36.3	0.05	2.34	669	460	646
991347	SR 4	7.34	C	Salmon Cr trib	24.0624	67	11.4	1.1	RND	PCC	0.76	0.76	23.2	0	0.08	1128	176	5593
992403	SR 4	7.59	C	Salmon Cr trib	24	33	13.19	1.2	RND	PCC	0.75	0.75	28.4	0.1	0.81	954	270	721
992403	SR 4	7.59	C	Salmon Cr trib	24	33	13.19	2.2	RND	PCC	0.75	0.75	27.5	0.14	0.51	954	270	721
992405	SR 4	8.21	C	Salmon Cr trib	24	33	13.66	1.1	RND	PCC	0.75	0.75	15.6	0.36	2.8	1021	528	1196

Appendix ID. WSDOT Southwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
991349	SR 4	8.42	C	Salmon Cr trib	24	0		1.1	RND	PCC	0.75	0.75	48.1	0	2.3	141		
991381	SR 4	8.73	C	Salmon Cr trib	24.0620A	0	9.38	1.1	RND	PCC	0.75	0.75	32.3	0.02	2	300	16	215
990109	SR 4	10.49	C	Campbell Cr trib	25	67	25.83	1.1	BOX	PCC	1.83	1.22	27.5	0	0	17808	4265	17203
990110	SR 4	10.61	C	Lassila Cr	25.0077	67	25.83	1.1	OTH	CPC	1.52	1.07	34.2	0	0.6	17808	4265	17203
990371	SR 4	13.7	C	Seal Cr	25.0104	0	28.5	1.1	BOX	PCC	1.37	1.37	15.9	0	-1.63	4079	190	13546
998998	SR 4	14.01	C	Seal Sl trib	25	0		1.1	RND	PCC	0.61	0.61	29.8	0.11	9.6	91		
999000	SR 4	15.08	C	Grays R trib	25	0		1.1	RND	PCC	0.83	0.83	29.8	0	8.9			
998685	SR 4	16.81	C	Grays R trib	25	67	5.71	1.1	RND	PCC	0.91	0.91	18.8	0	1.16	241	38	254
991396	SR 4	17.19	C	Grays R trib	25	67	9.17	1.1	RND	PCC	0.53	0.53	51.7	0	1.43	648	60	589
998688	SR 4	17.84	C	Hull Cr trib	25	33		1.1	RND	PCC	0.91	0.91	14.3	0	3.4	142		
998690	SR 4	18.61	C	Grays R trib	25	0		1.1	RND	OTH	0.76	0.76	49	0	6.5	199		
991421	SR 4	18.8	C	Grays R trib	25.0093A	33	8.92	1.1	RND	PCC	0.91	0.91	24.4	0	2.5	714	258	678
998695	SR 4	21.24	C	Klints Cr trib	25	0		1.1	RND	OTH	0.91	0.91	69.3	3.5	7.67	134		
998698	SR 4	23.06	C	Eggman Cr trib	25	0		1.1	RND	OTH	0.91	0.91	60.6	0.24	10.6			
998544	SR 4	23.19	C	Eggman Cr trib	25	0		1.1	RND	OTH	0.91	0.91	82.2	0	4.68	70		
991398	SR 4	26.25	C	WF Skamokawa Cr trib	25	67	11.93	1.1	RND	PCC	0.91	0.91	21.7	0	1.7	1189	429	1167
991399	SR 4	26.65	C	Skamokawa R trib	25	67		1.1	RND	PCC	0.91	0.91	29.8	0.99	0.07			
998554	SR 4	30	C	Brooks Sl trib	25	33		1.1	RND	PCC	0.91	0.91	24.4	0	2.7	107		
991422	SR 4	30.35	C	Brooks Sl trib	25	0	3.18	1.1	RND	PCC	1.22	1.22	28	0.37	2.5	53	0	40
998557	SR 4	30.57	C	Brooks Sl trib	25	0		1.1	RND	PCC	0.76	0.76	22.3	0.75	0			
991402	SR 4	32	C	Risk Cr trib	25	33		1.1	RND	PCC	0.61	0.61	30.9	0.24	0.7			
990305	SR 4	33.15	C	Indian Jack Sl	25.0237	33	26.28	1.1	RND	PCC	0.91	0.91	43.3	0.99	-0.2	5517	0	36388
998991	SR 4	35.7	C	Birnie Cr trib	25	33		1.1	RND	PCC	0.91	0.91	29.9	0	2.3			
998993	SR 4	36.59	C	Columbia R trib	25	33		1.1	RND	PCC	0.46	0.46	43.2	0.99	4			
991407	SR 4	36.88	C	Columbia R trib	25	33		1.1	BOX	CPC	1.27	1.83	55.6	0	2.9	65		
999008	SR 4	37.16	C	Columbia R trib	25	0		1.1	BOX	CPC	0.91	0.91	75	0.07	4	82		
998671	SR 4	41.94	C	Columbia R trib	25	33		1.1	RND	CAL	0.91	0.91	18.2	0.4	0.88	150		
999004	SR 4	52.28	C	Coal Cr Sl trib	25.0332	67		1.1	RND	CST	1.22	1.22	42.9	0	0.82			
992781	SR 401	0.76	C	Columbia R trib	24	67	6.95	1.1	RND	PCC	0.91	0.91	16.5	0.46	0.73	1192	52	281
991409	SR 401	0.84	C	Megler Cr	24.0049	67	18.52	1.1	RND	CST	1.22	1.22	20.3	0	-0.05	1280	2013	1767
991411	SR 401	1.85	C	Columbia R trib	24.0050	67	11.37	1.1	ELL	CST	1.42	1.6	27.8	0	0.8	3146	2298	3249
991418	SR 401	4.33	C	Columbia R trib	24	0	5.65	1.1	RND	PCC	1.22	1.22	32.9	0.15	5	1163	109	391
994567	SR 401	5.5	C	SF Naselle R	24.0584	0	15.75	1.1	RND	PCC	1.21	1.21	55.1	0	1.5	1342	12	1511
994566	SR 401	5.5	C	SF Naselle R trib	24	0	11.5	1.1	RND	PCC	0.61	0.61	11	0.32	0.99	911	98	721
994565	SR 401	5.56	C	unnamed trib	24	0	12.15	1.1	RND	PCC	0.61	0.61	12.5	0	5.6	732	248	414
991377	SR 401	5.56	C	SF Naselle R trib	24.0584A	0	17.32	1.2	RND	PCC	0.61	0.61	28	0	1.4	2077	385	1303
991377	SR 401	5.56	C	SF Naselle R trib	24.0584A	0	17.32	2.2	RND	PCC	0.61	0.61	33.8	0.31	1.4	2077	385	1303
992791	SR 401	6.02	C	SF Naselle R trib	24	33	5.3	1.1	RND	PCC	0.9	0.9	21.5	0.54	1.3	597	50	452
991378	SR 401	6.03	C	SF Naselle R trib	24.0584B	0	7.66	1.1	RND	PCC	0.9	0.9	28.1	0.78	4.9	666	66	282
992792	SR 401	6.13	C	SF Naselle R trib	24	33	6.92	1.1	RND	PCC	0.75	0.75	27.3	0.25	2.6	200	2	99
992392	SR 401	9.18	C	SF Naselle R trib	24	0	6.83	1.1	RND	PCC	0.9	0.9	34.6	0	3.23	204	0	60

Appendix ID. WSDOT Southwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
992262	SR 411	7.14	C	Cowlitz R trib	26	0	10.52	1.1	RND	OTH	0.85	0.85	40.5	0	1.67	621	102	191
992265	SR 411	9.56	C	Cowlitz R trib	26	67	11.38	1.1	RND	PCC	0.6	0.6	39.7	0	0.55	1516	436	1454
991783	SR 500	11.7	C	Lacamas Cr trib	28.0165	33		1.1	RND	PCC	0.91	0.91	16.5	0	4.2			
999062	SR 500	18.53	C	unnamed trib	28	67		1.1	RND	CST	0.99	0.99	24.1	0	2.8			
994514	SR 501	17.94	C	Gee Cr trib	27.0168D	0	16.27	1.1	RND	PCC	0.76	0.76	47.7	1.4	2.56	1730	1247	7553
991877	SR 502	0.77	C	Gee Cr trib	27.0168A	67	7.01	1.1	RND	PCC	0.91	0.91	18.6	0	1.4	358	0	792
27.0305 1.00	SR 503	0.05	C, FI	Ross Cr	27.0305	33	13.28	1.1	BOX	CPC	1.83	1.52	21.4	0.99	0.99	670	997	1798
991657	SR 503	13.21	C	Rock Cr trib	27.0223	33	18.88	1.1	SQSH	CST	2.11	1.55	32.9	0.3	1	3325	1138	3706
991656	SR 503	15.84	C	Rock Cr	27.0222	33	23.09	1.2	BOX	PCC	2.15	2.15	0.9	0	0.99	13644	776	32937
991656	SR 503	15.84	C	Rock Cr	27.0222	33	23.09	2.2	RND	CST	1.22	1.22	42.8	0	0	13644	776	32937
1350514	SR 503	18.87	C	Bitter Cr trib	27	33		1.1	RND	CST	0.53	0.53	12.1	0	1.97			
991503	SR 503	19.55	C	Bitter Cr trib	27.0372	0	12.18	1.1	RND	CST	0.61	0.61	18.6	0.58	8	543	570	682
990037	SR 503	19.85	C	Bitter Cr	27.0367	67	12.5	1.1	SQSH	CST	1.25	0.85	12.1	0	1.9	3045	2447	4102
990073	SR 503	25.36	C	Chelatchie Cr	27.0373	67	16.8	1.1	RND	CST	1.22	1.22	14.3	0	0.56	2032	701	4186
990842	SR 503	27.05	C	Lewis R trib	27	0		1.1	RND	CST	0.64	0.64	25	0	2	0		
994531	SR 503	33.04	C	Brooks Cr	27.0431	33	15.28	1.1	BOX	CPC	1.52	1.86	33.9	0	4.95	2072	3178	4603
994532	SR 503	33.28	C, FI	Brooks Cr trib	27.0432	33	4.18	1.1	BOX	CPC	2.45	2.43	34.9	0.99	5	603	687	1365
994533	SR 503	33.5	C	Brooks Cr trib	27.0433	0	3.44	1.1	RND	PCC	0.91	0.91	31.5	0.9	6.57	285	163	417
991789	SR 503	33.54	C	Lewis R trib	27	0		1.1	RND	PCC	1.22	1.22	50.3	0.3	20	11		
991790	SR 503	34.09	C	Yale Lk trib	27	0	4.2	1.1	RND	PCC	1.22	1.22	30.5	1.83	12	1154	1297	925
994610	SR 503	34.97	C	Lake Merwin trib	27.0428	0		1.1	RND	PCC	0.61	0.61	57.2	0	6.9	0		
991791	SR 503	35.2	C	Yale Lk trib	27	0	3.91	1.1	RND	PCC	1.22	1.22	32	1.83	3	1472	1077	913
994603	SR 503	35.58	C	Yale Lk trib	27	0	4.41	1.1	RND	PCC	0.76	0.76	40.2	0	6.03	1383	1310	1129
991571	SR 503	35.69	C	Dog Cr trib	27	0	2.87	1.1	RND	PCC	0.76	0.76	50.7	1.4	11.6	565	631	877
990120	SR 503	35.84	C	Dog Cr	27.0476	0	4.9	1.1	BOX	OTH	2.44	2.44	6.7	0.4	2.5	1090	1445	1768
994541	SR 503	36.57	C	Rock Cr trib	27.0420	0		1.1	RND	PCC	0.91	0.91	47.5	0.41	12	200		
994599	SR 503	37.06	C	Panamaker Cr	27.0478	67	18.85	1.2	BOX	CPC	3.05	2.45	21.4	0	-0.89	3322	23132	29138
994599	SR 503	37.06	C	Panamaker Cr	27.0478	67	18.85	2.2	BOX	CPC	3.05	2.45	20	0	-0.45	3322	23132	29138
990322	SR 503	37.79	C	Lewis R trib	27.0417	0		1.1	RND	PCC	0.91	0.91	37	3.5	16.4	0		
994545	SR 503	38.17	C	Lewis R trib	27.0416	0	3.48	1.1	RND	PCC	0.46	0.46	16.9	0.29	6	381	178	434
994546	SR 503	38.65	C	Lewis R trib	27.0415	0	4.84	1.1	BOX	CPC	0.91	1.57	27.1	0.76	6	600	1803	1625
990078	SR 503	38.77	C	Dry Cr	27.0481	0		1.1	BOX	PCC	2.44	3.05	27.7	0	3	103		
994547	SR 503	38.85	C	Indian Cr	27.0411	0		1.1	BOX	CPC	1.85	1.85	31.9	0.1	4	0		
994549	SR 503	39.41	C	Jim Cr trib	27	33	3.55	1.1	RND	PCC	0.61	0.61	32.6	0	7.55	410	491	702
994550	SR 503	39.9	C	Day Cr	27.0409	0	5	1.1	RND	PCC	0.75	0.75	23.6	0.2	9	1328	1241	1862
990062	SR 503	40.94	C	Cape Horn Cr	27.0401	0	2.43	1.1	BOX	CPC	2.3	2.9	65.9	0.65	3.34	161	76	300
994558	SR 503	41.1	C	Lake Merwin trib	27.0400	0	6.34	1.1	RND	PCC	0.91	0.91	22.4	0.26	8.57	676	272	4805
994557	SR 503	42.11	C	Lake Merwin trib	27.0398	0	3.15	1.1	RND	PCC	0.76	0.76	35.1	0.72	12.8	214	101	294
994582	SR 503	44.34	C	Husky Cr	27.0359	0		1.1	RND	PCC	1.22	1.22	0.9	15	0.99			
994583	SR 503	45.3	C	Lewis R trib	27	0		1.1	RND	PCC	0.76	0.76	0.9	0.3	0.99			
990089	SR 503	46.17	C	Colvin Cr	27.0392	0	16.71	1.1	RND	SPS	1.83	1.83	76.2	0.4	3.5	997	1021	1412

Appendix ID. WSDOT Southwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
991439	SR 503	46.55	C	Davis Cr	27.0338	0	3.53	1.1	RND	PCC	1.37	1.37	51.8	0.17	5	769	1254	1925
994623	SR 503	48.19	C	Houghton Cr trib	27	33		1.1	RND	CST	0.61	0.61	42	0	4	101		
994624	SR 503	48.42	C	Houghton Cr trib	27	0		1.1	RND	OTH	0.81	0.81	29.7	0	0.49			
994625	SR 503	49.49	C	Staples Cr	27.0315	0	9.49	1.1	RND	PCC	1.37	1.37	38	1.1	2.6	696	191	605
994629	SR 503	50.01	C	Lewis R trib	27.0310	0	11.86	1.1	RND	CST	0.61	0.61	46.2	1.5	0.99	1060	518	1190
991968	SR 504	2.49	C	Salmon Cr trib	26	0	4.07	1.1	RND	CAL	0.8	0.8	42.2	0	5	211	20	40
991970	SR 504	2.73	C	Salmon Cr trib	26	0	7.69	1.1	RND	CAL	0.6	0.6	23.7	0	3.6	370	24	104
992015	SR 504	2.76	C	Salmon Cr trib	26	0	6.23	1.1	RND	CAL	0.6	0.6	24.6	0.1	9.3	205	20	90
991669	SR 504	3.17	C	Salmon Cr trib	26	33	12.22	1.1	RND	CAL	0.8	0.8	33.5	0	2.3	775	685	1206
992019	SR 504	4.55	C	Silver Lk trib	26	0	2.92	1.2	RND	CST	0.75	0.75	27.6	0.73	2.6	60	0	900
992019	SR 504	4.55	C	Silver Lk trib	26	0	2.92	2.2	RND	CST	0.75	0.75	27.6	0.99	2.6	60	0	900
991675	SR 504	13.53	C	Spirit Marsh to Toutle R trib	26.0314B	33		1.2	RND	CST	0.76	0.76	25.6	0.3	1.5			
991675	SR 504	13.53	C	Spirit Marsh to Toutle R trib	26.0314B	33		2.2	RND	CST	0.76	0.76	25.6	0.3	1.5			
991634	SR 504	17	C	Wooster Cr	26.0320	0	11.57	1.1	RND	CST	1.37	1.37	20.4	2.53	1	2837	151	1212
992028	SR 504	17.6	C	NF Toutle R trib	26	0	9.29	1.1	RND	PCC	1.22	1.22	55	0	1.9	1431	478	1134
992068	SR 504	22.21	C	NF Toutle R trib	26	0		1.1	RND	CST	0.75	0.75	98.1	0.99	5.2			
992074	SR 504	23.58	C	NF Toutle R trib	26	0	6.35	1.1	RND	CST	1.6	1.6	68.6	0	10	498	64	400
992244	SR 505	0.16	C	Olequa Cr trib	26	0	10.21	1.1	BOX	CPC	0.95	1.54	288	2.5	0.99	414	317	983
992246	SR 505	0.26	C	Olequa Cr trib	26	0	9.72	1.1	RND	CST	0.9	0.9	29.5	0	5.5	1253	235	506
991047	SR 505	19.2	C	NF Toutle R trib	26	67	10.59	1.1	RND	CST	0.45	0.45	19.9	0	0.4	1512	329	1130
991685	SR 506	2.77	C	Stillwater Cr trib	26.0429A	0	8.16	1.2	RND	PCC	1.07	1.07	31.5	0.3	2.98	462	55	161
991685	SR 506	2.77	C	Stillwater Cr trib	26.0429A	0	8.16	2.2	RND	PCC	1.07	1.07	29.6	0.19	3.51	462	55	161
992287	SR 506	2.98	C	Stillwater Cr trib	26	0		1.1	RND	PCC	0.75	0.75	22.5	0	2.75			
992290	SR 506	5.41	C	Stillwater Cr trib	26	67		1.1	RND	PCC	1.22	1.22	31	0	0.51			
991432	SR 506	7.68	C	Cowlitz R trib	26	0	11.26	1.1	RND	OTH	0.78	0.78	33.4	0.16	8.26	570	137	434
994954	SR 508	0.53	C	Allen Cr	23.0883	33		1.1	RND	PCC	0.91	0.91	25	0	1.6			
994955	SR 508	0.64	C	Allen Cr trib	23	33		1.1	RND	PCC	0.61	0.61	22.9	0	0.7			
994958	SR 508	1.66	C	unnamed Allen Cr trib	23	33		1.1	RND	PCC	0.76	0.76	16.4	0.16	2.74			
994959	SR 508	1.85	C	unnamed Allen Cr trib	23	33	14.75	1.1	RND	PCC	0.91	0.91	25	0.26	1.9	860	370	2523
992277	SR 508	4.26	C	SF Newaukum R trib	23	33	10.59	1.1	RND	PCC	0.91	0.91	12.4	0.21	1.28	984	0	2016
994966	SR 508	4.7	C	SF Newaukum R trib	23	0	9.28	1.1	RND	OTH	0.46	0.46	18.5	0	2.6	964	9	398
991756	SR 508	5.1	C	SF Newaukum R trib	23	67	5.94	1.1	RND	CST	1.22	1.22	18.8	0	0.58	625	0	457
991292	SR 508	5.53	C	SF Newaukum R trib	23	67	8.49	1.1	RND	PCC	0.46	0.46	11.5	0	0.35	1632	1945	1783
991293	SR 508	6.78	C	SF Newaukum R trib	23	67	18.16	1.1	RND	PCC	0.91	0.91	12.5	0	0.64	3788	463	17938
994969	SR 508	8.88	C	SF Newaukum R trib	23	33	6.96	1.2	RND	PCC	0.61	0.61	14.5	0	0.5	652	2	377
994969	SR 508	8.88	C	SF Newaukum R trib	23	33	6.96	2.2	RND	PCC	0.61	0.61	15.2	0	0.3	652	2	377
994971	SR 508	11.27	C	SF Newaukum R trib	23.0000	33	5.54	1.1	RND	CST	0.61	0.61	16.3	0	0.2	210	39	76
991288	SR 508	11.55	C	SF Newaukum R trib	23	33	16.53	1.1	RND	PCC	1.22	1.22	15.1	0.1	3.7	4076	181	6003
991289	SR 508	12.66	C	SF Newaukum R trib	23	33	9.05	1.1	RND	PCC	0.91	0.91	20	0	1.5	756	306	1078
994976	SR 508	15.42	C	unnamed Kearney Cr trib	23	0		1.1	RND	PCC	0.61	0.61	15.5	0	4.5			
991296	SR 508	15.85	C	Kearney Cr trib	23	0	10.11	1.1	RND	PCC	0.91	0.91	15.5	0.12	4	1244	168	1279

Appendix ID. WSDOT Southwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
994979	SR 508	16.5	C	unnamed Stowell Cr trib	23	67	8.71	1.1	RND	PCC	0.76	0.76	14	0	1.9	2287	15	789
994981	SR 508	16.99	C	Stowell Cr trib	23	67	12.68	1.1	RND	PCC	0.61	0.61	12.9	0.03	1.39	997	0	4228
991291	SR 508	17.06	C	Stowell Cr trib	23	67		1.1	RND	PCC	1.22	1.22	15.3	0	1.76			
994463	SR 508	17.55	C	Stowell Cr	23.0916	33		1.1	RND	PCC	0.91	0.91	15.1	0	2.8			
992540	SR 508	18.32	C	Mill Cr trib	26	33	9.78	1.1	RND	PCC	0.73	0.73	13.1	0.15	3.5	1545	766	1008
992541	SR 508	18.95	C	Tilton R trib	26.0560x	67	1.67	1.1	RND	CPC	0.6	0.6	16.5	0	0.05	937	192	294
991433	SR 508	20.37	C	Shermans Cr	26.0564	0	3.24	1.1	RND	PCC	0.91	0.91	14.6	1.25	4.5	1827	477	1365
992550	SR 508	22.5	C	Tilton R trib	26.0566	0		1.1	RND	CST	1.8	1.8	55.9	0.44	15	38		
992551	SR 508	23	C	unnamed trib	26.0567x	0		1.1	RND	PCC	0.9	0.9	10.2	1.4	0.12	24		
992552	SR 508	23.16	C	Tilton R trib	26.0560x	0		1.1	RND	PCC	0.6	0.6	20.4	0.95	0.12	35		
992553	SR 508	23.45	C	Tilton R trib	26.0560x	0		1.1	RND	PCC	0.62	0.62	19.7	0.85	0.14	80		
992555	SR 508	23.89	C	Tilton R trib	26.0560x	33	4.7	1.1	BOX	CPC	1.68	1.82	24.6	0.55	7.11	1552	1049	2644
992557	SR 508	23.99	C	Tilton R trib	26.0560x	0		1.1	RND	PCC	0.9	0.9	15.1	0	0.04	80		
992573	SR 508	30.01	C	Tilton R trib	26	0		1.1	SQSH	CST	2.1	1.65	13.6	0.9	1.2	86		
991435	SR 508	31.8	C	Tilton R trib	26	0	10.6	1.1	RND	PCC	1.07	1.07	19.5	0.98	2	1427	433	1378
990774	SR 6	0.75	C	Case Pond	24	0		1.1	RND	CAL	0.75	0.75	19.3	4	5.2	0	0	0
991355	SR 6	2.96	C	Willapa R trib	24	67	6.39	1.1	RND	PCC	0.75	0.75	17.3	0	1.7	201	0	236
990802	SR 6	4.82	C	Willapa R trib	24	33		1.1	RND	PCC	1.05	1.05	17.4	0.04	1.73	50		
990805	SR 6	5.37	C	Willapa R trib	24.0334	0	21.78	1.1	ELL	PCC	1.02	0.84	48	0	1.1	3511	773	6814
990806	SR 6	6.31	C	Willapa R trib	24	33	14.77	1.1	RND	PCC	0.9	0.9	14.9	0.2	0.4	3815	200	3803
990813	SR 6	8.32	C	Willapa R trib	24	67	11.33	1.1	RND	PCC	0.9	0.9	23.9	0	1.75	1556	25	729
990816	SR 6	9.83	C	Willapa R trib	24	33	12.84	1.1	RND	PCC	0.6	0.6	15.7	0	1.28	1350	0	1149
990817	SR 6	9.92	C	Willapa R trib	24	67	4.09	1.1	RND	PCC	0.75	0.75	13.5	0	1.85	1595	119	406
990782	SR 6	11.69	C	Willapa R trib	24	0		1.1	RND	PCC	0.6	0.6	39.1	0	5.3	136		
990790	SR 6	17.36	C	Fern Cr to Willapa R trib	24	33	8.27	1.1	BOX	CPC	1.08	1.28	16.6	0	0.18	250	13	194
992424	SR 6	21.27	C	Fern Cr trib	24	0	8.08	1.1	RND	PCC	0.62	0.62	84	0.03	2.9	893	46	141
990735	SR 6	22.64	C	Salmon Cr	23.1166	33	14.43	1.1	BOX	CPC	2.44	1.83	19.2	0	-0.57	5736	7247	7329
990736	SR 6	22.94	C	Salmon Cr trib	23	33	10.31	1.1	RND	PCC	0.61	0.61	21.1	0	2.4	1755	2378	1894
990737	SR 6	23.49	C	Rock Cr trib	23	67	5.92	1.1	RND	PCC	0.61	0.61	27.6	0	5.5	526	258	424
991654	SR 6	24.3	C	Rock Cr trib	23	0	3.74	1.1	RND	PCC	0.76	0.76	21.6	0	7.3	158	38	87
990141	SR 6	24.63	C	Rock Cr trib	23	33		1.1	RND	PCC	0.61	0.61	27.3	0	3.4	146		
990738	SR 6	25.24	C	Rock Cr trib	23	33	7.85	1.1	RND	PCC	0.61	0.61	16.1	0	3.9	852	190	612
990740	SR 6	26.36	C	Rock Cr trib	23	0		1.1	RND	PCC	0.61	0.61	32.6	0	4.9			
990473	SR 6	27.49	C	Water Mill Cr	23.1156	67		1.1	BOX	CPC	1.22	1.22	27.3	0	0.4	200		
990741	SR 6	29	C	Chehalis R trib	23	67		1.1	RND	PCC	0.61	0.61	20.2	0	1.8	246		
930852	SR 6	33.3	C	Chehalis R trib	23	67	5.39	1.1	RND	PCC	0.46	0.46	13	0	1.07	462	0	277
990751	SR 6	33.56	C	unnamed trib	23	67	6.24	1.2	RND	CAL	0.91	0.91	15.2	0	1.2	831	0	499
990751	SR 6	33.56	C	unnamed trib	23	67	6.24	2.2	RND	PCC	0.61	0.61	14.6	0	1.5	831	0	499
990753	SR 6	34	C, FI	Chehalis R trib	23	33	1.64	1.1	RND	PCC	0.61	0.61	12.5	0	2.6	938	152	135
990755	SR 6	34.85	C	Chehalis R trib	23.1098	67	12.81	1.1	RND	OTH	0.91	0.91	16.5	0	1.58	2189	683	3993
990756	SR 6	35.08	C	Chehalis R trib	23	0	5.19	1.1	RND	CAL	0.61	0.61	25.1	0.85	5.54	557	121	310

Appendix ID. WSDOT Southwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
991542	SR 6	35.18	C	Chehalis R trib	23.1098	0		1.1	RND	PCC	0.76	0.76	24.9	0.47	7.2	11		
990757	SR 6	35.42	C	Chehalis R trib	23	67	5.76	1.1	RND	PCC	0.61	0.61	16.2	0	1.48	1122	70	894
990758	SR 6	35.85	C	Chehalis R trib	23	0	5.39	1.1	RND	PCC	0.91	0.91	26.7	0	8.3	1222	635	574
990405	SR 6	36.21	C	Chehalis R trib	23	33		1.1	RND	CST	0.61	0.61	28	0	-0.14			
990423	SR 6	36.74	C	Hope Cr trib	23	0	6.98	1.1	RND	CST	0.46	0.46	20.8	0.3	2.02	597	30	127
990764	SR 6	42.38	C	unnamed trib	23	67		1.1	BOX	CPC	1.07	0.91	20.4	0	0.5	189		
991221	SR 6	43.61	C	Chehalis R trib	23	0	12.6	1.1	RND	OTH	0.76	0.76	49.1	1.45	8.44	1074	569	1849
991544	SR 6	46.39	C	Chehalis R trib	23.0949	67	19.76	1.1	RND	SPS	2.06	2.06	42.2	0	0.3	12739	4904	25156
991757	SR 6	46.5	C	Chehalis R trib	23.0949	67	16.74	1.1	RND	SPS	2.52	2.52	67.9	0	0.5	13052	4904	25869
990825	SR 7	2.73	C	Tilton R trib	26	33		1.1	RND	PCC	0.61	0.61	16.6	0	-0.9			
990826	SR 7	3.36	C	Tilton R trib	26	0	11.95	1.1	RND	PCC	0.9	0.9	17.5	0.55	1.25	995	1105	1433
990831	SR 7	5.5	C	Tilton R trib	26	0	15.13	1.2	BOX	CPC	1.52	1.52	32.3	0.12	3.6	784	548	1736
990831	SR 7	5.5	C	Tilton R trib	26	0	15.13	2.2	BOX	CPC	1.52	1.52	32.4	0.12	3.8	784	548	1736
990832	SR 7	5.64	C	Tilton R trib	26	0		1.1	BOX	CPC	1.24	1.24	19	0	6.5	10		
990833	SR 7	6.91	C	Tilton R trib	26	0	3.12	1.1	BOX	CPC	1.22	1.22	41.7	0	8	1055	898	1229
990836	SR 7	7.36	C	Tilton R trib	26	0		1.1	BOX	CPC	1.83	1.22	27.3	0	0.6	58		
990840	SR 7	8.18	C	Tilton R trib	26	67		1.1	RND	PCC	0.76	0.76	12.9	0.25	1.3			
990841	SR 7	8.89	C	Tilton R	26	0	4.41	1.1	BOX	CPC	1.54	0.93	18.2	0.55	0.7	2296	2955	4894
990690	SR 7	9.85	C	Roundtop Cr trib	11	0		1.1	RND	PCC	0.91	0.91	34.8	0.76	1			
990657	SR 7	10.25	C	Summit Cr trib	11	0		1.1	BOX	CPC	1.22	1.22	19.8	0.4	11			
990691	SR 7	10.48	C	Round Top Cr trib	11	33		1.2	BOX	PCC	0.91	0.91	14.9	0	6.2			
990691	SR 7	10.48	C	Round Top Cr trib	11	33		2.2	RND	PCC	0.76	0.76	16.7	0	3.1			
990658	SR 7	10.81	C	Roundtop Cr trib	11	0		1.1	BOX	CPC	1.22	1.22	30.5	0.67	5			
990661	SR 7	11.1	C	Roundtop Cr trib	11	67		1.1	RND	PCC	0.61	0.61	16.8	0.18	1.7			
990662	SR 7	11.2	C	Roundtop Cr trib	11	33		1.1	BOX	CPC	0.91	0.91	10.7	0.49	4			
990084	SR 7	11.56	C	Coal Cr	11.0168	67	8.86	1.1	BOX	PCC	1.52	0.91	12.2	0.27	3	1101	484	1394
990669	SR 7	12.74	C	Roundtop Cr trib	11	67		1.1	BOX	PCC	1.52	0.91	12	0	1.24			
990670	SR 7	12.8	C	Roundtop Cr trib	11	33		1.1	RND	PCC	0.76	0.76	10.7	0.3	3			
990671	SR 7	12.9	C	Roundtop Cr trib	11	67		1.1	RND	PCC	0.76	0.76	11.5	0	1.1	50		
990672	SR 7	14.72	C	East Cr trib	11	0	12.87	1.1	RND	PCC	0.61	0.61	15.4	0	-3.2	1891	733	10867
997602	SR 7	14.81	C	East Cr trib	11	67		1.1	RND	PCC	0.46	0.46	13.8	0	0.94			
990674	SR 7	15.92	C	East Cr trib	11	67		1.1	BOX	CPC	1.22	1.22	17.9	0	1.9			
991388	US 101	1	C	Columbia R trib	24.0047	0	15.23	1.1	RND	PCC	0.91	0.91	22.1	0.3	1.8	2384	1554	2965
991359	US 101	1.3	C	Columbia R trib	24.0045	0	13	1.1	RND	PCC	0.61	0.61	27.1	0.61	1.22	934	682	1317
992817	US 101	1.62	C	Columbia R trib	24.0044	0	4.86	1.1	RND	PCC	0.91	0.91	0.9	0.99	0.99	220	0	17
991358	US 101	2	C	Station Camp Cr	24.0042	0	15.33	1.1	RND	PCC	0.61	0.61	16.6	0.61	1.82	1370	24	1756
992818	US 101	2.29	C	Columbia R trib	24.0042	0	12.32	1.1	RND	PCC	0.91	0.91	19.5	0.99	0.12	1020	312	1034
991390	US 101	2.58	C	Columbia R trib	24.0041	0	17.99	1.1	RND	PCC	0.61	0.61	16.9	0.1	-0.5	352	0	4487
992820	US 101	3.15	C	Columbia R trib	24	33		1.1	RND	PCC	0.61	0.61	18.3	0.2	2.5			
992823	US 101	7.11	C	Chinook R	24.0007A	33		1.3	BOX	CPC	2.4	2.55	25	0	0.17			
992823	US 101	7.11	C	Chinook R	24.0007A	33		2.3	BOX	CPC	2.4	2.55	25	0	0.17			

Appendix ID. WSDOT Southwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
992823	US 101	7.11	C	Chinook R	24.0007A	33		3.3	BOX	CPC	2.4	2.55	25	0	0.17			
991308	US 101	21.27	C	Willapa Bay trib	24.0679	67	18.82	1.2	RND	PCC	0.91	0.91	19.4	0	2.4	3666	4507	4561
991308	US 101	21.27	C	Willapa Bay trib	24.0679	67	18.82	2.2	RND	PCC	0.91	0.91	19.2	0	1.5	3666	4507	4561
991386	US 101	21.4	C	Willapa Bay trib	24.0680	33	10.28	1.1	RND	PCC	0.91	0.91	23	0	2	207	326	376
992836	US 101	22.12	C	Willapa Bay trib	24	67		1.1	RND	PCC	0.6	0.6	16.9	0	3.3	133		
992837	US 101	23.15	C	Willapa Bay trib	24	67		1.1	RND	PCC	0.6	0.6	19.7	0.07	2			
992838	US 101	23.31	C	Willapa Bay trib	24.0676	33	11.88	1.1	RND	PCC	0.9	0.9	23.6	0.01	4	204	619	417
992298	US 101	46.12	C	Willapa Bay trib	24	0	7.45	1.1	RND	PCC	0.92	0.92	62	0	3.32	418	0	280
990176	US 101	46.96	C	Hansen Cr	24.0403	33	3.67	1.1	BOX	PCC	1.83	1.83	31.2	0.4	0.67	1006	0	1824
992310	US 101	51.78	C	Willapa R trib	24	33	23.53	1.1	RND	PVC	0.91	0.91	39	0	0.99	2713	0	40856
982340	US 101	52.11	C	Willapa R trib	24	0	26.01	1.1	RND	PVC	0.91	0.91	39	0	0.3	2713	0	40856
990053	US 101	61.15	C	Butte Cr	24.0060	33	20.66	1.1	BOX	PCC	2.95	1.83	18.6	0.41	1.12	2800	3236	9946
990054	US 101	61.17	C	Butte Cr trib	24	33	7.25	1.1	RND	PCC	0.91	0.91	25.1	0	1.47	240	71	417
991517	US 101	61.26	C	Butte Cr trib	24	0	10.24	1.1	RND	PCC	0.61	0.61	22.2	0.4	1.12	879	228	544
991320	US 101	64.36	C	Smith Cr trib	24	33	6.23	1.1	BOX	CPC	0.95	0.91	18	0.28	0.01	1104	302	863
991323	US 101	65.71	C	Elkhorn Cr trib	24	67	12.35	1.1	BOX	PCC	0.95	0.91	19.5	0.32	0.37	1875	8	1962
992479	US 101	65.93	C	Elkhorn Cr trib	24	67		1.1	BOX	CPC	0.95	0.91	18.8	0	-0.48			
991426	US 12	72.45	C	Lacamas Cr trib	26.0474	33	10.12	1.1	BOX	PCC	0.92	0.92	22	0	2	2870	314	1867
992079	US 12	74.92	C	Cowlitz R trib	26	67		1.2	RND	PCC	1.05	1.05	22.1	0	0.92			
992079	US 12	74.92	C	Cowlitz R trib	26	67		2.2	RND	PCC	0.6	0.6	22.2	0	0.91			
990041	US 12	76	C	Blue Cr	26.0527	67	9.35	1.2	RND	PCC	0.91	0.91	27.6	0	0.61	3249	0	1500
990041	US 12	76	C	Blue Cr	26.0527	67	9.35	2.2	RND	PCC	0.91	0.91	28.1	0	0.5	3249	0	1500
992084	US 12	90.71	C	Riffe Lk trib	26	0		1.1	SQSH	SPS	1.65	1.05	0.9	0.99	10	5		
992085	US 12	91.25	C	Riffe Lk trib	26	0	2.01	1.1	SQSH	SPS	1.9	1.45	31.3	0.2	5.3	200	126	212
992087	US 12	92.09	C	Riffe Lk trib	26	0		1.1	ELL	SPS	1.35	1.7	0.9	0.34	0.17	5		
992092	US 12	93.8	C	Riffe Lk trib	26	0	1.89	1.1	RND	CST	1.28	1.28	59	0.48	1.8	498	225	165
992096	US 12	94.15	C	Highland Cr	26.0590	0	7.26	1.1	ELL	SPS	1.68	2	65.6	1.42	0.99	332	232	688
990190	US 12	95.75	C	Highland Cr	26.0590	67	16.12	1.2	ELL	SPS	2.38	2.58	28.9	0.35	0.4	5980	6417	12122
990190	US 12	95.75	C	Highland Cr	26.0590	67	16.12	2.2	ELL	SPS	2.38	2.58	27.2	0.3	0.4	5980	6417	12122
992099	US 12	95.98	C	Highland Cr trib	26	67	7.85	1.1	ELL	CST	1.12	1.32	37.3	0.18	1.9	2922	368	1038
992102	US 12	97.94	C	Lake Cr trib	26	67		1.1	BOX	CPC	2.32	2.45	27.8	0	0			
993141	US 12	101.9	C	Riffle Lk trib	26	0		1.1	RND	PCC	0.46	0.46	38.5	0	4.65	20		
992111	US 12	102.55	C, FI	Sand Cr	26.0646	33	3.25	1.1	ELL	SPS	1.68	1.84	92.6	0.4	5.1	2450	926	4150
992113	US 12	103.43	C	Riffe Lk trib	26	0	3.01	1.1	RND	CST	0.9	0.9	93.3	0	3	1057	337	1015
990944	US 12	103.98	C	Steffen Cr	26.0652	67	8.63	1.1	SQSH	SPS	3.52	2.39	24.5	0	3	3102	1424	2248
990401	US 12	109.27	C	Stiltner Cr	26.0654	33	3.09	1.1	BOX	CPC	1.83	0.95	18.7	0.5	1	2066	985	1701
992150	US 12	112.08	C	Kiona Cr trib	26	0	1.61	1.1	RND	PCC	1.05	1.05	44.1	0	5	656	55	87
992151	US 12	112.95	C	Oliver Cr	26.1025	67	2.85	1.1	ARCH	CPC	5.89	3.02	31.2	0	0	916	904	2583
990338	US 12	113.73	C	Peters Cr	26.1023	0		1.1	BOX	CPC	3.05	2.44	45.1	0.91	4	30		
931098	US 12	115.29	C	Cowlitz R trib	26	0		1.1	RND	CST	0.61	0.61	51	0.99	0.99			
992229	US 12	115.76	C	Hampton Cr	26	67		1.1	RND	CST	0.6	0.6	24	0	1.1			

Appendix ID. WSDOT Southwest Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
990945	US 12	118.41	C	Sethe Cr	26.1075	67		1.2	RND	CST	1.91	1.91	37.7	0	0.16			
990945	US 12	118.41	C	Sethe Cr	26.1075	67		2.2	RND	CST	0.75	0.75	39	0	0.28			
992282	US 12	125	C	Burton Cr	26.1106	0	5.73	1.1	SQSH	SPS	2.95	2	27.6	0.85	1.52	240		
991880	US 12	137.73	C	Cowlitz R trib	26	0		1.1	RND	CST	0.9	0.9	38.5	0.2	4.7	89		
991743	US 12	149.98	C	Millridge Cr trib	26	33	3.83	1.1	BOX	CPC	2.45	1.85	34.8	0.04	0.8	2028	1643	4015
998490	US 12	159.29	C	Andy Cr	38	67		1.1	RND	CST	0.91	0.91	17.5	0	2.9			
990845	US 97	12.9	C	Little Klickitat R trib	30	33		1.1	RND	SPS	2.74	2.74	69	0.48	1.25			
990846	US 97	13.39	C	Little Klickitat R trib	30	67		1.1	BOX	PCC	1.83	1.83	34.1	0.99	1.96	35		
990848	US 97	18.4	C	Jenkins Cr	30.0128	0	6.2	1.1	BOX	CPC	2.45	1.83	35.2	0.36	2.36	5752	667	6101
990850	US 97	21.16	C	W Prong L Klickitat R	30.0067	33	10.97	1.1	BOX	CPC	3.05	3.05	54.5	0.06	1.29	12585	12862	34133
990851	US 97	23.99	C	Dry Cr	30.0147	33		1.1	BOX	CPC	3.07	1.83	25.6	0	3.45			
990853	US 97	25.41	C	E Prong L Klickitat R	30.0139	0	9.48	1.1	BOX	CPC	1.85	1.23	28.4	0.5	4.95	8100	4170	7207
990854	US 97	25.59	C	Idlewild Canyon Cr	30.0152	33	6.7	1.1	BOX	CPC	1.23	0.94	20.5	0	5.72	5543	2823	5370
991955	US 97	27.97	C	SF Shinando Cr	37.1104	0	5.47	1.1	ELL	SPS	1.52	1.83	108.8	1.93	4	516	325	664
990857	US 97	30.1	C	Shinando Cr	37.1103	0	11.76	1.1	BOX	CPC	1.52	1.83	76.2	0.4	3.5	13354	12602	14910

[1]Field Codes

Codes Used for Culvert Shape

ARCH - bottomless arch
BOX - rectangular or square
ELL - ellipse
OTH - other
RND - round
SQSH - squash (pipe arch)

Codes Used for Culvert Materials

CAL - corrugated aluminium
CMP - corrugated metal pipe
CPC - cast in place concrete
CST - corrugated steel
OTH - other
PCC - precast concrete
PVC - plastic
SPA - structural plate aluminium
SPS - structural plate steel
SST - smooth steel

Feature Type

B - bridge
C - culvert
D - dam
DL - dike/levee
EC - erosion control
F - fill/puncheon
FD - fill/debris
FI - fishway
FL - flume

[2]The culvert # identifies individual culverts at multiple stream crossings. For example, in a triple culvert crossing, the first pipe would be 1.3, the second 2.3, and the third 3.3.

Appendix IE. WSDOT South Central Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
991457	I-82	26.26	C	Yakima R trib	39.0002A	33	10.77	1.1	RND	SPS	2.58	2.58	84.3	0.12	1.5	892	96	1714
991073	I-82	68.32	C	Yakima R trib	37	67		1.1	RND	SPS	2.67	2.67	77.8	0	0.8			
990404	I-82	70.12	C	Yakima R trib	37	67		1.1	RND	SPS	4.27	4.27	87.4	0	1.05			
997805	I-82	70.9	C	unnamed Sulphur Cr trib	37	0		1.1	RND	CST	1.22	1.22	144.3	0	4.35			
991074	I-82	72.08	C	Yakima R trib	37	33		1.1	RND	CST	1.07	1.07	83.4	0	2.2			
997806	I-82	72.38	C	unnamed trib	37	67		1.1	RND	CST	1.07	1.07	154.8	0	0.6			
997807	I-82	78.47	C	unnamed trib	37	67		1.1	RND	CST	0.83	0.83	117.5	0.19	1.2			
997808	I-82	80.32	C	Yakima R trib	37	67		1.1	RND	CST	1.22	1.22	79.5	0	0.76			
994882	I-90	38.19	C	SF Snoqualmie R trib	07	0	2.07	1.1	RND	CST	0.91	0.91	136.1	0	7.3	998	121	454
990575	I-90	38.67	C	SF Snoqualmie R trib	07.0492	33	3.11	1.1	ELL	SPS	2.1	2.28	172.4	0	3.85	1859	705	1743
990072	I-90	38.83	C	SF Snoqualmie R trib	07.0493	0	2.98	1.1	RND	SPS	1.52	1.52	172.4	0.69	3.85	654	205	982
994927	I-90	40.63	C	Mason Cr	07.0499	33	2.01	1.1	RND	CST	1.87	1.87	41.5	0	5.3	367	113	301
994912	I-90	40.67	C	SF Snoqualmie R trib	07	0	2.3	1.1	RND	CST	1.22	1.22	216	0	0.99	340	257	700
990265	I-90	42.18	C	Mason Cr	07.0499	0	2.36	1.1	SQSH	SPS	2.25	1.79	118.9	0.49	3.1	471	146	388
994887	I-90	43.12	C	SF Snoqualmie R trib	07	33	1.97	1.1	RND	CST	1.22	1.22	97.3	0	2.13	611	43	561
994891	I-90	43.42	C	SF Snoqualmie R trib	07	0		1.1	RND	PCC	0.76	0.76	61.1	1	4.6			
990865	I-90	43.87	C	SF Snoqualmie R trib	07	67		1.1	RND	CST	1.52	1.52	85.3	0	1	78		
994894	I-90	45	C	SF Snoqualmie R trib	07	0		1.1	RND	PCC	0.91	0.91	72.4	0.26	4	15		
994995	I-90	45.73	C	SF Snoqualmie R trib	07	0		1.1	RND	CST	0.76	0.76	114.2	1.6	6.6	143		
992941	I-90	46.18	C	SF Snoqualmie R trib	07	0	2.01	1.1	RND	CST	1.89	1.89	50.6	0.09	2.5	244	34	404
994914	I-90	46.19	C	SF Snoqualmie R trib	07	0	2.2	1.1	RND	SPS	1.89	1.89	26.1	5	3.8	327	49	579
990424	I-90	46.24	C	Talapus Cr	07.0508	0	3.45	1.2	BOX	PCC	3.06	1.87	35.8	0	8	536	817	1763
990424	I-90	46.24	C	Talapus Cr	07.0508	0	3.45	2.2	BOX	PCC	1.98	3.05	25	0.99	5	536	817	1763
994899	I-90	46.3	C	Talapus Cr	07.0508	33	3.12	1.2	BOX	CPC	3.04	1.84	29.3	0	5	262	817	1763
994899	I-90	46.3	C	Talapus Cr	07.0508	33	3.12	2.2	BOX	CPC	3.05	1.84	30.6	0	5	262	817	1763
994919	I-90	47.35	C	SF Snoqualmie R trib	07	0		1.1	RND	CST	1.52	1.52	105.5	1.65	6.3	193		
994994	I-90	47.35	F	SF Snoqualmie R trib	07	33										161		
992931	I-90	48.09	C	Humpback Cr	07.0512	0	5.67	1.2	BOX	CPC	3.38	2.49	61.8	0.54	7.6	3454	9003	12893
992931	I-90	48.09	C	Humpback Cr	07.0512	0	5.67	2.2	BOX	CPC	3.38	2.49	61.8	0.54	7.7	3454	9003	12893
992933	I-90	48.66	C	SF Snoqualmie R trib	07	0		1.2	BOX	CPC	3.15	2.45	31.4	0.24	2.26	125		
992933	I-90	48.66	C	SF Snoqualmie R trib	07	0		2.2	BOX	CPC	3.15	2.45	31.4	0.24	2.26	125		
999281	I-90	51.33	C	Coal Cr	39.1880	33		1.1	RND	CST	1.22	1.22	0.9	0	1.1			
994907	I-90	52.12	C	SF Snoqualmie R trib	07	33		1.1	RND	CAL	1.66	1.66	113.9	0.31	3.5	161		
999283	I-90	52.92	C	Coal Cr trib	39	33		1.2	BOX	CPC	3.05	3.35	90.4	0.76	3.7			
999283	I-90	52.92	C	Coal Cr trib	39	33		2.2	BOX	CPC	3.05	3.35	90.4	0.76	3.8			
999276	I-90	53.34	C	unnamed trib	39	0		1.1	RND	PCC	0.91	0.91	64.3	0	5.6			
999279	I-90	54.03	C	Coal Cr trib	39	33		1.1	BOX	CPC	1.58	1.56	50.5	0	3.1			
999280	I-90	54.18	C	Coal Cr	39.1880	33		1.2	BOX	CPC	3.05	1.7	63.2	0.65	3.3			

Appendix IE. WSDOT South Central Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
999280	I-90	54.18	C	Coal Cr	39.1880	33		2.2	BOX	CPC	3.05	1.7	63.4	0.06	3			
999342	I-90	59.37	C	Resort Lk	39.1861	0		1.1	RND	SPS	2.3	2.3	67.1	0.99	2			
992948	I-90	60.58	C	Townsend Cr	39	0	6.08	1.1	OTH	OTH	1.96	1.85	86.5	0	2	2618	935	3748
992950	I-90	61.35	C	Price Cr	39.1840	0	4.83	1.1	BOX	CPC	3.1	3.06	91.6	0.35	8.7	1669	548	1502
992952	I-90	62.22	C	Yakima R trib	39	0		1.1	BOX	OTH	1.82	1.22	60	0	3.9			
992953	I-90	62.29	C	Yakima R trib	39	0		1.1	RND	PCC	1.81	1.81	27.6	0.09	2.57	91		
992954	I-90	62.3	C	Yakima R trib	39	0		1.1	BOX	CPC	1.84	1.84	23.9	0.35	3.39	91		
992955	I-90	62.71	C	Swamp Cr	39.1836	33	17.22	1.2	BOX	CPC	2.45	1.84	67.3	0.13	1.01	1671	274	9624
992955	I-90	62.71	C	Swamp Cr	39.1836	33	17.22	2.2	BOX	CPC	2.45	1.84	67.3	0.15	1.01	1671	274	9624
933757	I-90	64.12	C	Toll Cr	39	33		1.1	RND	PCC	1.22	1.22	89	0	1.58			
992961	I-90	66.59	C	Hudson Cr	39.1822	0		1.1	BOX	CPC	1.25	1.28	32.5	2.2	0.99			
990378	I-90	70.9	C	Silver Cr	39.1713	33	19.29	1.2	BOX	PCC	2.88	1.84	91.5	0.57	1.4	3849	8121	6186
990378	I-90	70.9	C	Silver Cr	39.1713	33	19.29	2.2	BOX	PCC	2.83	1.85	89.8	0.27	1.87	3849	8121	6186
995459	I-90	83.89	C	unnamed trib	39	67		1.1	RND	PCC	1.9	1.9	53.4	0.15	0.6			
995453	I-90	84.16	C	Yakima R trib	39	33		1.1	RND	CST	0.61	0.61	68.4	0	0.04			
995465	I-90	88.42	C	Thorton Cr	39.1418	0		1.1	RND	CST	0.91	0.91	141.2	0	10.3			
991464	I-90	93.35	C	Morrison Canyon Cr	39.1230	33	3.95	1.1	RND	SPS	1.22	1.22	79.2	0	1	4032	2630	4507
998721	I-90	95.98	C	Taneum Cr trib	39	33		1.1	RND	PCC	1.52	1.52	44	0	1.1			
999303	I-90	99.39	C	Yakima R trib	39	0		1.1	RND	PCC	1.22	1.22	65.4	0	3.3			
991081	I-90	103.5	C	Independent wetland trib	39	67		1.1	RND	CST	0.61	0.61	79.6	0.99	1			
998735	SR 10	89.26	C	Teanaway R trib	39	33		1.1	RND	PCC	0.61	0.61	23	0	0.8			
990048	SR 129	0.9	C, FI	Buford Cr	35.2307	67	5.79	1.1	RND	SPS	3.35	3.35	54.9	0.99	6.6	6379	3233	14088
997942	SR 240	41.15	C	Columbia R trib	31	0		1.1	BOX	CPC	2.12	1.89	84.7	7	3.7			
990439	SR 241	8.8	C	Sulphur Cr Wstwy trib	37	0		1.1	RND	PCC	1.22	1.22	40.9	0.82	0.93			
990324	SR 261	0.2	C	Pataha Cr	35.0123	0		1.1	ARCH	CST	6.29	5.35	30	0.2	4.1			
990995	SR 261	5.5	C	Tucannon R trib	35	67		1.2	BOX	PCC	2.56	1.83	17.1	0	0.3			
990995	SR 261	5.5	C	Tucannon R trib	35	67		2.2	BOX	PCC	2.56	1.83	17.4	0	0.34			
990996	SR 261	7.4	C	Tucannon R trib	35	67		1.1	RND	CST	0.91	0.91	16.4	0	1.34			
998605	SR 410	75.57	C	American R trib	38	0		1.1	RND	PCC	0.61	0.61	23.8	1.2	10.34			
991018	SR 410	76.1	C	American R trib	38	33		1.1	RND	PCC	0.61	0.61	26.2	0	3.12			
998606	SR 410	76.38	C	American R trib	38	0		1.1	RND	CST	0.61	0.61	26.6	0.3	1.8	110		
990409	SR 410	82.8	C, FI	Wash Cr	38	67	7	1.1	RND	CST	3.05	3.05	34.1	0.99	2.5	222	278	506
998613	SR 410	83.94	C	American R trib	38	33		1.1	RND	PCC	0.61	0.61	18.3	0.08	0.67	323	10	1282
998614	SR 410	84.02	C	American R trib	38	0		1.1	RND	CST	0.91	0.91	17	2.05	4.8			
990003	SR 410	91.6	C	Bumping R trib	38	67		1.1	RND	PCC	0.46	0.46	18	0	2.4	100		
998887	SR 410	97.88	C	Gold Cr	38.0801	0	20.2	1.1	BOX	CPC	1.8	1.3	29.9	0	3.5	10292	12609	15976
998880	SR 410	107.55	C	Naches R trib	38	67		1.1	BOX	CPC	1.2	1.2	14.9	0	1.9			
991456	SR 821	0.38	C	Yakima R trib	39.0002A	33	8.84	1.1	RND	SPS	3.05	3.05	50	0.12	2	892	96	1714

Appendix IE. WSDOT South Central Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
998742	SR 823	2.86	C	Taylor Ditch trib	39	33		1.1	RND	CST	1.52	1.52	85.8	0.47	1.4			
999335	SR 903	7.09	C	No 3 Canyon	39.1436	0		1.1	RND	CST	1.3	1.3	26.1	0	2.4			
998724	SR 906	0.66	C	Coal Cr trib	39	33		1.1	RND	PCC	0.91	0.91	26.8	0.1	3.4			
998729	SR 906	1.43	C	Coal Cr trib	39	0		1.1	RND	PCC	1.52	1.52	23.9	0.45	5.6			
998731	SR 906	1.77	C	Coal Cr trib	39	0		1.1	BOX	CPC	2.5	2.5	22.9	0	5.2			
998733	SR 906	2.35	C	Coal Cr trib	39	67		1.1	RND	CPC	1.33	1.33	31.2	0	1	56		
992140	US 12	168.28	C	Pine Cr	38	33	1.62	1.1	RND	PCC	0.84	0.84	17.7	0	2.14		133	89
990183	US 12	168.3	C	Hause Cr	38	0	7.16	1.1	BOX	PCC	1.22	1.22	15.2	0.12	5	950	383	1299
999499	US 12	319.35	C, FI	Touchet R	32	67		1.2	ARCH	CPC	16.5	4	6.4	0.35	3.57			
999499	US 12	319.35	C, FI	Touchet R	32	67		2.2	ARCH	CPC	16.5	3.88	6.8	0.32	1.92			
930791	US 12	347.86	B	Dry Cr	32	0												
990293	US 12	348.5	C	Mud Cr	32.0956	33	5.78	1.1	RND	CST	2.6	2.6	49.9	0.37	1.44	5963	502	2210
991746	US 12	390.59	C	Pataha Cr	35	33		1.1	BOX	CPC	18.9	5.34	7.3	0.29	1.3			
990955	US 12	426.1	C	Snake R trib	35	67		1.1	RND	CST	0.76	0.76	31.5	0	1.2			
990442	US 12	426.28	C	Snake R trib	35	67		1.1	RND	CST	0.76	0.76	33.7	0	1.7			
990564	US 12	430.01	C	Snake R trib	35	67		1.2	RND	CST	1.52	1.52	21.7	0	0.09			
990564	US 12	430.01	C	Snake R trib	35	67		2.2	RND	CST	1.52	1.52	0.9	0.99	0.99			
990565	US 12	431.36	C	Snake R trib	35	67		1.1	RND	CST	0.76	0.76	31.6	0	2.3			
990189	US 97	37.14	C, FI	Highbridge Springs	37	0	6.13	1.1	BOX	CPC	2.44	2.44	29	0.99	3	1127	739	1488
990129	US 97	143.25	C	Dry Cr	39.1049	67		1.2	BOX	CPC	1.53	1.22	25.5	0.15	0.78			
990129	US 97	143.25	C	Dry Cr	39.1049	67		2.2	BOX	CPC	1.53	1.22	25.5	0.15	0.78			
990130	US 97	144.89	C	Dry Cr	39.1049	0		1.2	SQSH	CST	1.45	0.91	27.1	0.49	0.55			
990130	US 97	144.89	C	Dry Cr	39.1049	0		2.2	SQSH	CST	1.45	0.91	27.1	0.49	0.96			
998755	US 97	158.16	C, FI	Hovey Cr	39.1162	33		1.1	RND	CST	1.45	1.45	33.9	0.06	3			

[1]Field Codes

Codes Used for Culvert Shape

ARCH - bottomless arch
BOX - rectangular or square
ELL - ellipse
OTH - other
RND - round
SQSH - squash (pipe arch)

Codes Used for Culvert Materials

CAL - corrugated aluminium
CMP - corrugated metal pipe
CPC - cast in place concrete
CST - corrugated steel
OTH - other
PCC - precast concrete
PVC - plastic
SPA - structural plate aluminium
SPS - structural plate steel
SST - smooth steel

Feature Type

B - bridge
C - culvert
D - dam
DL - dike/levee
EC - erosion control
F - fill/puncheon
FD - fill/debris
FI - fishway
FL - flume

[2]The culvert # identifies individual culverts at multiple stream crossings. For example, in a triple culvert crossing, the first pipe would be 1.3, the second 2.3, and the third 3.3.

Appendix IF. WSDOT Eastern Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
998248	I-90	244.49	C	Negro Cr trib	34	0		1.2	BOX	CPC	3.05	3.65	107.3	1.1	1.66			
998248	I-90	244.49	C	Negro Cr trib	34	0		2.2	BOX	CPC	3.05	3.65	107.1	1.1	1.84			
997547	I-90	278	C	Garden Springs Cr	56.0005	33		1.1	RND	PCC	0.46	0.46	17.3	0.06	1.85			
997546	I-90	278	C	Garden Springs Cr	56.0005	33		1.1	RND	CST	0.91	0.91	27.6	0	2.6			
997545	I-90	279.09	C	Garden Springs Cr	56.0005	0		1.1	BOX	CPC	1.22	0.91	102.4	0	2.54			
999174	SR 127	11.22	C	Snake R trib	35	67		1.1	BOX	CPC	2.45	1.87	16.1	0	1.7			
999176	SR 127	12.38	C	Snake R trib	35	33		1.1	BOX	CPC	2.58	1.83	26.4	0.1	4.8			
999269	SR 174	28.87	C	Lake Roosevelt trib	53	0		1.1	BOX	CPC	2.44	2.24	58.5	0.55	4			
990012	SR 194	0.1	C	Almota Cr	35	33		1.1	SQSH	SPS	4.9	3.35	43.6	0	1.5			
995375	SR 194	1.34	C	Little Almota Cr	35	0	6.19	1.1	RND	CST	2.77	2.77	44	1.14	3.9	2470	2245	3208
998375	SR 194	15.08	C	Wilbur Cr	34.0285	0		1.1	SQSH	CST	2.55	1.69	22.8	0.55	2.7			
998376	SR 194	15.75	C	Wilbur Cr	34.0285	67		1.1	SQSH	CST	2.15	1.62	24.7	0.1	1.94			
998377	SR 194	15.86	C	Wilbur Cr trib	34	0		1.1	SQSH	CST	1.22	0.89	18.5	0.78	4.26	1190		
999351	SR 20	297.48	C	Granite Cr	52.0368	0		1.2	RND	CST	0.95	0.95	21.2	0.25	0.7			
999351	SR 20	297.48	C	Granite Cr	52.0368	0		2.2	RND	CST	0.95	0.95	19.9	0.27	0.55			
999352	SR 20	297.75	C	Granite Cr	52.0368	33		1.1	BOX	CPC	2.44	1.22	17.4	0	2.9			
999353	SR 20	298.49	C	Granite Cr	52.0368	0		1.1	BOX	CPC	2.44	1.22	47.8	0	2.17			
999354	SR 20	299.79	C	NF Granite Cr	52.0372	0		1.1	BOX	CPC	1.22	1	21.4	0	3.09			
999356	SR 20	301.7	C	Granite Cr trib	52	0		1.1	BOX	CPC	1.3	1.3	0.9	2	0.99			
990310	SR 20	306.73	C	O' Brien Cr	52.0239	67		1.1	BOX	PCC	2.44	1.22	11.2	0	2.5			
990311	SR 20	307.72	C	O' Brien Cr	52.0239	67		1.1	BOX	PCC	2.44	1.22	11.6	0	3.44			
992119	SR 20	307.8	C	O' Brien Cr	52.0239	33		1.1	BOX	CPC	2.44	1.22	11.2	0	1.88			
999373	SR 20	317.28	C	NF O'Brien Cr trib	52.0410	0		1.1	RND	CST	0.99	0.99	26.8	0	4.67			
998865	SR 20	320.9	C	unnamed trib	58	0		1.1	RND	CST	0.46	0.46	36	0.13	15			
998866	SR 20	320.97	C	Pass Cr	58.0472	0		1.1	RND	PCC	0.76	0.76	73.4	0	27			
998867	SR 20	321.5	C	Pass Cr	58.0472	0		1.1	RND	PCC	0.61	0.61	32.3	0.1	16			
998869	SR 20	323.74	C	Sherman Cr	58.0428	0		1.1	BOX	CPC	1.87	1.87	43.8	0.26	5.4			
998870	SR 20	323.87	C	NF Sherman Cr	58.0073	0		1.1	BOX	CPC	1.55	1.55	47.2	0.13	5.8	200		
998791	SR 20	328.69	C	Milk Cr	58.0464	33		1.1	RND	PCC	0.61	0.61	24.8	0.4	0.9	120		
998794	SR 20	330.04	C	Hart Cr	58.0462	0		1.2	RND	PCC	0.61	0.61	16.7	0.27	2.6			
998794	SR 20	330.04	C	Hart Cr	58.0462	0		2.2	RND	CST	0.61	0.61	16.1	0.27	2.2			
998797	SR 20	333.19	C	Sherman Cr trib	58	0		1.1	RND	PCC	0.46	0.46	22.3	0	2.8	100		
998802	SR 20	336.54	C	Sherman Cr trib	58	33	3.48	1.1	RND	PCC	0.46	0.46	24.3	0.07	6.6	196	5	1302
998803	SR 20	336.89	C	Trout Cr	58.0434	0	7.65	1.2	RND	CST	0.91	0.91	18.2	0.83	0.16	4013	5259	10142
998803	SR 20	336.89	C	Trout Cr	58.0434	0	7.65	2.2	RND	CST	0.91	0.91	18.2	0.83	0.38	4013	5259	10142
992122	SR 20	361.49	C	Keogh Lk trib	59	67		1.1	RND	CST	0.61	0.61	32.5	0	2.92			
990303	SR 20	363.69	C	Narcisse Cr	59.0252	0		1.2	RND	PCC	0.96	0.96	15.8	0	1.58			
990303	SR 20	363.69	C	Narcisse Cr	59.0252	0		2.2	RND	CST	0.77	0.77	16.1	0.23	1.8			

Appendix IF. WSDOT Eastern Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
997836	SR 20	365.6	C	Starvation Lk trib	59.0301	0		1.1	OTH	OTH	0.61	0.61	35.7	0.15	5.5			
990398	SR 20	367.77	C	Starvation Lk trib	59.0301	33		1.1	RND	CST	2.14	2.14	40	0	1.5			
997839	SR 20	371.38	C	Gap Cr	59.0330	0		1.1	RND	CST	0.91	0.91	22.4	0	2			
997841	SR 20	372.71	C	Little Pend Oreille R trib	59.0332	0		1.1	RND	CST	0.91	0.91	26.3	0.27	2			
997842	SR 20	372.76	C	Little Pend Oreille R trib	59	33		1.1	RND	CST	0.91	0.91	24.9	0.25	2.97	89		
991622	SR 20	373.7	C	L Pend Oreille R trib	59.0345	0		1.1	RND	CST	0.76	0.76	44.6	0.4	0.69			
990195	SR 20	378.29	C	Hosmer Cr	59.0364	67		1.2	RND	CST	0.91	0.91	31.1	0	1.8			
990195	SR 20	378.29	C	Hosmer Cr	59.0364	67		2.2	RND	CST	0.91	0.91	30.9	0	1.8			
990174	SR 20	378.74	C	Handle Cr	59.0370	67		1.3	SQSH	CST	1.07	0.7	27	0	2.4			
990174	SR 20	378.74	C	Handle Cr	59.0370	67		2.3	SQSH	CST	1.07	0.7	26.7	0	2.5			
990174	SR 20	378.74	C	Handle Cr	59.0370	67		3.3	SQSH	CST	1.07	0.7	26.8	0	1.9			
990881	SR 20	380.1	C	Lake Thomas trib	59	33		1.1	SQSH	CST	1.45	0.95	25.9	0	4.17			
997856	SR 20	381.34	C	Deer Cr	59.0383	33		1.1	ELL	CST	1.4	1.57	47.4	0.99	0.82			
997857	SR 20	381.93	C	Patchen Cr	59	67		1.1	RND	CST	0.91	0.91	41.3	0.99	1.43			
997858	SR 20	382.37	C	Little Pend Oreille R trib	59.0389	0		1.1	RND	CST	0.91	0.91	31.5	0.39	1.8			
990250	SR 20	384.95	C	Lost Cr	62.0322	67		1.1	SQSH	CST	2.04	1.53	28.1	0	2	26001		
990350	SR 20	388.13	C	Renshaw Cr	62.0310	33		1.2	RND	CST	0.9	0.9	22.1	0	3.9	18229		
990350	SR 20	388.13	C	Renshaw Cr	62.0310	33		2.2	RND	CST	0.9	0.9	22.3	0	3.9	18229		
990351	SR 20	389.5	C, FI	Renshaw Cr	62.0310	0		1.1	SQSH	CST	1.92	1.4	23.7	0.99	2	1178		
997877	SR 20	399.16	C	Pend Orielle R trib	62	0		1.1	RND	PCC	0.61	0.61	26.2	0	6.2	0		
990353	SR 20	403.6	C	Reynolds Cr	62.0408	0	2.65	1.1	RND	PCC	0.76	0.76	43.5	0.27	3.01	15365	248	510
997880	SR 20	408.69	C	Pend Orielle R trib	62.0522	0		1.1	RND	CST	0.76	0.76	27.2	0	11	0		
990165	SR 20	409.58	C	Gardiner Cr	62.0525	67		1.2	RND	PCC	0.76	0.76	13.4	0	3.8	9341		
990165	SR 20	409.58	C	Gardiner Cr	62.0525	67		2.2	RND	PCC	0.76	0.76	14.2	0	3.4	9341		
990101	SR 20	411.4	C	Cusick Cr	62.0524	33		1.2	RND	PCC	0.76	0.76	19	0.02	2	44826		
990101	SR 20	411.4	C	Cusick Cr	62.0524	33		2.2	RND	PCC	0.76	0.76	18.8	0.03	1.8	44826		
997871	SR 20	426.24	C	Bracket Cr	62.0815	67		1.1	RND	CST	1.52	1.52	62.1	0	1.7			
998654	SR 206	7.11	C	Deadman Cr trib	55.0092	67		1.1	BOX	CPC	1.52	1.22	10.1	0	2.08			
998655	SR 206	7.5	C	Deadman Cr trib	55.0102	67		1.1	RND	CST	0.91	0.91	19.8	0	2.1			
998657	SR 206	9	C	Deadman Cr trib	55.0109	0		1.1	RND	CST	0.91	0.91	17.2	0.4	0.99			
998659	SR 206	9.89	C	Deadman Cr trib	55.0112	33		1.1	SQSH	CST	1.95	1.51	13.2	0	3.34			
998581	SR 21	9.02	DL	Sanpoil R trib	52	0												
990260	SR 21	110.97	C	Manilla Cr	52.0011	33		1.1	RND	CST	1.83	1.83	0.9	0.99	0.99			
990280	SR 21	115.6	C	Meadow Cr	52.0031	0		1.1	BOX	PCC	1.83	1.83	46.9	6.1	5.5			
990204	SR 21	117.05	C	Jack Cr	52.0046	0	3.13	1.1	BOX	PCC	1.52	1.52	17.8	1.5	2.3	673	277	792
990140	SR 21	120.18	C	Empire Cr	52.0058	0	3.78	1.1	BOX	PCC	1.22	0.91	27.4	1.25	2.5	1635	1179	1701
990242	SR 21	122.05	C	Lime Cr	52.0066	0	3.47	1.1	BOX	CPC	1.22	1.22	23.8	0.29	5	927	582	1244
990056	SR 21	123.64	C	Cache Cr	52.0068	33		1.1	BOX	PCC	0.91	1.22	10.4	0.3	0.7			

Appendix IF. WSDOT Eastern Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
990275	SR 21	125.38	C	McAllister Cr	52.0082	0		1.1	RND	PCC	1.07	1.07	14.8	0	4.8			
990095	SR 21	132.16	C	Cub Cr	52.0123	67		1.1	RND	PCC	0.91	0.91	13.5	0	1.48			
990296	SR 21	134.33	C	N Nanamkin Cr	52.0136	67	8.86	1.3	RND	CST	0.76	0.76	15	0	0.53	10665	87423	51759
990296	SR 21	134.33	C	N Nanamkin Cr	52.0136	67	8.86	2.3	BOX	PCC	1.83	1.22	15	0	0.93	10665	87423	51759
990296	SR 21	134.33	C	N Nanamkin Cr	52.0136	67	8.86	3.3	SQSH	CST	1.75	1.22	15.4	0	-0.65	10665	87423	51759
990026	SR 21	136.61	C	Bear Cr	52.0148	33	3.61	1.1	BOX	CPC	1.83	1.83	17	0.17	4.83	911	694	1732
990013	SR 21	139.36	C	Anderson Cr	52.0171	0	3.58	1.1	BOX	CPC	2.44	1.22	15.1	0.8	2.12	760	858	1411
999362	SR 21	140.28	C	Sanpoil R trib	52.0174	67		1.1	BOX	CPC	2.44	1.22	13.4	0.99	1.27			
990306	SR 21	142.09	C	Nineteenmile Cr	52.0177	0		1.1	BOX	CPC	2.44	1.22	13.9	0.15	7.38			
990569	SR 21	146.76	C	Rattlesnake Gulch	52.0313	0	2.26	1.1	BOX	PCC	1.22	1.22	13.4	0.99	5.31	599	397	562
999367	SR 21	149.59	C	Sanpoil R trib	52	67		1.1	RND	PCC	0.61	0.61	10.1	0	1.39	104		
990428	SR 21	150.93	C	Tenmile Cr	52.0323	67		1.1	RND	PCC	0.61	0.61	10.1	0.99	-0.29			
990408	SR 21	151.52	C	Sunset Cr	52	33		1.1	RND	OTH	0.61	0.61	12.6	0	4.8	87		
998580	SR 21	165.4	C	Curlew Cr	52.0288	67		1.1	SQSH	CST	1.7	1.2	18.6	0	2.4			
990097	SR 21	173.88	C	Curlew Cr	60.0288	67		1.1	RND	CST	1.52	1.52	17.3	0	1.21			
990098	SR 21	174.35	C	Curlew Cr	60.0288	33		1.1	RND	CST	1.83	1.83	13.7	0	0.87			
990099	SR 21	174.65	C	Curlew Cr	60.0288	67		1.1	RND	CST	1.83	1.83	16	0.25	1.25			
990399	SR 21	175.09	C	St Peter Cr	60.0305	0	3.67	1.1	RND	CST	1.07	1.07	21.3	0.55	3	1100	506	1501
990100	SR 21	177.09	C	Aeneas Cr	60.0300	67		1.1	RND	CST	0.84	0.84	20.7	0	2.65	166		
998817	SR 21	179.17	C	Tonasket Cr	60.0291	33		1.1	RND	CST	0.61	0.61	22.2	0	9.09			
998822	SR 21	185.18	C	Little Goosmus Cr	60.0263	33		1.1	RND	PCC	0.61	0.61	11.8	0.75	3.65			
997863	SR 211	7.45	C	Deer Cr	62.0780	33		1.1	RND	PCC	0.76	0.76	32	0.14	1.3	29605		
998536	SR 23	1.92	C	Pleasant Valley Cr trib	34	33		1.2	RND	PCC	0.76	0.76	12.6	0	2.06	130		
998536	SR 23	1.92	C	Pleasant Valley Cr trib	34	33		2.2	RND	PCC	0.76	0.76	12.6	0.99	2.39	130		
990372	SR 23	52.28	C	Sheep Cr	43.0852	0	3.99	1.1	BOX	CPC	3.05	2.45	45.5	0.02	3.73	1510	851	3277
991465	SR 231	18.38	C	Upper Crab Cr trib	43	67		1.2	RND	CST	1.52	1.52	18	0	1.05			
991465	SR 231	18.38	C	Upper Crab Cr trib	43	67		2.2	RND	CST	1.52	1.52	19	0	2.1			
991466	SR 231	24.69	C	Upper Crab Cr trib	43	67		1.2	RND	CST	1.83	1.83	18.1	0	0.55			
991466	SR 231	24.69	C	Upper Crab Cr trib	43	67		2.2	RND	CST	1.83	1.83	18.2	0	0.99			
998271	SR 231	27.82	C	Crab Cr	43	67		1.2	RND	CST	1.83	1.83	18.2	0	1.59			
998271	SR 231	27.82	C	Crab Cr	43	67		2.2	RND	CST	1.83	1.83	18.2	0	1.48			
991683	SR 231	36.09	C	Spring Cr trib	54	0		1.1	BOX	PCC	1.83	1.22	16.1	0.55	2.5			
997861	SR 231	70.06	C	Jump-off Joe Cr	59.0786	0		1.1	BOX	CPC	2.17	0.93	11.6	0.22	2.9			
997862	SR 231	70.96	C	Bulldog Cr	59.0781	67		1.1	RND	OTH	0.61	0.61	15.9	0	1.1			
998930	SR 25	17.84	C	Bockemuehl Canyon Cr	54	0		1.1	BOX	CPC	1.83	1.83	23.9	0.53	6			
991470	SR 25	33.62	C	O-Ra-Pak-En Cr trib	58.0127	0		1.1	RND	CST	0.91	0.91	36.6	0.4	2.5			
990315	SR 25	34.55	C	O-Ra-Pak-En Cr	58.0126	0		1.1	BOX	CPC	1.22	1.22	69.1	0	3.6			
990007	SR 25	37.73	C	Alder Cr	58.0134	0	6.61	1.1	BOX	CPC	1.52	1.83	20.4	0	6	9235	6241	17620

Appendix IF. WSDOT Eastern Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
990198	SR 25	42.33	C	Hunters Cr	58.0146	0	4.87	1.1	BOX	CPC	3.96	1.68	27.1	0.35	2.5	2205	1785	6086
998854	SR 25	46.06	C	Harvey Cr	58.0200	33		1.1	BOX	CPC	1.55	1.83	58.5	0	2.7			
998856	SR 25	55.74	C	Deer Cr	58.0221	0		1.2	RND	PCC	0.46	0.46	12.6	0.33	4.75			
998856	SR 25	55.74	C	Deer Cr	58.0221	0		2.2	RND	PCC	0.61	0.61	12.7	0.29	5.45			
998857	SR 25	60.08	C	Lake Roosevelt trib	58	0		1.1	RND	CST	0.61	0.61	28	0.83	8.8	175		
990258	SR 25	61.59	C	Daisy Magee Cr	58.0357	33		1.1	BOX	PCC	1.95	1.83	0.9	0.2	0.99			
998860	SR 25	66.01	C	Cheweka Cr	58.0361	0		1.1	BOX	CPC	1.22	1.22	32	1.05	3.4			
998861	SR 25	66.14	C	Cheweka Cr trib	58	33		1.1	RND	CST	0.61	0.61	23.8	0	5.9			
998862	SR 25	67.91	C	Quillisacut Cr	58.0387	0		1.1	RND	PCC	1.22	1.22	65.9	0	2.6			
998864	SR 25	76.15	C	Hallam Cr	58.0424	33		1.1	RND	CST	0.46	0.46	14.1	0	2.1			
990343	SR 25	84.57	C	Pingston Cr	61.0007	33		1.1	BOX	CPC	1.22	1.22	40.6	0.18	3.4			
990319	SR 25	108.94	C	Onion Cr	61.0098	0		1.1	BOX	CPC	2.45	1.85	30	0	2.1			
998844	SR 25	111.95	C	Fivemile Cr	61.0148	0		1.1	RND	PCC	0.76	0.76	66.4	0	13			
998847	SR 25	119.87	C	Boundary Cr	61.0163	0		1.1	RND	CST	1.52	1.52	42.7	0.45	4.5			
998352	SR 26	107.78	C	Willow Cr	34.0131	33		1.2	BOX	CPC	3.05	2.44	30.6	0.7	0.41			
998352	SR 26	107.78	C	Willow Cr	34.0131	33		2.2	BOX	CPC	3.05	2.44	31.9	0.7	0.21			
998365	SR 26	131.86	C	Palouse R trib	34	33		1.1	RND	PCC	0.76	0.76	46.9	0	3.69			
998366	SR 26	132.14	C	Palouse R trib	34	0		1.1	RND	PCC	1.07	1.07	61.9	0.4	4.1			
998367	SR 26	132.43	C	Palouse R trib	34	0		1.1	RND	OTH	0.91	0.91	61.9	0	4.97			
998417	SR 27	2.47	C	Missouri Flat Cr trib	34	67		1.1	RND	PCC	1.22	1.22	36.1	0	1.83			
998418	SR 27	4.69	C	Rose Cr trib	34	33		1.1	BOX	PCC	1.83	1.83	28.4	0	1.44			
998419	SR 27	5.12	C	Rose Cr	34.2269	33		1.2	BOX	PCC	2.59	1.22	22.1	0	3.17			
998419	SR 27	5.12	C	Rose Cr	34.2269	33		2.2	BOX	PCC	2.59	1.22	23.5	0	2.9			
998445	SR 27	14.86	C	Palouse R trib	34	33		1.1	OTH	OTH	1.53	1.53	160.9	0	2.31			
998449	SR 27	16.85	C	Duffield Cr	34.2856	33		1.1	BOX	CPC	3.05	1.83	61	0	4.6			
998450	SR 27	17.22	C	Palouse R trib	34	33		1.1	RND	OTH	0.91	0.91	49.7	0.16	2.05	100		
998521	SR 27	29.31	C	Kelly Cr trib	34	67		1.1	BOX	CPC	1.83	1.83	16.1	0	2.9			
998529	SR 27	39.33	C	Pine Cr trib	34	33		1.1	RND	CST	1.75	1.75	21	0	2.47			
998369	SR 270	0.06	C	unnamed trib	34	33		1.1	RND	PCC	0.91	0.91	36.9	0.15	1.03			
998370	SR 270	1.5	C	SF Palouse R trib	34	67		1.1	BOX	PCC	1.22	1.27	65.8	0	1.1			
998403	SR 272	7.07	C	Clear Cr trib	34	0		1.2	RND	CST	0.76	0.76	11.4	0.6	2.11	136		
998403	SR 272	7.07	C	Clear Cr trib	34	0		2.2	RND	CST	0.76	0.76	11.3	0.6	2.74	136		
998405	SR 272	9.88	C	Brush Cr	34.2679	67		1.1	RND	CST	0.91	0.91	12.2	0	1.61			
997854	SR 292	2.96	C	Sheep Cr	59.0861	33		1.1	RND	PCC	1.22	1.22	61.6	0.36	1.05			
990352	SR 31	0.6	C	Renshaw Cr	62.0310	0		1.1	RND	CST	0.76	0.76	29.6	2.3	3.8	9541		
997883	SR 31	0.85	C	Diamond Cr	62.0312	67		1.1	RND	CST	0.46	0.46	30.1	0.31	1.7	7771		
990201	SR 31	3.75	C	Ione Millpond	62.0279	0	11.73	1.1	BOX	PCC	2.13	2.44	27.9	0	2.68	41801	15371	143218
997885	SR 31	7.39	C	Pend Oreille R trib	62.0254	0		1.1	RND	CST	0.61	0.61	23.5	2.1	3.6			

Appendix IF. WSDOT Eastern Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
998573	SR 31	9.4	C	Lost Cr	62.0248	0		1.1	RND	PCC	0.91	0.91	37.7	0.96	12.2	67368		
990416	SR 31	10.7	C	Sweet Cr	62.0224	33	3.17	1.1	BOX	CPC	2.29	2.59	22.7	0.6	2.4	75719	692	769
997535	SR 31	12.98	C	Linton Cr	62.0214	33		1.1	RND	PCC	1.22	1.22	44.4	0.35	3.65	4810		
997541	SR 31	24.34	C	Lime Cr	62.0014	33		1.1	RND	PCC	0.91	0.91	13.5	0	1.85	9123		
998467	US 195	0.01	C	unnamed North Pine Cr trib	34	33		1.2	RND	CST	1.52	1.52	37.7	0	1.55			
998467	US 195	0.01	C	unnamed North Pine Cr trib	34	33		2.2	RND	CST	1.52	1.52	37.5	0	1.93			
995673	US 195	0.05	C	Hatwai Cr trib	35	0		1.1	BOX	CPC	1.55	1.85	85.8	0.3	2.8			
998382	US 195	4.35	C	Spring Cr	34.0452	33		1.2	RND	CST	1.68	1.68	30.7	0	1.66			
998382	US 195	4.35	C	Spring Cr	34.0452	33		2.2	RND	CST	1.68	1.68	28	0.33	0.93			
998383	US 195	8.04	C	Union Flat Cr trib	34	67		1.1	RND	CST	1.37	1.37	36.1	0	2.17			
998388	US 195	11.91	C	Union Flat Cr trib	34	67		1.1	BOX	CPC	1.83	1.22	21.3	0	1.97			
998394	US 195	22.78	C	unnamed trib	34	67		1.1	SQSH	CST	1.8	1.14	27	0	1.26			
998397	US 195	25.97	C	SF Palouse R trib	34	67		1.1	BOX	CPC	1.83	1.83	26.2	0	3.02			
998398	US 195	30.73	C	Spring Flat Cr trib	34	67		1.2	BOX	CPC	0.91	0.61	41.9	0	2.53			
998398	US 195	30.73	C	Spring Flat Cr trib	34	67		2.2	BOX	CPC	0.91	0.61	41.9	0	2.53			
998431	US 195	43.17	C	Dry Cr trib	34	33		1.1	BOX	CPC	1.83	1.22	22.1	0	1.88	483		
998436	US 195	45.03	C	Dry Cr trib	34	0		1.1	RND	PCC	0.91	0.91	29.5	0.72	4.5			
998438	US 195	47.82	C	unnamed Dry Cr trib	34	67		1.2	BOX	CPC	3.05	1.22	24	0.35	0.58			
998438	US 195	47.82	C	unnamed Dry Cr trib	34	67		2.2	BOX	CPC	3.05	1.22	22.7	0.35	0.71			
998439	US 195	47.83	C	Dry Cr trib	34	67		1.1	RND	CST	1.68	1.68	30.9	0.3	-0.65	200		
998469	US 195	62.86	C	Pine Cr trib	34	0		1.2	RND	SPS	2.59	2.59	89.9	0	0			
998469	US 195	62.86	C	Pine Cr trib	34	0		2.2	RND	SPS	2.59	2.59	89.1	0	0.71			
998466	US 195	70.61	C	unnamed North Pine Cr trib	34	0		1.2	RND	CST	1.52	1.52	43.1	0	2.3			
998466	US 195	70.61	C	unnamed North Pine Cr trib	34	0		2.2	RND	CST	1.52	1.52	43.1	0	2.49			
998465	US 195	70.62	C	unnamed North Pine Cr trib	34	0		1.2	RND	CST	1.52	1.52	52.4	0	2.29			
998465	US 195	70.62	C	unnamed North Pine Cr trib	34	0		2.2	RND	CST	1.52	1.52	52.8	0	1.95			
999277	US 195	90.57	C	Hangman Cr trib	56	33		1.2	RND	PCC	1.45	1.45	91.5	0	1.6			
999277	US 195	90.57	C	Hangman Cr trib	56	33		2.2	RND	PCC	1.45	1.45	92.5	0	1.5			
994273	US 195	93.39	C	Marshall Cr	56.0008	0	8.04	1.1	BOX	CPC	1.91	1.91	63.6	1.39	1.4	54960	5522	104145
997531	US 195	94.58	C	Hangman Cr trib	56.0007	67		1.1	RND	OTH	0.91	0.91	127.5	0	0.35			
997532	US 195	94.9	C	Crystal Springs Cr	56.0006	67		1.1	ELL	SPS	2.29	2.51	101.6	0	1.16	78		
997543	US 195	95.77	C	Garden Springs Cr	56.0005	33		1.2	RND	CST	0.91	0.91	75.9	0	7.5			
997543	US 195	95.77	C	Garden Springs Cr	56.0005	33		2.2	RND	CST	0.91	0.91	76.2	0	7.5			
990113	US 2	304.4	C, FI	Deer Cr	55.0380	33		1.1	BOX	PCC	2.13	2.74	0.9	0.99	0.99			
990125	US 395	174.95	C	Dragoon Cr	55.0163	33		1.2	BOX	CPC	3.05	3.66	43.1	0	-0.18			
990125	US 395	174.95	C	Dragoon Cr	55.0163	33		2.2	BOX	CPC	3.05	3.66	43.1	0	-0.18			
991001	US 395	183.72	C	Beaver Cr trib	55.0298	33		1.1	RND	PCC	1.22	1.22	29.9	0	1.9			
997495	US 395	198.1	C	Bulldog Cr	59.0781	33		1.1	RND	PCC	0.91	0.91	40.1	0	0.95			

Appendix IF. WSDOT Eastern Region Fish Passage Barriers. Sorted by road and milepost. (as of June 6, 2017)

SiteId	Road	Mile-post	Feature Type[1]	Stream Name	WRIA	% Fish Pass-able	PI	Culvert #[2]	Culvert Shape[1]	Culvert Material[1]	Span (m)	Rise (m)	Length (m)	WS Drop (m)	% Slope	Lineal Gain (m)	Spawn Area (m^2)	Rear Area (m^2)
990157	US 395	204.79	C	Franzwa Cr	59.0687	33		1.1	RND	PCC	0.91	0.91	31	0	1.9			
990074	US 395	207.25	C	Chewela Cr	59.1539	67		1.2	BOX	OTH	3.05	1.24	57.9	0	0.58			
990074	US 395	207.25	C	Chewela Cr	59.1539	67		2.2	OTH	OTH	1.74	0.99	0.9	0.99	0.99			
991557	US 395	208.2	C	Paye Cr	59.0533	33		1.2	RND	CST	1.07	1.07	30.1	0.5	1.06			
991557	US 395	208.2	C	Paye Cr	59.0533	33		2.2	RND	CST	1.07	1.07	30.9	0.5	1.13			
997853	US 395	212.77	C	Colville R trib	59.0516	0		1.1	RND	CAL	0.46	0.46	45.4	0.96	3.68			
990573	US 395	212.8	C	Colville R trib	59	0	2.91	1.1	RND	PCC	0.76	0.76	50.3	0.79	0.99	1155	1478	1848
990005	US 395	215.88	C	Addy Cr	59.0455	33		1.1	RND	CST	0.76	0.76	26.5	0	3.6			
990451	US 395	219.3	C	Twelvemile Cr	59.0403	0		1.1	BOX	OTH	0.61	0.61	57.9	0	3.59			
997848	US 395	228.65	C	Colville R trib	59.0209	0		1.1	SQSH	CST	1.72	1.27	49.1	0.82	3.61	353		
990106	US 395	247.77	C	Deadman Cr	60.0008	0	11.48	1.1	BOX	CPC	2.45	1.77	45.7	0.55	11	38197	49777	131546
998826	US 395	249.66	C	Kettle R trib	60.0055	33		1.1	RND	PCC	0.61	0.61	14.7	0.99	7.4			
990267	US 395	249.98	C	Matsen Cr	60.0056	33	2.84	1.1	RND	PCC	1.22	1.22	30.5	0	5	1450	2583	2518
990124	US 395	250.19	C	Doyle Cr	60.0060	0		1.1	RND	PCC	1.22	1.22	21.3	0	12	44		
998827	US 395	251.96	C	Hodgson Cr	60.0067	0		1.2	RND	OTH	0.76	0.76	54.3	1.2	36.5	71		
998827	US 395	251.96	C	Hodgson Cr	60.0067	0		2.2	RND	OTH	0.76	0.76	55.5	1.2	36.5	71		
998831	US 395	261.62	C	Martin Cr	60.0185	0		1.1	RND	PCC	0.84	0.84	27	0	14.43	128		
998832	US 395	263.91	C	Jenny Cr	60.0210	33		1.1	RND	PCC	0.61	0.61	14.1	0.11	4.95			
998834	US 395	267.13	C	Kerry Cr	60.0216	33		1.1	BOX	CPC	1.84	1.23	35	0	5.71			
998835	US 395	267.68	C	Kettle R trib	60.0218	33		1.1	RND	PCC	0.76	0.76	26.6	0	4.96	99		
998833	US 395	271.13	C	Kettle R trib	60.0215	33		1.1	RND	PCC	0.46	0.46	15.8	0	7.14			

[1]Field Codes

Codes Used for Culvert Shape

ARCH - bottomless arch
BOX - rectangular or square
ELL - ellipse
OTH - other
RND - round
SQSH - squash (pipe arch)

Codes Used for Culvert Materials

CAL - corrugated aluminium
CMP - corrugated metal pipe
CPC - cast in place concrete
CST - corrugated steel
OTH - other
PCC - precast concrete
PVC - plastic
SPA - structural plate aluminium
SPS - structural plate steel
SST - smooth steel

Feature Type

B - bridge
C - culvert
D - dam
DL - dike/levee
EC - erosion control
F - fill/puncheon
FD - fill/debris
FI - fishway
FL - flume

[2]The culvert # identifies individual culverts at multiple stream crossings. For example, in a triple culvert crossing, the first pipe would be 1.3, the second 2.3, and the third 3.3.

Appendix II

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	995857	I-405; NB on-ramp	0.42	Gilliam Cr	Green R	9	King	Yes
NW	998967	I-405	0.61	Gilliam Cr	Green R	9	King	Yes
NW	995470	I-405	2.31	Rolling Hills Cr	Springbrook Cr	9	King	Yes
NW	994406	I-405	3.06	Rolling Hills Cr	Springbrook Cr	9	King	Yes
NW	996482	I-405	5.09	Johns Cr	Lake Washington	8	King	Yes
NW	933259	I-405	7.61	unnamed	Lake Washington	8	King	Yes
NW	996032	I-405	7.62	unnamed	Lake Washington	8	King	Yes
NW	998971	I-405	7.83	unnamed	Lake Washington	8	King	Yes
NW	998972	I-405	7.9	unnamed	Lake Washington	8	King	Yes
NW	933258	I-405	12.03	Trail Cr	Mercer Sl	8	King	No
NW	998974	I-405; SB	12.51	Hixson Cr	Mercer Sl	8	King	No
NW	933244	I-405	13.05	Sturtevant Cr	Richards Cr	8	King	Yes
NW	992385	I-405	15.09	Yarrow Cr	Lake Washington	8	King	Yes
NW	998982	I-405	19.07	unnamed	Forbes Cr	8	King	No
NW	932812	I-405	20.5	unnamed	Juanita Cr	8	King	Yes
NW	992654	I-405	20.95	unnamed	Juanita Cr	8	King	Yes
NW	998602	I-405	21.94	Juanita Cr	Lake Washington	8	King	Yes
NW	993106	I-405	25.33	unnamed	North Cr	8	Snohomish	No
NW	08.0070 A 0.25	I-405	26.46	Perry Cr	North Cr	8	Snohomish	Yes
NW	993109	I-405	26.87	unnamed	North Cr	8	Snohomish	Yes
NW	991008	I-405;NB	27.7	unnamed	North Cr	8	Snohomish	No
NW	998976	I-405; SB	27.76	unnamed	North Cr	8	Snohomish	No
NW	998977	I-405; SB	27.83	unnamed	North Cr	8	Snohomish	Yes
NW	995295	I-5; NB ROW	141.17	unnamed	EF Hylebos Cr	10	King	Yes
NW	995292	I-5	141.49	unnamed	EF Hylebos Cr	10	King	Yes
NW	995297	I-5; SB Ext 142B	142	unnamed	EF Hylebos Cr	10	King	Yes
NW	995293	I-5; SB Ext 142 B	142.15	unnamed	Hylebos Cr	10	King	Yes
NW	995299	I-5; NB Ext 143	143	unnamed	WF Hylebos Cr	10	King	Yes
NW	995300	I-5; NB Ext 143	143	unnamed	WF Hylebos Cr	10	King	Yes
NW	992364	I-5	143.6	unnamed	WF Hylebos Cr	10	King	Yes
NW	933613	I-5; ROW S 288th St	145.81	Bingaman Cr	Bingaman Pond	9	King	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	991031	I-5	145.93	Bingaman Cr	Bingaman Pond	9	King	Yes
NW	996030	I-5; NB to I-405	154.39	Gilliam Cr	Green R	9	King	Yes
NW	998964	I-5; NB off-ramp	154.48	unnamed	unnamed Green R trib	9	King	Yes
NW	994562	I-5	174.71	Thornton Cr	Lake Washington	8	King	Yes
NW	994842	I-5; ROW	175	unnamed	Thornton Cr	8	King	Yes
NW	102 M048	I-5; Service Rd	177.85	unnamed	McAleer Cr	8	Snohomish	Yes
NW	102 M046	I-5; WB Ext 177	177.85	McAleer Cr	Lake Washington	8	Snohomish	Yes
NW	990273	I-5	177.93	McAleer Cr	Lake Washington	8	Snohomish	Yes
NW	993116	I-5	180.63	Scriber Cr	Swamp Cr	8	Snohomish	Yes
NW	996229	I-5	183.33	unnamed	Swamp Cr	8	Snohomish	No
NW	102 N218	I-5	186.93	unnamed	North Cr	8	Snohomish	No
NW	993091	I-5	187.64	unnamed	Silver Lk	8	Snohomish	Yes
NW	993124	I-5; ROW	187.89	unnamed	Silver Lk	8	Snohomish	Yes
NW	930252	I-5	187.93	unnamed	Penny Cr	8	Snohomish	Yes
NW	995262	I-5	189.9	unnamed	Wood Cr	7	Snohomish	No
NW	996076	I-5; NB Ext 210	210.01	unnamed	Stillaguamish R	5	Snohomish	Yes
NW	992181	I-5	213.27	unnamed	unnamed to Pilchuck Cr	5	Snohomish	Yes
NW	992182	I-5	213.27	unnamed	unnamed to Pilchuck Cr	5	Snohomish	Yes
NW	991979	I-5	213.29	unnamed	unnamed	5	Snohomish	Yes
NW	992175	I-5	213.66	Secret Cr	Pilchuck Cr	5	Snohomish	Yes
NW	LP66	I-5	213.86	unnamed	unnamed Pilchuck Cr trib	5	Snohomish	Yes
NW	996077	I-5	214.38	unnamed	WF Church Cr	5	Snohomish	Yes
NW	996074	I-5	214.65	unnamed	WF Church Cr	5	Snohomish	Yes
NW	996454	I-5	214.65	unnamed	WF Church Cr	5	Snohomish	Yes
NW	996071	I-5	214.73	WF Church Cr	Church Cr	5	Snohomish	Yes
NW	996073	I-5	214.74	WF Church Cr	Church Cr	5	Snohomish	Yes
NW	995242	I-5; NB Ext 218	218	unnamed	unnamed	3	Skagit	Yes
NW	995221	I-5	218.01	unnamed	unnamed	3	Skagit	No
NW	03.0181 0.50	I-5	219.41	Fisher Cr	Carpenter Cr	3	Skagit	Yes
NW	991725	I-5	224.62	Maddox Cr	SF Skagit R	3	Skagit	Yes
NW	CR122	I-5	225.24	Martha Washington Cr	Maddox Cr	3	Skagit	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	995227	I-5; NB	234.65	unnamed	Samish R	3	Skagit	No
NW	995228	I-5	235.65	unnamed	Samish R	3	Skagit	No
NW	995241	I-5; NB Ext 240	240	unnamed	Friday Cr	3	Skagit	Yes
NW	995246	I-5; NB Ext 240	240	unnamed	unnamed	3	Skagit	Yes
NW	995245	I-5; NB off-ramp	240	unnamed	Friday Cr	3	Skagit	Yes
NW	995236	I-5; SB Ext 240	240	unnamed	Friday Cr	3	Skagit	Yes
NW	995240	I-5; SB Ext 240	240	unnamed	Friday Cr	3	Skagit	Yes
NW	995259	I-5; SB Ext 240	240	unnamed	unnamed	3	Skagit	Yes
NW	995233	I-5; Median	240.95	unnamed	Friday Cr	3	Skagit	Yes
NW	995232	I-5; NB	240.95	unnamed	Friday Cr	3	Skagit	Yes
NW	995234	I-5; SB	240.95	unnamed	Friday Cr	3	Skagit	Yes
NW	995235	I-5; SB ROW	240.95	unnamed	Friday Cr	3	Skagit	Yes
NW	995238	I-5; SB	241.03	unnamed	Friday Cr	3	Skagit	Yes
NW	995249	I-5	242.03	unnamed	Friday Cr	3	Skagit	Yes
NW	370614	I-5	243.43	unnamed	Samish Lk	3	Whatcom	Yes
NW	FR73	I-5; SB	243.91	unnamed	Samish Lk	3	Whatcom	Yes
NW	995250	I-5; NB	243.96	unnamed	Samish Lk	3	Whatcom	Yes
NW	990025	I-5; NB	244.2	Barnes Cr	Samish Lk	3	Whatcom	Yes
NW	994501	I-5; SB	244.2	Barnes Cr	Samish Lk	3	Whatcom	Yes
NW	FR75	I-5	245.76	Lake Cr	Samish Lk	3	Whatcom	Yes
NW	995247	I-5; NB Ext 246	246	unnamed	unnamed	3	Whatcom	Yes
NW	995248	I-5; NB Ext 246	246	unnamed	unnamed	3	Whatcom	Yes
NW	995256	I-5; SB Ext 246	246.12	unnamed	Lake Cr	3	Whatcom	Yes
NW	995255	I-5; SB Ext 246	246.22	unnamed	Lake Cr	3	Whatcom	Yes
NW	995411	I-5	246.75	Chuckanut Cr	Puget Sound	1	Whatcom	Yes
NW	994233	I-5	250.55	Padden Cr	Bellingham Bay	1	Whatcom	Yes
NW	995699	I-5	251.36	unnamed	Connelly Cr	1	Whatcom	Yes
NW	992003	I-5; NB on-ramp	256	Spring Cr	Baker Cr	1	Whatcom	Yes
NW	990022	I-5	256.28	Baker Cr	Squalicum Cr	1	Whatcom	Yes
NW	995701	I-5	258.56	unnamed	unnamed to Silver Cr	1	Whatcom	No
NW	995703	I-5	259.08	unnamed	unnamed	1	Whatcom	No

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	995709	I-5	260.98	unnamed	Tennant Cr	1	Whatcom	Yes
NW	995715	I-5	268.63	unnamed	California Cr	1	Whatcom	Yes
NW	995731	I-5; SB Ext 270	270.14	unnamed	unnamed California Cr trib	1	Whatcom	Yes
NW	995720	I-5;NB	270.14	unnamed	unnamed California Cr trib	1	Whatcom	Yes
NW	933400	I-5; NB; ROW	270.2	unnamed	unnamed California Cr trib	1	Whatcom	Yes
NW	995726	I-5	275.33	Cain Cr	Semiahmoo Bay	1	Whatcom	Yes
NW	994412	I-90	10.21	Richards Cr	Lake Washington	8	King	No
NW	996251	I-90	10.52	Sunset Cr	Richards Cr	8	King	Yes
NW	996478	I-90	12.75	unnamed	Squibbs Cr	8	King	Yes
NW	992798	I-90	13.83	Lewis Cr	Lake Sammamish	8	King	Yes
NW	932343	I-90	15.14	unnamed	Lake Sammamish	8	King	Yes
NW	996477	I-90; WB onramp	15.82	unnamed	Tibbetts Cr	8	King	Yes
NW	996967	I-90; WB on-ramp	15.89	unnamed	Tibbetts Cr	8	King	Yes
NW	996472	I-90	15.92	unnamed	Tibbetts trib	8	King	Yes
NW	996966	I-90; EB on-ramp	15.92	unnamed	Tibbetts trib	8	King	Yes
NW	991182	I-90	16.21	unnamed	Tibbetts Cr	8	King	Yes
NW	996475	I-90; WB off-ramp	17	NF Issaquah Cr	Issaquah Cr	8	King	Yes
NW	996963	I-90; WB on-ramp	17	NF Issaquah Cr	Issaquah Cr	8	King	Yes
NW	934151	I-90; WB off-ramp	17.06	unnamed	NF Issaquah Cr	8	King	Yes
NW	932089	I-90; EB	19.53	unnamed	EF Issaquah Cr	8	King	No
NW	996965	I-90	20.42	unnamed	EF Issaquah Cr	8	King	Yes
NW	996473	I-90; EB	21.23	unnamed	EF Issaquah Cr	8	King	Yes
NW	994410	I-90	23.13	Soderman Cr	Raging R	7	King	Yes
NW	994984	I-90; WB	24.85	unnamed	Lake Cr	7	King	Yes
NW	990111	SR 104	25.7	Willow Cr	Puget Sound	8	Snohomish	Yes
NW	996208	SR 104	29.33	unnamed	Lake Ballinger	8	Snohomish	No
NW	990653	SR 104	30.67	unnamed	Lyon Cr	8	King	Yes
NW	990253	SR 104	31.23	Lyon Cr	Lake Washington	8	King	Yes
NW	991623	SR 104	31.73	unnamed	Lyon Cr	8	King	Yes
NW	995790	SR 11	8.66	unnamed	Samish Bay	1	Skagit	Yes
NW	995796	SR 11	18.47	unnamed	Chuckanut Cr	1	Whatcom	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	990581	SR 11	18.65	unnamed	Chuckanut Cr	1	Whatcom	Yes
NW	994386	SR 11	21.08	Padden Cr	Bellingham Bay	1	Whatcom	Yes
NW	105 S011918a	SR 161	32.78	unnamed	Hylebos Cr	10	King	Yes
NW	997974	SR 161	32.9	unnamed	unnamed	10	King	Yes
NW	992062	SR 161	33.48	unnamed	Hylebos Cr	10	King	Yes
NW	992064	SR 161	33.79	unnamed	EF Hylebos Cr	10	King	Yes
NW	992360	SR 164	5.89	unnamed	White R	10	King	Yes
NW	996279	SR 164	7.01	unnamed	White R	10	King	No
NW	105 R042117a	SR 164	8.24	Pussyfoot Cr	White R	10	King	Yes
NW	991213	SR 164	9.06	Seconds Cr	White R	10	King	Yes
NW	991837	SR 164	10.21	unnamed	unnamed White R trib	10	King	Yes
NW	996281	SR 164	10.65	unnamed	unnamed	10	King	No
NW	991839	SR 164	13.33	unnamed	Newaukum Cr	9	King	Yes
NW	991198	SR 167	21.17	Mill Cr	Springbrook Cr	9	King	Yes
NW	995469	SR 167	22.63	unnamed	Springbrook Cr	9	King	No
NW	991681	SR 167	23.94	unnamed	Springbrook Cr	9	King	Yes
NW	991200	SR 167	24.16	unnamed	Springbrook Cr	9	King	No
NW	991202	SR 167	26.1	Rolling Hills Cr	Springbrook Cr	9	King	Yes
NW	997691	SR 169	7.15	Rock Cr	Covington Cr	9	King	Yes
NW	997692	SR 169	7.25	unnamed	Jones Lk	9	King	Yes
NW	997693	SR 169	8.27	unnamed	Ginder Cr	9	King	Yes
NW	997694	SR 169	8.29	Ginder Cr	Rock Cr	9	King	Yes
NW	997695	SR 169	9.95	Ravensdale Cr	Lake Sawyer	9	King	Yes
NW	996492	SR 169	17.92	unammed	Cedar R	8	King	Yes
NW	996493	SR 169	18.06	unnamed	Cedar R	8	King	No
NW	996514	SR 169; ROW	18.06	unnamed	Cedar R	8	King	No
NW	996494	SR 169	18.48	unnamed	Cedar R	8	King	Yes
NW	996277	SR 18	0.29	unnamed	EF Hylebos Cr	10	King	Yes
NW	995298	SR 18	0.45	unnamed	EF Hylebos Cr	10	King	Yes
NW	997660	SR 18	7.51	unnamed	Big Soos Cr	9	King	Yes
NW	997661	SR 18	8	unnamed	Soosette Cr	9	King	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	995474	SR 18	21.15	unnamed	Holder Cr	8	King	Yes
NW	990173	SR 18	22.16	Holder Cr	Issaquah Cr	8	King	Yes
NW	995971	SR 18	22.82	unnamed	Holder Cr	8	King	Yes
NW	995972	SR 18	22.98	unnamed	Holder Cr	8	King	Yes
NW	995973	SR 18	23.45	unnamed	unnamed	8	King	Yes
NW	995974	SR 18	23.55	unnamed	unnamed	8	King	Yes
NW	07.0396 0.80	SR 18	25.67	Deep Cr	Raging R	7	King	Yes
NW	990236	SR 18	27.64	Lake Cr	Raging R	7	King	Yes
NW	996320	SR 20	46.1	unnamed	Campbell Lk	3	Skagit	Yes
NW	996319	SR 20; ROW	46.14	unnamed	Campbell Lk	3	Skagit	Yes
NW	933175	SR 20	53.53	unnamed	Guemes Channel	3	Skagit	Yes
NW	SF49	SR 20	61.26	Gages Sl	Skagit R	3	Skagit	Yes
NW	991142	SR 20	69.08	unnamed	Red Cr	3	Skagit	Yes
NW	991547	SR 20	70.24	unnamed	Coal Cr	3	Skagit	Yes
NW	991146	SR 20	72.85	Childs Cr	Skagit R	3	Skagit	Yes
NW	995436	SR 20	78.01	unnamed	Carey's Lk	3	Skagit	No
NW	991123	SR 20	80.1	unnamed	Skagit R	3	Skagit	Yes
NW	991445	SR 20	85.63	unnamed	unnamed	4	Skagit	Yes
NW	997396	SR 20	85.94	unnamed	House Cr	4	Skagit	Yes
NW	997398	SR 20	86.86	unnamed	Skagit R	4	Skagit	Yes
NW	GR54	SR 20	87.01	Eagle Cr	Skagit R	4	Skagit	Yes
NW	991150	SR 20	87.2	Eagle Cr	Skagit R	4	Skagit	Yes
NW	991151	SR 20	87.31	Eagle Cr	Skagit R	4	Skagit	Yes
NW	GR9	SR 20	87.7	Fish Cr	Lorenzan Cr	4	Skagit	Yes
NW	GR23	SR 20	88.82	Lorenzan Cr	Skagit R	4	Skagit	Yes
NW	JK2	SR 20	91.3	unnamed	Skagit R	4	Skagit	Yes
NW	991707	SR 20	93.21	unnamed	Skagit R	4	Skagit	No
NW	991709	SR 20	93.7	unnamed	Skagit R	4	Skagit	No
NW	991710	SR 20	93.84	unnamed	Skagit R	4	Skagit	Yes
NW	994308	SR 20	94.47	unnamed	Skagit R	4	Skagit	Yes
NW	991125	SR 20	94.68	unnamed	Skagit R	4	Skagit	No

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	991126	SR 20	94.82	unnamed	Skagit R	4	Skagit	Yes
NW	990410	SR 20	99.95	Sutter Cr	Skagit R	4	Skagit	Yes
NW	995097	SR 20	105.34	Backus Cr	Skagit R	4	Skagit	No
NW	CD18	SR 20	105.42	Olson Cr	Skagit R	4	Skagit	Yes
NW	994941	SR 20	111.68	unnamed	Skagit R	4	Skagit	Yes
NW	991131	SR 20	112.9	unnamed	Skagit R	4	Skagit	Yes
NW	994947	SR 20	114.71	unnamed	Skagit R	4	Skagit	No
NW	DM7	SR 20	116.25	unnamed	Skagit R	4	Skagit	Yes
NW	991452	SR 20	118.41	Babcock Cr	Skagit R	4	Whatcom	No
NW	995430	SR 20; SPUR	50.48	unnamed	Fidalgo Bay	3	Skagit	Yes
NW	102 L062	SR 202	0.1	Little Bear Cr	Sammamish R	8	King	Yes
NW	996917	SR 202	0.97	unnamed	Sammamish R	8	King	No
NW	996930	SR 202; ROW	1.03	unnamed	Sammamish R	8	King	No
NW	996921	SR 202	4.17	unnamed	Sammamish R	8	King	Yes
NW	996925	SR 202	4.25	unnamed	High School Cr	8	King	Yes
NW	991181	SR 202	5.27	unnamed	Sammamish R	8	King	No
NW	990142	SR 202	11.96	Evans Cr	Bear Cr	8	King	Yes
NW	990325	SR 202	13.22	Patterson Cr	Snoqualmie R	7	King	Yes
NW	995194	SR 202	16.79	unnamed	Patterson Cr	7	King	Yes
NW	991174	SR 202	19.69	unnamed	Patterson Cr	7	King	Yes
NW	991173	SR 202	19.76	unnamed	Patterson Cr	7	King	Yes
NW	101S-22	SR 202	22.56	unnamed	Snoqualmie R	7	King	Yes
NW	101SA-06	SR 202	23.18	Skunk Cr	Snoqualmie R	7	King	Yes
NW	995200	SR 202	23.22	unnamed	Skunk Cr	7	King	Yes
NW	101S-10	SR 202	23.45	Mud Cr	Snoqualmie R	7	King	Yes
NW	101L-01	SR 203	3.97	unnamed	Griffin Cr	7	King	No
NW	991720	SR 203	4.37	unnamed	Snoqualmie R	7	King	Yes
NW	991721	SR 203	4.91	Indian Cr	Langlois Cr	7	King	Yes
NW	991717	SR 203	4.98	Langlois Cr	Snoqualmie R	7	King	Yes
NW	995167	SR 203	7.26	unnamed	Horseshoe Lk	7	King	Yes
NW	995178	SR 203	11.61	unnamed	unnamed	7	King	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	991716	SR 203	13.6	Loutsis Cr	Snoqualmie R	7	King	Yes
NW	995181	SR 203	14.1	unnamed	Snoqualmie R	7	King	Yes
NW	995184	SR 203	18.19	unnamed	Snoqualmie R	7	Snohomish	No
NW	995186	SR 203	18.48	unnamed	Snoqualmie R	7	Snohomish	No
NW	995137	SR 204	0.21	unnamed	unnamed to Ebey Sl	7	Snohomish	Yes
NW	995138	SR 204	0.54	unnamed	Ebey Sl	7	Snohomish	Yes
NW	995141	SR 204	0.96	unnamed	Ebey Sl	7	Snohomish	Yes
NW	995150	SR 204	1.19	Burri Cr	Ebey Sl	7	Snohomish	Yes
NW	995152	SR 204	1.8	Weiser Cr	Ebey Sl	7	Snohomish	Yes
NW	991204	SR 410	22.67	unnamed	Boise Cr	10	King	Yes
NW	991206	SR 410	22.94	unnamed	Boise Cr	10	King	Yes
NW	991205	SR 410	23.83	unnamed	Boise Cr	10	King	Yes
NW	990474	SR 410	25.19	Watercress Cr	Newaukum Cr	9	King	Yes
NW	996622	SR 410	31.48	unnamed	Scatter Cr	10	King	Yes
NW	990082	SR 410	35.77	Clay Cr	White R	10	King	Yes
NW	991219	SR 410	39.18	unnamed	White R	10	King	No
NW	105 R022221a	SR 410	41.42	unnamed	White R	10	King	Yes
NW	105 R071916a	SR 410	48.29	Boundary Cr	White R	10	Pierce	Yes
NW	996671	SR 410	53.01	unnamed	White R	10	Pierce	Yes
NW	105 R072018a	SR 410	59.57	unnamed	White R	10	Pierce	No
NW	996266	SR 509	9.18	unnamed	Puget Sound	10	King	Yes
NW	991651	SR 509	9.6	unnamed	Puget Sound	10	King	No
NW	996270	SR 509	10.96	Lakota Cr	Puget Sound	10	King	Yes
NW	996272	SR 509	11.43	unnamed	Lakota Cr	10	King	Yes
NW	991192	SR 509	13.49	unnamed	Puget Sound	9	King	Yes
NW	997675	SR 509; SR 99	14.23	Redondo Cr	Poverty Bay	9	King	Yes
NW	997679	SR 509	24.42	Miller Cr	Puget Sound	9	King	Yes
NW	997681	SR 509	29.06	Lost Fork Hamm Cr	Duwamish R	9	King	Yes
NW	997645	SR 515	3.97	Panther Cr	Springbrook Cr	9	King	Yes
NW	994409	SR 515	7.08	Rolling Hills Cr	Springbrook Cr	9	King	Yes
NW	991191	SR 516	0.41	Barnes Cr	Massey Cr	9	King	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	997649	SR 516	2.98	unnamed	Green R	9	King	Yes
NW	997651	SR 516	5.8	Mill Cr	Springbrook Cr	9	King	Yes
NW	997670	SR 516	10.58	unnamed	Big Soos Cr	9	King	Yes
NW	998886	SR 518	2.27	Gilliam Cr	Green R	9	King	Yes
NW	992651	SR 518	2.59	unnamed	Gilliam Cr	9	King	No
NW	997697	SR 518	3.57	unnamed	unnamed	9	King	No
NW	994117	SR 520	5.42	unnamed	Lake Washington	8	King	No
NW	990167	SR 520	7.9	Goff Cr	WF Kelsey Cr	8	King	Yes
NW	990430	SR 522	2.86	Thornton Cr	Lake Washington	8	King	Yes
NW	990655	SR 522	6.63	Cat Whisker Cr	Lake Washington	8	King	Yes
NW	996928	SR 522	9.6	Horse Cr	Sammamish R	8	King	Yes
NW	993083	SR 522	11.31	unnamed	Sammamish R	8	King	Yes
NW	996910	SR 522	11.59	unnamed	Sammamish R	8	King	No
NW	996916	SR 522	12.86	unnamed	Little Bear Cr	8	King	Yes
NW	996880	SR 522; ROW	12.86	unnamed	Little Bear Cr	8	King	Yes
NW	996913	SR 522	13.66	unnamed	Little Bear Cr	8	Snohomish	Yes
NW	994430	SR 522	14.25	Howell Cr	Little Bear Cr	8	Snohomish	Yes
NW	994432	SR 522	14.38	unnamed	Howell Cr	8	Snohomish	No
NW	992371	SR 522	17.48	unnamed	Evans Cr	7	Snohomish	Yes
NW	992632	SR 522	17.82	unnamed	Evans Cr	7	Snohomish	Yes
NW	992631	SR 522	17.87	unnamed	Evans Cr	7	Snohomish	Yes
NW	992378	SR 522	19.26	Anderson Cr	Evans Cr	7	Snohomish	Yes
NW	992381	SR 522	19.35	unnamed	Anderson Cr	7	Snohomish	Yes
NW	990139	SR 522	20.21	Elliott Cr	Snohomish R	7	Snohomish	Yes
NW	931850	SR 522	21.82	unnamed	unnamed	7	Snohomish	No
NW	993103	SR 524	3.89	Scriber Cr	Swamp Cr	8	Snohomish	Yes
NW	992846	SR 524	5.54	Golde Cr	Scriber Cr	8	Snohomish	Yes
NW	993100	SR 524	6.95	Martha Cr	Swamp Cr	8	Snohomish	Yes
NW	991053	SR 524	8.06	unnamed	North Cr	8	Snohomish	No
NW	102 L020	SR 524	12.44	Great Dane Cr	Little Bear Cr	8	Snohomish	Yes
NW	996460	SR 524	14.28	Daniels Cr	Cottage Lk Cr	8	Snohomish	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	994124	SR 524	14.38	Daniels Cr	Cottage Lk Cr	8	Snohomish	Yes
NW	994123	SR 524	14.52	Daniels Cr	Cottage Lk Cr	8	Snohomish	Yes
NW	996205	SR 524; SPUR	0.21	Shelleberger Cr	Puget Sound	8	Snohomish	Yes
NW	102 S088	SR 525	0.28	Maple Cr	Swamp Cr	8	Snohomish	Yes
NW	991176	SR 525	1.1	unnamed	Swamp Cr	8	Snohomish	Yes
NW	991054	SR 525	2.05	unnamed	Swamp Cr	8	Snohomish	Yes
NW	996203	SR 525	7.56	unnamed	Possession Bay	8	Snohomish	No
NW	995994	SR 525	9.14	Clinton Cr	Puget Sound	6	Island	Yes
NW	995986	SR 525	9.54	Clinton Cr	Puget Sound	6	Island	Yes
NW	995984	SR 525	9.7	Clinton Cr	Puget Sound	6	Island	Yes
NW	995992	SR 525	11.99	Maxwelton Cr	Useless Bay	6	Island	Yes
NW	991805	SR 525	15.03	unnamed	Deer Lagoon	6	Island	Yes
NW	993084	SR 527	2.78	unnamed	North Cr	8	Snohomish	Yes
NW	08.0077 0.20	SR 527	6.57	Penny Cr	North Cr	8	Snohomish	Yes
NW	990294	SR 528	2.52	Munson Cr	Allen Cr	7	Snohomish	Yes
NW	991159	SR 530	24.65	Trafton Cr	NF Stillaguamish R	5	Snohomish	Yes
NW	990629	SR 530	25.74	unnamed	Schoolyard Cr	5	Snohomish	Yes
NW	996092	SR 530	25.88	unnamed	Schoolyard Cr	5	Snohomish	No
NW	991160	SR 530	25.94	Schoolyard Cr	NF Stillaguamish R	5	Snohomish	Yes
NW	990628	SR 530	26.29	unnamed	Schoolyard	5	Snohomish	Yes
NW	991161	SR 530	26.4	unnamed	unnamed	5	Snohomish	No
NW	990632	SR 530	26.68	unnamed	NF Stillaguamish R	5	Snohomish	Yes
NW	990633	SR 530	26.87	unnamed	NF Stillaguamish R	5	Snohomish	Yes
NW	990630	SR 530	27.46	unnamed	NF Stillaguamish R	5	Snohomish	Yes
NW	990634	SR 530	27.66	unnamed	NF Stillaguamish R	5	Snohomish	No
NW	990361	SR 530	27.75	Ryan Falls Cr	Stillaguamish R	5	Snohomish	No
NW	990638	SR 530	30.67	unnamed	McGovern Cr	5	Snohomish	No
NW	990644	SR 530	31.01	unnamed	NF Stillaguamish R	5	Snohomish	Yes
NW	991164	SR 530	32.51	unnamed	NF Stillaguamish R	5	Snohomish	No
NW	990639	SR 530	34.3	unnamed	NF Stillaguamish R	5	Snohomish	No
NW	990646	SR 530	34.7	unnamed	NF Stillaguamish R	5	Snohomish	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	996100	SR 530	35.06	unnamed	NF Stillaguamish R	5	Snohomish	No
NW	990640	SR 530	35.24	unnamed	Montague Cr	5	Snohomish	Yes
NW	995402	SR 530	36.67	unnamed	NF Stillaguamish R	5	Snohomish	No
NW	990649	SR 530	38.53	unnamed	NF Stillaguamish R	5	Snohomish	Yes
NW	990650	SR 530	38.6	unnamed	NF Stillaguamish R	5	Snohomish	No
NW	990246	SR 530	42.14	Little French Cr	NF Stillaguamish R	5	Snohomish	Yes
NW	990652	SR 530	43.34	unnamed	NF Stillaguamish R	5	Snohomish	Yes
NW	997712	SR 530	64.41	unnamed	Hilt Cr	4	Skagit	No
NW	991750	SR 531	2.61	Fish Cr	Portage Cr	5	Snohomish	Yes
NW	991058	SR 531	8.65	Edgecomb Cr	MF Quilceda Cr	7	Snohomish	Yes
NW	991059	SR 531	8.71	Edgecomb Cr	MF Quilceda Cr	7	Snohomish	Yes
NW	05.0018 2.00	SR 532	6.14	Church Cr	Stillaguamish R	5	Snohomish	Yes
NW	990080	SR 532	6.68	unnamed	Church Cr	5	Snohomish	Yes
NW	990890	SR 532	8.71	Jackson Gulch Cr	Stillaguamish R	5	Snohomish	Yes
NW	CR2	SR 534	0.53	unnamed	Carpenter Cr	3	Skagit	Yes
NW	995265	SR 534	0.6	unnamed	Carpenter Cr	3	Skagit	Yes
NW	PA2	SR 536	2.07	unnamed	unnamed Higgins Sl trib	3	Skagit	Yes
NW	NC129	SR 538	2.18	Logan Cr	Nookachamps Cr	3	Skagit	Yes
NW	992987	SR 539	0.04	Baker Cr	Squalicum Cr	1	Whatcom	Yes
NW	990015	SR 539	0.3	Spring Cr	Baker Cr	1	Whatcom	Yes
NW	991473	SR 539	11.08	Duffner Ditch	Bertrand Cr	1	Whatcom	Yes
NW	991803	SR 542	2.4	Toad Lk Cr	Squalicum Cr	1	Whatcom	Yes
NW	991111	SR 542	13.48	unnamed	Nooksack R	1	Whatcom	Yes
NW	990584	SR 542	15.05	unnamed	Nooksack R	1	Whatcom	Yes
NW	990585	SR 542	15.08	unnamed	Jim Cr	1	Whatcom	Yes
NW	990434	SR 542	15.32	Jim Cr	Nooksack R	1	Whatcom	Yes
NW	990588	SR 542	15.97	unnamed	NF Nooksack R	1	Whatcom	Yes
NW	995776	SR 542	16.21	unnamed	unnamed	1	Whatcom	No
NW	991107	SR 542	16.28	unnamed	Nooksack R	1	Whatcom	No
NW	995777	SR 542	17.38	unnamed	NF Nooksack R	1	Whatcom	Yes
NW	990589	SR 542	17.85	unnamed	NF Nooksack R	1	Whatcom	No

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	991705	SR 542	21.45	unnamed	Kendall Cr	1	Whatcom	Yes
NW	991113	SR 542	23.95	unnamed	High Cr	1	Whatcom	Yes
NW	995770	SR 542	24.25	unnamed	High Cr	1	Whatcom	Yes
NW	990577	SR 542	24.49	unnamed	High Cr	1	Whatcom	Yes
NW	990590	SR 542	26.25	unnamed	NF Nooksack R	1	Whatcom	No
NW	991640	SR 542	27.21	unnamed	Nooksack R	1	Whatcom	Yes
NW	995409	SR 542	28.87	unnamed	NF Nooksack R	1	Whatcom	Yes
NW	990580	SR 542	29.02	unnamed	NF Nooksack R	1	Whatcom	No
NW	990598	SR 542	31.57	unnamed	NF Nooksack R	1	Whatcom	Yes
NW	990187	SR 542	32	Hedrick Cr	Nooksack R	1	Whatcom	Yes
NW	990600	SR 542	32.08	unnamed	Hedrick Cr	1	Whatcom	Yes
NW	990602	SR 542	34.49	unnamed	NF Nooksack R	1	Whatcom	Yes
NW	990604	SR 542	38.15	Deerhorn Cr	NF Nooksack R	1	Whatcom	No
NW	930309	SR 543	0.12	Cain Cr	Semiahmoo Bay	1	Whatcom	Yes
NW	996168	SR 544	3.51	unnamed	Four Mile Cr	1	Whatcom	Yes
NW	931144	SR 546	0.17	Duffner Ditch	Bertrand Cr	1	Whatcom	Yes
NW	990510	SR 546	0.46	Double Ditch	Fishtrap Cr	1	Whatcom	Yes
NW	996161	SR 546	0.47	Double Ditch	Fishtrap Cr	1	Whatcom	Yes
NW	996163	SR 546	1.47	unnamed	Fishtrap Cr	1	Whatcom	Yes
NW	996164	SR 546	2.01	unnamed	Fishtrap Cr	1	Whatcom	Yes
NW	996167	SR 546	6.02	unnamed	Squaw Cr	1	Whatcom	Yes
NW	995774	SR 547	6.71	unnamed	Saar Cr	1	Whatcom	Yes
NW	996003	SR 548	0.29	unnamed	California Cr	1	Whatcom	Yes
NW	996006	SR 548	0.87	unnamed	California Cr	1	Whatcom	Yes
NW	996007	SR 548	1.14	unnamed	unnamed California Cr trib	1	Whatcom	Yes
NW	996008	SR 548	1.24	unnamed	California Cr	1	Whatcom	Yes
NW	996142	SR 548	4.27	unnamed	Fingalson Cr	1	Whatcom	No
NW	996148	SR 548	6.76	unnamed	Terrell Cr	1	Whatcom	Yes
NW	996149	SR 548	8.11	unnamed	Terrell Cr	1	Whatcom	Yes
NW	996153	SR 548	10.55	unnamed	California Cr	1	Whatcom	Yes
NW	996156	SR 548	13.8	Cain Cr	Semiahmoo Bay	1	Whatcom	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	934011	SR 9; ROW (Broadway Ave)	0.07	unnamed	unnamed Thomas Cr trib	7	Snohomish	Yes
NW	934015	SR 9; ROW (Broadway Ave)	0.12	unnamed	unnamed Thomas Cr trib	7	Snohomish	Yes
NW	102 L012	SR 9	0.17	Howell Cr	Little Bear Cr	8	Snohomish	Yes
NW	995982	SR 9	10.61	Cemetery Cr	Snohomish R	7	Snohomish	Yes
NW	995087	SR 9	12.57	Bunk Foss Cr	Pilchuck R	7	Snohomish	Yes
NW	999168	SR 9	14	Cenntenial Cr	Pilchuck R	7	Snohomish	No
NW	995086	SR 9	16.66	Hulbert Cr	Ebey Sl	7	Snohomish	Yes
NW	991813	SR 9	17.75	unnamed	Stevens Cr	7	Snohomish	Yes
NW	991814	SR 9	18.79	unnamed	Lake Stevens	7	Snohomish	No
NW	995084	SR 9	22.72	unnamed	Quilceda Cr	7	Snohomish	Yes
NW	102 Q028	SR 9	24.44	unnamed	Quilceda Cr	7	Snohomish	Yes
NW	990255	SR 9	27.25	unnamed	Portage Cr	5	Snohomish	Yes
NW	996079	SR 9	27.94	unnamed	unnamed Portage Cr trib	5	Snohomish	Yes
NW	991166	SR 9	32.2	Bryant Cr	Armstrong Cr	5	Snohomish	Yes
NW	996080	SR 9	33.2	Roth Cr	Stillaguamish R	5	Snohomish	Yes
NW	996082	SR 9	34.23	unnamed	Pilchuck Cr	5	Snohomish	Yes
NW	LP23	SR 9	35.46	unnamed	unnamed Pilchuck Cr trib	5	Snohomish	Yes
NW	996088	SR 9	38.14	unnamed	unnamed	5	Skagit	No
NW	996089	SR 9	38.27	unnamed	unnamed	5	Skagit	No
NW	LP31	SR 9	38.64	unnamed	unnamed	5	Skagit	No
NW	LP32	SR 9	38.69	unnamed	unnamed	5	Skagit	Yes
NW	991158	SR 9	38.88	unnamed	Pilchuck Cr	5	Skagit	Yes
NW	NC158	SR 9	39.16	unnamed	Lake McMurray	3	Skagit	Yes
NW	995275	SR 9	39.51	unnamed	Lake McMurray	3	Skagit	No
NW	NC180	SR 9	39.69	unnamed	Lake McMurray	3	Skagit	Yes
NW	NC170	SR 9	39.87	unnamed	unnamed	3	Skagit	Yes
NW	990641	SR 9	40.09	unnamed	Lake McMurray	3	Skagit	Yes
NW	NC166	SR 9	40.77	unnamed	Lake McMurray	3	Skagit	Yes
NW	990091	SR 9	41.04	Norway Park Cr	Lake McMurray	3	Skagit	Yes
NW	991451	SR 9	41.5	unnamed	Lake Cr	3	Skagit	No
NW	NC164	SR 9	41.93	unnamed	Lake Cr	3	Skagit	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	NC163	SR 9	43.08	unnamed	Lake Cr	3	Skagit	Yes
NW	991122	SR 9	48	Gribble Cr	WF Nookachamps Cr	3	Skagit	Yes
NW	NC69	SR 9	49	unnamed	Nookachamps Cr	3	Skagit	Yes
NW	HC53	SR 9	59.08	unnamed	unnamed	3	Skagit	Yes
NW	HC93	SR 9	59.46	unnamed	Hansen Cr	3	Skagit	Yes
NW	991114	SR 9	62.36	unnamed	Samish R	3	Skagit	Yes
NW	SR71	SR 9	63.74	unnamed	Samish R	3	Skagit	Yes
NW	SR67	SR 9	64.45	unnamed	Samish R	3	Skagit	No
NW	991135	SR 9	64.68	unnamed	Samish R	3	Skagit	No
NW	995390	SR 9	64.93	unnamed	Samish R	3	Skagit	No
NW	991136	SR 9	65.07	unnamed	Samish R	3	Skagit	No
NW	991116	SR 9	65.32	unnamed	Samish R	3	Skagit	Yes
NW	991446	SR 9	66.51	unnamed	Samish R	3	Skagit	No
NW	991447	SR 9	66.85	unnamed	Samish R	3	Whatcom	Yes
NW	995392	SR 9	67.46	unnamed	Samish R	3	Whatcom	No
NW	995395	SR 9	69.1	unnamed	Samish R	3	Whatcom	No
NW	995396	SR 9	69.15	unnamed	Samish R	3	Whatcom	No
NW	930834	SR 9	69.87	unnamed	Samish R	3	Whatcom	Yes
NW	995398	SR 9	69.88	unnamed	Samish R	3	Whatcom	Yes
NW	991106	SR 9	70.6	unnamed	Landingstrip Cr	1	Whatcom	Yes
NW	995780	SR 9	70.81	unnamed	SF Nooksack R	1	Whatcom	No
NW	995783	SR 9	71.54	unnamed	SF Nooksack R	1	Whatcom	No
NW	992344	SR 9	76.91	unnamed	Black Sl	1	Whatcom	Yes
NW	992345	SR 9	77.12	unnamed	Black Sl	1	Whatcom	Yes
NW	992349	SR 9	77.36	unnamed	Tawes Cr	1	Whatcom	Yes
NW	992350	SR 9	77.43	unnamed	Tawes Cr	1	Whatcom	Yes
NW	992356	SR 9	77.94	Tawes Cr	SF Nooksack R	1	Whatcom	Yes
NW	991842	SR 900	15.86	Green Cr	May Cr	8	King	Yes
NW	991702	SR 900	18.59	May Cr	Lake Washington	8	King	Yes
NW	990432	SR 900	19.14	unnamed	Tibbetts Cr	8	King	No
NW	991185	SR 900	19.4	unnamed	Tibbetts Cr	8	King	No

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	990433	SR 900	19.5	Tibbetts Cr	Lake Sammamish	8	King	Yes
NW	992641	SR 92	0.22	unnamed	Stevens Cr	7	Snohomish	Yes
NW	991827	SR 92	0.78	Lundeen Cr	Lake Stevens	7	Snohomish	Yes
NW	991830	SR 92	2.2	unnamed	Catherine Cr	7	Snohomish	No
NW	990233	SR 92	2.73	Little Pilchuck Cr	Pilchuck R	7	Snohomish	Yes
NW	991831	SR 92	2.99	unnamed	Little Pilchuck Cr	7	Snohomish	Yes
NW	102 N183	SR 96	0.47	North Cr	Sammamish R	8	Snohomish	Yes
NW	995326	SR 96	5.29	Thomas Cr	Marshland Sl	7	Snohomish	Yes
NW	995214	SR 96	5.86	unnamed	unnamed to Snohomish R	7	Snohomish	Yes
NW	995215	SR 96	5.98	unnamed	unnamed to Snohomish R	7	Snohomish	Yes
NW	995216	SR 96	6.09	unnamed	Snohomish R	7	Snohomish	Yes
NW	995217	SR 96	6.49	unnamed	Marshland Sl	7	Snohomish	Yes
NW	991196	SR 99	13.54	McSorley Cr	Puget Sound	9	King	Yes
NW	997684	SR 99	23.41	unnamed	Duwamish R	9	King	Yes
NW	997685	SR 99	24.71	NF Hamm Cr	Duwamish R	9	King	Yes
NW	997687	SR 99	24.86	NF Hamm Cr	Duwamish R	9	King	Yes
NW	996216	SR 99	49.01	unnamed	Lunds Gulch Cr	8	Snohomish	Yes
NW	993849	SR 99	51.45	unnamed	Swamp Cr	8	Snohomish	Yes
NW	102 N192	SR 99	54.23	North Cr	Sammamish R	8	Snohomish	Yes
NW	932426	US 2; WB on-ramp	5.02	Bunk Foss Cr	Pilchuck R	7	Snohomish	Yes
NW	932428	US 2	5.18	Bunk Foss Cr	Pilchuck R	7	Snohomish	Yes
NW	995101	US 2	6.23	Bunk Foss Cr	Pilchuck R	7	Snohomish	Yes
NW	995108	US 2	12.94	unnamed	French Cr	7	Snohomish	Yes
NW	101NORT-04	US 2	16.22	unnamed	Skykomish R	7	Snohomish	Yes
NW	101NORT-36	US 2	19.3	unnamed	Skykomish R	7	Snohomish	Yes
NW	101NORT-32	US 2	20.48	unnamed	unnamed to Skykomish R	7	Snohomish	Yes
NW	101NORT-33	US 2	20.53	unnamed	Skykomish R	7	Snohomish	Yes
NW	101OWEN-02	US 2	21.74	Groeneveld Cr	Skykomish R	7	Snohomish	Yes
NW	991822	US 2	34.35	unnamed	Skykomish R	7	Snohomish	Yes
NW	991825	US 2	36.73	unnamed	SF Skykomish R	7	Snohomish	No
NW	995058	US 2	44.23	unnamed	SF Skykomish R	7	King	No

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
NW	995059	US 2	44.26	unnamed	SF Skykomish R	7	King	No
NW	995000	US 2	45.47	unnamed	SF Skykomish R	7	King	Yes
NW	995002	US 2	48.78	unnamed	SF Skykomish R	7	King	No
NW	934093	US 2; ROW	48.82	unnamed	SF Skykomish R	7	King	No
NW	995020	US 2	48.94	unnamed	SF Skykomish R	7	King	Yes
NW	995021	US 2	49.87	unnamed	SF Skykomish R	7	King	Yes
NW	995062	US 2	52.39	unnamed	Tye R	7	King	Yes
NW	995023	US 2	52.7	unnamed	Tye R	7	King	Yes
OL	991499	I-5	94.57	unnamed	Beaver Cr	23	Thurston	Yes
OL	991659	I-5	98.11	unnamed	Salmon Cr	23	Thurston	Yes
OL	997706	I-5	104.13	unnamed	Deschutes R	13	Thurston	Yes
OL	990292	I-5	105.52	Moxlie Cr	Budd Inlet	13	Thurston	Yes
OL	990199	I-5	105.85	Indian Cr	Moxlie Cr	13	Thurston	Yes
OL	998888	I-5	109.19	College Cr	Woodland Cr	13	Thurston	No
OL	997705	I-5	109.62	College Cr	Woodland Cr	13	Thurston	Yes
OL	933313	I-5; NB	115.77	unnamed	unnamed Red Salmon Cr trib	11	Pierce	No
OL	933186	I-5	134.33	unnamed	Puyallup R	10	Pierce	No
OL	162173	SR 104	4.25	unnamed	Barnhouse Cr	17	Jefferson	Yes
OL	990375	SR 104	10.36	Shine Cr	Hood Canal	17	Jefferson	Yes
OL	162192	SR 104	12.57	unnamed	Squamish Harbor	17	Jefferson	Yes
OL	990710	SR 104	16.55	unnamed	Hood Canal	15	Kitsap	Yes
OL	992199	SR 104	17.67	Ladine DeCouteaux Cr	Port Gamble	15	Kitsap	Yes
OL	992200	SR 104	17.82	unnamed	Port Gamble	15	Kitsap	Yes
OL	992201	SR 104	19.12	unnamed	Port Gamble	15	Kitsap	Yes
OL	992202	SR 104	19.39	unnamed	Port Gamble	15	Kitsap	Yes
OL	996729	SR 104	22.23	unnamed	Grovers Cr	15	Kitsap	Yes
OL	992207	SR 104	22.95	Carpenter Cr	Appletree Cove	15	Kitsap	Yes
OL	992208	SR 104	23.37	unnamed	Appletree Cove	15	Kitsap	No
OL	991295	SR 105	31.1	unnamed	South Bay	22	Grays Harbor	Yes
OL	993007	SR 105	31.79	unnamed	South Bay	22	Grays Harbor	No
OL	990905	SR 105	36.26	unnamed	South Bay	22	Grays Harbor	No

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
OL	980275	SR 105	38.1	unnamed	Johns R	22	Grays Harbor	Yes
OL	980274	SR 105	38.28	unnamed	Johns R	22	Grays Harbor	No
OL	991642	SR 105	39.77	unnamed	O'Leary Cr	22	Grays Harbor	Yes
OL	991298	SR 105	40.5	unnamed	South Bay	22	Grays Harbor	Yes
OL	991302	SR 105	41.76	unnamed	Grays Harbor	22	Grays Harbor	No
OL	991297	SR 105	44.56	unnamed	Grays Harbor	22	Grays Harbor	Yes
OL	996115	SR 106	2.07	unnamed	unnamed Skokomish R trib	16	Mason	Yes
OL	996127	SR 106	3.39	unnamed	Hood Canal	16	Mason	No
OL	996383	SR 106	4.11	unnamed	Hood Canal	16	Mason	Yes
OL	997163	SR 106	5.45	unnamed	Hood Canal	14	Mason	No
OL	997176	SR 106	9.7	unnamed	Hood Canal	14	Mason	No
OL	997182	SR 106	11.57	unnamed	Hood Canal	14	Mason	Yes
OL	990450	SR 106	12.3	Twanoh Cr	Hood Canal	14	Mason	Yes
OL	991245	SR 106	13.84	unnamed	Hood Canal	14	Mason	Yes
OL	997184	SR 106	14.61	unnamed	Hood Canal	14	Mason	Yes
OL	115 MC190	SR 106	14.72	Mulberg Cr	Hood Canal	14	Mason	Yes
OL	115 MC218	SR 106	19.57	Devereaux Cr	Hood Canal	14	Mason	Yes
OL	933360	SR 107	4.34	unnamed	Chehalis R	22	Grays Harbor	Yes
OL	933361	SR 107; ROW	4.34	unnamed	Chehalis R	22	Grays Harbor	Yes
OL	991727	SR 107	5.49	unnamed	Chehalis R	22	Grays Harbor	No
OL	993659	SR 108	0.18	unnamed	EF Wildcat Cr	22	Grays Harbor	No
OL	997210	SR 108	5.2	unnamed	unnamed	14	Mason	Yes
OL	991237	SR 108	5.5	unnamed	Skookum Cr	14	Mason	Yes
OL	990385	SR 108	5.54	unnamed	Skookum Cr	14	Mason	Yes
OL	991672	SR 108	7.62	unnamed	Skookum Cr	14	Mason	Yes
OL	990278	SR 108	8.89	McDonald Cr	Skookum Cr	14	Mason	Yes
OL	997224	SR 108	9.35	unnamed	Kamilche Cr	14	Mason	Yes
OL	997225	SR 108	9.47	Kamilche Cr	Skookum Cr	14	Mason	Yes
OL	990921	SR 109	2.71	unnamed	Grays Harbor	22	Grays Harbor	Yes
OL	991835	SR 109	3.41	unnamed	Grays Harbor	22	Grays Harbor	Yes
OL	991836	SR 109	4.46	unnamed	Little Hoquiam R	22	Grays Harbor	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
OL	990932	SR 109	6.91	unnamed	Grass Cr	22	Grays Harbor	Yes
OL	990933	SR 109	7.1	unnamed	Pacific Ocean	22	Grays Harbor	No
OL	990938	SR 109	9.8	unnamed	Gillis Sl	22	Grays Harbor	Yes
OL	990920	SR 109	19.4	unnamed	Connor Cr	21	Grays Harbor	Yes
OL	997311	SR 109	21.12	unnamed	Copalis R	21	Grays Harbor	No
OL	997360	SR 109	24.23	unnamed	unnamed to Boone Cr	21	Grays Harbor	No
OL	997363	SR 109	24.56	unnamed	Boone Cr	21	Grays Harbor	Yes
OL	991265	SR 109	26.1	unnamed	Pacific Ocean	21	Grays Harbor	Yes
OL	997780	SR 109	27.05	unnamed	Pacific Ocean	21	Grays Harbor	Yes
OL	997781	SR 109	27.41	Spruce Cr	Pacific Ocean	21	Grays Harbor	No
OL	990138	SR 109	28.1	Elk Cr	Pacific Ocean	21	Grays Harbor	Yes
OL	997784	SR 109	30.26	unnamed	Pacific Ocean	21	Grays Harbor	Yes
OL	997786	SR 109	31.93	unnamed	Moclips R	21	Grays Harbor	Yes
OL	991272	SR 109	33.1	Wain Cr	Pacific Ocean	21	Grays Harbor	Yes
OL	991266	SR 109	33.4	unnamed	Pacific Ocean	21	Grays Harbor	Yes
OL	997787	SR 109	33.87	unnamed	Pacific Ocean	21	Grays Harbor	Yes
OL	990922	SR 109	35.73	unnamed	Pacific Ocean	21	Grays Harbor	Yes
OL	997790	SR 109	36	unnamed	Pacific Ocean	21	Grays Harbor	Yes
OL	991271	SR 109	36.38	unnamed	Pacific Ocean	21	Grays Harbor	Yes
OL	991270	SR 109	36.43	unnamed	Pacific Ocean	21	Grays Harbor	Yes
OL	990924	SR 109	37.43	unnamed	Pacific Ocean	21	Grays Harbor	Yes
OL	990927	SR 109	39.15	unnamed	Pacific Ocean	21	Grays Harbor	Yes
OL	990559	SR 112	6.95	unnamed	Strait of Juan de Fuca	19	Clallam	Yes
OL	991739	SR 112	7.35	Olsen Cr	Strait of Juan de Fuca	19	Clallam	Yes
OL	991259	SR 112	12.26	unnamed	Hoko R	19	Clallam	Yes
OL	996684	SR 112	17.14	unnamed	Clallam R	19	Clallam	Yes
OL	996687	SR 112	17.65	unnamed	Clallam R	19	Clallam	No
OL	996691	SR 112	19.36	unnamed	Clallam R	19	Clallam	No
OL	991731	SR 112	21.1	unnamed	Green Cr	19	Clallam	Yes
OL	996694	SR 112	21.64	unnamed	unnamed	19	Clallam	No
OL	996578	SR 112; Maint Yard	22.99	unnamed	Green Cr	19	Clallam	No

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
OL	996552	SR 112	23.07	unnamed	Green Cr	19	Clallam	No
OL	996554	SR 112	24.26	unnamed	Pysht R	19	Clallam	Yes
OL	996555	SR 112	24.77	unnamed	Pysht R	19	Clallam	Yes
OL	996556	SR 112	25.2	unnamed	Pysht R	19	Clallam	Yes
OL	991732	SR 112	29.12	Indian Cr	Strait of Juan De Fuca	19	Clallam	Yes
OL	990941	SR 112	29.7	Butler Cr	Butler Cove	19	Clallam	Yes
OL	991258	SR 112	29.71	unnamed	Butler Cr	19	Clallam	Yes
OL	996424	SR 112	31.46	unnamed	Jim Cr	19	Clallam	Yes
OL	996426	SR 112	32.85	unnamed	Joe Cr	19	Clallam	No
OL	996427	SR 112	33.02	unnamed	Joe Cr	19	Clallam	No
OL	996430	SR 112	34.12	unnamed	Deep Cr	19	Clallam	Yes
OL	996431	SR 112	34.2	unnamed	Deep Cr	19	Clallam	Yes
OL	996432	SR 112	34.28	unnamed	Deep Cr	19	Clallam	Yes
OL	990715	SR 112	35.28	unnamed	Strait of Juan de Fuca	19	Clallam	No
OL	996528	SR 112	44.32	unnamed	Murdock Cr	19	Clallam	Yes
OL	996529	SR 112	45.66	unnamed	Murdock Cr	19	Clallam	No
OL	990480	SR 112	49.48	Whiskey Cr	Strait of Juan de Fuca	19	Clallam	Yes
OL	996536	SR 112	49.62	EF Whiskey Cr	Whiskey Cr	19	Clallam	Yes
OL	991693	SR 112	50.73	unnamed	Whiskey Cr	19	Clallam	Yes
OL	991738	SR 112	51.6	Uptha Cr	Salt Cr	19	Clallam	Yes
OL	991660	SR 112	52.9	Nordstrom Cr	Salt Cr	19	Clallam	Yes
OL	991661	SR 112	53.5	Falls Cr	Salt Cr	19	Clallam	Yes
OL	991686	SR 112	56.5	unnamed	Coville Cr	19	Clallam	Yes
OL	996541	SR 112	57.05	unnamed	Coville Cr	19	Clallam	No
OL	991733	SR 113	0.9	unnamed	Beaver Cr	20	Clallam	Yes
OL	996563	SR 113	6.55	unnamed	Pysht R trib	19	Clallam	No
OL	996571	SR 113	8.35	unnamed	Pysht R	19	Clallam	Yes
OL	996573	SR 113	9.7	unnamed	Pysht R	19	Clallam	Yes
OL	996574	SR 113	9.81	unnamed	Pysht R	19	Clallam	Yes
OL	990077	SR 116	0.22	Chimacum Cr	Port Townsend Bay	17	Jefferson	Yes
OL	995521	SR 116	1.64	unnamed	Port Townsend Bay	17	Jefferson	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
OL	990943	SR 116	4.67	Kilisut Harbor	Oak Harbor	17	Jefferson	Yes
OL	995913	SR 119	5.66	unnamed	Lake Cushman	16	Mason	No
OL	995915	SR 119	7.02	unnamed	Lake Cushman	16	Mason	Yes
OL	995916	SR 119	7.8	unnamed	Lake Cushman	16	Mason	Yes
OL	995917	SR 119	8.2	unnamed	Big Cr	16	Mason	Yes
OL	995918	SR 119	8.35	unnamed	Big Cr	16	Mason	No
OL	991939	SR 16	14.63	unnamed	McCormick Cr	15	Pierce	Yes
OL	991940	SR 16	14.65	McCormick Cr	Henderson Bay	15	Pierce	Yes
OL	991941	SR 16	14.86	McCormick Cr	Henderson Bay	15	Pierce	Yes
OL	991942	SR 16	15.02	unnamed	McCormick Cr	15	Pierce	Yes
OL	991944	SR 16; EB Ext 15	15.21	McCormick Cr	Henderson Bay	15	Pierce	Yes
OL	105 K051618a	SR 16	16.59	Goodnough Cr	Henderson Bay	15	Pierce	Yes
OL	15.0060 1.00	SR 16	17.8	Purdy Cr	Burley Lagoon	15	Pierce	Yes
OL	996760	SR 16	19.28	unnamed	Burley Cr	15	Kitsap	No
OL	991866	SR 16	19.54	unnamed	Burley Cr	15	Kitsap	Yes
OL	991516	SR 16	20.36	unnamed	Burley Cr	15	Kitsap	Yes
OL	991867	SR 16	20.44	unnamed	Burley Cr	15	Kitsap	Yes
OL	996752	SR 16	21.58	unnamed	Burley Cr	15	Kitsap	Yes
OL	15.0056 4.50	SR 16	22.7	Burley Cr	Henderson Bay	15	Kitsap	Yes
OL	996755	SR 16; EB on-ramp	25.24	Blackjack Cr	Sinclair Inlet	15	Kitsap	Yes
OL	990038	SR 16	25.3	Blackjack Cr	Sinclair Inlet	15	Kitsap	Yes
OL	996756	SR 16; WB off-ramp	25.3	Blackjack Cr	Sinclair Inlet	15	Kitsap	Yes
OL	990357	SR 16	26.8	Ross Cr	Sinclair Inlet	15	Kitsap	Yes
OL	990270	SR 16	27.1	unnamed	Ross Cr	15	Kitsap	Yes
OL	934154	SR 16	27.49	unnamed	Sinclair Inlet	15	Kitsap	No
OL	991670	SR 16	28.6	unnamed	Sinclair Inlet	15	Kitsap	Yes
OL	930022	SR 160	1.92	unnamed	unnamed	15	Kitsap	No
OL	990366	SR 160	2.29	Salmonberry Cr	Long Lk	15	Kitsap	Yes
OL	991567	SR 160	4.5	unnamed	Curley Cr	15	Kitsap	Yes
OL	996954	SR 160	5.13	unnamed	Sinclair Inlet	15	Kitsap	No
OL	996955	SR 160	6.06	unnamed	Puget Sound	15	Kitsap	No

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
OL	990970	SR 161	1.02	unnamed	Mashel R	11	Pierce	No
OL	995475	SR 161	14.89	unnamed	unnamed South Cr trib	11	Pierce	Yes
OL	991214	SR 162	3.7	unnamed	Puyallup R	10	Pierce	Yes
OL	991802	SR 162	6.33	unnamed	Puyallup R	10	Pierce	No
OL	105 R021121a	SR 162	11.04	Card Cr	Carbon R	10	Pierce	Yes
OL	105 R032918d	SR 162	12.44	Rauch Cr	Carbon R	10	Pierce	Yes
OL	996291	SR 162	13.64	unnamed	S Prairie Cr	10	Pierce	Yes
OL	105 R040517a	SR 162	19.11	unnamed	S Prairie Cr	10	Pierce	Yes
OL	996343	SR 162	19.7	Spiketon Cr	S Prairie Cr	10	Pierce	Yes
OL	105 R033018B	SR 165	19.76	Spiketon Cr	S Prairie Cr	10	Pierce	Yes
OL	992009	SR 166	0.73	unnamed	Sinclair Inlet	15	Kitsap	Yes
OL	996956	SR 166	2.12	unnamed	Sinclair Inlet	15	Kitsap	Yes
OL	996957	SR 166	2.27	unnamed	Sinclair Inlet	15	Kitsap	Yes
OL	15.0208 0.00	SR 166	2.54	unnamed	Sinclair Inlet	15	Kitsap	Yes
OL	920412	SR 166; Mile Hill Dr	4.11	unnamed	Sinclair Inlet	15	Kitsap	Yes
OL	15.0201 0.90	SR 166	4.52	Olney Cr	Sinclair Inlet	15	Kitsap	Yes
OL	930603	SR 167; ROW	0.14	unnamed	Milwaukee Canal	10	Pierce	Yes
OL	996288	SR 167; NB Ext 8	11.72	unnamed	Milwaukee Canal	10	Pierce	Yes
OL	990711	SR 19	4.3	Swansonville Cr	EF Chimacum Cr	17	Jefferson	Yes
OL	991579	SR 19	6.82	unnamed	EF Chimacum Cr	17	Jefferson	Yes
OL	995743	SR 20	0.65	unnamed	Discovery Bay	17	Jefferson	Yes
OL	995748	SR 20	1.39	unnamed	Discovery Bay	17	Jefferson	No
OL	995753	SR 20	3.67	unnamed	Discovery Bay	17	Jefferson	Yes
OL	997231	SR 3	2.11	unnamed	Goldsburrough Cr	14	Mason	No
OL	997235	SR 3	4.67	unnamed	Oakland Bay	14	Mason	Yes
OL	997365	SR 3	7.16	unnamed	Oakland Bay	14	Mason	Yes
OL	997368	SR 3	7.59	unnamed	Oakland Bay	14	Mason	Yes
OL	997369	SR 3	7.96	unnamed	Oakland Bay	14	Mason	No
OL	997371	SR 3	8.28	unnamed	Oakland Bay	14	Mason	Yes
OL	991987	SR 3	21.29	unnamed	Case Inlet	14	Mason	No
OL	991795	SR 3	23.94	unnamed	Devereaux Cr	14	Mason	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
OL	996734	SR 3	25.15	unnamed	Hood Canal	15	Mason	Yes
OL	991797	SR 3	25.31	Sweetwater Cr	Hood Canal	15	Mason	Yes
OL	999626	SR 3	26.26	Mindy Cr	Union R	15	Mason	Yes
OL	991991	SR 3	26.4	unnamed	Union R	15	Mason	Yes
OL	991728	SR 3	29.63	unnamed	Union R	15	Kitsap	Yes
OL	990168	SR 3	32.1	Gorst Cr	Sinclair Inlet	15	Kitsap	Yes
OL	991585	SR 3	34.27	unnamed	Gorst Cr	15	Kitsap	Yes
OL	991995	SR 3	36.1	Wright Cr	Sinclair Inlet	15	Kitsap	Yes
OL	991994	SR 3	36.51	unnamed	Sinclair Inlet	15	Kitsap	Yes
OL	996508	SR 3	38.41	Ostrich Cr	Ostrich Bay	15	Kitsap	Yes
OL	996798	SR 3; SB on-ramp	39.13	unnamed	Dyes Inlet	15	Kitsap	Yes
OL	996796	SR 3	39.45	unnamed	Dyes Inlet	15	Kitsap	No
OL	996741	SR 3	40.37	unnamed	Dyes Inlet	15	Kitsap	Yes
OL	15.0229 0.10	SR 3	40.96	Chico Cr	Dyes Inlet	15	Kitsap	Yes
OL	991907	SR 3; Access Rd	40.97	unnamed	Chico Cr	15	Kitsap	Yes
OL	996795	SR 3; SB on-ramp	40.99	unnamed	Chico Cr	15	Kitsap	Yes
OL	996794	SR 3; SB off-ramp	41.08	unnamed	Chico Cr	15	Kitsap	Yes
OL	996742	SR 3	41.52	unnamed	Dyes Inlet	15	Kitsap	Yes
OL	996745	SR 3	41.81	unnamed	Dyes Inlet	15	Kitsap	Yes
OL	996747	SR 3	42.21	unnamed	Dyes Inlet	15	Kitsap	Yes
OL	996748	SR 3	42.56	unnamed	Dyes Inlet	15	Kitsap	Yes
OL	996856	SR 3	43.58	Koch Cr	Dyes Inlet	15	Kitsap	No
OL	990708	SR 3	44.62	unnamed	Strawberry Cr	15	Kitsap	Yes
OL	15.0246 0.96	SR 3	44.8	Strawberry Cr	Dyes Inlet	15	Kitsap	Yes
OL	993013	SR 3	46.09	unnamed	WF Clear Cr	15	Kitsap	Yes
OL	996801	SR 3	46.82	unnamed	Clear Cr	15	Kitsap	Yes
OL	996803	SR 3	47.72	unnamed	Clear Cr	15	Kitsap	Yes
OL	996804	SR 3	49.48	Big Scandia Cr	Liberty Bay	15	Kitsap	Yes
OL	991241	SR 3	50.85	SF Johnson Cr	Johnson Cr	15	Kitsap	Yes
OL	990218	SR 3	50.94	MF Johnson Cr	Liberty Bay	15	Kitsap	Yes
OL	991744	SR 3	52.21	Johnson Cr	Liberty Bay	15	Kitsap	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
OL	991242	SR 3	57.23	unnamed	Kinman Cr	15	Kitsap	Yes
OL	991613	SR 3	57.87	unnamed	Hood Canal	15	Kitsap	Yes
OL	991240	SR 3	58.21	unnamed	Hood Canal	15	Kitsap	Yes
OL	990395	SR 3	58.49	Spring Cr	Hood Canal	15	Kitsap	Yes
OL	991612	SR 3	59.52	unnamed	Hood Canal	15	Kitsap	Yes
OL	996811	SR 3	59.55	unnamed	unnamed	15	Kitsap	Yes
OL	996699	SR 300	2.36	unnamed	Union R	15	Mason	Yes
OL	996700	SR 300	2.38	unnamed	Union R	15	Mason	No
OL	991559	SR 302	0.9	unnamed	North Bay	15	Mason	Yes
OL	996763	SR 302	1.25	unnamed	Coulter Cr	15	Mason	No
OL	996765	SR 302	1.86	unnamed	North Bay	15	Mason	Yes
OL	991522	SR 302	2.1	unnamed	North Bay	15	Mason	Yes
OL	991239	SR 302	2.36	unnamed	North Bay	15	Mason	Yes
OL	991523	SR 302	2.48	unnamed	North Bay	15	Mason	Yes
OL	991525	SR 302	4.2	Victor Cr	North Bay	15	Mason	Yes
OL	991526	SR 302	4.7	unnamed	Case Inlet	15	Mason	No
OL	991527	SR 302	5.5	unnamed	Rocky Bay	15	Pierce	Yes
OL	990286	SR 302	11.3	Minter Cr	Henderson Bay	15	Pierce	Yes
OL	15.0051 0.10	SR 302	11.44	Little Minter Cr	Minter Cr	15	Pierce	Yes
OL	15.0051 0.20	SR 302	11.5	Little Minter Cr	Minter Cr	15	Pierce	Yes
OL	996783	SR 302	15.95	unnamed	Henderson Bay	15	Pierce	Yes
OL	105 K051518a	SR 302	16.15	Goodnough Cr	Henderson Bay	15	Pierce	Yes
OL	990345	SR 302; SPPURDY	15.8	Purdy Cr	Burley Lagoon	15	Pierce	Yes
OL	994085	SR 303; NB off-ramp	6.63	Hoot Cr	Barker Cr	15	Kitsap	Yes
OL	990024	SR 303	6.66	Hoot Cr	Barker Cr	15	Kitsap	Yes
OL	994086	SR 303; NB on-ramp	6.68	Hoot Cr	Barker Cr	15	Kitsap	Yes
OL	930416	SR 303; NB on ramp	6.72	unnamed	unnamed	15	Kitsap	No
OL	930408	SR 303; LX	6.7	unnamed	Hoot Cr	15	Kitsap	Yes
OL	994320	SR 305	0.27	unnamed	Eagle Harbor	15	Kitsap	Yes
OL	994324	SR 305	0.62	unnamed	Eagle Harbor	15	Kitsap	Yes
OL	933644	SR 305	1.9	unnamed	Murden Cove	15	Kitsap	No

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
OL	994325	SR 305	2.44	unnamed	Murden Cove	15	Kitsap	Yes
OL	933663	SR 305	3.37	unnamed	Murden Cove	15	Kitsap	No
OL	994326	SR 305	3.73	Manzanita Cr	Manzanita Bay	15	Kitsap	Yes
OL	933685	SR 305	5.23	unnamed	Port Madison	15	Kitsap	No
OL	933686	SR 305	5.37	unnamed	Manzanita Bay	15	Kitsap	Yes
OL	991958	SR 305	7.28	Klebeal Cr	Agate Passage	15	Kitsap	Yes
OL	994327	SR 305	8.92	unnamed	Liberty Bay	15	Kitsap	Yes
OL	994328	SR 305	10.55	unnamed	Liberty Bay	15	Kitsap	Yes
OL	991855	SR 305	12.59	unnamed	SF Dogfish Cr	15	Kitsap	Yes
OL	933284	SR 305	13.12	unnamed	Dogfish Cr	15	Kitsap	Yes
OL	991997	SR 307	0.98	unnamed	unnamed	15	Kitsap	Yes
OL	991998	SR 307	0.98	unnamed	unnamed	15	Kitsap	Yes
OL	991999	SR 307	1.34	unnamed	Dogfish Cr	15	Kitsap	Yes
OL	991572	SR 307	1.45	unnamed	Dogfish Cr	15	Kitsap	Yes
OL	991851	SR 307	2.5	unnamed	Gamble Cr	15	Kitsap	Yes
OL	996931	SR 308	0.3	Clear Cr	Puget Sound	15	Kitsap	Yes
OL	990235	SR 308	0.94	Big Scandia Cr	Liberty Bay	15	Kitsap	Yes
OL	15.0280 1.00	SR 308	1.15	Big Scandia Cr	Liberty Bay	15	Kitsap	Yes
OL	992008	SR 308	1.33	Little Scandia Cr	Liberty Bay	15	Kitsap	Yes
OL	991000	SR 308	2.16	unnamed	Puget Sound	15	Kitsap	Yes
OL	996933	SR 308	2.41	unnamed	Liberty Bay	15	Kitsap	No
OL	996932	SR 308	2.57	unnamed	Liberty Bay	15	Kitsap	Yes
OL	996618	SR 410	17.26	Fennel Cr	Puyallup R	10	Pierce	Yes
OL	996619	SR 410	21.73	unnamed	LkTapps Canal	10	Pierce	Yes
OL	125 1502W11B	SR 507	8.22	unnamed	Skookumchuck R	23	Thurston	Yes
OL	995893	SR 507	30.61	McKenna Cr	Nisqually R	11	Thurston	Yes
OL	933185	SR 509	5.81	unnamed	Commencement Bay	10	Pierce	No
OL	990656	SR 510	5.64	unnamed	McAllister Cr	11	Thurston	Yes
OL	991052	SR 510	6.28	unnamed	McAllister Cr	11	Thurston	No
OL	997920	SR 512	3.3	unnamed	NF Clover Cr	12	Pierce	Yes
OL	932347	SR 512	8.25	Silver Cr	Meeker Cr	10	Pierce	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
OL	932349	SR 512; EB off ramp	8.25	Silver Cr	Meeker Cr	10	Pierce	Yes
OL	932345	SR 512;WB on ramp	8.25	Silver Cr	Meeker Cr	10	Pierce	Yes
OL	997623	SR 7	28.02	unnamed	Mashel R	11	Pierce	No
OL	990686	SR 7	32.4	unnamed	Silver Lk	11	Pierce	Yes
OL	997628	SR 7	33.52	unnamed	Cranberry Lk	11	Pierce	No
OL	991225	SR 7	37.5	unnamed	South Cr	11	Pierce	Yes
OL	990688	SR 7	38.12	unnamed	South Cr	11	Pierce	Yes
OL	996274	SR 7	58.34	unnamed	Commencement Bay	10	Pierce	Yes
OL	991229	SR 702	4.53	unnamed	unnamed to Nisqually R	11	Pierce	Yes
OL	995899	SR 702	5.6	unnamed	Horn Cr	11	Pierce	No
OL	991063	SR 8	0.1	unnamed	Cloquallum Cr	22	Grays Harbor	Yes
OL	993723	SR 8	1.27	unnamed	Cloquallum Cr	22	Grays Harbor	Yes
OL	993727	SR 8	1.37	unnamed	unnamed to Cloquallum Cr	22	Grays Harbor	No
OL	993724	SR 8	3.16	unnamed	Wildcat Cr	22	Grays Harbor	Yes
OL	993725	SR 8	3.51	unnamed	Wildcat Cr	22	Grays Harbor	Yes
OL	991066	SR 8	3.72	unnamed pond	Wildcat Cr	22	Grays Harbor	Yes
OL	22.0507 0.10	SR 8	5	MF Wildcat Cr	EF Wildcat Cr	22	Grays Harbor	Yes
OL	990770	SR 8	6.1	unnamed	EF Wildcat Cr	22	Grays Harbor	Yes
OL	990133	SR 8	6.3	EF Wildcat Cr	Wildcat Cr	22	Grays Harbor	Yes
OL	990773	SR 8	9.1	unnamed	Mox Chehalis Cr	22	Grays Harbor	Yes
OL	993728	SR 8	10.12	unnamed	Mox Chehalis Cr	22	Grays Harbor	Yes
OL	993729	SR 8	10.12	unnamed	Mox Chehalis Cr	22	Grays Harbor	Yes
OL	996275	SR 99	0.44	unnamed	Hylebos Cr	10	Pierce	Yes
OL	993670	US 101	80.4	unnamed	Chehalis R	22	Grays Harbor	Yes
OL	993674	US 101	89.48	unnamed	Hoquiam R	22	Grays Harbor	Yes
OL	993681	US 101	89.48	unnamed	Hoquiam R	22	Grays Harbor	Yes
OL	993675	US 101	89.77	unnamed	Hoquiam R	22	Grays Harbor	Yes
OL	993679	US 101	90.73	unnamed	Hoquaim R	22	Grays Harbor	Yes
OL	993695	US 101	93.49	unnamed	WF Hoquiam R	22	Grays Harbor	Yes
OL	990732	US 101	93.79	unnamed	WF Hoquiam R	22	Grays Harbor	Yes
OL	993698	US 101	95.46	unnamed	WF Hoquiam R	22	Grays Harbor	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
OL	993702	US 101	98.47	unnamed	WF Hoquiam R	22	Grays Harbor	Yes
OL	993704	US 101	99.45	unnamed	WF Hoquiam R	22	Grays Harbor	Yes
OL	990730	US 101	100.7	unnamed	unnamed	22	Grays Harbor	Yes
OL	991501	US 101	103.65	unnamed	Big Cr	22	Grays Harbor	Yes
OL	993714	US 101	107.42	Mopang Cr	Big Cr	22	Grays Harbor	Yes
OL	993717	US 101	110.84	unnamed	Stevens Cr	22	Grays Harbor	Yes
OL	990731	US 101	111.34	unnamed	Stevens Cr	22	Grays Harbor	Yes
OL	991690	US 101	111.9	unnamed	Stevens Cr	22	Grays Harbor	Yes
OL	997309	US 101	122.92	unnamed	McCalla Cr	21	Grays Harbor	Yes
OL	990276	US 101	123.05	McCalla Cr	Boulder Cr	21	Grays Harbor	Yes
OL	991653	US 101	126.24	unnamed	Quinault R	21	Grays Harbor	Yes
OL	990543	US 101	131.96	unnamed	Ten O Clock Cr	21	Grays Harbor	Yes
OL	990544	US 101	132.2	unnamed	Ten O Clock Cr	21	Grays Harbor	Yes
OL	990452	US 101	135.26	unnamed	Lunch Cr	21	Grays Harbor	Yes
OL	990546	US 101	135.68	Lunch Cr	Raft R	21	Grays Harbor	Yes
OL	990453	US 101	135.95	unnamed	Lunch Cr	21	Grays Harbor	Yes
OL	990883	US 101	137.35	Crane Cr	Raft R	21	Grays Harbor	Yes
OL	990548	US 101	142.48	Harlow Cr	Queets R	21	Grays Harbor	Yes
OL	990457	US 101	142.68	Harlow Cr	Queets R	21	Grays Harbor	Yes
OL	990178	US 101	146.85	Harlow Cr	Queets R	21	Jefferson	Yes
OL	990148	US 101	147.49	Fisher Cr	Queets R	21	Jefferson	Yes
OL	997342	US 101	152.47	unnamed	Queets R	21	Jefferson	Yes
OL	991268	US 101	153.96	unnamed	Pacific Ocean	21	Jefferson	No
OL	997345	US 101	154.27	unnamed	Pacific Ocean	21	Jefferson	No
OL	990549	US 101	154.45	unnamed	Pacific Ocean	21	Jefferson	No
OL	990722	US 101	154.88	unnamed	Pacific Ocean	21	Jefferson	No
OL	990550	US 101	154.9	unnamed	Pacific Ocean	21	Jefferson	Yes
OL	991276	US 101	156.1	unnamed	Pacific Ocean	21	Jefferson	Yes
OL	996220	US 101	160.42	unnamed	Pacific Ocean	20	Jefferson	No
OL	996223	US 101	160.89	unnamed	Pacific Ocean	20	Jefferson	Yes
OL	991261	US 101	161.5	unnamed	Pacific Ocean	20	Jefferson	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
OL	990400	US 101	162.6	Steamboat Cr	Pacific Ocean	20	Jefferson	Yes
OL	991262	US 101	163.13	unnamed	Pacific Ocean	20	Jefferson	Yes
OL	996224	US 101	164.57	unnamed	Pacific Ocean	20	Jefferson	No
OL	996225	US 101	165.11	unnamed	Cedar Cr	20	Jefferson	No
OL	990717	US 101	169.45	unnamed	Braden Cr	20	Jefferson	Yes
OL	997052	US 101	169.94	unnamed	Hoh R.	20	Jefferson	Yes
OL	990719	US 101	170.81	unnamed	Hoh R	20	Jefferson	Yes
OL	997054	US 101	171.29	unnamed	Hoh R	20	Jefferson	Yes
OL	997055	US 101	174.43	unnamed	Hoh R	20	Jefferson	Yes
OL	997059	US 101	174.79	unnamed	Old Joe Sl	20	Jefferson	No
OL	991647	US 101	175.45	unnamed	Hoh R	20	Jefferson	Yes
OL	933682	US 101;ROW	175.77	unnamed	Hoh R	20	Jefferson	Yes
OL	991598	US 101	175.91	unnamed	Hoh R	20	Jefferson	Yes
OL	997063	US 101	176.55	unnamed	Hoh R	20	Jefferson	Yes
OL	997070	US 101	177.77	unnamed	Hoh R	20	Jefferson	No
OL	997071	US 101	177.8	unnamed	unnamed Hoh R trib	20	Jefferson	Yes
OL	991575	US 101	181.2	unnamed	Dowans Cr	20	Jefferson	Yes
OL	991574	US 101	181.46	unnamed	Dowans Cr	20	Jefferson	Yes
OL	991507	US 101	182.2	unnamed	Dowans Cr	20	Jefferson	Yes
OL	991508	US 101	182.84	unnamed	Dowans Cr	20	Jefferson	Yes
OL	991509	US 101	183.05	unnamed	Dowans Cr	20	Jefferson	Yes
OL	997081	US 101	183.11	unnamed	Dowans Cr	20	Jefferson	Yes
OL	991510	US 101	183.87	unnamed	Bogachiel R	20	Jefferson	No
OL	990269	US 101	184.66	May Cr	Bogachiel R	20	Clallam	Yes
OL	997087	US 101	184.87	unnamed	Bogachiel R	20	Clallam	Yes
OL	997091	US 101	187.18	unnamed	Bogachiel R	20	Clallam	Yes
OL	991505	US 101	188.09	unnamed	Bogachiel R	20	Clallam	Yes
OL	997093	US 101	188.19	unnamed	Bogachiel R	20	Clallam	Yes
OL	997095	US 101	188.42	unnamed	Bogachiel R	20	Clallam	Yes
OL	997096	US 101	188.64	unnamed	Bogachiel R	20	Clallam	No
OL	933421	US 101	189.05	unnamed	Grader Cr	20	Clallam	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
OL	991264	US 101	189.15	unnamed	Grader Cr	20	Clallam	Yes
OL	990169	US 101	189.4	Grader Cr	Bogachiel R	20	Clallam	Yes
OL	997098	US 101	190.05	unnamed	Mill Cr	20	Clallam	Yes
OL	997097	US 101	191.12	Uncle John's Cr	Mill Cr	20	Clallam	Yes
OL	997107	US 101	202.71	unnamed	Sol Duc R	20	Clallam	Yes
OL	990554	US 101	209.32	Wisen Cr	Sol Duc R	20	Clallam	Yes
OL	997108	US 101	210.22	unnamed	Sol Duc R	20	Clallam	No
OL	997109	US 101	210.78	unnamed	Sol Duc R	20	Clallam	Yes
OL	995815	US 101	235.81	unnamed	Indian Cr	18	Clallam	No
OL	995816	US 101	236.28	unnamed	Indian Cr	18	Clallam	Yes
OL	995817	US 101	236.35	unnamed	Indian Cr	18	Clallam	Yes
OL	995818	US 101	237.98	unnamed	Indian Cr	18	Clallam	Yes
OL	18.0283 2.00	US 101	238.35	Indian Cr	Elwha R	18	Clallam	Yes
OL	932888	US 101; off-ramp	246.18	unnamed	Tumwater Cr	18	Clallam	Yes
OL	990448	US 101	246.4	Tumwater Cr	Port Angeles Harbor	18	Clallam	Yes
OL	990326	US 101	248.1	Peabody Cr	Strait of Juan de Fuca	18	Clallam	Yes
OL	990481	US 101	249.4	White Cr	Ennis Cr	18	Clallam	Yes
OL	18.0234 1.10	US 101	250	Ennis Cr	Strait of Juan de Fuca	18	Clallam	Yes
OL	990240	US 101	250.5	Lees Cr	Strait of Juan de Fuca	18	Clallam	Yes
OL	990021	US 101	253.85	Bagley Cr	Strait of Juan De Fuca	18	Clallam	Yes
OL	995544	US 101	255.65	unnamed	Siebert Cr	18	Clallam	No
OL	18.0173 2.40	US 101	256.1	Siebert Cr	Strait of Juan de Fuca	18	Clallam	Yes
OL	18.0021 5.40	US 101	260.93	Matriotti Cr	Dungeness R	18	Clallam	Yes
OL	933369	US 101	263.43	Sequim Prairie Tri irrigation ditch	Gierin Cr	18	Clallam	Yes
OL	995551	US 101	263.68	Sequim Prairie Tri irrigation ditch	Gierin Cr	18	Clallam	Yes
OL	990219	US 101	267.18	Johnson Cr	Sequim Bay	17	Clallam	Yes
OL	991667	US 101	268.54	unnamed	Sequim Bay	17	Clallam	Yes
OL	991666	US 101	269.24	unnamed	Sequim Bay	17	Clallam	Yes
OL	994464	US 101	269.45	unnamed	Sequim Bay	17	Clallam	Yes
OL	991735	US 101	271.22	unnamed	Sequim Bay	17	Clallam	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
OL	994478	US 101; ROW	271.22	unnamed	Sequim Bay	17	Clallam	Yes
OL	990712	US 101	271.57	unnamed	Sequim Bay	17	Clallam	Yes
OL	991850	US 101	271.83	unnamed	Sequim Bay	17	Clallam	Yes
OL	990075	US 101	271.98	Chicken Coop Cr	Sequim Bay	17	Clallam	Yes
OL	990134	US 101	274.25	Eagle Cr	Strait of Juan de Fuca	17	Clallam	Yes
OL	995484	US 101	275.72	unnamed	Eagle Cr	17	Jefferson	Yes
OL	990090	US 101	277.9	Contractors Cr	Discovery Bay	17	Jefferson	Yes
OL	995488	US 101	278.66	unnamed	Discovery Bay	17	Jefferson	No
OL	995490	US 101	281.61	unnamed	Discovery Bay	17	Jefferson	Yes
OL	995491	US 101	281.72	unnamed	Discovery Bay	17	Jefferson	Yes
OL	995497	US 101	283.57	unnamed	Snow Cr	17	Jefferson	Yes
OL	995499	US 101	289.36	unnamed	Leland Cr	17	Jefferson	Yes
OL	995500	US 101	289.91	unnamed	Leland Cr	17	Jefferson	No
OL	990896	US 101	290.35	unnamed	Leland Cr	17	Jefferson	Yes
OL	995502	US 101	291.79	unnamed	Leland Cr	17	Jefferson	Yes
OL	990241	US 101	292.52	Leland Cr	L Quilcene R	17	Jefferson	Yes
OL	994484	US 101	303.01	Marple Cr	Jackson Cove	17	Jefferson	Yes
OL	990449	US 101	304.24	Turner Cr	Hood Canal	16	Jefferson	No
OL	995931	US 101	305.59	unnamed	Hood Canal	16	Jefferson	Yes
OL	990899	US 101	307	Twana Cr	Hood Canal	16	Jefferson	Yes
OL	995935	US 101	310.27	unnamed	Hood Canal	16	Jefferson	No
OL	995936	US 101	310.4	unnamed	Hood Canal	16	Jefferson	Yes
OL	991603	US 101	314.1	unnamed	Hood Canal	16	Jefferson	Yes
OL	991606	US 101	315.19	Schaerer Cr	Hood Canal	16	Mason	Yes
OL	991614	US 101	322.83	unnamed	Hood Canal	16	Mason	Yes
OL	996135	US 101	325.68	unnamed	Hood Canal	16	Mason	Yes
OL	996138	US 101	327.76	Little Lilliwaup Cr	Hood Canal	16	Mason	Yes
OL	996358	US 101	331.18	unnamed	Hood Canal	16	Mason	No
OL	991254	US 101	331.83	unnamed	Hood Canal	16	Mason	Yes
OL	990191	US 101	332.65	Hill Cr	Hood Canal	16	Mason	Yes
OL	996366	US 101	334.4	unnamed	Hood Canal	16	Mason	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
OL	933494	US 101	334.47	unnamed	Hood Canal	16	Mason	No
OL	991250	US 101	335.93	unnamed	Hood Canal	16	Mason	Yes
OL	996371	US 101	338.37	unnamed	Skobob Cr	16	Mason	Yes
OL	115 MC093	US 101	346.95	Coffee Cr	Goldsborough Cr	14	Mason	Yes
OL	115 MC180	US 101	348.21	unnamed	Mill Cr	14	Mason	Yes
OL	997158	US 101	354.01	unnamed	Skookum Cr	14	Mason	Yes
OL	997159	US 101	354.22	unnamed	Skookum Cr	14	Mason	No
OL	115 MC144	US 101	355.58	unnamed	Totten Inlet	14	Mason	Yes
OL	997157	US 101	356.48	unnamed	Schneider Cr	14	Mason	Yes
OL	14.0010 0.10	US 101	356.8	Countyline Cr	Schneider Cr	14	Mason	Yes
OL	997161	US 101	357.4	Griggs Cr	Schneider Cr	14	Thurston	Yes
OL	991477	US 101	360.6	unnamed	Eld Inlet	14	Thurston	Yes
OL	994788	US 12	3.76	Elliott Sl	Chehalis R	22	Grays Harbor	Yes
OL	991284	US 12	4.59	unnamed	Mox Chuck Sl	22	Grays Harbor	Yes
OL	991283	US 12	5.24	unnamed	Mox Chuck Sl	22	Grays Harbor	Yes
OL	991285	US 12	5.38	unnamed	unnamed	22	Grays Harbor	Yes
OL	991633	US 12	5.62	unnamed	unnamed	22	Grays Harbor	Yes
OL	991909	US 12	6.5	unnamed	Higgins Sl	22	Grays Harbor	No
OL	991910	US 12	6.55	unnamed	Higgins Sl	22	Grays Harbor	Yes
OL	990957	US 12	6.58	unnamed	Higgins Sl	22	Grays Harbor	Yes
OL	990958	US 12	6.92	Higgins Sl	Chehalis R	22	Grays Harbor	Yes
OL	991911	US 12	7.26	unnamed	Higgins Sl	22	Grays Harbor	Yes
OL	994791	US 12	9.04	unnamed	Wynoochee R	22	Grays Harbor	Yes
OL	991528	US 12	11.01	unnamed	unnamed Chehalis R trib	22	Grays Harbor	Yes
OL	931349	US 12	11.49	unnamed	unnamed Chehalis R trib	22	Grays Harbor	Yes
OL	933616	US 12	17.56	unnamed	Wenzel Sl	22	Grays Harbor	Yes
OL	125 1806W34G	US 12	19.17	unnamed	Vance Cr	22	Grays Harbor	Yes
OL	991533	US 12	23.3	unnamed	Chehalis R	22	Grays Harbor	Yes
OL	994799	US 12	26.87	unnamed	Chehalis R	22	Grays Harbor	Yes
OL	991541	US 12	28.17	unnamed	Chehalis R	23	Grays Harbor	Yes
OL	991540	US 12	28.6	unnamed	Chehalis R	23	Grays Harbor	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
OL	991535	US 12	29.19	unnamed	Chehalis R	23	Grays Harbor	Yes
OL	991536	US 12	29.45	unnamed	Chehalis R	23	Grays Harbor	Yes
OL	996710	US 12	31.19	unnamed	Chehalis R	23	Grays Harbor	No
OL	996712	US 12	31.61	unnamed	Cedar Cr	23	Grays Harbor	Yes
OL	996714	US 12	32.69	unnamed	Cedar Cr	23	Grays Harbor	Yes
OL	991538	US 12	33.42	unnamed	Chehalis R	23	Grays Harbor	Yes
OL	991539	US 12	33.6	unnamed	Chehalis R	23	Grays Harbor	Yes
SW	995538	I-5	71.34	unnamed	unnamed Newaukum R trib	23	Lewis	Yes
SW	994300	I-5	78.11	unnamed	unnamed Chehalis R trib	23	Lewis	Yes
SW	994954	SR 508	0.53	Allen Cr	Newaukum R	23	Lewis	Yes
SW	994955	SR 508	0.64	unnamed	Allen Cr	23	Lewis	Yes
SW	994958	SR 508	1.66	unnamed	unnamed Allen Cr trib	23	Lewis	Yes
SW	994959	SR 508	1.85	unnamed	unnamed Allen Cr trib	23	Lewis	Yes
SW	992277	SR 508	4.26	unnamed	SF Newaukum R	23	Lewis	Yes
SW	994966	SR 508	4.7	unnamed	SF Newaukum R	23	Lewis	Yes
SW	991756	SR 508	5.1	unnamed	SF Newaukum R	23	Lewis	Yes
SW	991292	SR 508	5.53	unnamed	SF Newaukum R	23	Lewis	Yes
SW	991293	SR 508	6.78	unnamed	SF Newaukum R	23	Lewis	Yes
SW	994969	SR 508	8.88	unnamed	SF Newaukum R	23	Lewis	Yes
SW	994971	SR 508	11.27	unnamed	SF Newaukum R	23	Lewis	Yes
SW	991288	SR 508	11.55	unnamed	SF Newaukum R	23	Lewis	Yes
SW	991289	SR 508	12.66	unnamed	SF Newaukum R	23	Lewis	Yes
SW	991290	SR 508	15.1	unnamed	Kearney Cr	23	Lewis	Yes
SW	994976	SR 508	15.42	unnamed	unnamed Kearney Cr trib	23	Lewis	Yes
SW	991296	SR 508	15.85	unnamed	Kearney Cr	23	Lewis	Yes
SW	994979	SR 508	16.5	unnamed	unnamed Stowell Cr trib	23	Lewis	Yes
SW	994981	SR 508	16.99	unnamed	Stowell Cr	23	Lewis	Yes
SW	991291	SR 508	17.06	unnamed	Stowell Cr	23	Lewis	Yes
SW	994463	SR 508	17.55	Stowell Cr	Kearney Cr	23	Lewis	Yes
SW	990735	SR 6	22.64	Salmon Cr	Rock Cr	23	Pacific	Yes
SW	990736	SR 6	22.94	unnamed	Salmon Cr	23	Pacific	Yes

Appendix II. WSDOT Culvert Barriers Relevant to the Injunction (as of June 6, 2017)

806 barrier culverts with ≥ 200 meters habitat gain; 172 barrier culverts with <200 meters habitat gain

List sorted by WSDOT Region, Highway, and Milepost location.

WSDOT Region	Site ID	Road	Milepost	Stream	Tributary to	WRIA	County	Lineal Habitat Gain ≥ 200 meters
SW	990737	SR 6	23.49	unnamed	Rock Cr	23	Pacific	Yes
SW	991654	SR 6	24.3	unnamed	Rock Cr	23	Pacific	No
SW	990738	SR 6	25.24	unnamed	Rock Cr	23	Lewis	Yes
SW	990740	SR 6	26.36	unnamed	Rock Cr	23	Lewis	Yes
SW	990741	SR 6	29	unnamed	Chehalis R	23	Lewis	Yes
SW	990744	SR 6	31.04	SB Fronia Cr	Fronia Cr	23	Lewis	Yes
SW	990746	SR 6	31.06	Fronia Cr	Chehalis R	23	Lewis	Yes
SW	930852	SR 6	33.3	unnamed	Chehalis R	23	Lewis	Yes
SW	990751	SR 6	33.56	unnamed	unnamed	23	Lewis	Yes
SW	990755	SR 6	34.85	unnamed	Chehalis R	23	Lewis	Yes
SW	990756	SR 6	35.08	unnamed	Chehalis R	23	Lewis	Yes
SW	990757	SR 6	35.42	unnamed	Chehalis R	23	Lewis	Yes
SW	990758	SR 6	35.85	unnamed	Chehalis R	23	Lewis	Yes
SW	990423	SR 6	36.74	unnamed	Hope Cr	23	Lewis	Yes
SW	990764	SR 6	42.38	unnamed	unnamed	23	Lewis	No
SW	991221	SR 6	43.61	unnamed	Chehalis R	23	Lewis	Yes
SW	991544	SR 6	46.39	unnamed	Chehalis R	23	Lewis	Yes
SW	991757	SR 6	46.5	unnamed	Chehalis R	23	Lewis	Yes

Appendix III

Appendix III. Updates to the disposition of WSDOT Injunction Barrier List since September 24, 2013 (updates as of June 6, 2017)

One hundred eleven culverts are no longer injunction barriers requiring repair. Seventy-five newly identified barrier culverts added to the injunction barrier list.

List sorted by Road Name and Milepost location

Site ID	Road	Milepost	Stream	Tributary to	WRIA	Disposition	Explanation	Modified Date
09.0377 2.12	200th Ave		Des Moines Cr	Puget Sound	9	not an injunction barrier	not WSDOT ownership	6/11/2014
08.0183 3.10	270th Ave		EF Issaquah Cr	Issaquah Cr	8	not an injunction barrier	not WSDOT ownership	7/24/2014
996482	I-405	5.09	Johns Cr	Lake Washington	8	added to injunction barrier list	species use verified, salmon and/or steelhead present	9/9/2015
999410	I-405	6.31	Clover Cr	Lk Washington	8	not an injunction barrier	species use verified, salmon and/or steelhead are not present	6/6/2017
933259	I-405	7.61	Gypsy Cr	Lake Washington	8	added to injunction barrier list	newly identified barrier	5/18/2015
998971	I-405	7.83	unnamed	Lake Washington	8	added to injunction barrier list	newly identified barrier	5/18/2015
998972	I-405	7.90	unnamed	Lake Washington	8	added to injunction barrier list	newly identified barrier	5/18/2015
933258	I-405	12.03	Trail Cr	Mercer Sl	8	added to injunction barrier list	newly identified barrier	5/18/2015
933244	I-405	13.05	Sturtevant Cr	Richards Cr	8	added to injunction barrier list	newly identified barrier	2/24/2015
932812	I-405	20.50	unnamed	Juanita Cr	8	added to injunction barrier list	newly identified barrier	10/29/2014
998979	I-405; SB	21.44	unnamed	Juanita Cr	8	not an injunction barrier	stream determined to be non-fish bearing	8/4/2016
991008	I-405	27.70	unnamed	North Cr	8	added to injunction barrier list	newly identified barrier	3/29/2016
998976	I-405; SB	27.76	unnamed	North Cr	8	added to injunction barrier list	newly identified barrier	3/29/2016
993898	I-405; ROW	29.67	Martha Cr	Swamp Cr	8	not an injunction barrier	not WSDOT ownership	12/28/2015
991659	I-5	98.11	unnamed	Salmon Cr	23	added to injunction barrier list	newly identified barrier	4/13/2017
998888	I-5	109.19	College Cr	Woodland Cr	13	added to injunction barrier list	newly identified barrier	1/25/2016
933313	I-5; NB	115.77	unnamed	unnamed Red Salmon Cr trib	11	added to injunction barrier list	newly identified barrier	6/1/2015
933186	I-5	134.33	unnamed	Puyallup R	10	added to injunction barrier list	newly identified barrier	9/9/2015
933613	I-5; ROW S 288th St	145.81	Bingaman Cr	Bingaman Pond	9	added to injunction barrier list	newly identified barrier	2/3/2017
991031	I-5	145.93	Bingaman Cr	Green R	9	added to injunction barrier list	newly identified barrier	1/6/2016
995284	I-5	203.22	unnamed	WF Quilceda Cr	07.0051	not an injunction barrier	culvert determined to not be a barrier	2/3/2017
102 Q058	I-5	203.24	unnamed	WF Quilceda Cr	7	not an injunction barrier	duplicate record	11/4/2013
991036	I-5	255.15	Squalicum Cr	Bellingham Bay	1	not an injunction barrier	barrier corrected	12/30/2015
995701	I-5	258.56	unnamed	unnamed to Silver Cr	1	added to injunction barrier list	newly identified barrier	3/16/2016
995720	I-5; NB	270.14	unnamed	unnamed California Cr trib	1	added to injunction barrier list	newly identified barrier	6/18/2015
933400	I-5 NB ROW	270.20	unnamed	unnamed California Cr trib	1	added to injunction barrier list	newly identified barrier	7/2/2015
996475	I-90; WB off-ramp	17.00	unnamed	NF Issaquah Cr	8	added to injunction barrier list	newly identified barrier	10/13/2016
934151	I-90 ROW	17.06	unnamed	NF Issaquah Cr	8	added to injunction barrier list	newly identified barrier	5/8/2017
996885	Redmond Way		unnamed	unnamed	8	not an injunction barrier	not WSDOT ownership	1/7/2014
996886	Redmond Way		unnamed	Peters Cr	8	not an injunction barrier	not WSDOT ownership	1/7/2014
996887	Redmond Way		Peters Cr	Sammamish R	8	not an injunction barrier	not WSDOT ownership	1/7/2014
992205	SR 104	22.47	Grovers Cr	Miller Bay	15.0299	not an injunction barrier	barrier corrected	12/20/2016
991301	SR 105	31.38	unnamed	South Bay	22	not an injunction barrier	not a culvert feature	2/3/2014
994785	SR 105	46.39	unnamed	unnamed	22	not an injunction barrier	culvert determined to not be a barrier	12/1/2015
996127	SR 106	3.39	unnamed	Hood Canal	16	added to injunction barrier list	newly identified barrier	4/29/2015
991246	SR 106	13.50	Twanoh Falls Cr	Hood Canal	14	not an injunction barrier	barrier corrected	12/31/2013

Appendix III. Updates to the disposition of WSDOT Injunction Barrier List since September 24, 2013 (updates as of June 6, 2017)

One hundred eleven culverts are no longer injunction barriers requiring repair. Seventy-five newly identified barrier culverts added to the injunction barrier list.

List sorted by Road Name and Milepost location

Site ID	Road	Milepost	Stream	Tributary to	WRIA	Disposition	Explanation	Modified Date
933361	SR 107 ROW	4.31	unnamed	Chehalis R	22	added to injunction barrier list	newly identified barrier	1/25/2016
933360	SR 107	4.34	unnamed	Chehalis R	22	added to injunction barrier list	newly identified barrier	1/25/2016
990278	SR 108	8.89	McDonald Cr	Skookum Cr	14	added to injunction barrier list	newly identified barrier	5/4/2015
14.0021 0.30	SR 108	11.90	Little Skookum Cr	Skookum Cr	14.0021	not an injunction barrier	barrier corrected	12/20/2016
994389	SR 11	20.25	Padden Cr	Bellingham Bay	1	not an injunction barrier	barrier corrected	12/30/2015
990205	SR 112	5.17	Jansen Cr	Strait of Juan de Fuca	19.0228	not an injunction barrier	barrier corrected	12/20/2016
990214	SR 112	33.21	Joe Cr	Strait of Juan de Fuca	19.0109	not an injunction barrier	barrier corrected	12/20/2016
990144	SR 112	48.49	Field Cr	Strait of Juan de Fuca	19.0026	not an injunction barrier	barrier corrected	12/20/2016
990092	SR 112	57.61	Coville Cr	Strait of Juan de Fuca	19	not an injunction barrier	barrier corrected	12/31/2013
990077	SR 116	0.22	Chimacum Cr	Port Townsend Bay	17	added to injunction barrier list	newly identified barrier	10/28/2015
990943	SR 116	4.67	Kilisut Harbor	Oak Harbor	17	added to injunction barrier list	newly identified barrier	11/15/2013
995019	SR 119	3.98	unnamed	Lake Kokanee	16	not an injunction barrier	species use verified, salmon and/or steelhead are not present	6/30/2015
995913	SR 119	5.66	unnamed	Lk Cushman	16	added to injunction barrier list	newly identified barrier	6/30/2015
990962	SR 121	4.04	Blooms Ditch	Black R	23.0684	not an injunction barrier	barrier corrected	12/20/2016
343040	SR 121	4.10	unnamed	Blooms Ditch	23	not an injunction barrier	barrier corrected	12/20/2016
990357	SR 16	26.80	Ross Cr	Sinclair Inlet	15	added to injunction barrier list	species use verified, salmon and/or steelhead present	6/15/2015
934154	SR 16	27.49	unnamed	Sinclair Inlet	15	added to injunction barrier list	newly identified barrier	5/1/2017
996753	SR 16; EB	28.10	Anderson Cr	Sinclair Inlet	15.0211	not an injunction barrier	barrier corrected	12/20/2016
990017	SR 16; WB	28.10	Anderson Cr	Sinclair Inlet	15.0211	not an injunction barrier	barrier corrected	12/20/2016
990972	SR 161	12.85	South Cr	Muck Cr	11.0028	not an injunction barrier	barrier corrected	12/20/2016
991800	SR 162	4.39	unnamed	Puyallup R	10	not an injunction barrier	culvert determined to not be a barrier	11/22/2016
991215	SR 162	4.82	Ball Cr	Puyallup R	10	not an injunction barrier	barrier corrected	12/31/2013
996308	SR 164; ROW	7.00	unnamed	White R	10	not an injunction barrier	not WSDOT ownership	3/15/2016
992009	SR 166	0.52	unnamed	Sinclair Inlet	15	added to injunction barrier list	newly identified barrier	5/1/2017
990083	SR 167	0.82	Clear Cr	Puyallup R	10	not an injunction barrier	not a culvert feature	2/3/2014
996290	SR 167	11.37	unnamed	Milwaukee Canal	10	not an injunction barrier	culvert determined to not be a barrier	10/29/2013
105 R050320a	SR 167; NB Ext 8	12.05	Jovita Cr	Milwaukee Canal	10.0033	not an injunction barrier	barrier corrected	12/20/2016
930179	SR 167; ROW	12.72	unnamed	Milwaukee Canal	10	not an injunction barrier	barrier corrected	12/20/2016
990394	SR 167	21.64	Spring Brook Cr	Black R	9	not an injunction barrier	culvert determined to not be a barrier	7/27/2016
997646	SR 181	7.30	unnamed	Springbrook Cr	9	not an injunction barrier	culvert determined to not be a barrier	12/1/2015
995978	SR 20	12.96	Crockett Lk	Keystone Harbor	6	not an injunction barrier	species use verified, salmon and/or steelhead are not present	1/7/2015
933175	SR 20	53.53	unnamed	Guemes Channel	3	added to injunction barrier list	newly identified barrier	6/18/2015
995432	SR 20	53.90	unnamed	Indian Sl	3	not an injunction barrier	not a culvert feature	2/3/2014
991146	SR 20	72.85	Childs Cr	Skagit R	3	added to injunction barrier list	newly identified barrier	9/16/2015
995438	SR 20	77.75	unnamed	Careys Cr	3	not an injunction barrier	culvert determined to not be a barrier	2/3/2017
991123	SR 20	80.10	unnamed	Skagit R	3	added to injunction barrier list	newly identified barrier	9/16/2015
GR43	SR 20	86.21	Ebing Cr	Skagit R	04	not an injunction barrier	culvert determined to not be a barrier	3/27/2017

Appendix III. Updates to the disposition of WSDOT Injunction Barrier List since September 24, 2013 (updates as of June 6, 2017)

One hundred eleven culverts are no longer injunction barriers requiring repair. Seventy-five newly identified barrier culverts added to the injunction barrier list.

List sorted by Road Name and Milepost location

Site ID	Road	Milepost	Stream	Tributary to	WRIA	Disposition	Explanation	Modified Date
991150	SR 20	87.20	Eagle Cr	Skagit R	4	added to injunction barrier list	newly identified barrier	10/28/2015
991711	SR 20	94.10	unnamed	Skagit R	4	not an injunction barrier	species use verified, salmon and/or steelhead are not present	7/3/2014
932471	SR 20	118.10	Unnamed	Thorton Cr	4	not an injunction barrier	stream determined to be non-fish bearing	1/12/2016
101S-10	SR 202	23.45	Mud Cr	Snoqualmie R	7	added to injunction barrier list	newly identified barrier	1/7/2016
991721	SR 203	4.91	unnamed	Langlois Cr	7	added to injunction barrier list	newly identified barrier	12/3/2014
991718	SR 203	14.55	Coe Clemmons Cr	Snoqualmie R	7	not an injunction barrier	barrier corrected	12/29/2015
931620	SR 3; ROW	25.78	unnamed	Mindy Cr	15	not an injunction barrier	not WSDOT ownership	2/19/2015
931621	SR 3; ROW	25.78	unnamed	Mindy Cr	15	not an injunction barrier	not WSDOT ownership	2/19/2015
996735	SR 3	26.13	unnamed (Romance Hill)	Mindy Cr	15	not an injunction barrier	barrier corrected	12/20/2016
991995	SR 3	36.10	Wright Cr	Sinclair Inlet	15	added to injunction barrier list	newly identified barrier	10/12/2013
932163	SR 303; ROW	4.33	unnamed	Steele Cr	15	not an injunction barrier	not WSDOT ownership	3/15/2016
933644	SR 305	1.90	unnamed	Murden Cove	15	added to injunction barrier list	newly identified barrier	6/1/2016
933663	SR 305	3.37	unnamed	Murden Cove	15	added to injunction barrier list	newly identified barrier	6/1/2016
933685	SR 305	5.23	unnamed	Port Madison	15	added to injunction barrier list	newly identified barrier	4/11/2016
933686	SR 305	5.37	unnamed	Manzanita Bay	15	added to injunction barrier list	newly identified barrier	4/11/2016
994328	SR 305	10.55	unnamed	Liberty Bay	15	added to injunction barrier list	newly identified barrier	4/11/2016
933284	SR 305	13.12	unnamed	Dogfish Cr	15	added to injunction barrier list	newly identified barrier	12/28/2015
990123	SR 307	0.49	Dogfish Cr	Liberty Bay	15.0285	not an injunction barrier	barrier corrected	12/20/2016
992002	SR 307	4.62	Gamble Cr	Port Gamble	15.0356	not an injunction barrier	barrier corrected	12/20/2016
991204	SR 410	22.64	unnamed	Boise Cr	10	added to injunction barrier list	newly identified barrier	6/5/2017
991206	SR 410	22.94	unnamed	Boise Cr	10	added to injunction barrier list	newly identified barrier	6/5/2017
991049	SR 507	36.35	Lacamas Cr	Muck Cr	11.0022	not an injunction barrier	barrier corrected	12/20/2016
991755	SR 508	3.50	unnamed	SF Newaukum R	23	not an injunction barrier	culvert determined to not be a barrier	11/22/2016
994967	SR 508	5.75	unnamed	SF Newaukum R	23	not an injunction barrier	culvert determined to not be a barrier	3/30/2017
933185	SR 509	5.81	unnamed	Commencement Bay	10	added to injunction barrier list	newly identified barrier	9/9/2015
990412	SR 512	4.17	Swan Cr	Puyallup R	10	not an injunction barrier	culvert determined to not be a barrier	6/18/2015
990210	SR 516	12.33	Jenkins Cr	Big Soos Cr	9	not an injunction barrier	culvert determined to not be a barrier	10/16/2014
994449	SR 520; EB off-ramp	6.03	Yarrow Cr	Lk Washington	8	not an injunction barrier	barrier corrected	3/15/2016
994236	SR 520	6.19	Yarrow Cr	Lk Washington	8	added to injunction barrier list	newly identified barrier	1/6/2014
994236	SR 520	6.19	Yarrow Cr	Lk Washington	8	not an injunction barrier	barrier corrected in 2014	10/30/2014
994237	SR 520; LX	6.26	Yarrow Cr	Lk Washington	8	not an injunction barrier	barrier corrected	10/22/2014
994238	SR 520; WB off-ramp	6.27	Yarrow Cr	Lk Washington	8	not an injunction barrier	barrier corrected	10/22/2014
994704	SR 520; Maint Yard	6.40	unnamed	Yarrow Cr	8	not an injunction barrier	barrier corrected	3/15/2016
994705	SR 520	6.44	unnamed	Yarrow Cr	8	not an injunction barrier	barrier corrected	12/31/2013
08.0052 0.10	SR 522	5.76	Lyon Cr	Lake Washington	8	not an injunction barrier	barrier corrected	12/29/2015
994440	SR 522	16.54	Daniels Cr	Cottage Lk Cr	8	not an injunction barrier	culvert determined to not be a barrier	11/19/2013
994125	SR 522	21.97	unnamed	Skykomish R	7	not an injunction barrier	barrier corrected	10/22/2014

Appendix III. Updates to the disposition of WSDOT Injunction Barrier List since September 24, 2013 (updates as of June 6, 2017)

One hundred eleven culverts are no longer injunction barriers requiring repair. Seventy-five newly identified barrier culverts added to the injunction barrier list.

List sorted by Road Name and Milepost location

Site ID	Road	Milepost	Stream	Tributary to	WRIA	Disposition	Explanation	Modified Date
994128	SR 522	21.97	unnamed	Skykomish R	7	not an injunction barrier	barrier corrected	10/22/2014
996915	SR 523	1.24	unnamed	Thornton Cr	8	not an injunction barrier	species use verified, salmon and/or steelhead are not present	12/16/2013
993122	SR 524	7.02	Martha Cr	Swamp Cr	8	not an injunction barrier	not WSDOT ownership	12/16/2015
993121	SR 524; ROW	7.07	Martha Cr	Swamp Cr	8	not an injunction barrier	not WSDOT ownership	12/16/2015
102 S088	SR 525	0.28	Maple Cr	Swamp Cr	8	added to injunction barrier list	newly identified barrier	7/8/2014
995404	SR 530	36.83	unnamed	NF Stillaquamish R	5	not an injunction barrier	barrier corrected	10/22/2014
991169	SR 530	36.90	unnamed	NF Stillaquamish R	5	not an injunction barrier	barrier corrected	10/22/2014
991170	SR 530	37.58	unnamed	NF Stillaquamish R	5	not an injunction barrier	barrier corrected	10/22/2014
991058	SR 531	8.65	Edgecomb Cr	MF Quilcea Cr	7	added to injunction barrier list	newly identified barrier	10/16/2014
990624	SR 532	9.75	Secret Cr	Pilchuck Cr	05.0065	not an injunction barrier	barrier corrected	12/20/2016
PA2	SR 536	2.07	unnamed	unnamed Higgins Sl trib	3	added to injunction barrier list	newly identified barrier	1/25/2016
01.0228 4.80	SR 542	6.55	Anderson Cr	Nooksack R	1	not an injunction barrier	barrier corrected	12/29/2015
991621	SR 542	24.90	High Cr	Kendall Cr	01.0407	not an injunction barrier	barrier corrected	12/20/2016
990603	SR 542	36.61	Lookout Cr	NF Nooksack R	1	not an injunction barrier	species use verified, salmon and/or steelhead are not present	6/15/2014
996161	SR 546	0.47	Pepin Cr	Fishtrap Cr	1	added to injunction barrier list	newly identified barrier	8/5/2014
996155	SR 548	11.19	unnamed	Drayton Harbor	01.0044	not an injunction barrier	barrier corrected	12/20/2016
990755	SR 6	34.85	unnamed	Chehalis R	23	added to injunction barrier list	newly identified barrier	8/4/2016
990534	SR 6	40.53	unnamed	Chehalis R	23	not an injunction barrier	stream determined to be non-fish bearing	6/20/2016
990761	SR 6	41.70	unnamed	Chehalis R	23	not an injunction barrier	stream determined to be non-fish bearing	6/20/2016
990084	SR 7	11.56	Coal Cr	Roundtop Cr	11	not an injunction barrier	species use verified, salmon and/or steelhead are not present	10/30/2014
990672	SR 7	14.72	unnamed	East Cr	11	not an injunction barrier	species use verified, salmon and/or steelhead are not present	10/30/2014
990687	SR 7	38.60	unnamed	South Cr	11	not an injunction barrier	stream determined to be non-fish bearing	9/19/2014
990297	SR 7	41.17	Muck Cr	Nisqually R	11	not an injunction barrier	barrier corrected	12/31/2013
996274	SR 7	58.34	unnamed	Commencement Bay	10	added to injunction barrier list	newly identified barrier	12/28/2015
990706	SR 8	18.99	unnamed	Perry Cr	14	not an injunction barrier	species use verified, salmon and/or steelhead are not present	12/28/2015
990707	SR 8	18.99	unnamed	Perry Cr	14	not an injunction barrier	species use verified, salmon and/or steelhead are not present	12/28/2015
934011	SR 9; ROW (Broadway Ave)	0.07	unnamed	Snohomish R	7	added to injunction barrier list	newly identified barrier	12/21/2016
934015	SR 9; ROW (Broadway Ave)	0.12	unnamed	Snohomish R	7	added to injunction barrier list	newly identified barrier	12/21/2016
991810	SR 9; Access Rd	4.15	unnamed	unnamed	7	not an injunction barrier	species use verified, salmon and/or steelhead are not present	1/15/2015
991158	SR 9	38.88	unnamed	Pilchuck Cr	5	added to injunction barrier list	newly identified barrier	4/4/2016
991120	SR 9	42.36	Lake Cr	Big Lk	3	not an injunction barrier	barrier corrected	12/29/2015

Appendix III. Updates to the disposition of WSDOT Injunction Barrier List since September 24, 2013 (updates as of June 6, 2017)

One hundred eleven culverts are no longer injunction barriers requiring repair. Seventy-five newly identified barrier culverts added to the injunction barrier list.

List sorted by Road Name and Milepost location

Site ID	Road	Milepost	Stream	Tributary to	WRIA	Disposition	Explanation	Modified Date
991114	SR 9	62.36	unnamed	Samish R	3	added to injunction barrier list	newly identified barrier	9/15/2015
SR71	SR 9	63.74	unnamed	Samish R	3	added to injunction barrier list	newly identified barrier	9/15/2015
991116	SR 9	65.32	unnamed	Samish R	3	added to injunction barrier list	newly identified barrier	9/10/2015
991446	SR 9	66.51	unnamed	Samish R	3	added to injunction barrier list	newly identified barrier	10/13/2015
991448	SR 9	67.33	NP Cr	Samish R	3	not an injunction barrier	barrier corrected	12/31/2013
991210	SR 99	6.86	WF Hylebos Cr	Hylebos Cr	10	not an injunction barrier	barrier corrected	12/29/2015
993673	US 101	84.15	unnamed	Chehalis R	22	not an injunction barrier	not a culvert feature	2/3/2014
990548	US 101	142.48	Harlow Cr	Queets R	21.0134	added to injunction barrier list	newly identified barrier	1/9/2014
990457	US 101	142.68	Harlow Cr	Queets R	21	added to injunction barrier list	newly identified barrier	1/9/2014
997355	US 101	155.80	unnamed	Pacific Ocean	21	not an injunction barrier	species use verified, salmon and/or steelhead are not present	8/19/2014
933682	US 101; ROW	175.77	unnamed	Hoh R	20	added to injunction barrier list	newly identified barrier	3/22/2016
997072	US 101	177.97	unnamed	unnamed to Hell Roaring Cr	20	not an injunction barrier	species use verified, salmon and/or steelhead are not present	1/21/2014
991595	US 101	178.09	unnamed	unnamed to Hell Roaring Cr	20	not an injunction barrier	species use verified, salmon and/or steelhead are not present	1/21/2014
991589	US 101	178.30	unnamed	Hell Roaring Cr	20	not an injunction barrier	species use verified, salmon and/or steelhead are not present	1/21/2014
991590	US 101	178.63	unnamed	Hell Roaring Cr	20	not an injunction barrier	species use verified, salmon and/or steelhead are not present	1/21/2014
991591	US 101	179.13	unnamed	Hell Roaring Cr	20	not an injunction barrier	species use verified, salmon and/or steelhead are not present	1/21/2014
991592	US 101	179.57	Hell Roaring Cr	Hoh R	20	not an injunction barrier	species use verified, salmon and/or steelhead are not present	1/21/2014
997078	US 101	179.73	unnamed	Hell Roaring Cr	20	not an injunction barrier	species use verified, salmon and/or steelhead are not present	1/21/2014
991593	US 101	180.20	unnamed	EF Hell Roaring Cr	20	not an injunction barrier	species use verified, salmon and/or steelhead are not present	1/21/2014
997082	US 101	183.44	unnamed	Dowans Cr	20	not an injunction barrier	stream determined to be non-fish bearing	7/21/2014
990156	US 101	186.41	unnamed	Bogachiel R	20	not an injunction barrier	culvert determined to not be a barrier	3/27/2017
991515	US 101	187.79	unnamed	Bogachiel R	20	not an injunction barrier	species use verified, salmon and/or steelhead are not present	1/16/2014
933421	US 101	189.05	unnamed	Grader Cr	20	added to injunction barrier list	newly identified barrier	1/26/2016
20.0312 0.60	US 101	197.10	Swanson Cr	Soleduck R	20.0312	not an injunction barrier	barrier corrected	12/20/2016
991565	US 101	221.00	unnamed	Lk Crescent	19	not an injunction barrier	species use verified, salmon and/or steelhead are not present	5/8/2015
996391	US 101	222.11	Eagle Cr	Lk Crescent	19	not an injunction barrier	species use verified, salmon and/or steelhead are not present	5/8/2015
996398	US 101	226.24	Smith Cr	Lk Crescent	19	not an injunction barrier	species use verified, salmon and/or steelhead are not present	5/7/2015
932888	US 101; off-ramp	246.18	unnamed	Tumwater Cr	18	added to injunction barrier list	newly identified barrier	4/13/2017
990555	US 101	259.79	Owl Cr	Matriotti Cr	18	not an injunction barrier	barrier corrected	10/22/2014
933369	US 101	263.43	Sequim Prairie Tri ditch	Gierin Cr	18	added to injunction barrier list	newly identified barrier	12/28/2015

Appendix III. Updates to the disposition of WSDOT Injunction Barrier List since September 24, 2013 (updates as of June 6, 2017)

One hundred eleven culverts are no longer injunction barriers requiring repair. Seventy-five newly identified barrier culverts added to the injunction barrier list.

List sorted by Road Name and Milepost location

Site ID	Road	Milepost	Stream	Tributary to	WRIA	Disposition	Explanation	Modified Date
995551	US 101	263.68	Sequim Prairie Tri irrigation ditch	Gierin Cr	18	added to injunction barrier list	newly identified barrier	6/23/2015
994464	US 101	269.45	unnamed	Sequim Bay	17	added to injunction barrier list	newly identified barrier	5/8/2017
999584	US 101	308.74	unnamed	Hood Canal	16	not an injunction barrier	species use verified, salmon and/or steelhead are not present	11/4/2013
995935	US 101	310.27	unnamed	Hood Canal	16	added to injunction barrier list	newly identified barrier	2/3/2017
991615	US 101	317.45	unnamed	Hood Canal	16	not an injunction barrier	species use verified, salmon and/or steelhead are not present	10/18/2014
933494	US 101	334.47	unnamed	Hood Canal	16	added to injunction barrier list	newly identified barrier	3/20/2017
996367	US 101	334.74	unnamed	Hood Canal	16	not an injunction barrier	culvert determined to not be a barrier	12/1/2015
991910	US 12	6.55	unnamed	Higgins Sl	22	added to injunction barrier list	newly identified barrier	12/16/2015
933616	US 12	17.56	unnamed	Wenzel Sl	22	added to injunction barrier list	newly identified barrier	4/13/2017
995046	US 2	3.59	unnamed	unnamed	7	not an injunction barrier	stream determined to be non-fish bearing	9/20/2016
101NORT-04	US 2	16.22	unnamed	Skykomish R	7	added to injunction barrier list	newly identified barrier	5/2/2016
992066	US 2	24.80	unnamed	Wallace R	7	added to injunction barrier list	newly identified barrier	5/4/2016
992066	US 2	24.80	unnamed	Wallace R	7	not an injunction barrier	culvert determined to not be a barrier	9/7/2016
995061	US 2	48.35	unnamed	SF Skykomish R	07	not an injunction barrier	culvert determined to not be a barrier	2/3/2017
934093	US 2	48.82	unnamed	SF Skykomish R	7	added to injunction barrier list	newly identified barrier	5/8/2017

Appendix IV

Appendix IVA. Northwest Region Spring 2017 WSDOT Fishway Inspections

List sorted by Highway and Milepost location.

Region	Site ID	Road	Milepost	Stream Name	Inspector	Inspection Date	Fishway Condition	Maintenance Required
Northwest	08.0268 0.80	I-405	10.12	Coal Cr	Collins	5/18/2017	OK	None at this time.
Northwest	990376	I-405	19.12	Forbes Cr	Collins	5/18/2017	MN	Need to reseal US most weir as indicated in previous inspections.
Northwest	08.0059 7.00	I-405	29.75	Swamp Cr	Collins	5/18/2017	OK	None at this time.
Northwest	08.0049 3.00	I-5	177.67	McAleer Cr	Collins	5/17/2017	OK	None at this time.
Northwest	993090	I-5	182.73	Swamp Cr	Collins	5/17/2017	OK	None at this time.
Northwest	08.0070 10.60	I-5	187.2	North Cr	Collins	4/19/2017	OK	None at this time.
Northwest	990308	I-5	187.2	North Cr	Collins	4/18/2017	OK	None at this time.
Northwest	990622	I-5	211.5	Secret Cr	Dominguez	3/16/2017	OK	None at this time.
Northwest	05.0021 4.10	I-5	216.73	WF Church Cr	Dominguez	3/16/2017	OK	None at this time.
Northwest	03.0016 0.40	I-5	238.4	Bow Hill Cr	Collins	4/20/2017	MN	Reposition tree and wood chunk from US most DS control. Move below the DS most control.
Northwest	08.0183 1.00	I-90	17	EF Issaquah Cr	Collins	4/4/2017	OK	None at this time.
Northwest	08.0183 1.30	I-90	18.37	EF Issaquah Cr	Collins	4/4/2017	OK	None at this time.
Northwest	08.0183 1.90	I-90	19.02	EF Issaquah Cr	Collins	4/4/2017	OK	None at this time.
Northwest	08.0183 3.00	I-90	20.22	EF Issaquah Cr	Collins	4/4/2017	OK	None at this time.
Northwest	996965	I-90	20.42	unnamed	Collins	4/4/2017	OK	None at this time.
Northwest	08.0191 0.30	I-90	21.23	unnamed	Collins	4/4/2017	OK	None at this time.
Northwest	08.0183 5.00	I-90	22.37	EF Issaquah Cr	Collins	4/4/2017	MNR	None at this time.
Northwest	990272	SR 104	29.65	McAleer Cr	Collins	5/17/2017	OK	None at this time.
Northwest	01.0626 0.35	SR 11	18.6	Chuckanut Cr	Collins	4/20/2017	OK	None a this time.
Northwest	105 R042117a	SR 164	8.24	Pussyfoot Cr	Collins	4/4/2017	MNR	None at this time.
Northwest	08.0302 0.00	SR 169	23.62	Maplewood Cr	Collins	4/4/2017	OK	None at this time.
Northwest	08.0320 1.30	SR 18	16.94	Downs Cr	Collins	4/4/2017	OK	None at this time.
Northwest	03.0354A 0.04	SR 20	77.7	Little Careys Cr	Collins	4/20/2017	OK	None at this time.
Northwest	990065	SR 20	77.82	unnamed	Collins	4/20/2017	OK	None at this time.
Northwest	08.0110 0.10	SR 202	11.05	Rutherford Cr	Collins	5/17/2017	OK	None at this time.
Northwest	990142	SR 202	11.96	Evans Cr	Roler	4/4/2017	MNR	None at this time
Northwest	07.0383A 0.50	SR 202	13.8	Dry Cr	Collins	5/17/2017	OK	None at this time.
Northwest	991013	SR 410	50.32	Minnehaha Cr	Collins	4/4/2017	OK	None at this time.
Northwest	990262	SR 522	1.87	Maple Leaf Cr	Collins	5/17/2017	OK	None at this time.
Northwest	08.0080 0.90	SR 522	12.66	Little Bear Cr	Collins	5/17/2017	OK	None at this time.
Northwest	08.0080 1.10	SR 522	12.92	Little Bear Cr	Collins	5/17/2017	OK	None at this time.
Northwest	08.0070A 0.01	SR 527	4	Sulphur Springs Cr	Collins	5/18/2017	OK	None at this time.
Northwest	08.0075 0.20	SR 527	4.06	Silver Cr No 1	Collins	5/18/2017	OK	None at this time.
Northwest	08.0075 0.70	SR 527	4.46	Silver Cr No2	Collins	5/18/2017	OK	None at this time.
Northwest	08.0075 0.75	SR 527	4.48	Silver Cr No 3	Collins	5/18/2017	OK	None at this time.
Northwest	08.0070B 0.30	SR 527	6.32	Nickel Cr	Collins	5/18/2017	OK	None at this time.
Northwest	991160	SR 530	25.94	Schoolyard Cr	Collins	4/20/2017	MNR	None at this time.
Northwest	991155	SR 530	54.6	Lyle Cr	Collins	4/20/2017	OK	None at this time.
Northwest	990188	SR 530	64.09	Hilt Cr	Collins	4/20/2017	OK	None at this time.
Northwest	991741	SR 534	1.2	unnamed	Collins	4/19/2017	OK	None at this time.
Northwest	990014	SR 542	3.5	Squalicum Cr	Collins	4/20/2017	OK	None at this time.
Northwest	990433	SR 900	19.5	Tibbetts Cr	Collins	4/4/2017	MNR	None at this time.
Northwest	07.0148 1.30	SR 92	1.93	Catherine Cr	Dominguez	3/16/2017	OK	Not at this time.
Northwest	07.0096 0.30	US 2	3.6	Mosier Cr	Dominguez	3/16/2017	OK	None at this time.

Fishway Condition:

MN requires minor maintenance

MNR requires replacement

Appendix IVB. Olympic Region Spring 2017 WSDOT Fishway Inspections

List sorted by Highway and Milepost location.

Region	Site ID	Road	Milepost	Stream Name	Inspector	Inspection Date	Fishway Condition	Maintenance Required
Olympic	990278	SR 108	8.89	McDonald Cr	Collins	4/12/2017	MNR	No maintenance required this year. Upper cells of fishway have sufficient pool volume for upstream Chum passage.
Olympic	15.0060 1.00	SR 16	17.8	Purdy Cr	Piazza	5/4/2017	MNR	None at this time.
Olympic	15.0056 4.50	SR 16	22.7	Burley Cr	Piazza	5/4/2017	MNR	Inlet may have debris or log jam. Recommend inlet inspection for potential maintenance needs.
Olympic	990323	SR 3	33.7	Parish Cr	Piazza	5/4/2017	OK	None at this time.
Olympic	15.0229 0.10	SR 3	40.96	Chico Cr	Piazza	5/4/2017	MNR	WSDOT may want to relocate log spanning the inlet.
Olympic	15.0250 0.55	SR 3	46.24	WF Clear Cr	Piazza	5/4/2017	OK	None at this time.
Olympic	996803	SR 3	47.72	unnamed	Piazza	5/4/2017	MNR	Large angular rock (about 5 pieces) are inside the culvert and is recommended for removal.
Olympic	990224	SR 3	57.1	Kinman Cr	Piazza	5/4/2017	OK	None at this time.
Olympic	991636	SR 706	8.02	unnamed	Collins	3/30/2017	OK	None at this time.
Olympic	991227	SR 706	9.81	unnamed	Collins	3/30/2017	MNR	None at this time.
Olympic	991501	US 101	103.65	unnamed	Collins	4/25/2017	MNR	None at this time.
Olympic	991581	US 101	104.9	unnamed	Collins	4/25/2017	OK	None at this time.
Olympic	990143	US 101	105.6	Fairchild Cr	Collins	4/25/2017	OK	None at this time.
Olympic	990178	US 101	146.85	Harlow Cr	Collins	4/25/2017	MNR	None at this time.
Olympic	991263	US 101	162.15	Big Cedar Cr	Collins	4/25/2017	MNR	None at this time.
Olympic	990400	US 101	162.6	Steamboat Cr	Collins	4/25/2017	MNR	None at this time.
Olympic	161180	US 101	167.44	Fletcher Cr	Collins	4/25/2017	OK	None at this time.
Olympic	990197	US 101	171.7	Huelsdonk Cr	Collins	4/25/2017	OK	None.
Olympic	990169	US 101	189.4	Grader Cr	Collins	4/25/2017	MNR	Reattach loose baffles and replace and reset stop logs.
Olympic	18.0283 2.00	US 101	238.35	Indian Cr	Collins	4/26/2017	MNR	None at this time.
Olympic	990448	US 101	246.4	Tumwater Cr	Collins	4/26/2017	MNR	None at this time.
Olympic	990466	US 101	246.9	Valley Cr	Collins	4/26/2017	OK	None at this time.
Olympic	18.0234 1.10	US 101	250	Ennis Cr	Collins	4/27/2017	MNR	Remove debris from culvert inlet. Need to clean sump at FW outlet and adjust the stop log heights in the WP FW. Also check baffles for debris accumulation while onsite.
Olympic	990240	US 101	250.5	Lees Cr	Collins	4/27/2017	MNR	None at this time.
Olympic	990021	US 101	253.85	Bagley Cr	Collins	4/27/2017	MNR	None at this time.
Olympic	18.0173 2.40	US 101	256.1	Siebert Cr	Collins	4/27/2017	MNR	The panel that was fabricated last year to seal the DS end of the Weir Pool FW has failed. Need to re-attach or try another method.
Olympic	115 MC093	US 101	346.95	Coffee Cr	Collins	4/12/2017	MNR	None at this time.
Olympic	14.0021 0.21	US 101	353.6	Little Skookum Cr	Collins	4/12/2017	OK	None at this time.
Olympic	14.0010 0.10	US 101	356.8	Countyline Cr	Collins	4/12/2017	MNR	None at this time.
Olympic	14.0009A 0.06	US 101	357.9	Holiday Valley Cr	Collins	4/12/2017	OK	None at this time.
Olympic	22.0346 1.10	US 12	11.73	unnamed	Collins	4/25/2017	OK	None at this time.
Olympic	22.0350 0.30	US 12	12.1	unnamed	Collins	4/25/2017	OK	None at this time.
Olympic	22.0349 0.70	US 12	12.36	Camp Cr	Collins	4/25/2017	MNR	None at this time.
Olympic	991532	US 12	13.8	unnamed	Collins	4/25/2017	OK	None at this time.

Fishway Condition:

MNR requires replacement

Appendix IVC. Southwest Region Spring 2017 WSDOT Fishway Inspections

List sorted by Highway and Milepost location.

Region	Site ID	Road	Milepost	Stream Name	Inspector	Inspection Date	Fishway Condition	Maintenance Required
Southwest	994286	I-5	74.05	Berwick Cr	Collins	3/30/2017	OK	None at this time.
Southwest	994301	I-5	81.77	China Cr	Collins	3/30/2017	OK	None at this time.
Southwest	992268	SR 14	20.92	Lawton Cr	Collins	5/4/2017	OK	None at this time.
Southwest	992223	SR 142	13.4	Snyder Canyon Cr	Collins	5/4/2017	OK	None at this time.
Southwest	990035	SR 4	35.6	Birnie Cr	Collins	4/11/2017	OK	None at this time.
Southwest	990071	SR 401	8.8	Cement Cr	Collins	4/11/2017	MNFP	Remove two pieces of wood that are currently blocking the US most cell in the PC FW.
Southwest	990036	SR 409	3.85	Birnie Cr	Collins	4/11/2017	OK	None at this time.
Southwest	27.0327 0.50	SR 503	46.84	Johnson Cr	Collins	5/4/2017	OK	None at this time.
Southwest	991440	SR 503	49.03	Kenyon Cr	Collins	5/4/2017	OK	None at this time.
Southwest	27.0300 0.00	SR 503	52.1	Robinson Cr	Collins	5/4/2017	MNFP	Remove large truck tire and debris jam near culvert inlet. After removing the jam ensure all baffles are clear of debris.
Southwest	26.0314 A 0.10	SR 504	12.7	Spirit Lake Hwy Marsh	Collins	4/11/2017	MNFP	Remove debris from culvert inlet and surrounding area.
Southwest	990171	SR 6	8.9	Green Cr	Collins	3/30/2017	OK	None at this time.
Southwest	990363	US 101	29.8	SF Nemah R	Collins	4/11/2017	OK	None at this time.
Southwest	992311	US 101	53.56	Old Mill Pond Cr	Collins	4/11/2017	OK	None at this time

Fishway Condition:

MNFP requires maintenance for fish passage